
PWS-ID 801745

**ANNUAL WATER SUPPLY STATEMENT
CITY OF NORWICH PUBLIC WATER SUPPLY
CHENANGO COUNTY, NEW YORK**

2016

This statement is being provided to the public as required by the New York State Public Health Law. Amendments to this law were adopted in the Fall of 1996 requiring that all public water systems with a gross operating revenue over \$ 125,000.00 provide an annual water statement.

The City of Norwich, Water System

The city of Norwich supplies water to 2,800 customers with a total population of approximately 9,000. The system also supplies water to the Town of Norwich.

The Water System uses Surface and Ground water to the 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 feed by the Ransford Creek drainage area and Chenango Lake. Storage capacity of Chenango Lake is approximately 340,000,000 million gallons, the Upper & Lower Reservoirs capacity is approximately 86,000,000 million gallons.

The average daily demand for water is 0.88 million gallons per day (mgd) with a maximum daily demand of 1.6 mgd. Total water production for 2015 was 321,078,000 million gallons. Unaccounted for water is approximately twenty (20) percent. During 2016, efforts will focus on the reduction of the amount of water lost.

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)		\$ 56.75
Additional 1,000 – 13,000 cu. ft.	(7,480 – 97,240 gallons)	\$ 4.94 per 100 cu.ft
Additional 13,000 – 50,000 cu.ft.	(97,240 – 374,000 gallons)	\$ 5.19 per 100 cu.ft.
Additional 50,000 and over cu.ft.	(370,000 gallons and over)	\$ 5.45 per 100 cu.ft.

WATER QUALITY:

Under the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (EPA) sets national limits on contaminant levels to ensure the safety of your drinking water, These limits are known as Maximum Contaminant Levels (MCL). For some contaminants the monitoring techniques may be unreliable, too expensive or too difficult to perform. In these cases, the EPA establishes Treatment Technique (TT) requirements instead of MCL. If there is a regulation violation we are required to let you know. In New York State it is the NYS Department of Health that is responsible for enforcing EPA regulations.

The City of Norwich, Water System collects Fourteen (14) coliform analysis (Bacteriological) each month. Results of these samples are provided to the State and County Departments of Health for review. As part of their surveillance, Chenango County Department of Health performs additional testing of the distribution system. The Water Systems monitoring program exceeds EPA and State Department of Health requirements.

In 2015 there were no distribution system bacteriological, chemical MCLs, treatment technique or action level violations. In 2014 The City was only able to receive back 19 of the 25 samples for lead & copper. 20 samples are required resulting in a treatment technique violation.

In accordance with NY State regulations, the Water System routinely monitors your drinking water for numerous contaminants. We test your drinking water for; coliform bacteria, inorganic contaminants, lead and copper levels, nitrate, volatile organic contaminants, total trihalomethanes, and synthetic contaminants. The table presented below depicts which contaminants were detected in your drinking water. The State allows us to monitor for certain contaminants less than once a year because the concentrations of these contaminants are not expected to vary significantly from year to year. Therefore some of the data, though representative of the water quality; is more than one year old.

TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Yes/No	Date of Sample	Level Detected Maximum	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contaminant
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MICROBIOLOGICAL CONTAMINANTS

Total Coliform	No	Monthly	n/a	n/a	0	MCL= 2 or more positive samples	Naturally present in environment
Turbidity (1)	No	Daily	0.50	NTU	n/a	TT = 5 NTU	Soil Runoff
Turbidity (1)	No	Daily	98 %	NTU	n/a	TT = 95 % of samples <0.3 NTU	Soil Runoff

Notes: (1) 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. Our highest single turbidity measurement for the year accrued on May 28, 2015 (0.26 NTU). State regulations require that turbidity must always be below 5 NTU. The regulations require that 95 % of the turbidity samples collected at the filtration plant have measurements below 0.3 NTU. The levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.

