

# What is this Report?

The City and Borough of Juneau (CBJ) Water Utility is pleased to present this annual water quality report in accordance with the United States Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, which requires all drinking water suppliers to provide the public with an annual statement describing the water supply and quality of its water.

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 uses both groundwater and surface water as its 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 year-round. Surface water, collected at the Salmon Creek (SC) Reservoir, comes from snow melt 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 some of the highest quality water in the state, requiring very little treatment by comparison 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 the SC Reservoir is also treated with soda ash. This helps reduce leaching of copper and lead from household pipes into the drinking water as it enters the home. The chemistry of LCB has slightly different characteristics, and does not require soda ash addition.



# Projects and Updates

## LAST CHANCE BASIN

Over the past five years, the LCB wellfield saw a 55% reduction in capacity and the existing five wells could no longer keep up with demand. In 2015, the wellfield underwent a major renovation: five replacement wells and two new wells were drilled. New buildings, piping, and controls were installed for the two new wells. Additionally, a new emergency generator was installed for backup power during outages. This \$2.1M construction project regained the production capacity needed to serve the citizens, businesses, and visitors with plentiful, high quality drinking water.



## SALMON CREEK PLANT

Renovations at the Salmon Creek Plant began in late 2015 to meet the EPA Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). Facility upgrades include installation of two microfiltration units and modifications to the site, building, piping, pump, electrical, and mechanical systems. This \$4.1M construction project, slated to be completed in 2016, will provide a year-round redundant water source for the CBJ Utilities to serve the community.



# 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.

In 2015, 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).

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## 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 drinking water system:

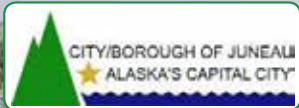
**Samantha Stoughtenger, Utilities Superintendent**  
2009 Radcliffe Road • (907) 586-0393

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

# 2015 ANNUAL Water Quality REPORT



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



# 2015 Drinking Water Monitoring and Test Results

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 2015.

\*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.

Test	Units	Maximum Contaminant Level	Maximum Contaminant Level Goal	Last Chance Basin	Salmon Creek	Date Sampled	Source of Contaminant
MEASURED BEFORE TREATMENT							
Turbidity	NTU	5	0	N/A	0.91 avg	Continuous	Surface runoff (Values shown do not include days when SC was offline)
Total Organic Carbon	mg/L	N/A	N/A	N/A	0.749 avg (ND-0.883)	Monthly	Naturally present in the environment
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	0.37	0.12	2015	Fertilizer runoff; sewage leaching; erosion of natural deposits
Selenium	mg/L	0.05	0.05	<0.002	<0.002	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	0.002 avg (ND-0.006)		Quarterly	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	mg/L	0.080	N/A	0.003 avg (0.001-0.005)		Quarterly	By-product of drinking water disinfection
Chlorine	mg/L	MRDL = 4		0.479 avg		Continuous	Disinfectant used to control microbes
Copper	mg/L	AL = 1.3		90th percentile = 0.459		2013*	Corrosion of household plumbing systems
Lead	ppb	AL = 15		90th percentile = 1.4		2013*	Corrosion of household plumbing systems

## ABBREVIATIONS

<b>ADEC</b>	Alaska Department of Environmental Conservation
<b>AL</b>	Action Level – The concentration of a contaminant which, if exceeded, triggers additional treatment or other requirements.
<b>CBJ</b>	City and Borough of Juneau
<b>EPA</b>	U.S. Environmental Protection Agency
<b>FDA</b>	U.S. Food & Drug Administration
<b>LCB</b>	CBJ's Last Chance Basin water source
<b>MCL</b>	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.
<b>MCLG</b>	Maximum Contaminant Level Goal – The level of a contaminate in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
<b>MGD</b>	Million Gallons per Day
<b>mg/L</b>	Milligram per liter or parts per million
<b>MRDL</b>	Maximum residual disinfectant level – the highest level of a disinfectant allowed in drinking water.
<b>N/A</b>	Not Applicable
<b>ND</b>	None Detected at specified level
<b>NTU</b>	Nephelometric Turbidity Unit
<b>pCi/L</b>	pico Curies per Liter
<b>ppb</b>	Parts per Billion
<b>SC</b>	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. The CBJ also had a waiver for the surface water filtration treatment requirement at SC in 2015.

## 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](http://www.epa.gov/safewater/lead).

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, 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 Dining Water Hotline (1-800-426-4791) or visit [water.epa.gov/drink/contaminants](http://water.epa.gov/drink/contaminants).