



City of Seward Water Quality Report

Public Water Supply ID 240757

June 2020

Why do we send this Report?

The Alaska Department of Environmental Conservation (DEC) and Environmental Protection Agency (EPA) require us to provide annual water quality reports to our customers. The City of Seward has two public water sources: The City and Seward Marine Industrial Center (SMIC) water systems. This report is based on testing City water during calendar year 2019 unless otherwise noted.

Compliance Record

We vigilantly safeguard our water supplies and distribution system and once again are pleased to report that in 2019 City water met all DEC and EPA drinking water standards.

Where does my water come from?

The sources of City water are deep water wells in the Fort Raymond area, fed from the Japanese Creek aquifer. Our water is minimally treated because of its great natural quality.

How is water contaminated?

Typical sources of water are wells, streams, springs, rivers and lakes. As water travels through the ground or over land, it dissolves naturally-occurring minerals and, in some cases, radioactive materials. It can also pick up substances from animal or human activity. These are often considered to be contaminants:

- **Microorganisms:** Bacteria, protozoa, some fungi and algae, rotifers, and other tiny organisms. Sometimes viruses are also classified as microorganisms.
- **Inorganics:** Minerals, often salts and metals, that can be naturally-occurring or come from stormwater runoff, industrial or domestic discharges, oil and gas production, mining and farming.
- **Organics:** Carbon-containing compounds, such as sewage, stormwater runoff, by-products of industrial processes, and hydrocarbons, including synthetic and volatile organic compounds.
- **Pesticides and Herbicides:** These may come from fertilized lawns, agriculture, and stormwater runoff.
- **Radionuclides:** Radioactive material can be naturally-occurring or result from oil, gas and mining activities.
- **Lead and Copper:** Elevated levels of lead can cause high blood pressure in adults and delay development in children. Pregnant women and young children are especially vulnerable. Long-term exposure to high levels of copper can cause gastrointestinal distress, potentially leading to liver and kidney damage. These metals are primarily from service lines and home plumbing that are the responsibility of our customers. You can minimize exposure to lead and copper by flushing your tap for 30 to 60 seconds before using water for drinking or cooking.

Surveys and Additional Testing

DEC requires us to demonstrate water quality, proper equipment function, and safety. The last on-site sanitary survey was done on November 26, 2019. Minor deficiencies with equipment were noted and were corrected. The next survey is due in 2022. The City spot checks for lead and copper every 3 years and the most recent tests were in 2017. The next tests will be done in 2020. More information is available from Public Works at <https://www.cityofseward.us/departments/public-works>. You may also wish to have your own water tested. Other information, including testing methods and steps to minimize exposure, is available from the Safe Drinking Water Hotline at (800) 426-4791 and online at www.epa.gov/safewater.



Analyte ¹	Sample Date ²	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Copper	7/27/17	N	0.01 to 0.12 ppm ³	1.3 ppm	AL=1.3 ppm	Corrosion of household plumbing; erosion of natural deposits.
Lead	7/27/17	N	ND to 2.3 ppb ³	0	AL=15 ppb	Corrosion of household plumbing; erosion of natural deposits.
Arsenic	4/14/20	N	ND	0	10 ppb	Erosion of natural deposits.
Barium	4/14/20	N	0.005 ppm ⁴	2 ppm	2 ppm	Erosion of natural deposits.
Total Coliform	Regularly	N	ND	0	1	An indicator naturally present in the environment.
Nitrate	4/14/20	N	0.53 ppm ⁴	10 ppm	10 ppm	Runoff from fertilizer use; effluent from septic tanks, sewage and manure; erosion of natural deposits.
Total Trihalomethanes	4/14/20	N	ND	0	80 ppb	By-product of drinking water disinfection.
Haloacetic Acids	7/24/18	N	ND	0	60 ppb	By-product of drinking water disinfection.
Gross Alpha Emitters	12/19/16	N	0.66 pCi/L	0	15 pCi/L	Erosion of natural deposits.
Combined Radium	12/19/16	N	0.19 pCi/L	0	5 pCi/L	Erosion of natural deposits.

Notes: 1) This table lists what DEC and EPA require the City to report; 2) Unless otherwise noted, the data are from testing during 2019, but some testing is less frequent than once per year; 3) From sampling at customer locations, not the treated water sources; and 4) Flow-weighted average result from separate samples from Wells 4, 5, 6 and 7.

Terms and Definitions

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

Maximum Contaminant Level (MCL): The highest level of contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment 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 disinfectant allowed in drinking water. Addition of a disinfectant reduces and controls microbial contamination.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of disinfectants to control microbial contamination.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

ND: Not detected

ppm: Parts per million, or milligrams per liter

ppb: Parts per billion, or micrograms per liter

pCi/L: Picocuries per liter.

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