

2007 DRINKING Water Quality



Juneau Drinking Water Quality Continues to Exceed Federal and State Standards During 2007

We are pleased to provide a Water Quality Report containing information that is important to our customers and is required by the Federal Safe Drinking Water Act. This report contains information about the City and Borough of Juneau Water System and covers the period of time from January 2007 – December 2007. This report details where your water comes from, what it contains, contact information and a map of our service lines. We welcome your questions and comments.

JUNEAU WATER SOURCES

There are two sources for Juneau's area-wide water system. Both sources have the capacity to supply the entire system. The Last Chance Basin (LCB) well field on Gold Creek is the primary source. This groundwater source typically supplies about two-thirds of Juneau's total demand of 3.75 MGD.

The secondary source for the water system operates in conjunction with Alaska Electric Light and Power Company's (AEL&P) power generation plant at Salmon Creek (SC). This is an intermittent source due to seasonally high turbidity (cloudiness) and annual AEL&P power plant maintenance. Current ADEC and EPA Surface Water Treatment Rule regulations do not require filtration for this surface water source when the turbidity is within acceptable limits. Salmon Creek typically supplies about one-third of Juneau's water demand.

When both sources are operating, customers north of Hospital Drive are generally served by water from Salmon Creek. The area south of Hospital Drive and all of Douglas Island is generally served by Last Chance Basin water.

Salmon Creek—Surface Water

The Source Water Assessment conducted by the Alaska Department of Environmental Conservation for our surface water has given the overall protection area a susceptibility rating of very high, a vulnerability rating of medium for bacteria/viruses, very high for nitrates/nitrites, medium for volatile organic chemicals, medium for heavy metals, medium for other organic chemicals, and medium for synthetic organic chemicals.

Last Chance Basin—Ground Water

The Source Water Assessment for our ground water has established a natural susceptibility rating of medium for the ground-

water source. The vulnerability rating was low for bacteria/viruses, low for nitrates/nitrites, medium for volatile organic chemicals, high for heavy metals, low for the organic chemicals, and low for synthetic organic chemicals.

If you would like to read the complete Source Water Assessment, contact the Water Utility at 780-6888

WATER TREATMENT

Neither water source requires filtration. LCB water comes from ground water wells. SC water is monitored regularly to maintain a waiver from the requirement to provide filtration. Both water sources are chlorinated to kill disease causing organisms and had been fluoridated. Soda ash is added to SC water to raise the pH and alkalinity. This reduces copper and lead leaching into the water from in-house pipes. LCB water does not require treatment to minimize leaching of copper or lead based on studies the Utility has performed.

WATERSHED PROTECTION

The City and Borough of Juneau has two major programs for protection of its watersheds: The Watershed and Wellhead Protection Program for Gold Creek Source and The Watershed Control Program for Salmon Creek. While these programs restrict development within the watersheds, they allow for public access, however **no dogs** are permitted in the LCB well-field. You are one of the key links to insure that we continue to have clean water available at all times. When hiking in these locations, we ask that you observe and follow the rules posted throughout the sites including cleaning up after your pets. This will insure a high quality source of water for years to come. For more information on these programs, contact the Water Utility at 780-6888.

VULNERABILITY

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, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking treated water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from The Safe Drinking Water Hotline (800-426-4791), or at www.epa.gov/safewater/mcl.html.

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Chemical	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Units	Last Chance Basin Wells	Salmon Creek	Sources of Contaminant
Total Coliform Bacteria	2 positive monthly sample	n/a	Presence/Absence	1 positive sample		Naturally present in the environment.
Total Organic Carbon	n/a	n/a	mg/l	1.09 avg 0 - 9.4		Naturally present in the environment.
INORGANIC (Measured After Treatment)						
Fluoride (January Only)	4	4	mg/l	0.72 avg 0.56 - 0.80	0.74 avg 0.68 - 0.81	Erosion of natural deposits; Water additive which promotes strong teeth.
Nitrate (as Nitrogen)	10	10	mg/l	0.372	0.0919	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Arsenic	10	0	ug/l	0.507	0.539	Erosion of natural deposits
ORGANIC AND DISINFECTION BYPRODUCTS (Measured in the Distribution System)						
Total Trihalomethane	80	n/a	ug/l	4.54 avg 0 - 11.6		By-product of drinking water chlorination
Copper	AL=1.3	1.3	mg/l	90% = 0.207		Corrosion of household plumbing systems; Erosion of natural deposits.
Lead	AL=15	0	ug/l	90% = 1.7		Corrosion of household plumbing systems; Erosion of natural deposits.
Chlorine	MRDL=4	MRDL=4	ppm	0.44 avg 0.38 - 0.50		Water additive used to control microbes
Haloacetic Acids	60	n/a	ug/l	4.44 avg 0.00 - 15.2		By-product of drinking water disinfection
CLARITY (Measured Before Treatment)						
Turbidity	5 (TT)	n/a	NTU	N/A	1.14 avg 0 to 5.0	Soil runoff