Contaminant	Violation Yes/NO	Date of Sample	Level Detected Maximum Range	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contaminant
INORGANIC CONTAMINANTS							
Fluoride	No	Daily	0.7	mg/l	n/a	MCL 2.2 mg/l	Erosion of natural deposits, water additive that promote strong teeth
Copper (2)	No	7-14	0.40 0.09 – 0.43	mg/l	1.3	AL=1.3	Corrosion of galvanized pipes; Erosion of natural deposits
Lead (3)	No	7-14	0.002 ND-0.0023	mg/l	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits
DISINFECTION BYPRODUCTS							
Total (4) TTHM Total Trihalomethanes	No	11/19	66	ug/l	n/a	MCL= 80	By-product of drinking water chlorination
Total (4) HAA5 Total Haloacetic Acids	No	11/19	35	ug/l	n/a	MCL= 60	

Notes; (2) The level presented represents the 90th percentile of the 19 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 at your water system. In this case, 19 samples were collected at your water system and the 90th percentile was the 17 sample at 0.002 mg/l. The action level for copper was not exceeded.

(3) The level presented represents the 90th percentile of the 19 sites tested. The action level for lead was not exceeded at any of the sites tested.

(4) This level represents the annual quarterly average calculated from data collected.

FOR ADDITIONAL INFORMATION YOU MAY CALL THE FOLLOWING PHONE NUMBERS

Safe Drinking Water Hotline	800-426-4791
Chenango County Department of Health	607-337-1673
City of Norwich	607-334-1250

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

A full copy of this report and the data supplement is available at City Hall, One City Plaza, Norwich, NY 13815. For additional information you may call the USEPA "Safe Drinking Water Hotline at 1-800- 426-4791"

EDUCATION STATEMENTS;

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 EPA's "Safe Drinking Water Hotline at 1-800-426-4791"

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 particularly at risk from infections. These people should seek advise 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 at 1-800-426-4791"

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 accruing minerals and in some cases, radioactive material and can pick up substances resulting from the presence of animals or human activities.

EDUCATIONAL STATEMENTS;

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 EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department and FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

SOURCE WATER SUMMARY;

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 "*Are there contaminants in our drinking water*" 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 microbials, nitrates, industrial organics and other contaminants.

DISINFECTION; While the source water assessment rates our sources as being susceptible to microbials, 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.

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 the drinking water at an optimal range 0.7 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the City of Norwich monitor fluoride levels on a daily basis. During 2015 monitoring showed fluoride levels in your water were in the target level (0.1 mg/l) 100 % of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

MODIFICATIONS;

The City of Norwich has received one million dollars from USDA-RD as a grant towards the new filter plant. The plant would be a membrane microfiltration system. Pilot testing to start January 2014 and completed August 2014. Final design is in engineering.

WATER CONSERVATION;

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 cost 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 pumping systems 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 fire fighting needs are met.

The water system with both its surface and ground water supplies will be able to meet its current and future water needs. To avoid waste inside and outside the home the following are helpful tips.

When watering your lawn please water before 10:00 a.m. or after 6:00.p.m. This will allow the water to soak into the ground and use less water with the same benefit. Adjust lawn sprinklers so only the lawn is being watered, not the house, sidewalk or the street.

Repair dripping faucets and toilets that seem to flush themselves.

Use water saving devices and appliances such as washing machines, toilets, showerheads and aerators.

Water your garden and lawn only when necessary, refrain from watering on windy days. Using a layer of mulch on flower beds and gardens will help retain moisture

When washing your vehicle please don't let the hose run continuously, wash dishes and laundry only when you have a full load.

Conserving water saves you money and preserves the Norwich Water Systems water supply.

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.

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.

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.(ppm)

Micrograms per liter (ug/l) Corresponds to one part of liquid in one billion parts of liquid (ppb)

Non-Detects (ND) Laboratory analysis indicates that the constituent is not present.

