



**Golden Heart Utilities**™

**2018**

# **Annual Consumer Confidence Water Quality Report**

# AN IMPORTANT MESSAGE ABOUT YOUR WATER



Dear Customers,

Golden Heart Utilities (GHU) is wholly committed to providing safe and reliable drinking water to our community. This responsibility drives our focus on strict regulatory compliance and operational excellence. Our team of licensed operators, laboratory scientists, certified engineers, and dedicated customer service professionals takes great pride in the work we do and our commitment to the Fairbanks community.

Like many other communities across the country and around the world, Fairbanks is currently managing a complex situation. GHU is publishing its annual water quality report early to alleviate potential concerns about recently detected perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) plumes in our local groundwater. GHU is working with the City, Airport, and the Alaska Department of Environmental Conservation (ADEC) to supply water to properties where PFOA and/or PFOS concentrations exceed the U.S. Environmental Protection Agency's (EPA) health advisory levels.

The EPA established lifetime health advisory levels of 70 parts per trillion to provide consumers with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water.

In response to this emerging issue, we began testing our water for PFOA and PFOS out of an abundance of caution. GHU's water is safe to drink. There are trace amounts of PFOA and PFOS detected at concentrations that are considerably lower than the EPA's health advisory levels. The trace concentrations are more than 90% lower than the health advisory standards.

Working together with the community and the ADEC, we are continuing to implement an aggressive monitoring program to ensure that our treated water remains safe. In addition, we will be evaluating treatment options in the unlikely event that concentrations of PFOA and/or PFOS increase to levels that exceed the lifetime health advisory. Please take a moment to review the Q&A Section on page eight for additional information regarding PFOA and PFOS.

If you have further questions, please contact us at 907-479-3118 or [usainfo@akwater.com](mailto:usainfo@akwater.com).

Sincerely,  
Oran Paul, President

## DRINKING WATER QUALITY REPORT

Golden Heart Utilities (GHU) is proud of the fine drinking water we provide and are happy to report to you that we have met or surpassed established water quality standards.

This annual water quality report describes the source of our water, lists the results of our 2017 tests, and contains important information about water and health.

### Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment.

Before communities began routinely treating drinking water with chlorine, starting with Chicago and Jersey City in 1908, cholera, typhoid fever, dysentery, and hepatitis killed thousands of U.S. residents annually.

Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the United States. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

### Where Our Water Comes From

We operate three wells, 70 to 90 feet deep, which pump an average of 3.5 million gallons per day. These wells tap the huge aquifer that lies beneath the Tanana Valley.

### Water Testing and Your Health

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes limits on the amount of certain contaminants in water provided by public water systems. Similarly, the Food Drug Administration (FDA) regulates bottled 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 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 (1-800-426-4791).

*(continued on page 4)*



## Water Testing and Your Health

*(continued from page 3)*

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 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:

- Microbiological 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, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

## Consumers With Special Health Concerns

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/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 (1-800-426-4791).

## Source Water Assessment

The Alaska Department of Environmental Conservation (ADEC) Source Water Assessment program was implemented to make public water systems and the public they serve aware of potential wellhead and watershed contamination sources. An informed public is the best ally in wellhead and watershed protection.

GHU's most recent source water assessment identified possible contaminating activities (PCAs) located in the Fairbanks area. PCAs at the top of GHU's source water (well water) vulnerability ranking include: industrial activities, businesses, fuel storage tanks, sewer lines, residential areas, landfill, airport, class V injection wells, and ADEC recognized contaminated sites.

Due to the PCAs in our area, the Fairbanks aquifer received a high to very high vulnerability ranking. Despite the high vulnerability ranking, **GHU's water quality remains stable and EPA compliant**. If contaminant levels above the allowable limits are ever detected in the source and/or distribution water, you will receive notification of the results.

Some of the contaminants that could be found in our source water are removed during the water treatment process prior to distribution. GHU performs numerous required tests on the water it provides to its customers. Regular monitoring of the source wells, treatment process, and the distribution system helps to ensure water quality.

