Annual Drinking Water Quality Report
New England, North Dakota
2016

We're pleased to present to you this year's *Annual Drinking Water Quality Report*. This report is designed to inform you about the safe clean water we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is treated surface water purchased from the Southwest Water Authority (SWA). The source of SWA water is Lake Sakakawea. The SWA then delivers the partially treated water to a lime-softening treatment plant. The water is then clarified, softened, filtered, and disinfected before being delivered to our customers.

New England is participating in North Dakota's Wellhead Protection Program. The North Dakota Department of Health will be preparing a Source Water Assessment for the city of New England and Southwest Water Authority at a future date. Information on this program will be made available to the public as it is completed.

The city of New England is pleased to report that our drinking water is safe and meets federal and state requirements.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Jason Jung, City Auditor, at (701) 579-4422. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first Monday of each month at 7:00 PM in the New England City Hall. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Jason Jung at the number listed above.

The city of New England would appreciate it if large volume water customers would please post copies of this *Annual Drinking Water Quality Report* in conspicuous locations or distribute them to tenants, residents, patients, students, and/or employees, so individuals who consume the water, but do not receive a water bill, can learn about our water system.

New England routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1st to December 31st, 2016. As authorized and approved by EPA, the state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data [e.g., for inorganic contaminants], though representative, is more than one year old.

The sources of drinking water (both tap 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, 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 sewage 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 and herbicides, which may come from a variety of sources such 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 stormwater runoff, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Not Applicable (NA)

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (µg/l)- one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Picocuries per liter (pCi/l) - picocuries per liter is a measure of the radioactivity in water.

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

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level - The "Maximum Allowed" (*MCL*) 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.

Maximum Contaminant Level Goal - The "Goal"(*MCLG*) 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.

Maximum Residual Disinfectant Level (MRDL) – 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.*Maximum Residual Disinfectant Level Goal (MRDLG)* – 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.

TEST RESULTS FOR THE CITY OF NEW ENGLAND								
Contaminant	**MCLG**	**MCL**	**Level Detected**	**Units**	**Range**	**Date (year)**	**Violation Yes/No Other Info**	**Likely Source of Contamination**
Microbiological Contaminants								
Turbidity*(NTU)	NA	TT=.3	0.18	NTU	N/A	2016	100% of samples met turbidity limits	Soil runoff
Radioactive Contaminants								
Uranium, Combined	0	30	0.024	pCi/l	N/A	2009	NO	Erosion of natural deposits
TOC Removal								
Total Organic Carbon, Source H2O	NA	TT	4.47	Ppm	2.96-4.47	2016	N/A	Naturally present in the environment.
Total Organic Carbon, Finished H20	NA	TT	2.88	Ppm	1.99-2.88	2016	N/A	Naturally present in the environment.
Alkalinity (Source)			174	mg	163-174	2016	N/A	Naturally present in the environment.
Inorganic Contaminants								
Copper	13	AL= 1.3	.109	Ppm	N/A	2016		Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	AL=.015	None	Ppb	N/A	2016		Corrosion of household plumbing systems, erosion of natural deposits
Barium	2	2	0.0126	Ppm	N/A	2016	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	.92	Ppm	N/A	2016	NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Selenium	50	50	1.12	Ppm	N/A	2010	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Nitrate-Nitrite (as Nitrogen)	10	10	0.04	Ppm	N/A	2016	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection By-products								
Chloramine	MRDLG=4	MRDL =4.0	1.5	Ppm	.2-1.5	2016	NO	Water additive used to control microbes
HAA5s Haloacetic Acids	N/A	60	8	Ppb	N/A	2016	NO	By-product of drinking water chlorination
TTHMs [Total trihalomethanes]	N/A	80	7	Ppb	N/A	2016	NO	By-product of drinking water chlorination

SWA Table of Detected Unregulated Contaminants

Alkalinity, Carbonate (ppm)	N/A	N/A	5		ND-5	2016	N/A	Natural Erosion, plant activities, and certain industrial waste discharges
Bicarbonate as HCO3 (ppm)	N/A	N/A	212		87-212	2016	N/A	Natural Erosion, plant activities, and certain industrial waste discharges
Radium		5	1.05	pCi/L		2009		N/A
Gross Alpha	15	15	.01608	pCi/L		2009		N/A
Calcium	N/A	N/A	36.8	ppm		2016		N/A
Chloride			13.8	ppm		2016		N/A
Conductivity@25C UMHOS/CM	N/A	N/A	621	umho/cm		2016		N/A
Hardness Total(AS CACO3)	N/A	N/A	155	ppm		2016		N/A
Magnesium	N/A	N/A	15.2	ppm		2016		N/A
PH	N/A	N/A	8.76	PH		2016		N/A
Potassium	N/A	N/A	4.4	ppm		2016		N/A
Sodium	N/A	N/A	71.8	ppm		2016		N/A
Sodium Adsorption Ratio	N/A	N/A	2.51	obsvns		2016		N/A
TDS	N/A	N/A	391	ppm		2016		N/A

The beneficial use status of Lake Sakakawea providing source water for the SWA public water system is classified as fully supporting, while the potential contaminant sources in the source water protection area are of low concern. The SWA public water system is classified as **moderately susceptible.** Although the SWA public water system is classified as moderately susceptible to the source water's potential contaminant sources, it should be noted that historically, SWA has effectively treated this source water to meet drinking standards.

*Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity is measured every four hours during treatment plant operations. 100% of samples met turbidity limits. Average finished water turbidity for 2016 was 0.3 NTU, and highest single measurement was .18.

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. Southwest Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. Use water from the cold tap for drinking and cooking. 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 drinking 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.

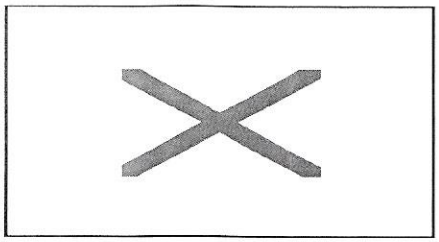
As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels.

EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table above are the only contaminants detected in your drinking water. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Your water system monitors for sulfate, which at the present time is an unregulated contaminant. The following results are from the most recent testing in accordance with the regulations.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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/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 (1-800-426-4791).

Please call Jason Jung, City Auditor, at (701) 579-4422 if you have questions concerning your water system.

The city of New England works diligently to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.