TEST RESULTS

The results contained in the Treated Drinking Water Quality Table are from 2007. The minimum and maximum are provided with the average shown as well except for Arsenic, and Nitrate data which reports the maximum value only. The State of Alaska and EPA limit the amount of certain contaminants in drinking water provided by public water systems in order to ensure that tap water is safe to drink.

Monitoring results demonstrate the excellent quality of our water. CBJ drinking water met or exceeded all state and federal water quality standards for public health protection. Our main goal is to provide you with reliable and safe drinking water.

SUBSTANCES

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground it dissolves naturally-occurring minerals and, in some case, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria, which may come from wildlife or human activity.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or from mining activity.

Organic contaminants, including synthetic and volatile organic chemicals, such as total trihalomethane form when naturally occurring organics in water are chlorinated or from contamination by petroleum and similar products.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Contaminants can be in the form of biological or chemical constituents. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA hotline the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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Waivers

The City and Borough of Juneau has such pristine water sources that it operates under a waiver authorized by the State of Alaska for asbestos monitoring. This waiver allows the CBJ to reduce its monitoring for asbestos.

Violations

The City and Borough of Juneau had one violation for failing to provide a certification of the 2005 Consumer Confidence report to the State of Alaska Department of Environmental Control within the proper time period.

FLUORIDE

Fluoride was being added to the water in the form of Sodium Fluoride. The Water Utility finished its transition to non-fluoridated water January 2007.

BACKFLOW PREVENTION

How can your water get contaminated? If you are preparing weed killer, fertilizer or a chemical solutions when a drop in water pressure occurs the chemical could be siphoned into the water distribution system. In order to prevent this from occurring, backflow prevention devices should be installed. Most locations are required by regulation to install these devices including garden hose connections, janitor sinks, boilers with glycol or other chemicals in them and food and beverage processing facilities. Approved backflow prevention devices must be installed by licensed plumber or the homeowner. If the homeowner installs the device, the CBJ requires that the device be tested by a licensed installer/tester before use and annually thereafter.

DEFINITIONS

AL	Action Level—The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
CBJ	City and Borough of Juneau
CDC	Center for Disease Control and Prevention
DEC	Alaska State Department of Environmental Conservation
EPA	U.S. Environmental Protection Agency
LCB	Last Chance Basin of Gold Creek — location of CBJ's well field
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.
MRDLG	Maximum residual disinfectant level goal—the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
ND	None Detected at specified level
NTU	Nephelometric Turbidity Unit
SCADA	Supervisory Control and Data Acquisition
TT	Treatment Technique—A required process intended to reduce the level of a contaminant in drinking water.
ug/l	Microgram per liter or parts per billion

IF YOU NEED MORE HELP

If you have questions, comments or are interested in learning more about the drinking water system in Juneau, call the Water Utility at 780-6808 or visit our web site at www.juneau.org. Test results are available to the public, either through the CBJ Water Utility office at 5433 Shaune Drive or through the Alaska Department of Environmental Conservation, 410 Willoughby Avenue at 465-5350. Additional resources are available at EPA's website www.epa.gov.

