

CITY OF NORWICH, DEPARTMENT OF PUBLIC WORKS

One City Plaza Norwich, NY 13815 Phone 607-334-1255 Fax 607-334-1254

Annual Drinking Water Quality Report for 2020

City of Norwich Public Water Supply, One City Plaza, Norwich, NY 13815 (Public Water Supply ID# 801745)

INTRODUCTION: To comply with State regulations, City of Norwich, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact the City of Norwich Water Department, 607-334-1255. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Water Commission meetings. The meetings are held every third Wednesday of the month, at 6:30pm, at the WWTP, 129 Portelli Dr.

WHERE DOES OUR WATER COME FROM? In general, 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, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Water System uses Surface and Ground water to supply its customers. There are four (4) wells with wells 3 & 4 being the primary ground water production wells. The surface water supply is from Chenango Lake, Ransford Creek and the Upper and Lower Reservoirs.

The Ground Water consists of the following; Well 1 is rated at 300 gallons per minute (gpm), Well 2 is rated at 200 gpm, Well 3 is rated at 1,100 gpm and Well 4 is rated at 2,000 gpm. Wells 1 & 2 are less than fifty (50) feet in depth and are not in use at this time. Wells 3 & 4 are greater than two hundred (200) feet in depth and are the primary Ground water wells.

The Surface Water consists of the Upper and Lower reservoirs that are fed by the Ransford Creek drainage area and Chenango Lake. Storage capacity of Chenango Lake is approximately 340 million gallons, the Upper & Lower Reservoirs capacity is approximately 86 million gallons.

The City of Norwich, Water System provides treatment for disinfection, fluoridation and the stabilization (sequestering) of manganese with polyphosphate at wells 3 & 4 and filtration, disinfection, fluoridation stabilization (sequestering) of manganese with polyphosphate at the surface water treatment plant.

The NYSDOH has completed a source water assessment for this water system, based on available information. Possible and actual threats to the drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the source. **IT DOES NOT MEAN THAT THE WATER DELIVERED TO CONSUMERS IS, OR WILL BECOME CONTAMINATED.** Please see section "Water Quality" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. City of Norwich Water System 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>

As mentioned before, our water is derived from surface water and ground water sources. The source water assessment has rated these sources as having a medium-high susceptibility to microbial, nitrates, industrial organics and other contaminants.

DISINFECTION; While the source water assessment rates our sources as being susceptible to microbial, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State drinking water standards for microbial contamination.

County and State health departments will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning and education programs.

FACTS AND FIGURES: The City of Norwich supplies water to approximately 2,800 customers with a total population of approximately 9,000. The system also supplies water to the Town of Norwich.

The total water produced in 2020 was 348 million gallons. The daily average of water treated and pumped into the distribution system was 953,000 gallons per day. Our highest single day was 1,543,000 gallons. The amount of water billed to customers was 158.3 million gallons. Due to meter inaccuracy, an estimated 8 million gallons was delivered to customers but not billed. About 6.2 million gallons was used to flush mains and hydrants. About 8.3 million gallons was used by City Government to provide water to municipal buildings, parks including irrigation at Angelino ball fields, Community Gardens, and filling of Kurt Beyer pool. Approximately 150 million gallons was lost due to leaks in main lines and services. This leaves an unaccounted for total of about 17 million gallons (or 5%) which is made up of unidentified leaks, unquantified flushing, and fire suppression. The City Water System utilizes a step billing schedule with quarterly billing as follows; Billing for water usage is in cubic feet (cu. ft.) one cubic foot equals 7.48 gallons

Minimum charge one thousand (1,000) cubic feet = (7,480 gallons) \$ 66.80
 Additional 1,000 – 13,000 cu. ft. (7,480 – 97,240 gallons) \$ 5.81 per 100 cu.ft
 Additional 13,000 – 50,000 cu.ft. (97,240 – 374,000 gallons) \$ 6.11 per 100 cu.ft.
 Additional 50,000 and over cu.ft. (370,000 gallons and over) \$ 6.41 per 100 cu.ft.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER? As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, fluoride, turbidity, inorganic compounds, nitrate, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 EPA's Safe Drinking Water Hotline (800-426-4791) or the Chenango County Health Department at (607-334-1673)

