

Fun Facts

ABOUT 80-100 GALLONS

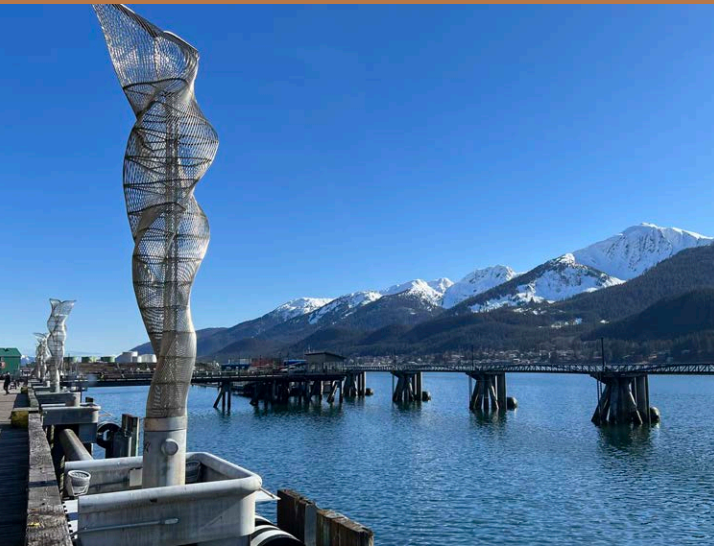
Estimates vary, but, on average, each person uses about 80-100 gallons of water per day for indoor home uses.

RECORD RAIN & SNOW MELT

Juneau measured 88.31 inches of rain and snow melt in 2022. The previous record was set in 1991 with 85.15 inches.

SAVE WATER DAILY

Fixing a small drip in one faucet could save 15 gallons of water per day, or almost 5,500 gallons a year!



FOR MORE INFORMATION

Thank you for reading this report and helping us protect Juneau's water supply. If you have any questions, comments, or would like more information please contact Brian McGuire, CBJ Utilities Superintendent at (907) 586 0393 or ADEC at (907) 465-5066

Cover Art by Lanie McCarry | www.laniemccarryart.com

Lanie is an oil painter from Northern Michigan. She lived in Bethel, Alaska before moving to Juneau in 2018. Drawing inspiration from her life in Alaska, Lanie enjoys painting and creating silly comics. Her grandfather, a painter, always encouraged her to pursue a life in art.

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WATER QUALITY REPORT 2022





Drinking Water Monitoring & Test Results

TEST	UNITS	MAXIMUM CONTAMINANT LEVEL	MAXIMUM CONTAINMENT LEVEL GOAL	LAST CHANCE BASIN	SALMON CREEK	DATE SAMPLED	SOURCE OF CONTAMINANT
Measured Before Treatment							
Turbidity	NTU	0.3	0	N/A	0.011 avg 0.059 max	Continuous	Turbidity data is recorded post filtration
Arsenic	mg/L	0.01	0	<0.001	<0.001	2022	Erosion of natural deposits
Barium	mg/L	2	2	0.047	0.042	2022	Erosion of natural deposits
Fluoride	mg/L	4	4	<0.1	<0.1	2022	Naturally present in the environment (CBJ has not added fluoride since Jan. 2007)
Nitrate (as Nitrogen)	mg/L	10	10	0.40	<1.0	2022	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	0.06	N/A	0.0018 avg ND-0.0076		Quarterly	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	mg/L	0.08	N/A	0.0037 avg 0.0009-0.0094		Quarterly	By-product of drinking water disinfection
Chlorine	mg/L	MRDL = 4	MRDL = 4	0.49 avg		Continuous	Disinfectant used to control microbes
Copper	mg/L	AL = 1.3	1.3	90 th percentile = 0.320		2022	Corrosion of household plumbing systems, erosion of natural deposits
Lead	mg/L	AL = 0.015	0	90 th percentile = 0.0006		2022	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 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. Some data, though representative, is more than a year old. Per State requirements, some contaminants are monitored less than once per year due to infrequent concentration shifts.

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 treatment technology.
MCLG	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.
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 – The unit of measure for turbidity, or the light scatter created by particles suspended in water.
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

CBJ's drinking water is regularly tested and required to provide the results annually to the public – ensuring that is clean, pure, and delicious. All drinking water may be reasonably expected to contain small amounts of certain contaminants. Contaminants often enter the source water naturally; as water travels over land or through the ground, it dissolves 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 are viruses and bacteria that may come from local wildlife or human activity and could affect source watersheds. The most common examples of these include: giardia, cryptosporidium, salmonella, campylobacter, Escherichia coli (E.coli), Hepatitis A, and Norwalk-type viruses.

Inorganic Contaminants can include a combination of metals, salts, compounds, particles, and mineral complexes which do not contain carbon. Inorganic contaminants include natural or man-made elements or compounds that can contaminate water or be concentrated in the water cycle. Some of the most common contaminants include carbon dioxide and other gases, salts like chloride, sodium, calcium, potassium, iron, and manganese. Inorganic contaminants commonly create a salty or bitter taste, discoloration, or even chemical scale/corrosion.

Organic Contaminants in drinking source waters are comprised of Synthetic Organic Compounds (SOCs) and Natural Organic Matter (NOM). SOCs are man-made chemicals typically from the petroleum, plastics, chemical, pharmaceutical, and agricultural industries. NOM is often due to trace organic compounds from decomposing plant and animal material in the environment. These include a variety of acids, proteins, algae, and microorganisms. Excepting the rare instance of harmful algal blooms, NOM is generally not a health threat.

