

Water Quality Report

Annual Water Quality Report
June 2017

Fort
Greely
Alaska



DOYON UTILITIES LLC

www.doyonutilities.com

Office: 907-869-3600

Public Water System ID# AK2370780

Doyon Utilities Drinking Water Mission



A water utility seldom takes the opportunity to tell its customers about all they are doing to produce exceptional quality drinking water in conjunction with the myriad of additional things the utility does to ensure public safety. All too often, we concentrate only on our mission of producing water that goes through a rigorous testing and quality control process before being introduced into a water distribution system for customers. Beyond that, we don't broadcast what we are doing. In essence, we fail to "toot our own horn."

The Environmental Protection Agency (EPA) and the Alaska Department of Environmental Conservation (ADEC) have given us an opportunity to tell the rest of our story in the form of this annual Consumer Confidence Report. Doyon Utilities is pleased to prepare this comprehensive report for our customers who work and reside on Fort Greely. Our goals and efforts are to provide you with a complete picture of the water quality program.

As you will clearly see from the report, the water you consume is of exceptional quality and exceeds the standards established by the US Environmental Protection Agency.

Letter from the Site Manager

Doyon Utilities has prepared the following report to provide information to you, the consumer, on the quality of our drinking water for 2016. This report has been prepared as part of state



Al Thomas,
Fort Greely
Site Manager

and federal requirements to inform the consumer as mandated by the Safe Drinking Water Act. However, we welcome this opportunity to inform residents and business owners about our high water quality and hope that consumers will contact our office on Fort Greely with any questions or concerns regarding water quality and service.

Who are we? Doyon Utilities and its employees have been producing and delivering drinking water to our customers on Fort Greely since Au-

gust of 2008. Our goal is to maintain the highest standards in water quality with a well-trained and professional staff. These goals are the cornerstone on which we provide safe and reliable drinking water for the consumers. Doyon Utilities also provides water service for the Army training areas and recreational sites.

Doyon Utilities owns and operates the four utility systems on Fort Greely; these systems are water treatment and distribution, wastewater treatment and collection, heat distribution and electrical distribution. Doyon Utilities continues to provide the highest level of utility service to Fort Greely residents and the Army. Doyon Utilities is responsible for repair and replacement of the utility infrastructure on Fort Greely

through multiple large scale capital improvement projects. Doyon Utilities has and will continue to provide Fort Greely residents with exceptional service and reliability.

Water Quality. Water is essential to the health of our installation and we take seriously the integrity of our supply. Doyon Utilities adheres to strict testing requirements with oversight by the Alaska Department of Environmental Conservation (ADEC) and the Environmental Protection Agency (EPA). The results from our 2016 water quality tests are included in this report. The results indicate that your wa-

ter meets or exceeds the state and federal drinking water requirements.

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test results indicate that Doyon Utilities' water supply is safe and free of contaminants. Full test results are available at Doyon Utilities' headquarters located at 714 4th Avenue, Fairbanks, Alaska.

Doyon Utilities' Employees. You can have the utmost confidence in the dedicated and committed employees responsible for producing and distributing your drinking water. Doyon Utilities' water treatment plant operators and water distribution system personnel are highly trained and certi-

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Doyon Utilities operates and provides utility service for the United States Army in Alaska at Fort Wainwright, Fort Greely and JBER (Joint Base Elmendorf-Richardson).

Drinking Water Quality Report

Doyon Utilities is proud of the high quality water it provides to our customers. This annual water quality report provides information on the source of our water, lists the results of water quality tests that are conducted and contains other important information about water and health.

Doyon Utilities will notify you immediately if there is any reason for concern about your water. We are happy to report to you how we have surpassed established water quality standards. Doyon Utilities is in compliance with the national primary drinking water regulations and has met all testing and monitoring requirements. The EPA has determined that your water is safe at the tested and monitored levels. We have included a table inside outlining the tests conducted and the results of those tests.

