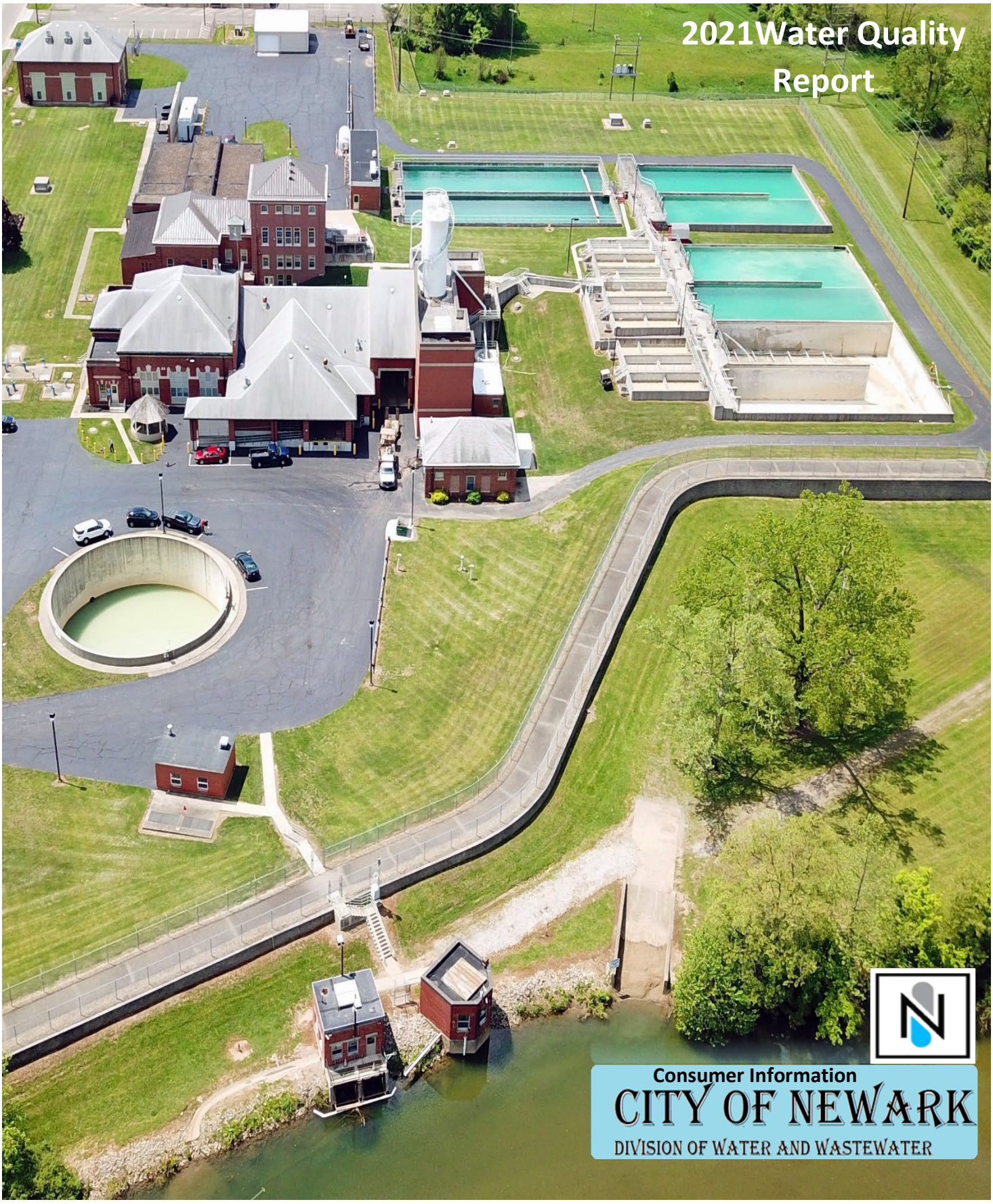

2021Water Quality Report
Consumer Information
CITY OF NEWARK
DIVISION OF WATER AND WASTEWATER

Our Mission

To provide essential services that protect public health, preserve the environment and support sustainable growth of the community.

The Newark Water Treatment Plant analyzes over 100 process and quality control tests every day. The NWTP employees are certified by the Ohio Environmental Protection Agency Laboratory certification section, Division of Environmental Services. In addition, we contract with EPA-approved laboratories to analyze more complex required contaminants such as SOC's, VOC's, inorganics and disinfection by-products.

History of Our Water System

From the Newark Water Company's inception in 1886 through to the present day, the Newark Water Treatment Plant has played a key role in the City's progress. While water treatment regulation and technology have changed over the years, the City's administrators and treatment plant operators have remained dedicated to providing customers with the highest quality water using the most cost-effective measures.