Radionuclide Contaminants found in public drinking water sources occur naturally. Radioactive radium and uranium are found in small amounts in almost all rock and soil, and can dissolve in water. Radon, a radioactive gas, created through the decay of radium, can also naturally occur in groundwater. If it is not removed, radon in water will increase the risks of kidney damage and cancer.

Contaminants of Special Concern are determined through continual monitoring by the USEPA and currently include Lead and PFAS.

Lead is a toxic metal that is persistent in the environment and can accumulate in the body over time. The USEPA has set the maximum contaminant level goal for lead in drinking water at zero because lead can be harmful to human health even at low exposure levels. The most common sources of lead in drinking water are lead pipes, faucets, and plumbing fixtures. Certain pipes that carry drinking water from the water source to the home may contain lead. Household plumbing fixtures, welding solder, and pipe fittings made prior to 1986 may also contain lead. There is currently no detectable lead in Juneau's source water.

PFAS, or Per- and Polyfluoroalkyl Substances, are persistent synthetic compounds used in a variety of industrial and consumer product applications including non-stick cookware and firefighting foams. The presence of PFAS compounds in source water and drinking water is of increasing public concern due to their widespread use, environmental persistence and toxicological effects. There is currently no detectable PFAS in Juneau's source water.

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](https://www.epa.gov/drink/contaminants).

Your Water. Your Report.

Per 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. The belief at the Utility is that it is your water, and it is the Utility's job to protect its purity and deliver it safely so that is clean and delicious for all residents, visitors, and businesses.

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

Juneau's water requires very little treatment compared to the rest of the United States. Both sources are gently chlorinated to kill any disease causing microorganisms that may be present. As required by the EPA, all surface water is run through an additional filtration unit.

The CBJ Utility regularly monitors its waters for contaminants, including lead, which have been known to adversely affect water quality in other communities. In the fall of 2022, the reservoir tanks were inspected and cathodic protection systems repairs were made at each reservoir to prevent internal corrosion. Additionally, divers were employed to clean the sediment on the bottom of the tanks. Rigorous monitoring and maintenance programs like these have allowed CBJ to consistently deliver water that meets and exceeds drinking water standards as set by the EPA.



LEAD SERVICE LINE INVENTORY PROGRAM

In response to the crisis in Flint, Michigan, the EPA has recently mandated that all public water supplies, including CBJ, re-survey, inventory, and update their drinking water distribution systems; including all water mains and service lines to every individual household, school, and business. As part of this mandate, CBJ must identify and assign all service lines, regardless of ownership, to one of four categories: Lead, Galvanized requiring replacement, Non-Lead, or Lead Status unknown. Any lead-containing pipes or valves will be then need to be removed and replaced with contemporary, lead-free materials.

This new mandate, the Lead Service Line Inventory (LSLI) Program, **will start in 2024** and it will require the Utility to extend its survey of water piping systems to include the service lines that run from mains to each household. The mandate encourages the CBJ to continue its work in modernizing its drinking water system and protecting future generations from any adverse impacts from reactive materials. The LSLI Program aligns with CBJ's recent water pipe assessment and inventory program for the water distribution system. In July of 2022, the Utility conducted an initial exercise in downtown Douglas, utilizing ePulse technology. Using these non-destructive testing methods, the Utility was able to assess the condition and take inventory of about 2 miles of water distribution lines in the area.

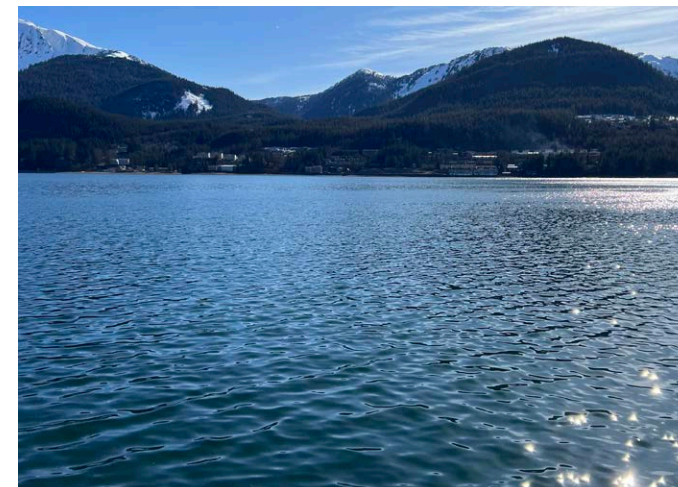
Moving forward, CBJ is currently preparing a comprehensive plan for the LSLI Program and will be releasing it for public awareness later this year. The Utility looks forward to working with the community to continue its legacy of delivering clean, pure, and delicious drinking water.



Katie Koester

ENGINEERING & PUBLIC WORKS DIRECTOR

Juneau has a delicious, pure, and plentiful supply of drinking water. That water is both a result of natural bounty and a team of dedicated professionals who provide treatment and maintain a distribution system to ensure that Juneau has world class drinking water.



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.
-  **REPORT 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.
-  **SIGN UP FOR PAPERLESS BILLING**
Help the Utility conserve resources by receiving your bill by email! Sign up at www.bit.ly/cbj-paperless