We are proud to report that the water provided by Doyon Utilities meets or exceeds established water quality standards.



Water Testing and Your Health

The sources of drinking water from both tap water and bottled water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land and through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which 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 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, storm water runoff and residential uses.

- **Organic chemical contaminants**, including synthetic and volatile organics, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- **Radioactive contaminants**, 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. FDA regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Some people in the general population may be more

vulnerable than others to contaminants in drinking water. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk of infection. These people should seek advice about drinking water from their health care providers. EPA/CDC published guidelines on appropriate means to lessen the risk of infection are available from the Safe Drinking Water Hotline (800-426-4791).

We're happy to answer any other questions about Doyon Utilities and our water quality. For general information or for water quality questions call our site management office at 907-869-3600. Other resources: Environmental Protection Agency's Safe Drinking Water Hotline: 1-800-426-4791. Water Quality Data for community water systems throughout the United States is available at www.waterdata.com.



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fied in the production and distribution of clean, safe water by the Alaska Department of Environmental Conservation. To earn certification, each employee receives specialized training in water treatment and water distribution, must have years of job experience, and must pass comprehensive tests. These tests cover a wide range of subjects from hydrology, microbiology, chemistry, and physics to pumps, electricity, chlorination and drinking water regulations.

Doyon Utilities' Commitment. Part of Doyon Utilities' contract with the government is our commitment to repair and replace utility infrastructure. Our approach to this large and complex task is the development of an Annual Capital Upgrades, Renewals and Replacements Plan. The Plan is a 5-year forward look at the work we intend to perform on the system. Many factors are considered in identifying and scheduling renewal and replacement projects such as the age of the existing facilities, design life of the equipment and cost of replacing the existing equipment. Customers will be notified in advance of scheduled work activities in their area and who to contact for assistance.

Summer is a busy time for our maintenance crews. Many construction employees as well as our own workforce will be in public roadways. Please be aware of these personnel and potential traffic revisions.

Doyon Utilities looks forward to continuing to provide you with exceptional quality service and drinking water. We appreciate your comments on how we are doing and can use this information to improve customer satisfaction. Our door is always open!

*Best regards,
James Thomas, Site Manager*



Drinking Water Test Results

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water hotline at 1-800-426-4791.

Fort Greely routinely monitors for contaminants in your drinking water according to Federal and State laws. While your drinking water 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. The table below shows the results for substances detected for the period 1/1/16 to 12/31/16 and lists the Regulated Contaminants required to be monitored by the EPA that were detected in your water.

All the substances we found were present in quantities less than the EPA limits for safe drinking water. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. If you would like a complete listing of test results, please call DU Environmental at 907-455-1500.

| Substance | Sample Date | Violation Y/N | Fort Greely Detected Range <small>PWS AK2370780</small> | MCL | MCLG | Likely Source of Contamination |
|-------------------------------|------------------|----------------|--|------------|-------------|---|
| Inorganic Contaminants | | | | | | |
| Fluoride | Daily 2016 | N | 0.14 - 0.96 ppm | 4 ppm | 4 ppm | Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| Nitrate | Annually 4/11/16 | N | 0.2 ppm | 10 ppm | 10 ppm | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Lead ¹ | July 2016 | N ¹ | 90% = <1.0 ppb | AL=15 ppb | 0 | Corrosion of household plumbing systems |
| Copper ¹ | July 2016 | N ¹ | 90% = 0.079 ppm | AL=1.3 ppm | 1.3 ppm | Corrosion of household plumbing system |
| Free Residual Chlorine | Daily 2016 | N | Range 0.17 - 1.32 ppm | MRDL 4 ppm | MRDLG 4 ppm | Water additive used to control microbes |

¹ Fort Greely conducted residential copper and lead testing at the housing units in January and July 2015. Twenty samples were collected during each sampling period. Zero samples exceeded the lead AL.

