

Thorne Bay 2016 CCR

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Last year, we conducted tests for over 80 contaminants. We only detected 5 of those contaminants, and found only 2 at a level higher than the EPA allows. As we informed you at the time, our water temporarily exceeded drinking water standards. (For more information see the section labeled Violations at the end of the report.)

Do I need to take special precautions?

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.

EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

The City of Thorne Bay drinking water comes from a Surface Water location called Water Lake.

Source water assessment and its availability

A Source Water Assessment for our water source was completed in 2003. Vulnerability rankings are assigning based on the susceptibility of the drinking water source to potential contamination, recent sampling results and the presence of potential contamination source- they do not necessarily indicate these contaminants will reach our source. The results of the assessment are:

The Wellhead/Surface Intake Susceptibility: Very High

The Aquifer Susceptibility: Not Applicable

The overall vulnerability to potential contaminants is:

Bacteria and Viruses: High

Nitrates/Nitrites: High

Volatile Organic Chemicals: Very High

Inorganics/Heavy Metals: Very High

Synthetic Organic Chemicals: Medium

Other Organic Chemicals: Medium

For further information regarding this source water assessment please contact the local water system operator,

or the Alaska Resources Library & Information Services (ARLIS) located at 3211 Providence Drive, Room 111, Anchorage, Alaska 99508; phone number 907-272-7547. Or you may call Chris Miller at the ADEC Drinking Water Protection Program at 907-269-4791, or 907-269-7549. You may also access the public source water executive summary data at the ADEC website: <http://dec.alaska.gov/DWW/JSP/swaDisclaimer.html>

Why are there contaminants in my drinking water?

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 that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

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 cases radioactive material. It can pick up substances resulting from the presence of animals and from human activity. Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming. Pesticides and herbicides, may come from a variety of sources such as agriculture. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, can come from gas stations, urban storm water runoff, septic systems, and radioactive contaminants. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

Residents are encouraged to participate in decisions that affect drinking water quality and bring any concerns to local City council meetings.

Description of Water Treatment Process

Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.

Additional Information for Lead

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. City of Pelican 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>.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	186.3	54.4	243	2016	Yes	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) (ppb)	NA	80	212.5	182	242	2016	Yes	By-product of drinking water disinfection
Inorganic Contaminants								
Barium (ppm)	2	2	.003	0	.003	2015	No	Erosion of natural deposits
Total Organic Carbon (percentage of removal)	NA	TT	58.8%	48.6%	60.2%	2016	No	Naturally present in the environment

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Copper - action level at consumer taps (ppm)	1.3	1.3	0.434	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits, sampling error by sampler
Lead - action level at consumer taps (ppb)	0	15	0.00131	2016	0	No	Corrosion of household plumbing systems;

Violations and Exceedances

Haloacetic Acids (HAA5)

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer. Thorne Bay has over the years experienced high levels of HAA5s since we began monitoring in 2004 when regulatory changes took effect. This violation took place from January of 2016- December of 2016. Seasonal variations of water quality (naturally-occurring organic materials) at Water Lake contribute to the formation of these Disinfection Byproducts in our water distribution system. The City utility staff have increased maintenance efforts (decreasing Chlorine usage, routine hydrant flushing distribute on line purging, valve exercising, etc.) within our distribution system to remove organic material which contributes to HAA5 formation. Although the HAA5 levels have been reduced, they are still high and the City will continue working to reduce their levels even further. Recently, we have met with DEC officials to come up with ideas to resolve this issue.

TTHMs [Total Trihalomethanes]

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. The Violation of TTHM occurred from January of 2016 through December of 2016 and has been occurring since regulations came about in 2004. Thorne Bay has over the years experienced high levels of TTHM's since we began monitoring in 2004 when regulatory changes took effect. Seasonal variations of water quality (naturally occurring organic materials) at Water Lake contribute to the formation of these Disinfection Byproducts in our water distribution system. The City utility staff has increased maintenance efforts (decreasing Chlorine usage, routine hydrant flushing, distribution line purging, valve exercising, etc.) within our distribution system to remove organic material which contributes to TTHM formation.. Although the TTHM levels have been reduced, they are still high and the City will continue working to reduce their high levels. Recently, we have met with the DEC and are discussing more options to lower these levels

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

For more information please contact:

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