Today the City of Newark owns and operates a state-of-the-art surface water treatment plant. The Class IV (highest in the State) treatment plant is designed to clarify, soften, fluoridate and disinfect water from the North Fork of the Licking River. The treatment plant has all the modern features of telemetry and automation (SCADA system) that continually monitor flows, chemical dosages and all essential processes. Additionally, Newark was one of the first water systems in the entire nation to install UV (ultraviolet light) disinfection for the purpose of meeting the most stringent pending Federal and State regulations. The City of Newark Water Treatment Plant maintains interconnections with the City of Heath and the Village of Granville for emergency water supply. Neither connection was used in 2021.

Where Our Water Comes From

The Newark Water Treatment Plant is located in the north end of Newark at 164 Waterworks Road. Raw water is drawn from the North Fork of the Licking River thus the classification of a surface water treatment plant. The North Fork is composed of a drainage area, or water shed, of approximately 75 square miles.

In cooperation with the Ohio EPA, a source water assessment has been completed. For purpose of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. By their nature, surface waters are readily accessible and can be contaminated by chemicals and pathogens which may arrive at the water intake with little warning or time to prepare. The purpose of this assessment is to identify where and how the City of Newark's source waters are at risk of contamination.

The Report:

- Identifies the drinking water source-protection area.
- Examines the characteristics of the watershed and the water quality.
- Inventories the potential contaminant sources within that area.
- Discusses the susceptibility of the system to contamination.

The report is available for review by calling the Water Treatment Plant at (740) 349-6765

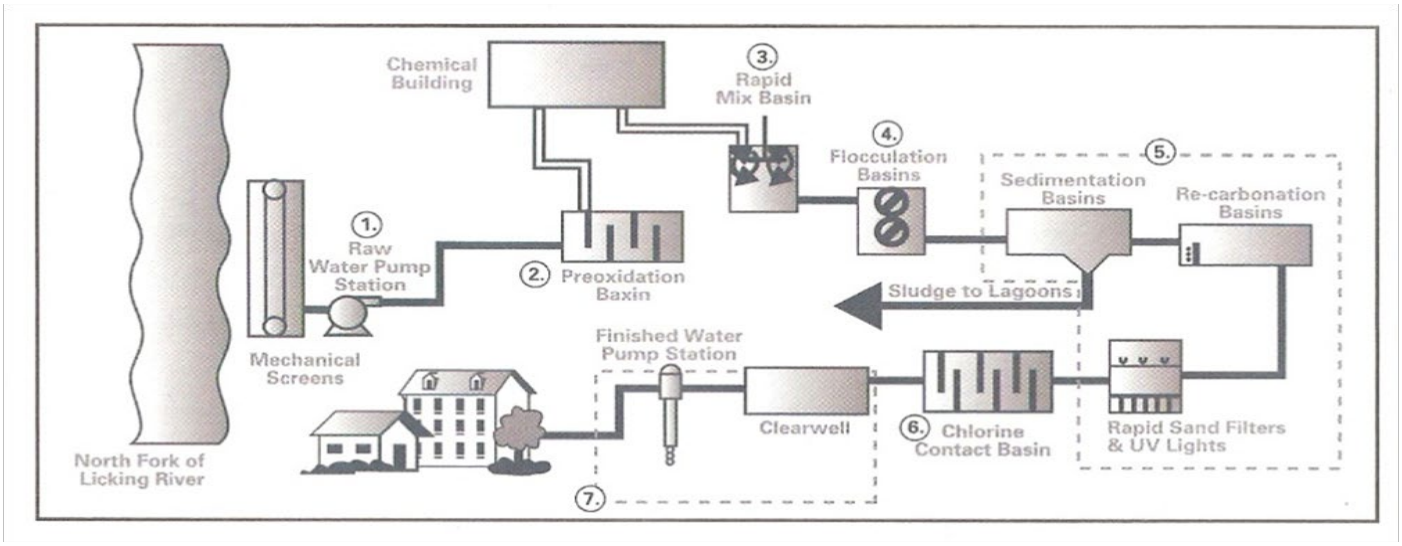
License to Operate:

The Water Treatment Plant has a current, unconditioned license to operate our water system.

If You Have Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised people, such as people with cancer undergoing chemotherapy, people 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. Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791. Or Call the Newark Water Treatment Facility at (740) 349-6766 and ask for Don Dyar.

