

907.586.0393 • JUNEAU • ALASKA

Here to serve your drinking water needs.



2014 ANNUAL WATER QUALITY REPORT
CITY/BOROUGH OF JUNEAU ALASKA'S CAPITAL CITY

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CBJ WATER UTILITY
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OUR LOCAL WATER SYSTEM HAS ROUGHLY 175 MILES OF WATER MAINS AND 8,500 WATER CONNECTIONS!

MUCH OF JUNEAU'S WATER ACTUALLY COMES FROM SNOW MELT.

IN 2014 LCB PROVIDED JUNEAU WITH 2,370,000 GALLONS PER DAY AND SC RESERVOIR PROVIDED 830,000 GALLONS PER DAY!

LCB USES 2 TUNNELS, JUALPA AND MILL, FOR WATER STORAGE. THESE TUNNELS WERE PREVIOUSLY USED AS MINE SHAFTS DURING JUNEAU'S MINING HEYDAY.

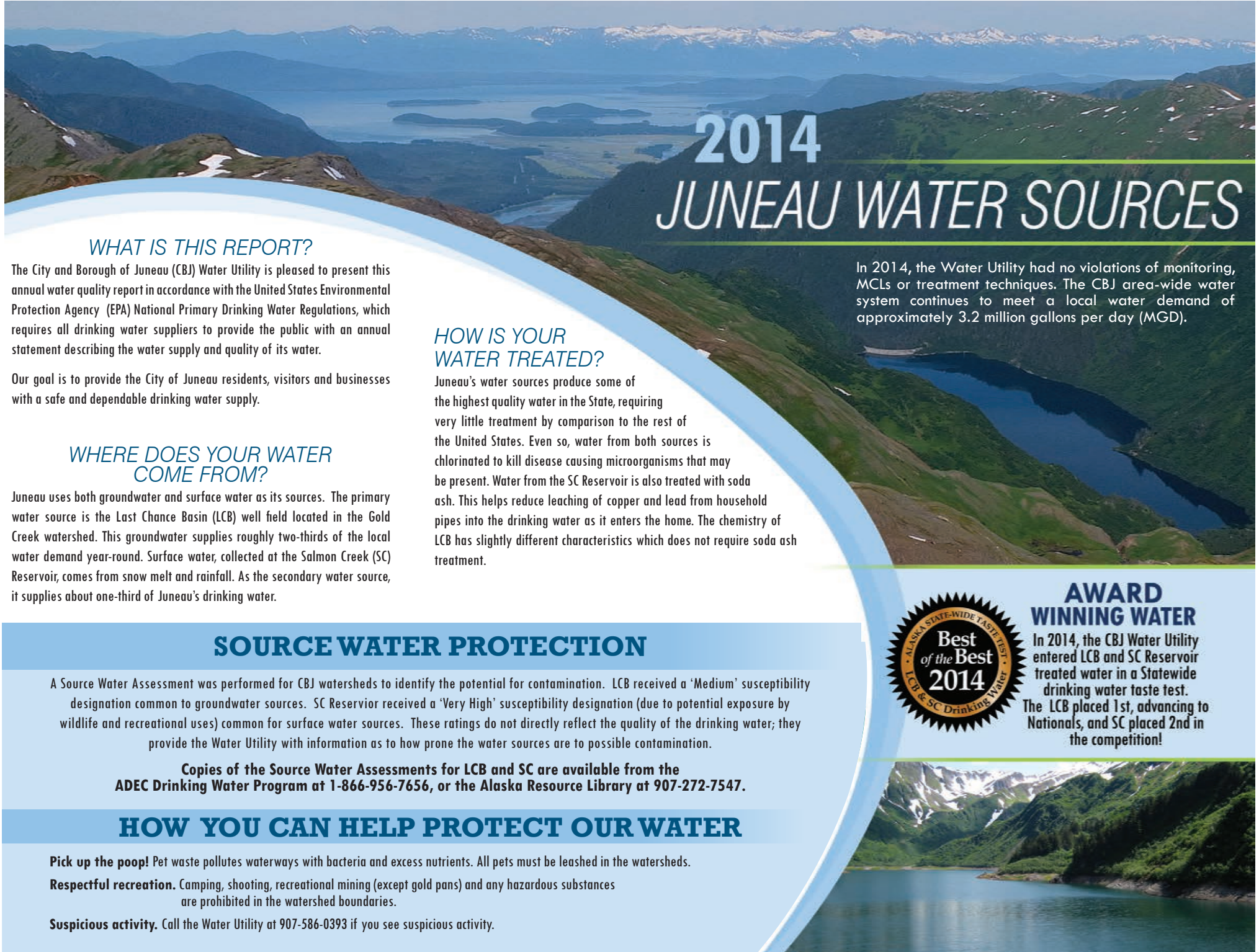
A SERIES OF 6 RESERVOIRS AND 1 CONTACT TANK PROVIDE WATER STORAGE FOR DRINKING AND FIRE FIGHTING.