Table of Detected Contaminants						
Contaminant	Violation Yes/No	Date of Sample	Level Detected Avg (Range)	Unit Measurement	MCLG	Likely Source of Contamination
Total Coliform ⁽¹⁾	No	09/18/2018	Positive	Pos/Neg	N/A	TT – No positive sample Naturally present in environment
Total Coliform ⁽¹⁾	No	09/25/2018	Positive	Pos/Neg	N/A	TT– No positive sample Naturally present in environment
Turbidity ⁽²⁾	No	Daily	0.998	NTU	N/A	TT = 1 NTU Soil Runoff
Turbidity ⁽³⁾	No	Daily	95%	NTU	N/A	TT = 95% of samples <0.3 NTU Soil Runoff
Fluoride	No	Monthly	0.7 (0.25 – 2.14)	mg/L	N/A	MCL = 2.2 Erosion of natural deposits, water additive for dental health
Nitrate - Reservoir	No	03/10/20	0.27	mg/L	N/A	MCL = 10 mg/L Runoff from fertilizer; Leaching from septic; Erosion of natural deposits
Nitrate – Well #1	No	03/10/20	0.91	mg/L	N/A	MCL = 10 mg/L Runoff from fertilizer; Leaching from septic; Erosion of natural deposits
Radium 228 – Well #4	No	03/12/20	1.3	pCi/L	N/A	MCL = 5 pCi/L Erosion of natural deposits
Barium - Well #1&2	No	12/19/2018	0.037	mg/L	N/A	MCL = 2 mg/L Discharge of drilling wastes and metal refineries; Erosion of natural deposits
Barium - Well #3&4	No	12/18/2019	0.12	mg/L	N/A	MCL = 2 mg/L Discharge of drilling wastes and metal refineries; Erosion of natural deposits
Barium - Reservoir	No	03/16/2020	0.015	mg/L	N/A	MCL = 2 mg/L Discharge of drilling wastes and metal refineries; Erosion of natural deposits
Chromium – Well #1&2	No	12/19/2018	0.0022	µg/L	N/A	MCL = 100 µg/L Discharge from steel and pipe mills; Erosion of natural deposits
Chromium – Well #3&4	No	06/03/2015	1.5	µg/L	N/A	MCL = 100 µg/L Discharge from steel and pipe mills; Erosion of natural deposits
Chromium – Reservoir	No	03/16/2020	0.0018	mg/L	N/A	MCL = 0.1 mg/L Discharge from steel and pipe mills; Erosion of natural deposits
Cyanide, total - Reservoir	No	03/16/2020	0.058	mg/L	N/A	MCL = 0.2 mg/L Discharge from steel/metal
Nickel – Well #1&2	No	12/19/2018	0.0014	mg/L	N/A	N/A Erosion of natural deposits
Nickel – Well #3&4	No	12/18/2019	0.0013	mg/L	N/A	N/A Erosion of natural deposits
Nickel – Reservoir	No	03/16/2020	0.00063	mg/L	N/A	N/A Erosion of natural deposits
Total Trihalomethanes (TTHM) ⁽⁴⁾	No	Quarterly	68	µg/L	N/A	MCL = 80 µg/L By-product of drinking water chlorination
Total Haloacetic Acids (HAA5) ⁽⁴⁾	No	Quarterly	49	µg/L	N/A	MCL = 60 µg/L By-product of drinking water chlorination
Di(2-ethylhexyl)phthalate – Well #1&2 Resampled 02/13/2019	No	12/19/2018 (02/13/2019)	0.0068 (ND)	mg/L	N/A	MCL = 0.006 mg/L Discharge of plastic, ink, pesticides, cosmetics, manufacturing wastes
Copper	No	11/16/2020	0.601 ⁽⁵⁾ (0.0093 – 0.69)	mg/L	N/A	AL = 1.3 Corrosion of galvanized pipes; Erosion of natural deposits
Lead	No	11/16/2020	0.00123 ⁽⁶⁾ (ND – 0.021)	mg/L	N/A	AL = 0.015 Corrosion of household plumbing systems; Erosion of natural deposits

Notes:

- 1 – All positive samples for total coliform are resampled within 24 hours. Both of these positive samples came back negative on the resample.
- 2 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year occurred on October 20 (0.998 NTU). State regulations require that turbidity must always be less than or equal to 1.0 NTU.
- 3 – The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. Although October 2020 was the month when we had the fewest measurements meeting the treatment technique for turbidity, the levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.
- 4 – This level represents the highest locational running annual average calculated from data collected.
- 5 – The level presented represents the 90th percentile of the 40 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected. In this case, 40 samples were collected and the 90th percentile value was 0.601 mg/L, the sample with the highest value was 0.69 mg/L. The action level for copper was not exceeded at any of the sites tested.
- 6 – The level presented represents the 90th percentile of the 40 samples collected. The action level for lead was exceeded at one of the 40 sites tested.

Definitions:

- Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
- Maximum Contaminant Level Goal (MCLG):** 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 contamination.
- 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 required process intended to reduce the level of a contaminant in drinking water.
- Level 1 Assessment:** A Level 1 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.
- Level 2 Assessment:** A Level 2 assessment is an evaluation of the water system to identify potential problems and determine, if possible, why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
- Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.
- Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- Milligrams per liter (mg/l):** Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
- Micrograms per liter (µg/l):** Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).
- Nanograms per liter (ng/l):** Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).
- d** Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion - ppq).
- Picocuries per liter (pCi/L):** A measure of the radioactivity in water.
- Millirems per year (mrem/yr):** A measure of radiation absorbed by the body.
- Million Fibers per Liter (MFL):** A measure of the presence of asbestos fibers that are longer than 10 micrometers.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. It should be noted that the action level for lead was exceeded in one of the samples collected. We are required to present the following information on lead in drinking water: If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. City of Norwich 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

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IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2020, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens 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 provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, we monitor fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.7 mg/l. During 2020 monitoring showed that fluoride levels in your water were within 0.1 mg/l of the target level for 51% of the time.

INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS

Spanish: Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.
French: Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks.
- Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes. If it moved, you have a leak.

SYSTEM IMPROVEMENTS

In 2020, we made some repairs to the Well 3 Natural Gas engine including replacing the flywheel, and repaired some leaky water mains estimated to seal up about 13 million gallons of lost water. These improvements will help us in our continuing efforts to maintain a safe and dependable water supply. In 2021, we are looking at planning the next phase of water main replacements, and focusing efforts on leak detection.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community.