How the Treatment Works



1. Raw water is withdrawn from the North Fork of the Licking River through mechanical screens located along the river bank. The mechanical screens prevent fish, leaves and other suspended debris from entering the pumping station. Four raw water pumps deliver the screened water to the plant processes.
2. Raw water first enters the Pre-oxidation Basin, where treatment is initiated. Chemicals such as potassium permanganate, chlorine and powdered activated carbon may be applied to the raw water flow for oxidation or adsorption of taste and odor-causing contaminants and other trace organic impurities.
3. Treated water then enters the Rapid-Mix Basin, where the chemical treatment is continued for softening and clarification. Turbine-type mixers are provided to rapidly disperse the chemicals into the water supply. Lime is used to raise the pH levels and cause the hardness constituents to be precipitated. Ferric sulfate is utilized as a coagulant to enhance the removal of the hardness constituents and the turbidity (fine suspended matter) from the water supply.
4. The chemically treated water supply then enters the Flocculation Basins; Paddle-type mixers gently mix the water to promote the completion of the chemical reactions and the formation of settleable solids.
5. From these Basins, water travels to three parallel Sedimentation Basins, where a quiescent period is provided for settling and removal of suspended solids. The settled water supply then flows to the Recarbonation Basins where carbon dioxide is diffused into the water to adjust the pH from around 10.8 S.U. to around a pH of 8.8 S.U. Clarification is then completed by water flowing through the Rapid Sand Filters with the removal of any remaining fine colloidal/suspended solids.
6. After filtration, the water is disinfected with ultraviolet light and then sodium hypochlorite in the Chlorine Contact Basin. The disinfected water is then fluoridated before flowing to the Clearwell, which provides storage to satisfy pumping demands.
7. Finally, the finished water supply flows to the Finished Water Pump Station, where four large pumps serve to provide water and pressure to the city's distribution system.

Sources of Contamination

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 or from human activity. Contaminants that may be present in source water include the following:

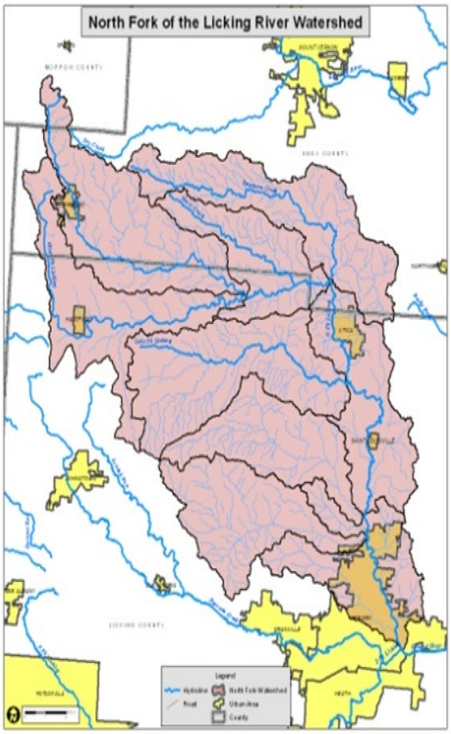
A. Microbial contaminants, such as viruses and bacteria, which may come from wastewater treatment plants, septic system, agricultural livestock operations and wildlife;
B. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial 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 that are by-products of industrial processes and petroleum production. The contaminants also can come from gas stations, urban storm water runoff and septic systems;
E. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities;
F. 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 Newark 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 or at: http://www.epa.gov/safewater/lead

How to identify a Lead Line go to:

http://www.newarkohio.net/userfiles/files/Pipe%20ID%20Procedures%20(1).pdf

For more information about Lead vist:

http://www.newarkohio.net/userfiles/files/Lead%20Educational%20Info_(1).pdf



In order to ensure that tap water is safe to drink, the Environmental Protection Agency prescribes Regulations that 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 may be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Regulated Contaminants

