Primary Drinking Water Standards — Caribou Utilities District 2018

The following contaminants were detected in Caribou's drinking water. All those indicated below are below the Maximum Contaminant Level (MCL) allowed by the US EPA and Maine Department of Human Services, Drinking Water Program. Not shown are nearly 100 other contaminants for which we tested, but were not detected. These included pesticides, herbicides, and many other agricultural and industrial chemicals. A complete listing of all tests and results is available at the Caribou Utilities District office.

No violations in 2018	Maximum Contaminant Level Goal	Maximum Contaminant Level	Actual Test Results	Actual Test Results	
Parameter	MCLG	MCL	(Average)	(Range)	Source
Microbiological					
Total Coliform Bacteria (1) (5/month)				5 tests / month distribution system	
# of samples positive	0 pos	1 pos / mo or 5%	0 pos	0 pos. of 60 tests	Naturally present in environment
Organic Chemicals / Disinfection Byproducts				LRAA 2018	
Total Trihalomethanes (9)	0 ppb	80 ppb	6.00 ppb	(9.2 - 9.2) LRAA, Locational Running Annual Avg.	Disinfection By-product
Total Haloacetic Acids (9)	0ppb	60ppb	0.00 ppb	(0.0 - 0.0) LRAA, Locational Running Annual Avg.	Disinfection By-product
Chlorine Residual	4ppm	4ppm	0.22 ppm	0.18 - 0.45 ppm	Disinfection By-product
Inorganic Chemicals					
Arsenic	0 ppb	10 ppb	ND	02/24/15	natural erosion, orchards
Barium	2 ppm	2 ppm	0.030 ppm	03/26/18	drilling wastes; natural erosion
Chromium	100 ppb	100 ppb	1.8 ppb	03/26/18	natural,steel,pulp mills
Copper (4)	1.3ppm	AL 1.3ppm	0.16 ppm / 90th %tile	0 failed of 20 homes tested 12/12/17	corrosion of plumbing
Fluoride (3)	4 ppm	4ppm	0.8 ppm	annual average (16 tests/yr.)	Natural, fertilizer, additive
Lead (4)	0 ppb	AL=15ppb	0.89 ppb / 90th %tile	0 failed of 20 homes tested 12/12/17	corrosion of plumbing
Nitrate(5)	10 ppm	10ppm	2.5 ppm	04/09/18	Fertilizer, septic runoff
Sodium	100 ppm	none	13 ppm	02/24/15	Natural, road salt
Radionuclides					
Gross Alpha Screen (6)	0	15 pCi/L	0.296	02/15/06	Naturally occurring radioactivity
Gross Alpha Particle ACT (6)	0	5 pCi/L	0.10 pCi/L	01/18/06	Naturally occurring radioactivity
Radon Screen (8)	NA	4,000 pCi/L	431 pCi/L 297pCi/L	2/15/2006 11/25/2006	Naturally occurring radioactivity
Synthetic Organics (Waiver)					
Diquat		20 ug/L	0.42 ug/L 0.38 ug/L	6/23/15 11/24/15	

Definitions and Footnotes

Maximum Contamination Level Goal (MCLG):The level of a contaminant in drinking water below which there is no known or expected risk to health.

Maximum Contamination Level (MCL): The highest level of a contaminant that is allowed in drinking water.

Variance or Waiver: State or US EPA permission not to meet an MCL, testing requirement, or a treatment technique under certain conditions (e.g. waiver to Dioxin testing).

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water (e.g. treatment technique for turbidity).

Action Level: (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements a water system must follow .

Running Annual Average (RAA): A 12 month rolling average of all monthly or quarterly samples at all locations. Calculation of RAA may contain data from the previous year.

Locational Running Annual Average (LRAA): A 12 month rolling average of all monthly or quarterly samples at specific sampling locations. Calculation of LRAA may contain data from the previous year.

ppm = parts per million or mg/L = milligrams per Liter

ppb = parts per billion; ppt = parts per trillion; ppq = parts per quadrillion

pCi/L- picocuries per liter, a measure of radioactivity.

ND = None detected or detected below the reporting level

pos = positive sample; ntu or NTU = mephelometric turbidity units

MFL = million fibers per liter

(1) Total Coliform Bacteria: Reported as the highest monthly number of positive samples, for water systems that take less than 40 samples per month.