ANNUAL WATER SUPPLY STATEMENT, CITY OF NORWICH, WATER QUALITY REPORT

DATE 2015

PARAMETER	UNITS	MCL	RESULT	PARAMETER	UNITS	MCL	RESULT
SURFACE WATER, FILTER PLANT				GROUND WATER, WELLS 3 & 4			
Alkalinity	mg/l	note 2	49	Alkalinity	mg/l	note 2	110
Antimony Total	mg/l	0.006	<0.0004	Antimony Total	mg/l	0.006	<0.00040
Arsenic	mg/l	0.05	<0.0010	Arsenic	mg/l	0.05	<0.0010
Barium	mg/l	2	0.021	Barium	mg/l	2	0.033
Beryllium Total	mg/l	0.004	<0.0003	Beryllium Total	mg/l	0.004	ND
Cadmium	mg/l	0.005	<0.001	Cadmium	mg/l	0.005	<0.00030
Calcium Total	mg/l	note 2	27	Calcium Total	mg/l	note 2	55
Chromium	mg/l	0.1	0.001	Chromium	mg/l	0.1	0.0016
Color	PtCoU	5 DL	<5	Color	PtCoU	5 DL	<5
Copper	mg/l	1.3	0.019	Copper	mg/l	1.3	ND
Corrosivity	SI	see notes	-0.97	Corrosivity	SI	see notes	0.17
Cyanide	mg/l	0.2	<0.01	Cyanide	mg/l	0.2	<0.01
Fluoride	mg/l	2.2	0.93	Fluoride	mg/l	2.2	0.98
Iron	mg/l	0.3	0.19	Gross Alpha	pCi/L	15	1.64
	mg/l			Iron	mg/l		ND
Manganese	mg/l	0.3	0.24	Manganese	mg/l	0.3	0.23
Mercury	mg/l	0.002	<0.0002	Mercury	mg/l	0.002	<0.00020
Nickel Total	mg/l	0.1	0.00057	Nickel Total	mg/l	0.1	0.00069
Nitrate as N.	mg/l	10	0.21	Nitrate as N.	mg/l	10	<0.2
pH	Units	6.5 - 8.5	6.64	Orthophosphate	mg/l	note 2	<0.04
Selenium	mg/l	0.01	<0.001	pH	Units	note 2	7.8
Sodium	mg/l		22	S.C.	umhos/cm	note 2	464
Sulfate as SO4	mg/l	250	5.03	Selenium	mg/l	0.01	<0.0010
T.D.S.	mg/l	500	97	Sodium	mg/l		24
Thallium Total	mg/l	0.002	<0.0003	Sulfate as SO4	mg/l	250	27
Turbidity	NTU	note 4	0.2	T.D.S.	mg/l	500	210
Zinc	mg/l	5	0.048	Thallium Total	mg/l	0.002	<0.00030
EPA 502.2 VOC's			ND	Turbidity	NTU	note 4	<1
EPA 531.1 Methylcarbamate Pesticides			ND	Zinc	mg/l	5	ND
EPA 504.1 SOC's Microextractables			ND				
EPA 515.1 SOC's Chlorinated Acids			ND				
EPA 525.2 SCC's NY			ND				
EPA 508 SCC's Organohalide Pest & P			ND				

DISINFECTANT BY-PRODUCTS

EPA 502.2 Trihalomethanes
Units = ug/l MCL = see note 1

Chloroform Trihaloromethane	
Bromodichloromethane	
Chlorodibromomethane	
Bromoform	
Total Trihalomethanes	80
Total Haloacetic Acids	60

NOTES

- Note 1 = MCL for total of all four compounds not to exceed 100 ug/l
- Note 2 = No Recommended MCL
- Note 3 = pH of 7 is neutral pH above 7 basic reaction

NOTES

- Note 4 = 95% of samples collected shall be below 0.3 ntu
- mg/l = Milligrams Per Liter
- ug/l = Micrograms Per Liter
- MCL = Maximum Contaminant Level
- ND = Not Detected
- DL = Detection Level
- T.D.S. = Total Dissolved Solids
- pCi/L = Pico Curies Per Liter
- NTU = Nephelometric Units
- PtCoU = Platinum Cobalt Units
- State regulations require that turbidity must always be below 5 ntu
- SI = Saturation Index, a negative indication the water will dissolve, a positive indication the water will scale