City and Borough of Sitka
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DRINKING WATER QUALITY REPORT – FOR THE YEAR 2007
SITKA, ALASKA
(Public Water System No. AK2 130075)

The City and Borough of Sitka (CBS) Water Department is pleased to present this year's Annual water Quality report. This report is designed to inform you about the high quality water and services we deliver every day. Our goal is to constantly provide you with a safe and dependable supply of drinking water. We want our valued customers to understand the efforts made to continually improve our water system and to protect our water resources. If you have any questions regarding this report, your water utility, or would like to be added to a facility tour list, please contact Environmental Superintendent, Mark Buggins at 966-2256 or at markb@cityofsitka.com. According to state and federal law, the CBS Assembly makes the ultimate decisions related to water treatment process. They meet the second and fourth Tuesday of each month at Harrigan Centennial Hall. These meetings are open to the public.

Our primary water source is surface water from Blue Lake. Our secondary water source is surface water from Indian River. Through the Alaska Drinking Water Protection Program, the State of Alaska Department of Environmental Conservation completed a source assessment in 2003, and provided a final source water protection plan in 2004. Copies of this plan can be obtained from your water department.

As water travels to the collection point, either lake or river, it may pick up contaminants it comes in contact with. These contaminants could include microbes, inorganic and organic material, or radioactive substances. 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 about drinking water from their health care providers. Guidelines from the Environmental Protection agency (EPA) Center for Disease Control (CDC) on the appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. The Sitka Public Water System routinely monitors for contaminants in your drinking water according to State and Federal laws and regulations. The following tables show results of that monitoring for the period of January 1st to December 31st, 2007.

In the following tables you will find terms you might not be familiar with. To help you better understand these terms we have provided the following definitions:

NR: Not Regulated – reporting this data is not required.
NA: Not Applicable, Not Available – does not apply or is not available.
ND: Non-Detects – laboratory analysis indicates that the contaminant is not present.
MRL: Method Reporting Limit – the minimum concentration that can be measured.
ppm: Parts per million or mg/l: Milligrams per liter – corresponds to one part per million parts.
ppb: Parts per billion or Micrograms per liter – corresponds to one part per billion parts.
NTU: Nephelometric Turbidity Unit – nephelometric turbidity unit is a measure of clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
AL: Action Level – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
TT: Treatment Technique – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
MCL: Maximum Contaminant Level – The "Maximum Allowed": is 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 "Goal" is 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.

Waivers, or reduced sampling requirements, have been obtained for many of the regulations pertaining to the monitoring of our water system. These waivers were granted only after years of test results that were significantly less than the MCLs of the various contaminants. Currently we have waivers for Synthetic Organic Contaminants, Asbestos, Organics/Pesticides, Inorganics, (Nitrites), and Dioxins; we did not test for them during the time period covered by this report. Previous and current monitoring results are tabled below.

2007 TEST RESULTS

Contaminant	*MCL Violation*	*Level Detected*	*Unit Measurement*	*MCL Goal*	*MCL*	*Likely source of contamination to the best of our present knowledge*
Microbiological Contaminants						
Total Coliform Bacteria	None	ND	Colonies per 100 ml	0	Note (1)	Naturally present in the environment
Turbidity	None	1.79 (2)	NTU	NA	NA	Natural soil runoff, glacial silt, land slides

Note (1) presence of Coliform bacteria in 5% of monthly treated water samples.
Note (2) highest monthly raw water turbidity value was reported in the month of July 2007.

Total Coliform: Coliforms are bacteria that are used as an indicator that other, potentially-harmful, bacteria may be present. None were found.

Turbidity: Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial Growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Blue Lake's turbidity is mostly inorganic in nature (glacial silt) and often not directly associated with microbial contamination

Inorganic Contaminants ***(Waiver except: Nitrate-N, Arsenic, Lead and Copper, Cyanide, Fluoride added for enhanced dental health)***						
Nitrate (as Nitrogen)	None	0.157	ppm	10	10	Erosion of natural deposits, animal waste
Fluoride (Voluntary)	None	Avg. 0.86	ppm	4.0	4.0	Water treatment additive, natural deposits
Arsenic	None	ND	ppm	NA	0.05	Erosion of natural deposit
Cyanide (Sampled 2005)	None	0.005	ppm	0.2	0.25	Industrial discharge

Nitrate: Infants below the age of six months, who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome. Note, that your drinking water nitrate level is far less than the MCL.

Flouride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the Bones. Children may get mottled teeth. Note, that your drinking water fluoride level is controlled to the recommended range of 0.7 to 1.2 ppm.

Arsenic: At high concentrations arsenic is known to cause cancer in humans and is linked to other health effects such as skin damage and circulatory problems.

Cyanide: Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their Thyroid.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City and Borough of Sitka water department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water 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 http://www.epa.gov/safewater/lead.