DOUGLAS ISLAND GETS ITS DRINKING WATER TWO WAYS: FROM PIPES INSIDE THE BRIDGE AND A PIPE THAT CROSSES THE CHANNEL.

THE FIRST WATER PIPES IN THE U.S. WERE MADE FROM WOOD LOGS BORED OUT AND CHARGED WITH FIRE.

AT 1 DRIP PER SECOND, A FAUCET CAN LEAK 3,000 GALLONS PER YEAR!

FUN FACTS
CITY/BOROUGH OF JUNEAU ALASKA'S CAPITAL CITY



2014 JUNEAU WATER SOURCES

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 YOUR WATER COME FROM?

Juneau uses both groundwater and surface water as its sources. The primary water source is the Last Chance Basin (LCB) well field 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 which does not require soda ash treatment.

In 2014, 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).

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 1-866-956-7656, or the Alaska Resource Library at 907-272-7547.

HOW YOU CAN HELP PROTECT OUR WATER

- Pick up the poop!** Pet waste pollutes waterways with bacteria and excess nutrients. All pets must be leashed in the watersheds.
- Respectful recreation.** Camping, shooting, recreational mining (except gold pans) and any hazardous substances are prohibited in the watershed boundaries.
- Suspicious activity.** Call the Water Utility at 907-586-0393 if you see suspicious activity.



AWARD WINNING WATER

In 2014, the CBJ Water Utility entered LCB and SC Reservoir treated water in a Statewide drinking water taste test. The LCB placed 1st, advancing to Nationals, and SC placed 2nd in the competition!



2014 DRINKING WATER MONITORING AND TEST RESULTS

This table presents a summary of the most recent water quality test results for the CBJ water system. The State of Alaska and EPA limit the amount of certain contaminants in drinking water in order to ensure water safety to the public. Juneau's treated drinking water met all State and Federal standards for public health in 2014.

**The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of our data, though representative, are more than a year old.*

Test	Units	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Last Chance Basin	Salmon Creek	Date Sampled	Source of Contaminant
MEASURED BEFORE TREATMENT							
Turbidity	NTU	5 NTU	0	n/a	0.97 avg	Continuous	Surface runoff. Note: Values shown do not include days when Salmon Creek was offline.
Total Organic Carbon	mg/l	n/a	n/a	n/a	0.36 avg ND - 0.75	Monthly	Naturally present in the environment.
Arsenic	mg/l	0.010	0	< 1.0	ND	2014 2013*	Erosion of natural deposits.
Barium	mg/l	2	2	0.0447	0.0378	2010*	Erosion of natural deposits.
Fluoride	mg/l	4	4	0.06550	0.050	2010*	Naturally present in environment. The CBJ has not added fluoride to system since Jan. 2007.
Nitrate (as Nitrogen)	mg/l	10	10	0.25	< 0.1	2014	Fertilizer runoff; sewage leaching, or erosion of natural deposits.
Selenium	mg/l	0.05	0.05	0.00103	0.00077	2010*	Erosion of natural deposits.
Alpha Particles	pCi/l	15	0	0.40	0.30	2007*	Erosion of natural deposits.
Radium 226	pCi/l	5	0	0.28	0.11	2007*	Erosion of natural deposits.
Radium 228	pCi/l	5	0	0.37	0.27	2007*	Erosion of natural deposits.
Cryptosporidium	# of cysts	0	0	n/a	0	2014	Runoff from organic material.
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	0.0036 avg ND - 0.009		Quarterly	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	mg/l	0.080	n/a	0.0041 avg 0.00094 - 0.009		Quarterly	By-product of drinking water disinfection.
Chlorine	mg/l	MRDL = 4	MRDL = 4	0.473 avg		Continuous	Water additive used to control microbes.
Copper	mg/l	AL = 1.3	1.3	90th percentile = 0.459 Based on 2013 test results		2013*	Corrosion of household plumbing systems; erosion of natural deposits.
Lead	mg/l	AL = 0.015	0	90th percentile = 0.00140 Based on 2013 test results		2013*	Corrosion of household plumbing systems; erosion of natural deposits.

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. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
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



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 tap water is safe to drink. The FDA establishes contaminant limits for bottled water.

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. 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 use 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. 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 Drinking Water Hotline (1-800-426-4791) or visit water.epa.gov/drink/contaminants.

WHERE'S OUR WATER SYSTEM HEADED?

Juneau has a plentiful supply of high quality drinking water to meet ever increasing community demands. To deliver this water, we are drilling two new wells and rehabilitating the five existing wells at LCB. Also, a filtration plant is being installed at SC to ensure water supply year round.

EXEMPTIONS AND WAIVERS

The CBJ water system operates under waivers for synthetic organic chemicals and reduced asbestos monitoring as authorized by ADEC. The SC Reservoir has a waiver for the surface water filtration treatment requirement.



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
5433 Shaune Drive • 907-586-0393

Drinking water test results are available to the public at the Water Utility Office or by contacting ADEC at 907-465-5350.