

What is this Report?

The City and Borough of Juneau, Department of Public Works, Utilities Division, is pleased to present this annual water quality report. In accordance with the United States Environmental Protection Agency's (EPA) National Primary Drinking Water Regulations, all drinking water suppliers are required to provide the public with an annual statement describing the community's water supply and quality.

Our goal is to provide the City of Juneau residents, visitors, and businesses with a safe and dependable drinking water supply.

Where Does Our Water Come From?

Juneau's drinking water comes from both groundwater and surface water sources. The primary water source is the Last Chance Basin (LCB) wellfield located in the Gold Creek watershed. This groundwater supplies roughly two-thirds of the local water demand. Surface water, collected at the Salmon Creek (SC) Reservoir, comes from snowmelt and rainfall. As the secondary water source, it supplies about one-third of Juneau's drinking water.

How is Your Water Treated?

Juneau's water sources produce high quality water, requiring very little treatment compared to the rest of the United States. Even so, water from both sources is chlorinated to kill disease causing microorganisms that may be present. Water from SC is additionally run through a filtration unit (as required by the EPA Long Term 2 Enhanced Surface Water Treatment Rule), and is treated with soda ash. Soda ash helps reduce leaching of copper and lead from household pipes into drinking water as it enters the home. As groundwater, LCB does not require filtration. The chemistry of LCB also has slightly different characteristics and does not require the soda ash addition.

Projects and Updates

COPE PARK

As part of the Cope Park improvement project, the 100 year-old piping systems were replaced. These waterlines provide service from LCB to the Highlands, sections of Downtown and the Flats.

WATERLINE REPLACEMENTS

Most projects in 2016 focused on replacing the aging distribution piping around town. Much of this infrastructure was over 50 years old. Notable replacements include:

- Distin Ave. & West 8th St.
- Front St. in Douglas
- Egan Drive from 10th to Main St.



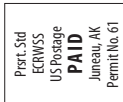
In 2016, the Water Utility had no violations of monitoring, MCLs or treatment techniques. The CBJ area-wide water system continues to meet a local water demand of approximately 3.2 million gallons per day (MGD).

Fun Facts

- About 400 billion gallons of water are used in the United States per day!
- 80% of all illnesses in the developing world are water related.
- There is more freshwater in the atmosphere than in all of the rivers on the planet combined.
- LCB and SC produce about 1.2 billion gallons of water annually.

How You Can Help

- **Pick up pet waste.** Pet waste pollutes waterways with bacteria and excess nutrients. All pets must be leashed in the watershed areas.
- **Respectful recreation.** Camping, shooting, recreational mining (except gold panning) and any hazardous substances are prohibited within the watershed boundaries.
- **Suspicious activity.** Call the Utilities Division at (907) 586-0393 if you see suspicious activity.
- **Get educated!** Contact the Utilities Division if you'd like more information or a tour of our facilities.



POSTAL CUSTOMER



FOR MORE INFORMATION

Thank you for reading this report and doing your part to protect Juneau's water supply. Please contact us if you have any questions, comments, or are interested in learning more about the CBJ Utilities drinking water system:

John Bohan, Chief CIP Engineer
2009 Radcliffe Road • (907) 586-0393

Drinking water test results are available to the public by calling the Utilities Division at 907-586-0393 or by contacting ADEC at 907-465-5350.



CBJ Utilities Division
2009 Radcliffe Road • Juneau, AK 99801

2016 ANNUAL

Water Quality REPORT



Salmon Creek Dam

Here to Serve Your Drinking Water Needs.
(907) 586-0393

2016 Drinking Water Monitoring and Test Results

Test	Units	Maximum Contaminant Level	Maximum Contaminant Level Goal	Last Chance Basin	Salmon Creek	Date Sampled	Source of Contaminant
MEASURED BEFORE TREATMENT							
Turbidity	NTU	0.3	0	N/A	0.046	Continuous	Surface runoff (Values shown do not include days when SC was offline)
Arsenic	mg/L	0.01	0	ND	ND	2014*/2013*	Erosion of natural deposits
Barium	mg/L	2	2	0.054	0.048	2015*	Erosion of natural deposits
Fluoride	mg/L	4	4	< 0.1	< 0.1	2015*	Naturally present in the environment. (The CBJ has not added fluoride since Jan. 2007)
Nitrate (as Nitrogen)	mg/L	10	10	0.23	<0.1	2016	Fertilizer runoff; sewage leaching; erosion of natural deposits
Selenium	mg/L	0.05	0.05	0.001	0.001	2015*	Erosion of natural deposits
Alpha Particles	pCi/L	15	0	1.1	0.26	2015*	Erosion of natural deposits
Radium 226	pCi/L	5	0	0.44	0.84	2015*	Erosion of natural deposits
Radium 228	pCi/L	5	0	1.8	0.22	2015*	Erosion of natural deposits
MEASURED IN THE DISTRIBUTION SYSTEM							
Total Coliform Bacteria	count	1 positive sample/month	0	No Violation		Weekly	Runoff from organic material
Haloacetic Acids (HAA5)	mg/L	0.060	N/A	0.001 avg ND-0.009		Quarterly	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	mg/L	0.080	N/A	0.003 avg ND-0.012		Quarterly	By-product of drinking water disinfection
Chlorine	mg/L	MRDL = 4	MRDL = 4	0.428 avg		Continuous	Disinfectant used to control microbes
Copper	mg/L	AL = 1.3	1.3	90th percentile = 0.4000		2016	Corrosion of household plumbing systems; erosion of natural deposits.
Lead	mg/L	AL = 0.015	0	90th percentile = 0.0000		2016	Corrosion of household plumbing systems; erosion of natural deposits.

