



www.doyonutilities.com
Office: 907-455-1571

Drinking Water Quality Fort Wainwright Alaska

Second Annual Water Quality Report • June 2010

Letter from the Site Manager



Shayne Coiley,
Doyon Utilities Fort
Wainwright Site Manager

Doyon Utilities has prepared the following report to provide information to you, the consumer, on the quality of our drinking water for testing year 2009. This report has been prepared as part of state 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 of our

high water quality and hope that consumers will contact our office on Fort Wainwright with any questions or concerns regarding water quality and service.

Who are we? Doyon Utilities owns and operates the utilities located at Forts Wainwright, Richardson and Greely under a program to privatize utility operations through the Department of Defense. Doyon Utilities submitted its competitive bid for the purchase of the utilities in 2005.

The results from our 2009 water quality tests are included in this report. The results of which indicate that your water meets or exceeds the state and federal drinking water requirements.

We received notice that we were the successful bidder in September 2007. Upon receiving the award notice, Doyon Utilities quickly began evaluating the utility systems, organizing the construction of our “depots” at each Army Post, and identifying and hiring key positions. On August 15, 2008, the date selected to transfer the utilities to private ownership, Doyon Utilities was staffed, had all necessary equipment, and was ready to assume the critical role of owning, operating and maintaining the utilities.

Water Quality. Water is one of the world’s most precious resources 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 2009 water quality tests are included in this report. The results confirm that your water meets or exceeds the state and federal drinking water requirements.

Source water protection is also a high priority which requires special attention. Doyon

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Where does our water come from?

Fort Wainwright draws its water supply from two primary and two secondary, or back-up, groundwater wells. Additional wells are used for fire suppression but are only activated when the distribution system has a significant drop in water pressure. The water is very good quality and requires very little treatment and disinfection prior to being distributed to customers.

Fort Wainwright’s drinking water is obtained from an underground aquifer called the “Tanana Basin Alluvium.” This aquifer, which ranges from a few feet to approximately 300 feet thick, provides us with an

continued on back

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.



Fort Wainwright Team: These are just 21 of our 67 employees at Fort Wainwright.
Front row left to right: Denny jolly, Ken Price, Randy Dunn, Diane Wallis, Benno Cleveland, Warren Howard, Ken Brown, Charles Davenport, Bill Sparks, Dave Kerner, Ben Wolfe.
Back row left to right: Roy Davis, Shayne Coiley, John Werrczynski, Robert, Mellon, Mark Fleming, Dennis Jones, Kurt Cook, Charlie Smith, Todd Vincent, Mike Foster.

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 may be more vulnerable to contaminants in drinking water than is the general population. Immuno-compromised persons such as persons 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 from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* 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 907-455-1571.

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.

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.

Not Applicable (NA): When NA is used in the range column, only one sample was taken, therefore, no range exists.

Not Detectable (ND): The contaminant is below the detectable limits of the testing method.

pCi/L: Picocuries per liter.

ppb: Parts per billion or micrograms per liter.

ppm: Parts per million or milligrams per liter.

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 Wainwright routinely monitors for contaminants in your drinking water according to Federal and State laws. The table at right shows the results for some of our required monitoring for the period 1/1/09 to 12/31/09 and lists the Regulated Contaminants required to be monitored by the EPA that were detected in your water. Doyon Utilities has a waiver that does not require us to test for asbestos through 2011. 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. 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 Kathleen Hook at 907-455-1540.



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Letter from the Site Manager continued

Utilities completes water quality tests on its source water (water wells). The test results indicate that Doyon Utilities' water supply is safe and free of contaminants. Recently in the news, you may have seen or read about sulfolane in the groundwater which is suspected of being a result of gasoline spills. Due to detection of sulfolane in some drinking water wells the ADEC required all drinking water utilities in the Fairbanks vicinity to test their source water for sulfolane. Samples from Fort Wainwright's four wells were obtained during January 2010. The results indicated a non-detect for sulfolane.

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 certified in the production and distribution of clean, safe water by the Alaska Department of Environmental Conservation. To earn certification, each employee must have passed many courses in water treatment and water distribution, have completed years of job experience, and passed extensive 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 renewals and replacements such as the age of the existing

Contamination	Sample Date	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
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The following constituents were detected in low levels. Fort Wainwright is required to test for these analyses quarterly.