To reduce the corrosive nature of our drinking water, a sodium carbonate (soda ash) solution has been added since January 2001. This addition has been very successful in the reduction of lead and copper samples that meet or exceeded the action levels of these contaminants. In fact, it has been so successful that the required annual "At the Tap" monitoring program of 20 Sitka households has been granted a reduced monitoring status. The next round of sampling will be completed in 2008. Prior to 2001, 35 of 40 Sitka households exceeded at least one action level of the lead and copper monitoring program. As illustrated in the table below only two samples were above the AL.

"At the Tap" Lead & Copper Monitoring (Last required sampled in June 2005)

Contaminant	*AL*	*MCLG*	*Unit of Measurement*	*90th % value*	*Likely Source of Contamination to the Best of our Present Knowledge*
Lead	0.015	NA	ppm	0.01190	Corrosion of household plumbing systems
Copper	1.30	NA	ppm	0.33000	Corrosion of household plumbing systems

Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL over many years may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer. Sitka's results are well below the MCL. CBS routinely monitors TOC in place of the more expensive TTHM & HAA5 to reduce costs.

Volatile Organic Contaminants (TTHM & HAA5 sampled in 3rd qtr & TOC's sampled monthly for average)						
Contaminant	***MCL Violation***	***Level Detected***	***Unit Measure***	***MCLG***	***MCL***	***Likely Source of Contamination to the Best of our Present Knowledge***
Total Trihalomethanes (TTHM)	None	16.30	ppb	NA	80	By-Product of Chlorination
Total Haloacetic Acids (HAA5)	None	17.70	ppb=ug/1	NA	60	By-Product of Chlorination
Total Organic Carbon (TOC)	None	<MDL to 1.16 Avg = 0.64	mg/1=ppm	NA	NA	Naturally present in Environment

Radioactive Contaminants						
Contaminant	***MCL Violation***	***Level Detected***	***Unit Measure***	***MCLG***	***MCL***	***Likely Source of Contamination to the Best of our Present Knowledge***
Gross Alpha	None	ND	pCi/L	0	15	Erosion of Natural Deposits
Uranium	None	ND	pCi/L	0	30	Erosion of Natural Deposits
Radium – 226	None	ND	ppm	0	5	Erosion of Natural Deposits
Radium – 228	None	ND	ppm	0	5	Erosion of Natural Deposits

The tables above show <u>our water system had no MCL violations</u>. CBS drinking water meets or exceeds all federal and state requirements. ADEC confirms that CBS had no violations to report in 2007. We have learned through our monitoring and testing that some contaminants have been detected. ***The EPA has determined that your water IS SAFE at these levels.***

Sitka's Water Treatment: Our primary source of water is Blue Lake, which is very clean in its natural state and therefore we are not required to filter it prior to disinfection and distribution to you the customer. Federal and state laws require proof of proper disinfection prior to providing water to the public. Disinfection is accomplished by adding a small amount of chlorine to guarantee our drinking water is safe from harmful microorganisms. Fluoride is added to increase the natural level of fluoride in our drinking water to a level recommended by the Public Health Service and the ADEC to help reduce the incidence of tooth decay.

Following proper disinfection, sodium carbonate (soda ash) is added to the drinking water at the Corrosion Control Facility (CCF) which is located at 103 Jarvis Street. The CCF went into operation January 1, 2001. Soda ash slightly increases the pH and alkalinity of our treated water thereby reducing the leaching of lead and copper from private plumbing systems into your water.

The CCF is the operations center for our water system, serving as the primary monitoring and control location for the Blue Lake Water Treatment Plant (BLWTP) and the treated water storage tanks. The Water Operators perform routine monitoring and control of the BLWTP from the Jarvis Street location. The CCF operations center enhances our productivity in monitoring and controlling our water system, as well as providing enhanced documentation of the treatment process and water quality.

Our secondary source of water is Indian River, which was the primary source water for many years prior to 1984 when Blue Lake supply went in to service. Indian River Water Treatment Plant (IRWTP) water passes through the natural river bed gravel and sand which has a filtering affect, then through two inlet infiltration pipes under Indian River. The water flows into a reservoir beside IRWTP and then through one of a dozen infiltration pipes buried under gravel and sand in the reservoir and passes into one of four wells, each with a pump. A small amount of chlorine is added to ensure the water is safe to consume. When the Blue Lake system has to be taken off line for penstock inspections or maintenance; chlorinated Indian River water is supplied to the community after public notice. IRWTP is operated several times a year to insure plant readiness to produce safe drinking water in an emergency.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements to the treatment or distribution systems that will benefit all of our customers. These improvements sometimes cause short-term inconveniences or rate structure adjustments. Thank you for understanding the importance of our drinking water.

The Water Department is required to present an annual Watershed Control Report to the Alaska Department of Environmental Conservation. That report along with this Consumer Confidence Report (CCR) will be on file at the City and Borough of Sitka Public Works Office and is available for your review on the City's web site, www.cityofsitka.com.

The Sitka Water department works to provide sufficient quantity and top quality drinking water to each customer. From protecting public health to economic vitality, safe clean water is clearly a great value to our entire community. We ask that everyone help us protect our raw water sources at Blue Lake and Indian River. These water sources are the heart of our community, our way of life and our future. Thank you for your assistance. Safe drinking water is everyone's business.