

## Where Do Contaminants Come From?

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 contaminants may be present in some source waters:

**Microorganisms:** Bacteria, protozoa, viruses, and other tiny organisms, often from animal and human wastes.

**Inorganics:** Minerals, often salts and metals, that can be naturally occurring or come from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.

**Organics:** These may be hydrocarbons, including synthetic and volatile organic compounds, from fuel storage and distribution, by-products of industrial processes, urban stormwater runoff, and sewage.

**Pesticides and Herbicides:** These may come from fertilizing lawns, urban stormwater runoff and agricultural operations.

**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, so pregnant women and young children are especially vulnerable. High levels of copper can cause gastrointestinal distress, even leading to liver and kidney damage from long-term exposure. These metals are primarily from service lines and home plumbing. Seward provides high quality water, but you are responsible for your plumbing.

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 seconds to 2 minutes before using water for drinking or cooking. You may also wish to have your water tested. Information on lead and copper, testing methods, and steps you can take to minimize exposure to them is available from the Safe Drinking Water Hotline at (800) 426-4791 or [www.epa.gov/safewater](http://www.epa.gov/safewater). The City spot checks for lead and copper every 3 years.

## Compliance Record

In 2011 we had no violations of monitoring, maximum contaminant levels or treatment techniques for the SMIC water system. If you have any questions or concerns, please contact us.

### Contact Information:

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# SMIC Water Quality Report

June 2012

## What is the Water Quality Report?

The Alaska Department of Conservation (DEC) and Environmental Protection Agency (EPA) require us to send out annual water quality reports. The City of Seward has two public water systems: the City water system and the Seward Marine Industrial Center (SMIC) water system. This report is based on testing SMIC water from January 1-December 31, 2011 unless otherwise noted.

## How to Get Involved

Regular Seward City Council meetings are held twice a month, usually on Monday evenings. Changes to your drinking water may be discussed at these meetings. Presentations may also be made at other community gatherings. We encourage your participation.

## Are You at Risk?

Some people may be more vulnerable to drinking water contaminants than others. Immuno-compromised people like those undergoing chemotherapy, with organ transplants, HIV/AIDS or other immune system disorders, some 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 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](http://www.epa.gov/safewater). We will also answer your questions about water quality.

## Is My Water Safe?

In 2011 SMIC water met all DEC and EPA drinking water health standards. We vigilantly safeguard our water and once again are pleased to report we have not violated a maximum contaminant level or other water quality standard.

## Where Does My Water Come From?

The sources of the Seward Marine Industrial Center water are deep water wells fed from the Fourth of July Creek Aquifer. Our water is minimally treated because of its great quality that occurs naturally.

## Additional Testing and Surveys

DEC requires various tests to demonstrate the quality of your drinking water. It also requires an on-site sanitary survey every five years. More information is available at the Public Works Department.

Analyte	Sample Date	Violation Y/N	Level Detected	MCLG	MCL	Likely Source of Contamination
Copper	8/22/11	N	0.48 ppm	1.3 ppm	AL=1.3 ppm	Corrosion of household plumbing; erosion of natural deposits.
Lead	8/22/11	N	1.8 ppb	0	AL=15 ppb	Corrosion of household plumbing; erosion of natural deposits.
Arsenic	10/3/10	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	Naturally present in the environment.
Nitrate	12/20/11	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	8/30/10	N	6.3 ppb	0	80 ppb	By-product of drinking water disinfection.
Haloacetic Acids	8/30/10	N	3.3 ppb	0	60 ppb	By-product of drinking water disinfection.
Gross Alpha Emitters	12/19/07	N	1.1 pCi/L	0	15 pCi/L	Erosion of natural deposits.
Combined Radium	12/19/07	N	0.05 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 2011; 3) Some of our testing is less frequent than once per year.

## Terms and Definitions

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

**Maximum Contaminant Level (MCL):** The highest level of contaminant that is 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 controls microbial contamination.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a 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.

## What Are You Really Drinking?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of 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](http://www.epa.gov/safewater).