Total Trihalomethanes	Quarterly 2009 Range	N		NA	80	By-product of drinking water chlorination
Bldg 1003	40.02- 70.5		52.1 ppb			
Bldg 3565	11.0 - 19.0		14.4 ppb			
Bldg 3015	33.3 - 57.0		45.2 ppb			
Bldg 1541	47.9 - 59.5		53.8 ppb			
Bldg 1060	37.7 - 55.0		47.9 ppb			
Bldg 3494	72.0 - 83.8		79.3 ppb			
Bldg 4024	30.1 - 35.1		32.0 ppb			
Bldg 1003	10/6/09		50.0 ppb			
Bldg 1003	11/13/09		67.4 ppb			

Total Haloacetic Acids	Quarterly 2009 Range	N		NA	60	By-product of drinking water disinfection
Bldg 1003	27.7- 39.3		32.4 ppb			
Bldg 3565	11.5 - 21.7		16.6 ppb			
Bldg 3015	24.8 - 44.3		33.4 ppb			
Bldg 1541	23.2 - 34.7		30.7 ppb			
Bldg 1060	28.6 - 36.9		31.6 ppb			
Bldg 3494	<3.0 - 5.5		3.3 ppb			
Bldg 4024	19.6 - 31.2		26.9 ppb			
Bldg 1003	10/6/09		29.2 ppb			
Bldg 1003	11/13/09		27.0 ppb			

The following constituents were detected in low levels. Fort Wainwright is required to test for these analyses every three years.

Arsenic	1/12/09	N	0.646 ppb	0	10	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Lead ¹	7/17/07	N	90% = 3.74 ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Copper ¹	7/17/07	N	90% = 0.309 ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

¹Multiple samples were taken, each corresponding to a unique location.

The following constituents were detected in low levels. Fort Wainwright is required to test for these analyses every six years.

Radium, Combined (226, 228)	Quarterly Composites 2005	N	1.0 pCi/L	0	5	Erosion of natural deposits
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The following constituents were detected in low levels. Fort Wainwright is required to test for these analyses every nine years.

Barium	8/29/06 8/29/06	N N	0.175 ppm 0.185 ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	8/29/06 8/29/07	N N	2.76 ppb 2.61 ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	3/22/02	N	0.58 ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel	8/29/06 8/29/06	N N	2.14 ppb 2.29 ppb	100	100	Occurs naturally in soils, groundwater, and surface waters and is often used in electroplating, stainless steel, and alloy product
Thallium	8/29/06 8/29/06	N N	0.0766 ppb 0.113 ppb	0.5	2	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories

facilities, design life of the equipment and cost of replacing the existing equipment in kind with a new version, are a few of the factors.

We have multiple projects planned for Fort Wainwright this upcoming summer. Many construction employees as well as our own workforce will be in public roadways. Please be aware of these personnel on the roadway and potential traffic revisions.

Doyon Utilities looks forward to continuing to provide you with exceptional quality service and drinking water for many years to come. Our door is always open!

Fun Facts

- Without water, the earth would look like the moon.
- All living things need water to live. People can live several weeks without food, but only a few days without water. We should drink six to eight glasses of water each day!
- Water makes up 83% of our blood, 70% of our brain, and 90% of our lungs. Overall, our bodies are 70% water.
- A tomato is about 95% water. An apple, a pineapple, and an ear of corn are each 80% water.

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.



Lead/Copper in Drinking Water

The EPA Safe Drinking Water Act requires public water systems to test water samples from its customers to determine lead and copper levels. If present, elevated levels of lead can cause serious health problems, especially in pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. There is nothing in the treatment process that would introduce lead into the water; therefore, Doyon Utilities tests the water at the individual service locations. If abnormal levels of lead or copper are detected in the water supply, Doyon Utilities will notify the residents and implement action to correct the problem. One method to minimize the risk of lead or copper contamination is to let the tap water run for 30 seconds to 2 minutes



to flush any water that has been sitting for several hours. It is important to use this approach for drinking water or cooking water.

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>.