In addition to ADEC and EPA required testing, GHU takes added samples from the distribution system and the source wells to help ensure the safety of the water we supply to our customers. This sampling includes general water quality tests such as pH, total dissolved solids, conductivity, turbidity, hardness, alkalinity, salinity, and bacteriological analysis. The weekly water quality tests and quarterly volatile organic chemical samples are meant to alert GHU to the presence of source water contamination.

If each of us does our part to protect our water resources, we can ensure that future generations will have ample supplies of high quality water.

A complete copy of the source water assessment document can be obtained by contacting Golden Heart Utilities' customer service department at 907-479-3118.



## Testing Our Water

The ADEC and U.S. EPA require GHU to test the drinking water we distribute regularly to make sure that it meets State and Federal requirements.

GHU collects numerous water samples from locations throughout the community to monitor the quality of water as it travels to your tap.

The Detected Contaminant Table on page six shows substances that are regulated by the U.S. EPA and ADEC and that were detected in our finished drinking water. GHU tests for many other substances, but because they were not detected, they are not reported here.

The State requires GHU to monitor for certain contaminants less than once a year because concentrations of these contaminants are not expected to vary significantly from year to year.

## HOW TO READ THE WATER QUALITY TABLES

### AL

Action Level or the concentration which, if exceeded, triggers treatment or other requirements which a water system must follow.

### MCL

Maximum Contaminant Level or 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.

### MCLG

Maximum Contaminant Level Goal or 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.

### MRDL

Maximum Residual Disinfectant Level or the highest level of a disinfectant allowed in the distribution system.

### MRDLG

Maximum Residual Disinfectant Level Goal or the level of a disinfectant in the distribution system below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

### NA

Not applicable.

### NTU

A Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

### pCi/L

Picocuries per liter (a measure of radioactivity).

### ppm

Parts per million, or milligrams per liter (mg/L). The same as one minute in two years or one penny in \$10,000.

### ppb

Parts per billion, or micrograms per liter ( $\mu\text{g/L}$ ). The same as one minute in 2,000 years or one penny in \$10,000,000.

### ppt

Parts per trillion or nanograms per liter (ng/L). One ppt is equivalent to one grain of sugar in an Olympic-size swimming pool or one second in 32,000 years.

### The "<" symbol

A symbol which means 'less than'. A result of "< 2.0" means that the contaminant was not detected above the reportable level of 2.0.

