



SOLDOTNA

City of Soldotna's  
Drinking Water Quality Report  
For Year 2016  
PWSID # 2241054



SOLDOTNA

We are pleased to present this year's Annual Quality Water Report to our valued customers. This report is designed to inform you about the quality of the ground water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. Continual efforts are made to improve the water treatment process and protect our water resources. Copies of the Source Water Protection Plan are available at our office or public libraries. The Soldotna Utility Department continually strives to provide quality water by flushing the system every spring and cleaning the water mains on an as needed basis. If you have any questions about this report or about your water utility, please contact Kyle Kornelis, City Engineer at 907-714-1232.

The City of Soldotna routinely monitors for contaminants in your drinking water according to Federal and State laws. The table below shows the results of our monitoring for the period of January 1, 2016 to December 31, 2016, or the most recent monitoring results. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these 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 Safe Drinking Water Hotline (1-800-426-4791). 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 microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

**Waivers and/or Non-Detects:**

There are many regulations pertaining to sampling and monitoring of our water system. Since we had a waiver for Synthetic Organic Contaminants and other Organic Contaminants, we did not test for them during the time period covered by this report. We tested for numerous contaminants including total Coliform Bacteria, and all of them were below the maximum contaminant level goal.

**Definitions:**

In this table, you will find test results and abbreviations with which you might not be familiar.

Non-Detects (ND) – laboratory analysis indicates that the contaminant is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) – corresponds to one part per million parts.

Parts per billion (ppb) or Micrograms per liter (µg/l) – corresponds to one part per billion parts.

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

Maximum Contaminant Level (MCL) – the “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLG’s as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) – the “Goal” (MCLG) is the level of a contaminant in drinking water below, which there is no known or expected risk to health. MCLG’s allow for a margin of safety.

**Well B (depth 163 ft.)**

Contaminant	Sample Date	MCL Violation	Level Detected	Unit Measurement	MCLG	MCL	Likely source of contamination to the best of our present knowledge
<b>Inorganic Contaminants</b>							
Arsenic	9-15	NO	8.39	ppb	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Combined Radium 226/228	11-14	NO	2.24	pCi/L	0	5.0	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Barium	08-13	NO	97.9	ppb	0	2000	Erosion of natural deposits

**Well C (depth 247 ft.)**

Contaminant	Sample Date	MCL Violation	Level Detected	Unit Measurement	MCLG	MCL	Likely source of contamination to the best of our present knowledge
<b>Inorganic Contaminants</b>							
Combined Radium 226/228	11-14	NO	1.68	pCi/L	0	5.0	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Barium	12-10	NO	69.4	ppb	0	2000	Erosion of natural deposits
Chloroform	9-15	NO	0.680	ppb	0	NA	By-product of drinking water chlorination

**Well C-2 (depth 275 ft.)**

Contaminant	Sample Date	MCL Violation	Level Detected	Unit Measurement	MCLG	MCL	Likely source of contamination to the best of our present knowledge
<b>Inorganic Contaminants</b>							
Gross Alpha	5-12 To 1/13 4-sample	NO	1.4	pCi/L	0	15 pCi/L	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.
Combined Radium 226/228	5-12 To 1/13 4-sample	NO	1.97	pCi/L	0	5.0	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Barium	11-16	NO	83.1	ppb	0	2000	Erosion of natural deposits

**Well E (depth 292 ft.)**

Contaminant	Sample Date	MCL Violation	Level Detected	Unit Measurement	MCLG	MCL	Likely source of contamination to the best of our present knowledge
<b>Inorganic Contaminants</b>							
Arsenic	9-15	NO	9.25	ppb	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Combined Radium 226/228	11-14	NO	2.77	pCi/L	0	5.0	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Barium	8-13	NO	72.3	ppb	0	2000	Erosion of natural deposits
<b>Volatile Organic Contaminants</b>							

**Test Results Distribution System**

<b>Lead and Copper</b>							
Lead	9-15	NO	3.09	ppb	0	AL=15	Corrosion of household plumbing
Copper	9-15	NO	178	ppb	1300	AL=1300	Corrosion of household plumbing
<b>Volatile Organic Contaminants</b>							
Halacetic Acid	5-16	NO	5.6	ppb	0	60	By-product of water chlorination
Trihalomethanes	5-16	NO	5.06	ppb	0	80	By-product of water chlorination
Asbestos	11-13	NO	ND	mfl	0	7	Erosion of the distribution mains

