

City of Norwalk 2014 Drinking Water Consumer Confidence Report

Mayor Rob Duncan and the City of Norwalk Water Department are proud to report that throughout 2014 your drinking water met or exceeded all requirements set by the Ohio Environmental Protection Agency.

Please read this report to learn more about general health information, water quality test results, and how to find answers to any questions about the water.

The City of Norwalk holds a current, unconditional Ohio EPA license to operate its water system. In 2014, about 661 million gallons of water were processed at the city's treatment plant, an average of about 1.81 million gallons a day. The capacity of the plant, located at the intersection of Woodlawn Avenue and Old State Road, is 4 million gallons a day. The plant operates and is staffed 24 hours a day, every day of the year.

The water goes through multiple types of treatment to ensure its safety. Treatment includes: adsorption, coagulation, sedimentation, oxidation, filtration, stabilization, fluoridation and disinfection. The amount of chemical used is the minimum needed to meet drinking water standards.

Most all of the plant facilities have back-up systems available to always maintain the ability to provide safe water to our customers. The treatment plant staff strives to keep all equipment in top working condition, while at the same time keeping costs and customer rates as low as possible.

Finished drinking water is stored in two elevated tanks with capacities of 400,000 gallons and 750,000 gallons. Additionally, there are two underground tanks at the plant with a total storage capacity of about 1.1 million gallons.

The city buys about 54 million gallons of finished drinking water a year from Northern Ohio Rural Water (NORW). In an emergency, additional water could be obtained from NORW. Sources for the NORW water are municipal water plants in Elyria, Lorain, and New London. This report includes data from NORW, Elyria, Lorain, and New London.

Expanded efforts to protect the primary source of your drinking water were launched by the city in 2013. Read about the plan in the Source Water Information section of this report

To protect all water consumers, the City of Norwalk administers a backflow prevention program. Backflow can occur through a cross-connection from a possible source of contamination back into the drinking water system. It occurs when a cross-connection exists and a pressure reversal occurs in the water supply piping. The pressure reversal can be caused by things like a water main break or other change in the system. Most businesses, residences with lawn-sprinkling systems, and certain other facilities must have backflow devices in their plumbing systems to help prevent contamination of drinking water in the distribution system. Additionally, all consumers are urged to use a simple vacuum breaker on hoses to help prevent possible back-siphonage of water from swimming pools, lawn chemicals or other contaminants into the drinking water. For more information, call Bob DeVecchio on Tuesdays or Wednesdays at 419-663-6725.

For More Information

Questions about water quality may be directed to Bill Albrecht, superintendent of water treatment operations, at 419-663-6725. The public is also welcome at City Council's regular meetings, held at 7:30 p.m. on the first and third Tuesdays of each month in Municipal Court, off of Whittlesey Avenue, near the fire station.

Copies of this report are available at City Hall, the water plant and the wastewater plant, and on the city's website: www.norwalkoh.com.

About Your Drinking Water

About 75 different kinds of tests were completed on thousands of water samples in 2014 to confirm drinking water safety. Included were tests to detect bacteria, inorganic compounds, synthetic and volatile organic compounds, copper and nitrates. Tests for most contaminants did not result in detections. The Ohio EPA requires us to monitor for some contaminants less than once per year because concentrations of the contaminants do not change frequently. Some of our data, though accurate, is more than a year old.

What are sources of contamination in drinking water?

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 activity.

Contaminants that may be present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) 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 storm runoff, and septic systems; (E) radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

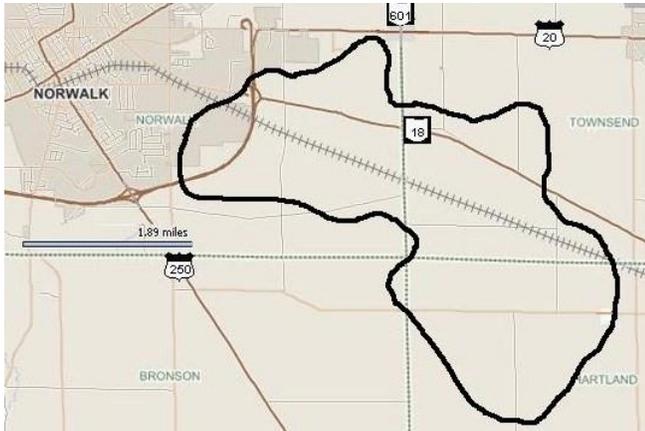
In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 Safe Drinking Water Hotline (1-800-426-4791).