## DETECTED CONTAMINANT TABLE

Contaminant	Tested	Units	MCLG	MCL	Result	Range	Violation	Typical Sources
<b>Radiological Contaminants</b>								
Alpha Emitters	2017	pCi/L	0	15	2.5	NA	No	Erosion of natural deposits
Radium	2017	pCi/L	0	5	0.41	NA	No	Erosion of natural deposits
<b>Inorganic Contaminants</b>								
Arsenic	2011	ppb	0	10	0.71	NA	No	Erosion of natural deposits
Fluoride <sup>1</sup>	2011	ppm	4	4	0.44	NA	No	Erosion of natural deposits
<b>Disinfection By-Products</b>								
Haloacetic Acids	2017	ppb	0	60	22.6 <sup>2</sup>	12.7 - 25.0	No	By-product of water chlorination
Total Trihalomethanes	2017	ppb	0	80	54.2 <sup>2</sup>	33.7 - 68.3	No	By-product of water chlorination
<b>Disinfectants</b>								
Free Chlorine	2017	ppm	MRDLG 4	MRDL 4	0.50 <sup>3</sup>	0.04 - 0.76	No	Additive to control bacterial growth
<b>Unregulated Contaminants<sup>4</sup></b>								
1,1-Dichloroethane	2013	ppb	NA	NA	0.04	< 0.03 - 0.04	NA	Used as a solvent
Chlorate	2013	ppb	NA	NA	348	320 - 420	NA	By-product of water chlorination
Hexavalent Chromium	2013	ppb	NA	NA	0.05	0.03 - 0.06	NA	Erosion of natural deposits
Strontium	2013	ppb	NA	NA	243	240 - 250	NA	Erosion of natural deposits
Vanadium	2013	ppb	NA	NA	0.3	0.2 - 0.3	NA	Erosion of natural deposits
<b>Perfluoroalkyl Substances (PFAS)</b>								
PFHxS <sup>5</sup>	2017	ppt	NA <sup>6</sup>	NA <sup>6</sup>	5.5	5.1 - 5.9	NA <sup>6</sup>	Firefighting foams, industrial chemicals, and consumer goods
PFHxA <sup>5</sup>	2017	ppt	NA <sup>6</sup>	NA <sup>6</sup>	3.0	2.8 - 3.2	NA <sup>6</sup>	Firefighting foams, industrial chemicals, and consumer goods
PFOS <sup>5</sup>	2017	ppt	NA <sup>6</sup>	LHAL <sup>7</sup> 70	2.7	2.4 - 2.9	No	Firefighting foams, industrial chemicals, and consumer goods
PFOA <sup>5</sup>	2017	ppt	NA <sup>6</sup>	LHAL <sup>7</sup> 70	3.2	2.9 - 3.5	No	Firefighting foams, industrial chemicals, and consumer goods
<b>Lead and Copper</b>								
Lead	2016	ppb	0	AL 15	3.9	30 samples; 1 exceeded AL	No	Erosion of natural deposits; plumbing corrosion
Copper	2016	ppm	1.3	AL 1.3	0.12	30 samples; 0 exceeded AL	No	Erosion of natural deposits; plumbing corrosion

Data in this report is from the most recent testing done in accordance with regulations and presented as required by 40 CFR 141.153 and 141.154.

<sup>1</sup> The addition of fluoride was halted on 6/15/2011 by City Ordinance No. 5849.

<sup>2</sup> Reported as the highest locational running annual average.

<sup>3</sup> Reported as the highest system-wide running annual average.

<sup>4</sup> Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard.

<sup>5</sup> Detected PFAS: perfluorohexanesulfonic acid (PFHxS), perfluorohexanoic acid (PFHxA); perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA)

<sup>6</sup> Not applicable at this time, the EPA is currently studying PFAS to determine whether MCLG and MCL are needed.

<sup>7</sup> The EPA's lifetime health advisory level (LHAL) for PFOA and PFOS offers a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOA and PFOS in drinking water.

## OTHER MONITORING

In addition to the ADEC and EPA mandated sampling, our water system voluntarily tests for numerous additional substances to make certain your water is of the highest quality.

Substance	Frequency	MCL	2017 Average	Compare to MCL
Alkalinity	Daily	No Limit	127 ppm as CaCO <sub>3</sub>	-
Hardness	Daily	No Limit	142 ppm as CaCO <sub>3</sub>	-
Turbidity	Daily	1 NTU	0.11 NTU	9 times better
Iron	Daily	300 ppb	11 ppb	27 times better
pH	Daily	6.5 - 8.5 standard units	8.4 standard units	within range
Manganese	Daily	50 ppb	11 ppb	4 times better
Dissolved Solids	Weekly	500 ppm	181 ppm	3 times better

### Additional Information About Lead in Drinking Water

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.

Golden Heart Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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 two 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 (1-800-426-4791) or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

Water that remains stationary within your home plumbing for extended periods of time can leach lead out of pipes joined with lead-containing solder as well as brass fixtures or galvanized pipes. Flushing fixtures has been found to be an effective means of reducing lead levels. The flushing process could take from 30 seconds to 2 minutes or longer while the water becomes cold or reaches a steady temperature.

Faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. Consumers should be aware of this when choosing fixtures and take appropriate precautions. Visit the NSF Web site at [www.nsf.org](http://www.nsf.org) to learn more about lead-containing plumbing fixtures.