(2) E. Coli: E. coli are bacteria whose presence indicates the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

(3) Fluoride: Fluoride levels must be maintained between 0.5 - 1.2 ppm, for those water systems that fluoridate the water. Optimum level is 0.7 ppm

(4) Lead/Copper action levels are measured at consumer's tap. 90% of tests must be equal to or below the action level (AL).

(5) Nitrate: Nitrate in drinking water above 10 ppm is a health risk for infants of less than six months of age. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. High nitrate levels in drinking water can cause blue baby syndrome. If you are caring for an infant, you should ask for advice from your health care provider.

(6) Arsenic: While your drinking water may meet EPA standards for arsenic, if it contains between 5 to 10 ppb you should know the standard balances the current understanding of arsenic's possible health effects against the cost of removing it from drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Quarterly compliance is based on running annual average.

(7) Gross Alpha: Action level over 5 pCi/L requires testing for Radium 226 & 228. Action level over 15 pCi/L requires testing for Uranium. Compliance based on Gross Alpha results less Uranium results = Net Gross Alpha.

(8) Radon: The State of Maine adopted a Maximum Exposure Guideline (MEG) for Radon in drinking water at 4000 pCi/L, effective 1/1/2007. If Radon exceeds the MEG in water, treatment is recommended. It is advisable to test indoor air for Radon.

(9) TTHM/HAA5: Total Trihalomethanes and Haloacetic Acids (TTHM and HAA5) are formed as a byproduct of drinking water chlorination. This chemical reaction occurs when chlorine combines with naturally occurring organic matter in water. Compliance based on running annual average.

Board of Trustees
2018

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The Caribou Utilities District Board of Trustees consists of a five-person Board appointed by the City Council for a term of three years each. The Board holds regular meetings, usually on the second Wednesday of each month, at the office building at 176 Limestone Street. Board Meetings are open to the public and public participation is encouraged.

The Caribou Waterworks was first established in 1889 as The Caribou Water Company, and in 1903 reformed as the Caribou, Water, Light and Power Company. In 1943 the power generation assets were sold to Maine Public Service Company and the Waterworks was acquired by General Waterworks Corporation of Philadelphia, Pa. In 1989 the Caribou Utilities District (CUD) purchased the Caribou Waterworks Corporation, adding a water treatment and distribution system to the District. A new groundwater source and treatment plant were completed in 2006 to replace the old filter plant built in 1941. The new facility provides higher quality water that complies with more stringent water quality standards.

The Caribou Utilities District (CUD) was organized in 1945 to take over the assets of the Caribou Sewer Company (1905) and to manage wastewater functions for the City of Caribou. In 1960, a primary treatment plant was constructed at 176 Limestone Street to treat wastewater prior to discharge to the Aroostook River. Significant industrial loadings were added to the CUD facilities from local potato processing plants. In order to provide an improved effluent quality, The Charles D. Hatch Treatment Facility was constructed in 1983 near Grimes Mills on the Aroostook River, 2.5 miles downriver from the primary plant. Three aerated lagoons totaling 36 million gallons were constructed along with disinfection capabilities. Periodic improvements have been performed to improve treatment and effluent water quality.

WATER QUALITY

We ensure your water is safe through regular monitoring and testing of water quality. Testing is conducted by independent, state certified laboratories. This report shows a summary of the laboratory test results for the components we regularly monitor in your water supply. Responsibility for maintaining your water quality resides with our staff of certified water treatment plant operators, licensed by the Maine Department of Health & Human Services.

The Safe Drinking Water Act directs the State, along with the Environmental Protection Agency (EPA), to establish and enforce minimum drinking water standards. These standards set limits on certain biological, radioactive, organic and inorganic substances sometimes found in drinking water. Two types of standards have been established. Primary drinking water standards set achievable levels of drinking water quality to protect your health. Secondary drinking water standards provide guidelines regarding the taste, odor, color, hardness, and other aspects of drinking water, which are not health risks. This year's test results indicate your water meets all state and federal requirements. Detected contaminants are shown in the attached table.