Who needs 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 infection. 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Source Water Information



The City of Norwalk's Water Treatment Plant is fed by rainwater runoff from about 8 square miles of land east of the city (see map at left). The runoff forms Norwalk Creek, which flows into the city's reservoirs on Old State Road. Raw water is pumped from the Lower Reservoir into the plant for sophisticated treatment before it is distributed to consumers. The capacity of the three-reservoir system is nearly 700 million gallons, more than a year's supply. The East Branch of the Huron River is an alternative water source. Due to adequate rainfall, no water was pumped from the river in 2014.

With the assistance of the Ohio Rural Water Association and Ohio EPA, the City of Norwalk developed a Source Water Protection Plan for the Norwalk Creek watershed. The plan was endorsed by Ohio EPA in 2014. Under the plan, the city is working with property owners in the watershed to find ways to improve

the quality of water coming into the reservoirs. A harmful algae bloom occurred in Upper Reservoir in 2014, the first such bloom known to have ever occurred in the Norwalk reservoir system. The bloom had great potential to harm drinking water quality, and illustrates how vulnerable the water supply is to activities in the watershed. The phosphorus required for a harmful algae bloom to occur was a result of activities in the watershed.

The source water protection plan, including a more detailed map of the watershed, is available on the city's website at <http://www.norwalkoh.com/Departments/watertreatment.html>

For the purposes of water source assessments, all surface water in Ohio, including the Norwalk Creek watershed, is considered to be susceptible to contamination. By its nature, surface water is readily accessible and can be contaminated by chemicals and pathogens that may rapidly arrive at the public drinking water intake with little warning.

Potential contaminant sources to the city's drinking water are agricultural runoff, pesticide/fertilizer/petroleum storage, a fertilizer plant, transportation accidents, confined animal feedlots, above ground storage tanks, auto repair and car dealerships, silage, pastures, industrial storm water, home construction, gas line rupture, Laundromats, construction and demolition debris and golf courses. The water plant treats water to meet drinking water standards, but available treatment techniques cannot address all potential contaminants. Implementing measures to protect Norwalk Creek can further decrease the potential for water quality impacts. More detailed information is in the city's Drinking Water Source Assessment Report, which can be obtained from the water plant.

The city's new Source Water Protection Plan will attempt to address the potential contamination sources listed above through the voluntary cooperation of property owners and other governmental agencies.

The following is source water information for finished water purchased from Northern Ohio Rural Water.

City of Elyria - Although the City of Elyria's surface water intakes are located offshore in Lake Erie, the proximity of Beaver Creek and Martin's Run increases the susceptibility of the source water to contamination. The City of Elyria's drinking water source protection area is susceptible to contamination from municipal wastewater treatment discharges, air contamination deposition, runoff from residential, agricultural and urban areas, oil and gas production and transportation, leaking underground storage tanks and accidental releases and spills from rail and vehicular traffic as well as from commercial shipping and recreational boating.

The City of Elyria's public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie, Beaver Creek, and Martin's Run. More detailed information is provided in the City of Elyria's Drinking Water Source Assessment report, which can be obtained by calling Elyria Water Works, 440-324-7669.