Source Water Assessment (SWA) Reports have been completed by the ADEC Drinking Water Protection Program as a first step towards voluntary local source water protection efforts. Vulnerability rankings are assigned based on the susceptibility of the drinking water source to **potential** contamination, recent sampling results and the presence of **potential** contaminant sources - they do not necessarily indicate these contaminants will reach our source of water. Our water system has received the following vulnerability rankings:

Completed source water assessments are available at ADEC's Drinking Water Protection Program website: [http://www.dec.state.ak.us/eh/dw/DWP/source\\_water.html](http://www.dec.state.ak.us/eh/dw/DWP/source_water.html), by calling 907.269.7521, or at 555 Cordova St, Anchorage, AK; or at the Alaska Resources Library and Information Services, 3150 C St, Anchorage, AK. The City of Soldotna's public water system consists of three source intakes which are the following.

**Well B** - is a Class A water system. This water system is located in Soldotna and the intake for this PWSID is a ground water well. The wellhead received a susceptibility of "low" and the aquifer received a susceptibility rating of "high". Combining these scores produces a natural susceptibility of "low" for the source. In addition, this water system has received a vulnerability rating of "medium" for bacteria/viruses, "high" for nitrates/nitrites, "high" for volatile organic chemicals, "high" for heavy metals, "medium" for other organic chemicals, and "medium" for synthetic organic chemicals.

**Well C** - is a Class A water system. This water system is located in Soldotna and the intake for this PWSID is a ground water well. The wellhead received a susceptibility of "low" and the aquifer received a susceptibility rating of "medium". Combining these scores produces a natural susceptibility of "low" for the source. In addition, this water system has received a vulnerability rating of "medium" for bacteria/viruses, "medium" for nitrates/nitrites, "high" for volatile organic chemicals, "high" for heavy metals, "medium" for other organic chemicals, and "low" for synthetic organic chemicals.

**Well C-2** - is a Class A water system. This water system is located in Soldotna and the intake for this PWSID is a ground water well. The wellhead received a susceptibility of "low" and the aquifer received a susceptibility rating of "medium". Combining these scores produces a natural susceptibility of "low" for the source. In addition, this water system has received a vulnerability rating of "medium" for bacteria/viruses, "medium" for nitrates/nitrites, "high" for volatile organic chemicals, "high" for heavy metals, "medium" for other organic chemicals, and "low" for synthetic organic chemicals.

**Well E** - is a Class A water system. This water system is located in Soldotna and the intake for this PWSID is a ground water well. The wellhead received a susceptibility of "low" and the aquifer received a susceptibility rating of "medium". Combining these scores produces a natural susceptibility of "low" for the source. In addition, this water system has received a vulnerability rating of "medium" for bacteria/viruses, "medium" for nitrates/nitrites, "high" for volatile organic chemicals, "high" for heavy metals, "medium" for other organic chemicals, and "low" for synthetic organic chemicals.

**Arsenic:** Arsenic is a naturally occurring mineral. 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. On February 22, 2002, EPA reduced the MCL for arsenic from 50 ppb to 10 ppb.

The table now reflects an MCL of 10 ppb for reporting purposes, which our system is currently meeting.

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. Arsenic is a mineral known to cause cancer in humans when it is in high concentrations and, it is also linked to other health effects such as skin damage and circulatory problems. This continuing review may result in more stringent standards.

The City of Soldotna has been aware of EPA's study on arsenic and has met the arsenic levels deadline. As shown in the table above all four of our wells are currently below the new 10 ppb standard set by EPA.

### **2017 Water Operation Projects:**

In our continuing effort to meet existing needs for high water quality and to provide emergency reserve and growth capacity, the city will be taking the Karen Street 1,000,000 gallon reservoir off line this July to complete an inspection of the coating that was applied to the interior last July. We will also be performing some minor water maintenance on the S. Kobuk Street Upgrade Project this summer.

To continue to maintain a safe and dependable water supply, improvements may need to be made in the existing water system. If improvements are made, future rate adjustments may be necessary to implement these improvements.

We, at the City of Soldotna, work to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

