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 substances found in some source waters 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, hydrocarbons, including synthetic and volatile organic compounds, often from chemical and fuel storage and distribution.

Pesticides and Herbicides: These may come from fertilized lawns, agricultural operations, 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. The City of Seward provides high quality water, but you are responsible for the plumbing in your home, business, or institution.

If you have lead or copper in your plumbing and your water has been sitting for several hours, you can minimize the potential for exposure by flushing your tap for 30 to 60 seconds before using water for drinking or cooking.

You may also wish to have your 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. The City spot checks for lead and copper every 3 years and the most recent tests were in 2017.

Compliance Record
In 2018 we had **no violations** of maximum contaminant levels or treatment techniques for the SMIC water system. If you have any questions or concerns, please contact us.

Are you at risk?
Some people may be more vulnerable to drinking water contaminants than others. Immuno-compromised persons such as those undergoing chemotherapy or with HIV/AIDS or other immune system disorders, organ transplant recipients, the elderly, and infants can be particularly at risk. These people should seek advice about drinking water from their health care providers. EPA and Centers for Disease Control (CDC) guidelines on means to lessen the risk of harmful effects are available from the Safe Drinking Water Hotline at (800) 426-4791 and www.epa.gov/safewater. We will also answer your questions.

City of Seward
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Seward, AK 99664-0167

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SMIC
Water Quality Report

Public Water Supply ID 244159

June 2019

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 Seward Marine Industrial Center (SMIC) and City water systems. This report is based on testing SMIC water during calendar year 2018 unless otherwise noted.

Contact information:

Doug Schoessler, Public Works Director
434 6th Ave, Seward, Alaska 99664

phone: 224-4005
e-mail: publicworks@cityofseward.net
website: http://www.cityofseward.net/pubwork

Is my water safe?
We vigilantly safeguard our water supplies and distribution system and once again are pleased to report that in 2018 SMIC water met all DEC and EPA drinking water standards.

Where does my water come from?
The sources of SMIC water are two deep water wells northeast of the prison, fed from the Fourth of July Creek aquifer. This water is minimally treated because of its great natural quality.

Surveys and Additional Testing
DEC requires surveys and other demonstrations of water quality and safety. The last on-site sanitary survey was done on December 7, 2016. The next one is due in 2019. More information is available from Public Works.

Analyte[1]	Sample Date[2]	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Copper	7/25/17	N	0.02 to 0.84 ppm[3]	1.3 ppm	AL=1.3 ppm	Corrosion of household plumbing; erosion of natural deposits.
Lead	7/25/17	N	0.6 to 3.2 ppb[3]	0	AL=15 ppb	Corrosion of household plumbing; erosion of natural deposits.
Arsenic	12/19/16	N	ND	0	10 ppb	Erosion of natural deposits.
Barium	10/3/10	N	0.006 ppm	2 ppm	2 ppm	Erosion of natural deposits.
Total Coliform	Regularly	N	ND	0	1	An indicator naturally present in the environment.
Nitrate	12/12/18	N	0.22 ppm	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage and manure; erosion of natural deposits.
Total Trihalomethanes	7/24/18	N	5.0 ppb	0	80 ppb	By-product of drinking water disinfection.
Haloacetic Acids	7/24/18	N	3.3 ppb	0	60 ppb	By-product of drinking water disinfection.
Gross Alpha Emitters	12/19/16	N	0.60 pCi/L	0	15 pCi/L	Erosion of natural deposits.
Combined Radium	12/19/16	N	0.06 pCi/L	0	5 pCi/L	Erosion of natural deposits.

Notes: 1) This table lists what DEC and EPA require the City of Seward to report; 2) Unless otherwise noted, the data are from testing during 2018, but some testing is less frequent than once per year; and 3) From sampling at customer locations, not the treated water source.

What are you really drinking?
Drinking water, including bottled water, may contain at least small amounts of minerals and some contaminants. Their presence does not necessarily indicate that water poses a health risk. More information about water quality and its potential health effects is available at (800) 426-4791 and www.epa.gov/safewater.

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.