City of Lorain - Although the City of Lorain's surface water intake is located offshore in Lake Erie, the proximity of the Black River increases the susceptibility of the source water to contamination. The City of Lorain's drinking water source protection area contains a moderate number of potential contaminant sources. These include accidental spills, releases associated with commercial shipping and recreational boating, air contaminant deposition, contaminants from industries and agricultural runoff, contaminants associated with oil and gas production and transportation, sediments from river dredging and disposal operations, natural erosional processes, contaminated storm water runoff from urban areas, municipal and home sewerage treatment system discharges, and combined sewer overflows.

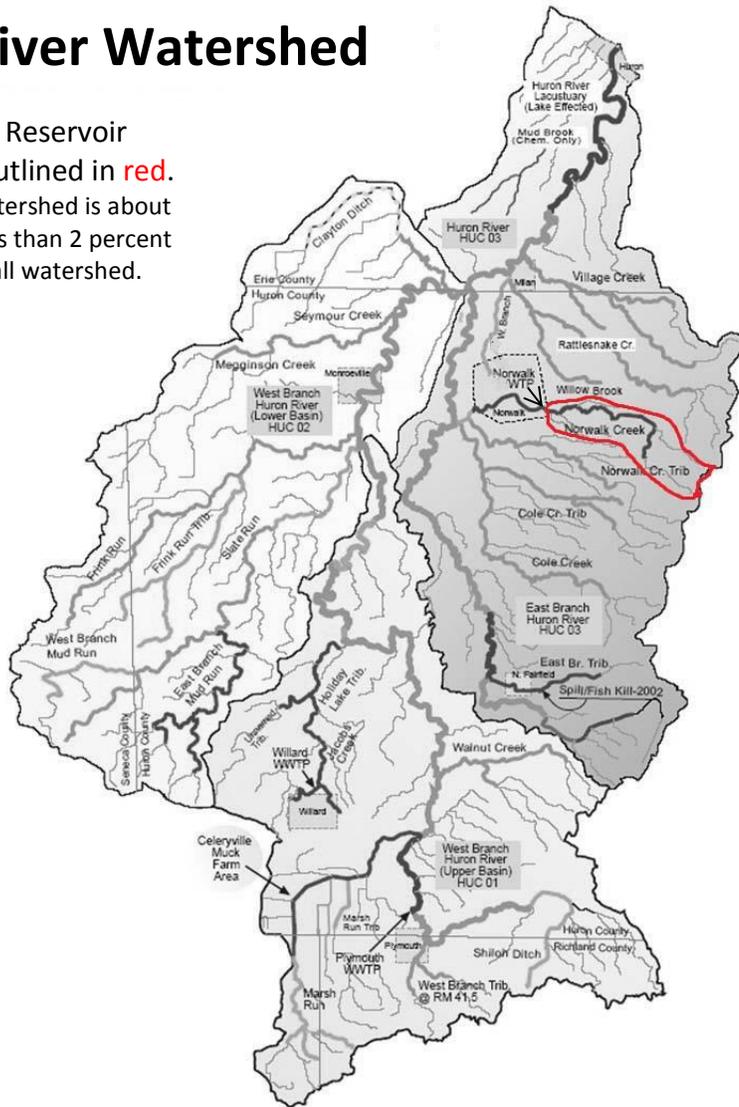
The City of Lorain's Public Water System treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. Implementing measures to protect Lake Erie and the Black River can further decrease the potential for negative impacts on water quality. More detailed information is provided in the City of Lorain's Drinking Water Source Assessment report, which can be obtained by calling Lorain Water Purification Plant, 440-204-2280.

Village of New London - The Village of New London's public water system uses surface water drawn from an intake on Buck Creek. The village's drinking water source protection area contains potential contaminant sources such as agricultural runoff, pasture runoff, above ground storage tanks, industrial storm water, gas line rupture, marina boat docks, unsewered areas, cemeteries, oil and gas wells, roadways and railways.

The Village of New London's public water system treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Buck Creek. More detailed information is provided in the Village of New London's Drinking Water Source Assessment report, which can be obtained by calling the Village of New London, 419-929-4091.

Huron River Watershed

City of Norwalk Reservoir
Watershed is outlined in red.
The reservoirs' watershed is about
8 square miles, less than 2 percent
of the river's overall watershed.