Where does our water come from? continued

an excellent supply of good quality drinking water. An assessment completed by the U.S. Army Corp of Engineers (USACE) identified that although our raw (untreated) water is susceptible to potential sources of contamination, such as fuel storage tanks, they have not impacted our supply of water. Currently we use several wells located throughout the installation to draw water from the aquifer. The water is then treated to Alaska Department of Environmental Conservation (ADEC) drinking water standards prior to being distributed to your home. The water treatment plant consists of a small, pressurized green sand filter plant connected to the water distribution system. Much of the water distribution system is enclosed in the vast utilidor system.

The treatment process is fairly simple. As the water from the primary and secondary groundwater wells enters the water treatment facility, it is mixed with potassium permanganate. This chemical is used to aid in the removal of iron and manganese, which are naturally occurring substances in groundwater. The water flows through several filters designed to remove the iron and manganese which can cause stains, tastes and odors in water if not removed. After the filtration process, the water enters a clearwell and is mixed with sodium hypochlorite (disinfects the water), fluoride (promotes healthy teeth and gums), soda ash (adjusts the pH), and sodium hexameta-phosphate (prevents corrosion in the distribution system). The finished water is tested three times daily to ensure the pH, chlorine residual and fluoride content are at their optimum levels. Additionally, we closely monitor all drinking water contaminants required by the EPA Safe Drinking Water Act, and are proud to provide you with the highest quality product possible. We are proud to report the results of our water quality tests and allow you to have complete confidence in the water you consume.

If you would like to review the USACE Source Water Assessment for Fort Wainwright, please contact Kathleen Hook at 907-455-1540.



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Across

- Water flows to fire hydrants through a system of water mains, storage tanks, and _____.
- Drinking enough water every day keeps us healthy and _____.
- The company that maintains and delivers our tap water is called a water _____.
- What kind of water delivers fire protection and safe drinking water?
- What is the main ingredient in common products like canned foods and soft drinks?
- The network of water pipes below the ground is sometimes called the water _____.
- _____ in the infrastructure can result in wasted water.

Down

- What do many water systems add to their water to prevent tooth decay?
- Water that firefighters use to fight fires sometimes comes from _____.
- Tap water in the United States and Canada is suitable for drinking and is sometimes called _____ water.
- A break in a water main can cause a drop in water _____.
- People pay water _____ to help maintain their water systems.

Complete the puzzle using the word bank and clues below to see how tap water delivers.

tap **hydrants**
pumps **leaks**
hydrated **water**
fluoride **infrastructure**
bills **utility**
potable **pressure**

Just for kids!

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 Fort Wainwright Water Treatment Plant has been completed and is available for review by contacting Kathleen Hook at 907-455-1540, or by visiting the Noel Wien Library in Fairbanks. The following table is from the Executive Summary of our assessment:

Source Water Assessment Report Executive Summary Data – PWSID# AK2310918

The public water system for Ft Wainwright/Water Treatment Plant is a Class A water system consisting of 10 source intake(s). The water system is located in Fairbanks and the intake for this PWSID is a groundwater well.

DISCLAIMER: Information provided on this page is automatically generated from a database of Source Water Assessment information. For additional details, please view the actual Executive Summary contained in the Source Water Assessment Report.

Source Intake	Wellhead Susceptibility	Aquifer Susceptibility	Normal Susceptibility	Water System Vulnerability Rating					
				Bacteria/ Viruses	Nitrates/ Viruses	Volatile Organic Chemicals	Heavy Metals	Other Organic Chemicals	Synthetic Organic Chemicals
Well #1	Low	Very High	Medium	High	Low	High	Low	Low	Low
Well #2	Low	Very High	Medium	High	Low	High	Low	Low	Low
Well #3	Low	Very High	Medium	High	Low	High	Low	Low	Low
Well #4	Low	Very High	Medium	High	Low	High	Low	Low	Low
Well #5	Low	Very High	Medium	High	Low	High	Low	Low	Low
Well #6	Low	Very High	Medium	Very High	Medium	High	High	High	Medium
Well #7	Low	Very High	Medium	High	Medium	High	High	Medium	Low
Well #8	Low	High	Medium	High	Low	Medium	Low	Low	Low
Well #9	Low	Very High	Medium	High	Low	High	Low	Low	Low
Well #10	Low	Very High	Medium	High	Low	High	Low	Low	Low