| | | | | | | |
|-----------------------------|-----------------------|---|------------|--------|--------|---|
| Organic Contaminants | | | | | | |
| Total Trihalomethanes | Samples taken 4/11/16 | N | Average | | | |
| Bldg 960 | <0.5 - 3.9 ppb | N | 2.08 ppb | 80 ppb | NA | By-product of drinking water chlorination |
| Bldg 638 | | | | | | |
| Haloacetic Acids | Samples taken 4/11/16 | N | Average | | | |
| Bldg 960 | <1.0 ppb | N | <1.0 ppb | 60 ppb | NA | By-product of drinking water chlorination |
| Bldg 638 | | | | | | |
| 1,2 Xylene | Samples taken 4/11/16 | N | 0.0005 ppm | — | — | Part of total Xylene |
| 1,3+1,4 Xylene | Samples taken 4/11/16 | N | 0.0014 ppm | — | — | Part of total Xylene |
| Total Xylene | Samples taken 4/11/16 | N | 0.0019 ppm | 10 ppm | 10 ppm | Discharge from petroleum products and refineries; discharge from chemical factories |

| Substance | Sample Date | Violation Y/N | Front Gate Detected Range <small>PWS AK2372805</small> | MCL | MCLG | Likely Source of Contamination |
|-------------------------------|---------------------|---------------|---|--------|--------|---|
| Inorganic Contaminants | | | | | | |
| Nitrate | Annually 1/18/16 | N | 0.1 ppm | 10 ppm | 10 ppm | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |

| Substance | Sample Date | Violation Y/N | Allen Army Air Field Detected Well 1A <small>PWS AK2370798</small> | MCL | MCLG | Likely Source of Contamination |
|-------------------------------|---------------------------|---------------|---|---------------|----------------|---|
| Inorganic Contaminants | | | | | | |
| Free Residual Chlorine | Daily 2016 | N | 0.21 - 1.50 ppm | MRDL 4 ppm | MRDLG 4 ppm | Water additive used to control microbes |
| Nitrate Well 1A | Annually 1/18/16 | N | 0.1 ppm | 10 ppm | 10 ppm | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Barium | Every 3 years 10/21/14 | N | 0.065 ppm | 2 ppm | 2 ppm | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| Lead ¹ | 8/11/16 | N | 90% = 1.5 ppb | AL=15 ppb | 0 | Corrosion of household plumbing systems |
| Copper ¹ | 8/11/16 | N | 90% = 0.11 ppm | AL=1.3 ppm | 1.3 ppm | Corrosion of household plumbing system |

¹ Fort Greely conducted initial copper and lead testing in May 2015. Five samples were collected, one of the samples exceeded the Lead AL. None of the samples exceeded the Copper AL.

| Organic Contaminants | | | | | | |
|--------------------------------|--------------------------|---|---------|--------|----|---|
| Total Trihalomethanes Bldg 111 | Every 3 years 5/11/15 | N | 6.8 ppb | 80 ppb | NA | By-product of drinking water chlorination |
| Haloacetic Acids Bldg 101 | Every 3 years 5/11/15 | N | 3.3 ppb | 60 ppb | NA | By-product of drinking water chlorination |

Be assured that Doyon Utilities make every effort to ensure the water provided to Fort Greely is safe for consumption and the installation is notified should water quality deteriorate.

Some residents may experience brown or rusty water coming from their faucets; more often in older housing. This is usually caused by a higher concentration of minerals in the water. This does not mean that the water is not

safe. Any brown or rusty water that does not run clear after running faucets for several minutes should be reported to housing maintenance.

Another common occurrence is white cloudy water. This is due to more oxygen in the water and most often noticed during colder months. Any cloudy water that does not clear up after sitting for a couple minutes should be reported to housing maintenance.

Terms and Abbreviations Used

Action Level (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL): 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 technology.

Maximum Contaminant Level Goal (MCLG): 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.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal

(MRDLG): 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 contamination.