The Huron River Watershed drains
some 403 square miles of land in
western Huron County along with
portions of Erie, Seneca, and
Richland counties

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Definitions of Some Terms Used in This Report

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

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.

MCLG - Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

MRDL - Maximum Residual Disinfectant Level - The highest level of residual disinfectant (chlorine) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG - Maximum Residual Disinfectant Level Goal - The level of residual disinfectant in drinking water 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.

TT - Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

ppm - Parts Per Million - Units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

ppb - Parts Per Billion - Units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

NTU - Nephelometric Turbidity Unit - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

The "<" symbol means less than. For example, if a result was <5, the lowest level that can be detected was 5 and the contaminant in that sample was not detected.

Table of Contaminants Data on contaminants found in the City of Norwalk's drinking water							
Contaminants (units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contamination
Microbiological Contaminants							
Total Organic Carbon (a)	N/A	TT	1.54	1.37 – 2.13	No	2014	Naturally present in the environment
Turbidity (NTU) (b)	N/A	TT	0.30	.03 - 0.30	No	2014	Soil runoff
Turbidity (% samples meeting standard)	N/A	TT	100	100 - 100	No	2014	Soil runoff
Inorganic Contaminants							
Barium (ppm)	2	2	.019	N/A	No	2014	Erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	.252	N/A	No	2013	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives
Zero out of 30 samples from residential taps was found to have a copper level above the action level.							
Lead (ppb)	0	AL=15	4	N/A	No	2013	Corrosion of household plumbing; erosion of natural deposits;
Zero out of 30 samples from residential taps was found to have a lead level above the action level.							
Fluoride (ppm)	4	4	1.09	0.89 - 1.24	No	2014	Erosion of natural deposits; additive which promotes strong teeth; discharge from fertilizer plants
Nitrate (ppm)	10	10	1.09	0.23 – 1.1	No	2014	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Volatile Organic Contaminants							
Haloacetic Acids [HAA5](ppb)	N/A	60	34.5	15.2 – 65.5	No	2014	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	N/A	80	45.7	25 – 65.8	No	2014	By-product of drinking water chlorination
Levels for Total Trihalomethanes and Haloacetic Acids are based on locational running averages of results for the year 2014.							
Chloroform (ppb)	N/A	N/A	31.28	13.9 - 48.3	No	2014	By-product of drinking water chlorination
Bromodichloromethane (ppb)	N/A	N/A	9.8	5.4 – 13.3	No	2014	By-product of drinking water chlorination
Dibromochloromethane (ppb)	N/A	N/A	2.54	1.3 – 4.7	No	2014	By-product of drinking water chlorination
Residual Disinfectants							
Total Chlorine (ppm)	MRDLG=4	MRDL=4	1.32	1.02 - 1.55	No	2014	Water additive used to control microbes
Levels for Total Organic Carbon and Total Chlorine are based on running averages of results for the previous 7 quarters.							
Unregulated Contaminant Monitoring Rule (UCMR) (See note (c) below table)							
Chlorate (ppb)	N/A	N/A	88.7	81.8-95.6	No	2014	Herbicide; disinfection byproduct
Chromium, Hexavalent (ppb)	N/A	N/A	0.054	0.038-0.069	No	2014	Erosion of natural deposits
Chromium, total (ppb)	100	100	0.24	<0.2 – 0.24	No	2014	Erosion of natural deposits
Molybdenum (ppb)	N/A	N/A	3.3	3.2 – 3.4	No	2014	Naturally-occurring element
Strontium (ppb)	N/A	N/A	100.5	91-110	No	2014	Naturally-occurring element
Data on contaminants found in drinking water from Northern Ohio Rural Water							
Volatile Organic Contaminants							
Haloacetic Acids [HAA5](ppb)	N/A	60	31.4	19.7 - 41.8	No	2014	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	N/A	80	59.6	27.5 - 70.5	No	2014	By-product of drinking water chlorination
Inorganic Contaminants							
Copper (ppm)	1.3	AL=1.3	.147	N/A	No	2012	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives
Zero out of 30 samples from residential taps was found to have a copper level above the action level.							
Residual Disinfectants							
Total Chlorine (ppm)	MRDLG=4	MRDL=4	1.6	0.5 - 2.4	No	2014	Water additive used to control microbes
Data on contaminants found in drinking water from the Elyria Water Works							
Microbiological Contaminants							
Total Organic Carbon(a)	N/A	TT	2.2	1.03 – 2.2	No	2014	Naturally present in the environment
Turbidity (NTU) (b)	N/A	TT	1.17	0.05 – 1.17	Yes	2014	Soil runoff
Turbidity (% samples meeting standard)	N/A	TT	100	100 - 100	No	2014	Soil runoff
Inorganic Contaminants							
Barium (ppm)	2	2	.019	N/A	No	2014	Erosion of natural deposits