This table presents a summary of the most recent water quality test results for the CBJ water system. ADEC and the EPA limit the amount of certain contaminants in drinking water to ensure the safety of public health. Juneau's treated drinking water met all State and Federal standards for public health in 2016.

*The State only requires monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of the data, though representative, are more than a year old.

ABBREVIATIONS

ADEC	Alaska Department of Environmental Conservation
AL	Action Level – The concentration of a contaminant which, if exceeded, triggers additional treatment or other requirements.
CBJ	City and Borough of Juneau
EPA	U.S. Environmental Protection Agency
FDA	U.S. Food & Drug Administration
LCB	CBJ's Last Chance Basin water source
MCL	Maximum Contaminant Level – 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 – 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.
MGD	Million Gallons per Day
mg/L	Milligram per liter or parts per million
MRDL	Maximum residual disinfectant level – the highest level of a disinfectant allowed in drinking water.
N/A	Not Applicable
ND	None Detected at specified level
NTU	Nephelometric Turbidity Unit
pCi/L	pico Curies per Liter
ppb	Parts per Billion
SC	CBJ's Salmon Creek water source

Exemptions and Waivers

The CBJ water system operates under waivers for synthetic organic chemicals and reduced asbestos monitoring as authorized by ADEC.

Potential Water Contaminants

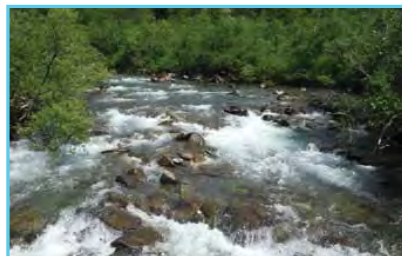
Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of certain contaminants. Contaminants often enter the source water naturally; as water travels over land or through the ground, it dissolves naturally occurring minerals and may pick up substances from the presence of animals or human activity.

The presence of a contaminant does not necessarily indicate that the water poses a health risk. The EPA limits the amounts of contaminants in public water systems to ensure that water is safe to drink. The FDA establishes contaminant limits for bottled water.

Source Water Protection

A Source Water Assessment was performed for CBJ watersheds to identify the potential for contamination. LCB received a "Medium" susceptibility designation common to groundwater sources. SC reservoir received a "Very High" susceptibility designation (due to potential exposure by wildlife and recreational uses) common for surface water sources. These ratings do not directly reflect the quality of the drinking water; they provide the Water Utility with information as to how prone the water sources are to possible contamination.

Copies of the Source Water Assessments for LCB and SC are available from the ADEC Drinking Water Program at 866-956-7656, or the Alaska Resource Library at 907-272-7547.



Contaminants that may be present in drinking water sources:

Microbial contaminants such as viruses and bacteria, may come from humans or animals.

Inorganic contaminants, such as salts and metals, can be naturally-occurring, or the result of runoff and inputs from wastewater treatment plants, industrial practices like oil and gas production, mining, or farming.

Organic contaminants, including synthetic and volatile organic chemicals such as trihalomethanes, form when naturally occurring organics in water react with chlorine-based chemicals or petroleum products.

Radioactive contaminants, such as radium, can occur naturally or as a result of oil and gas production and mining activities.

Lead: Although there is no detectable lead in our source water, if present, lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water occurs primarily from materials and components of household plumbing. The majority of homes have some risk of lead contamination in water that sits in pipes for more than two hours. The CBJ Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. You can minimize lead exposure by flushing your tap for up to 2 minutes before used 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 or at www.epa.gov/safewater/lead.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS, or other immune system disorders, the elderly and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

For more information about contaminants in drinking water sources and potential health effects, contact the EPA's Safe Drinking Water Hotline (1-800-426-4791) or visit water.epa.gov/drink/contaminants.