Not Applicable (NA): When NA is used in the

range column, only one sample was taken, therefore, no range exists.

ppb: Parts per billion or micrograms per liter.

ppm: Parts per million or milligrams per liter.



Lead/Copper in Drinking Water

The United States Environmental Protection Agency (EPA), Alaska Department of Environmental Conservation (ADEC), Fort Greely Garrison and Doyon Utilities (DU) are concerned about lead in your drinking water. Although most homes have very low levels of lead in their drinking water, some homes in the community have historically had lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/L).

Lead can pose a significant risk to your health. 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. DU 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 with cold water for 30 seconds to 2 minutes before using water for drinking or cooking. Information on lead in drinking water and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safe-water/lead.

To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash dishes or water plants. Use only cold water for cooking and drinking. Try not to cook with, or drink water from the hot water tap. Never use the hot water tap for water to mix infant formula or for cooking. Hot water can dissolve lead more quickly than cold water. If you need hot water for drinking or cooking, draw water from the cold tap and heat it on the stove. Boiling water will not reduce the lead level.

Some Garrison housing may have faucet mounted filters for lead removal. The filters are designed to last for 6 months and meet the ANSI/NSF standard for lead removal (Standard 53). Replacement filters are available from your housing manager. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible use the first flush water to wash dishes or water plants. Use only cold water for cooking and drinking. Try not to cook with, or drink water from the hot water tap. Never use the hot water tap for water to mix infant formula or for cooking. Hot water can dissolve lead more quickly than cold water. If you need hot water for drinking or cooking, draw water from the cold tap and heat it on the stove. Boiling water will not reduce the lead level.

It is important to note that DU's water treatment process does not increase the lead levels in the treated water. Any increases in the lead levels are generally from water service lines and older plumbing fixtures within the buildings. In 2014, DU worked with the Garrison to replace existing faucets with certified low lead fixtures. During 2015, this faucet replacement program was successful, with nearly all samples returning non-detectable levels of lead. This trend continued in 2016 with all lead results returning well below the EPA Action Level of 15 ppb.

Hydrant Maintenance

Hydrant maintenance is a top priority for our utility! Twice a year, April and September, we visit each hydrant in our system. We test the water flow at each hydrant and make sure each one is working properly. This is our way to provide superior fire protection to ensure the safety and well being of our consumers.



Source Water Assessment

For the last several years, the ADEC has been working on assessments of the vulnerability of the water sources that provide water to all of the public water systems in Alaska. The source water assessment for the Fort Greely Water Treatment Plant has been completed and is available for review by contacting DU Environmental at 907-455-1500, or by visiting the Noel Wien Library in Fairbanks.



Where does our water come from?

Fort Greely Main Post obtains its water supply from one primary ground water well and one secondary well. The water is very good quality and requires very little treatment and disinfection prior to being distributed to customers.

The treatment process is fairly simple. As water from the primary and/or secondary wells enters the water treatment facility, chemical feed equipment injects a calcium hypochlorite solution into the stream to provide disinfectant to the raw water. We also inject sodium fluoride to promote healthy teeth and gums, especially in younger customers. Once treated, the water is stored in two 50,000-gallon storage tanks and a 188,000-gallon storage tank. Five pumps with variable frequency drives maintain pressure in the distribution system. The finished water is tested daily to ensure the pH, chlorine residual and fluoride concentrations are at their optimum levels. In addition to the daily tests, we conduct periodic tests to closely monitor all drinking water contaminants specified by the EPA Safe Drinking Water Act. We are proud to report the results of our water quality tests and allow you to have complete confidence in the water you consume.

This Consumer Confidence Report summarizes drinking water quality for the period between January 1, 2016 and December 31, 2016. In order to conserve natural resources and make it more efficient to distribute, an electronic copy can be downloaded at www.doyonutilities.com. Hard copies are also available at your local Doyon Utilities depot or by contacting DU Environmental at 907-455-1500.