CONTAMINANTS THAT WERE NOT DETECTED

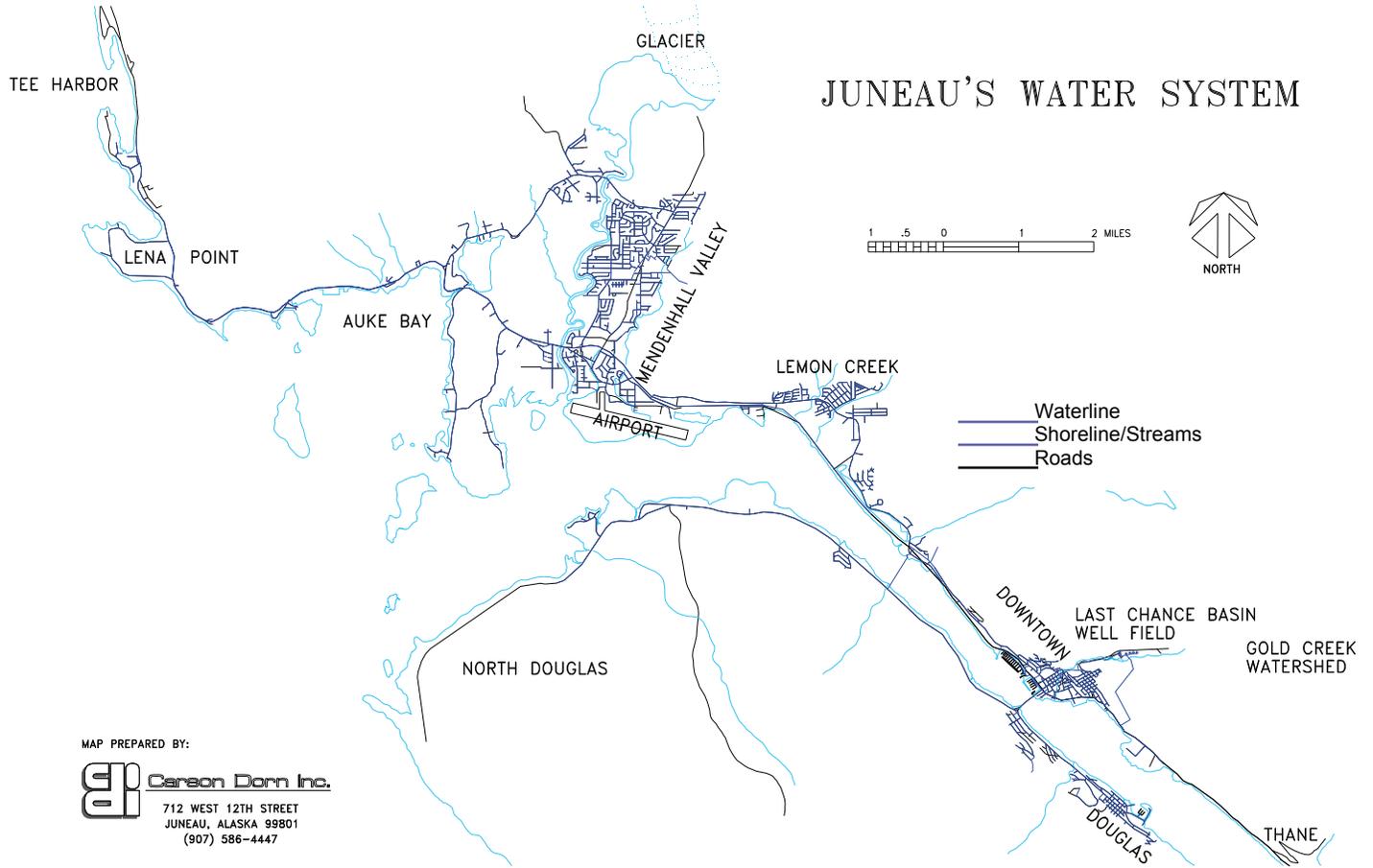
Besides the detected chemicals listed in the Drinking Water Quality Report on the previous page, the CBJ Water Utility has tested for additional chemicals. These were found to not be present in the drinking water. Because of space considerations we have not listed these non-detected chemicals. If you have an interest in reviewing this list, please contact the Water Utility.

WHAT IF THE WATER LOOKS STRANGE?

If your water is discolored when it comes from your tap, it may be because we're doing some maintenance or hydrant flushing work in your area, or the fire department may have just used a nearby hydrant. If you notice discoloration of your water, let the water stand for one to two hours, then flush your cold water tap three to five minutes to see if the water is clear. Discolored water may or may not pose a health risk. Often color is related to rust or sediment build-up in the pipes.

CAPITAL IMPROVEMENT PROJECTS

The CBJ is continually investing in improvements and major repairs to the Water Utility. Improvements in 2008 include upgrading and rehabilitating mechanical, electrical, structural, and SCADA systems in the water pump stations; well field improvements to increase water production for Last Chance Basin; and reconstruction of aging water systems in West 11th street and associated side streets and alley ways.



CBJ Water Utility
 5433 Shaune Drive
 Juneau, AK 99801

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Please contact the water utility if you would like to know when the next opportunity is for public participation.