WATER SUPPLY / SOURCE INFORMATION

The Caribou Utilities District procures its water from two gravel wells on the River Road in Caribou. Chemicals used in the treatment process include sodium hypochlorite for disinfection, fluoride for dental health, and ortho-phosphate for corrosion control. Although water quality is very high, the water has some hardness. Customers are urged to regularly flush water heaters and water boilers to reduce mineral deposits from the harder water. Also, customers should try different detergents for clothes washing and dishwashing to determine which are best for hard water. Small amounts of white vinegar may reduce mineral deposits in dishwashers and other heating appliances such as coffee makers.

Sources of drinking water include rivers, lakes, ponds, and wells. As water flows either on the surface or through the ground, it dissolves naturally occurring minerals and radioactive material and can also accumulate substances resulting from human and animal activity. The Maine Drinking Water Program (DWP) has evaluated all public water supplies as part of the Source Water Protection Program (SWPP). The assessments included geology, hydrology, land uses, water testing information, and local ordinances to see how likely our drinking water source is to being contaminated by human activities in the future. Assessment results are available at public water suppliers, town offices, and the DWP. For more information on the SWPP, contact the DWP by telephone (207) 287-2070.

All sources of drinking water are subject to potential contamination by constituents which are naturally occurring or are manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk. Contaminants which may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from wastewater treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides & herbicides, which may come from a variety of sources as agriculture. Urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban runoff, and septic system.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

In 2018, we applied for and were granted a partial waiver for water testing for certain synthetic organic compounds (SOC) (Phase II/V). This is an exemption from doing tests for insecticides, herbicides, fungicides, and certain other industrial chemicals that are regulated in drinking water. The State of Maine Drinking Water Program grants a waiver only upon determining, on a case by case basis, that 'it will not result in an unreasonable health risk. For any water tests which are not waived, we are required to report contaminants which were detected in our water supply in this report.

WATER SYSTEM DATA

Your water supply and distribution system include over 30 miles of water main piping, serves over 1,600 customers and provides fire protection service through over 150 hydrants. In the last twelve months, we have produced and delivered over 185 million gallons of water. That is about 500,000 gallons each day. The system also maintains over 1.5 million gallons in 4 storage tanks. This storage allows us to meet peak system demand periods and maintain an adequate supply during firefighting activities.

LEAD IN DRINKING WATER

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 Caribou Utilities District is responsible for providing high quality drinking water, but it cannot control the variety of materials used in customer 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. Test results for the latest lead tests are shown in the attached table. The Caribou Utilities District tested below the action level for lead. The Caribou Utilities District now qualifies for reduced monitoring every three years.

OTHER IMPORTANT INFORMATION

This report is only a summary of our activities during the past year. If you have any questions about your water quality, the information contained in this report, or your water service in general, please call us at 496-0911 during normal business hours (Monday through Friday between 7:30 a.m. and 4:00 p.m.). You may also direct questions to the Maine Department of Human Services Drinking Water Program at 207-287-2070, State Toxicologist at 866-292-3474, or the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Caribou Utilities District
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Public Water Supply ID #90320

2018
Water Quality Report

This is the annual Water Quality Report of the Caribou Utilities District (CUD) serving the City of Caribou, Maine. This report is intended to provide you with important information about your drinking water. We know you count on us for a safe and reliable supply of water every day and we are dedicated to providing the highest quality of service.

In accordance with Federal Law and USDA Policy, the Caribou Utilities District does not discriminate on the basis of race, color, religion, sex, national origin, age, or disability. To file a complaint of discrimination, write to USDA, Director of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Ave. SW, Washington, DC, 20250-6410 or call 1-800-795-3272 (voice) or 202-720-6382 (TDD). The Caribou Utilities District is an Equal Opportunity Provider and Employer.

If at any time you have questions concerning your water or wastewater services, please do not hesitate to contact us at 176 Limestone Street, call us at 207-496-0911, or visit us at:
http:// www.cariboumaine.org/utilities
https://www.facebook.com/CaribouUtilitiesDistrict/

HIGHLIGHTS OF THE PAST YEAR

In the spring of 2017, a new meter reading system was sought to replace equipment and software no longer supported by the manufacturer. Throughout that year over 300 of our oldest meters were replaced with new radio and remote read ready meters. Throughout 2018, the balance of all meters were replaced or had a new remote read radio installed. In October 2018, the District transitioned from quarterly to monthly billing with a paper bill and envelope instead of a postcard. Access to the treatment plant was detoured in 2018 by the failure of the roadway on the River Road.