### Attention Property Owners and Managers

This report is available at our administrative office located at 3691 Cameron Street or on our website at: [www.akwater.com/ghu-ccr.pdf](http://www.akwater.com/ghu-ccr.pdf)

Certain residents and tenants may not receive notice of this report if the property owner or manager is receiving the water bill. While not required by law, property owners and managers, as well as business owners, are encouraged to provide this information to their tenants.

This report should be photocopied and distributed, or posted in a prominent place at the facility.

## PFAS: Q&A

### What are PFOA and PFOS?

PFOA and PFOS are perfluoroalkyl substances (PFAS) – man-made chemicals that are resistant to oil, stains, grease, and water. They have been used to make carpets, fabrics for clothing and furniture, paper packaging for food, non-stick cookware, and firefighting foams. PFOS and PFOA are no longer manufactured in the United States.

### How can I be exposed to PFAS?

PFAS have been used worldwide in industry and consumer products since the 1950s; they are released into the environment (air, water, soil, etc.) when other products are made, used, or discarded. PFAS are very stable and persist in the environment for long periods of time.

People can be exposed to these chemicals in house dust, indoor and outdoor air, food, and drinking water. Because PFAS were used worldwide, stay in the environment for a long time, and travel long distances in water and air, there are trace amounts all around us.

### What is an advisory level?

A lifetime health advisory level (LHAL) is the amount below which no harm is expected from these chemicals. The EPA publishes LHALs to offer a margin of protection against adverse health effects to the most sensitive populations: fetuses during pregnancy and breastfed infants.

The LHALs are calculated based on the drinking water intake of lactating women, who drink more water than other people and can pass these chemicals along to nursing infants through breastmilk. The EPA has set separate and combined LHALs for PFOA and PFOS of 70 parts per trillion (ppt).

### How can PFAS affect my health?

Scientists are not yet certain about the possible health effects resulting from human exposure to PFAS levels typically found in our food and water. Some, but not all studies in humans have suggested that certain PFAS may affect the developing fetus and child. Potential health effects from exposure to PFAS may include:

- Effects on the developing fetus and child, including possible changes in growth, learning, and behavior
- Decreased fertility and interference with the body's natural hormones
- Increased cholesterol
- Effects on the immune system
- Increased cancer risk

To learn more about potential health effects of PFAS, contact the Alaska Section of Epidemiology at 907-269-8000.

### What are PFAS levels in the U.S. population?

Most people in the United States and in other industrialized countries have measurable amounts of PFAS in their blood. The CDC estimates that the average blood concentrations of PFOA and PFOS are 2,100 ppt and 6,300 ppt respectively.

### Are my pets at risk?

The health effects on animals are likely to be similar to the effects on people. However, animals and humans do not always process chemicals the same way. Contact your veterinarian if you have questions about PFAS and your pet's health.

### What is GHU doing?

As part of our ongoing efforts to ensure the highest standards of water quality, we are closely monitoring PFAS concentrations to confirm that they remain significantly lower than the EPA's lifetime health advisory levels.

We are currently assessing PFAS treatment options and developing contingency procedures. This proactive approach will allow GHU to respond quickly and effectively, should PFAS concentrations increase to levels of concern.

### Is GHU's water safe to drink?

Yes, the trace amounts of PFOA and PFOS detected are more than 90% lower than the EPA's health advisory levels.

### Where can I get more information?

- Alaska Environmental Public Health Program  
<http://dhss.alaska.gov/dph/Epi/eph/Pages/default.aspx>
- Agency for Toxic Substances and Disease Registry  
<https://www.atsdr.cdc.gov/pfc/index.html>
- EPA  
<https://www.epa.gov/chemical-research/research-and-polyfluoroalkyl-substances-pfas>
- National Toxicology Program:  
<https://ntp.niehs.nih.gov/pubhealth/hat/noms/pfoa/index.html>

If you have questions about PFAS and your health, please consult your healthcare provider.





**Have a question about your water system?**

**Contact Golden Heart Utilities**

PO Box 80370  
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Phone: 907-479-3118

Email: [usainfo@akwater.com](mailto:usainfo@akwater.com)

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