Fluoride (ppm)	4	4	1.27	0.80 - 1.27	No	2014	Erosion of natural deposits; additive which promotes strong teeth; discharge from fertilizer plants
Nitrate (ppm)	10	10	0.77	0.13 – 0.77	No	2014	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Data on contaminants found in drinking water from the Lorain Water Department							
Microbiological Contaminants							
Total Organic Carbon(a)	N/A	TT	1.0	1.0 – 1.1	No	2014	Naturally present in the environment
Turbidity (NTU) (b)	N/A	TT	0.21	0.05 - 0.21	No	2014	Soil runoff
Turbidity (% samples meeting standard)	N/A	TT	100	100 - 100	No	2014	Soil runoff
Inorganic Contaminants							
Barium (ppm)	2	2	0.013	N/A	No	2014	Erosion of natural deposits
Fluoride (ppm)	4	4	0.95	0.82 - 1.10	No	2014	Erosion of natural deposits; additive which promotes strong teeth; discharge from fertilizer plants
Nitrate (ppm)	10	10	0.78	<0.10 – 0.78	No	2014	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Data on contaminants found in drinking water from the Village of New London							
Microbiological Contaminants							
Total Organic Carbon(a)	N/A	TT	1.0	1.0 – 1.12	No	2014	Naturally present in the environment
Turbidity (NTU) (b)	N/A	TT	0.20	0.06 - 0.20	No	2014	Soil runoff
Turbidity (% samples meeting standard)	N/A	TT	100%	100% - 100%	No	2014	Soil runoff
Inorganic Contaminants							
Barium (ppm)	2	2	.025	N/A	No	2014	Erosion of natural deposits
Fluoride (ppm)	4	4	1.094	0.537- 1.20	No	2014	Erosion of natural deposits; additive which promotes strong teeth; discharge from fertilizer plants
Nitrate (ppm)	10	10	0.28	<0.10 - 0.28	No	2014	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

(a) The value reported under “Level Found” for Total Organic Carbon (TOC) is the lowest ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of TOC removal requirements.

(b) Turbidity is a measure of cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95 percent of daily samples, and turbidity shall not exceed 1 NTU at any time. As reported above, the City of Norwalk’s highest recorded turbidity result was 0.30 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100 percent. The Elyria Water Works’ highest recorded turbidity was 1.17 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100 percent. **Elyria’s highest recorded turbidity of 1.17 NTU was a violation of drinking water standards, but Norwalk was NOT receiving any water from Elyria at the time of their violation.** Lorain’s highest recorded turbidity was 0.21 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 99.7 percent. The Village of New London’s highest recorded turbidity was 0.20 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

(c) Tests conducted under the Unregulated Contaminants Monitoring Rule (UCMR) look for unregulated contaminants for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Unregulated contaminants that were detected in Norwalk’s water are listed in table above. Several other potential contaminants were tested for but not detected. Full UCMR results are available from the water plant.

Lead Information

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 City of Norwalk is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When the water has been sitting in your pipes 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 you 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>.