	Contaminant + Units	MCLG	MCL	Level Found	Range of Detection			Violation	Sample Year	Typical Source of Contaminants
Microbiological Contaminants	Turbidity N.T.U.,	NA	TT	0.13	0.02	-	0.13	NO	2021	Soil Runoff
Synthetic Organic Contaminants including pesticides and herbicides	Atrazine (µg/L)	3	3	0.38	0.19	-	0.31	NO	2021	Herbicides Runoff
	Simazine (ug/L)	4	4	0.35	0.35	-	0.35	NO	2021	
Disinfection By-products	THM's (µg/L)	NA	80	48.20	16.40	-	66.20	NO	2021	By-Product of Drinking Water Chlorination
	HAA5's (µg/L)	NA	60	26.95	4.90	-	58.90	NO	2021	By-Product of Drinking Water Chlorination
	# TOC	NA	TT	1.36	0.80	-	2.50	NO	2021	Naturally present in the environment
Inorganics	Nitrates (mg/L)	10	10	3.09	0.50	-	3.09	NO	2021	Runoff from Fertilizer use, Leaching from Septic Tanks, Sewage, Erosion of Natural Deposits
	Nitrates as Nitrates-Nitrites (mg/L)	10	10	2.33	0.53	-	4.59	NO	2021	
	Barium (ug/L)	2	2	0.0061	0.0061	-	0.0061	NO	2021	Barium is released to water in the discharge and disposal of drilling wastes, and the manufacture of motor vehicle parts
	Fluoride (mg/L)	4	4	1.04	0.79	-	1.28	NO	2021	Water additive to promote strong teeth, Discharge from Fertilizer and Aluminum
Asbestos	Asbestos (ug/L)	600	600	0.19	0.19	-	0.19	NO	2021	Tested for in Asbestos Cement Water Main
Chlorine	**Contaminant + Units**	**MRDLG**	**MRDL**	**Level Found**	**Range of Detection**			**NO**	**Sample Year**	**Typical Source of Contaminants**
	Total Chlorine Residual (mg/L)	4	4	1.47	1.35	-	1.68	NO	2021	Water Additive to Control Microbes
Lead and Copper	**Contaminants + Units**	**Action Level**		**Individual Results over the AL**	**90th Percentile**			**Violation**	**Sample Year**	**Typical Source of Contaminants**
	Lead (ppb)	15		N/A	NO			NO	2020	Corrosion of household plumbing systems.
		0 out of 32 samples was found to have lead levels in excess of Action Level of 15ppb								
	Copper (ppm)	1.3		N/A	NO			NO	2020	Corrosion of household plumbing systems.
		0 out of 32 samples was found to have copper levels in excess of the Action Level of 1.3 ppm.								

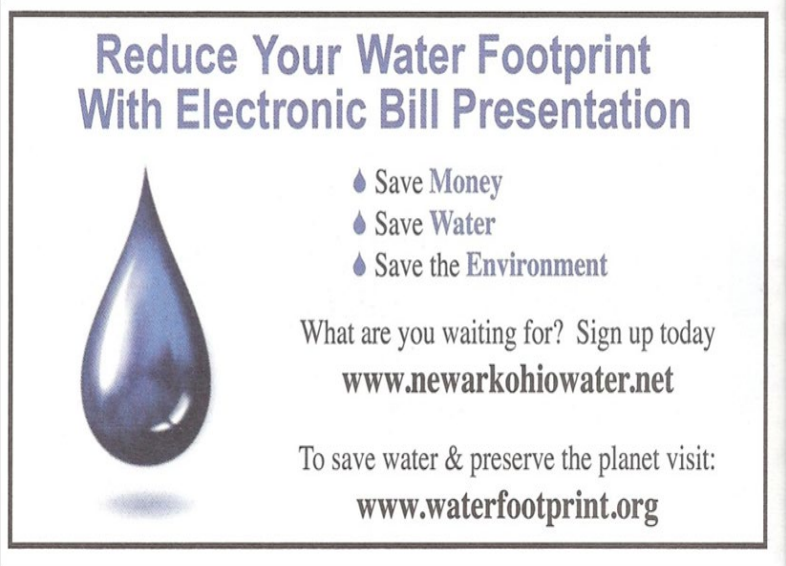
Ŧ Cryptosporidium ("Crypto") is a microscopic organism that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. Crypto comes from animal waste in the watershed and may be found in our source water. Crypto was detected in 5 of the 11 raw water samples collected during 2016. Crypto is eliminated by using a multi-barrier water treatment process including coagulation, sedimentation, softening, filtration and disinfection (chlorination and ultraviolet radiation). All part of Newark's treatment. In fact the City of Newark was the first in the State of Ohio to use UV for water treatment. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminates are available from the Safe Drinking Water Hotline at 1 (800) 426-4791.The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of TOC removal requirements. Turbidity is a measure of the 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% of the daily samples and shall not exceed 1 NTU at any time. As reported above, the City of Newark Water Treatment Plant highest recorded turbidity results for 2021 was 0.13 NTU and the lowest monthly percentage of samples meeting the turbidity limits was 100%. 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 Contaminant Level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible, using the best available treatment technology. Parts per million (ppm) or milligrams per liter (mg/L): Units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days. Parts per billion (ppb) or micrograms per liter (µg/L): Units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years Maximum Residual Disinfectant Level Goal (MRDLG): The level of 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. Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. The addition of a disinfectant is necessary for control of microbial contaminants. Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment of 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. The "<" symbol: a Symbol which means less than. A result of <5 means that the lowest level that could be detected is 5 and the contaminant in that sample was not detected. Picocuries per liter (pCi/L): A common measure of radioactivity.

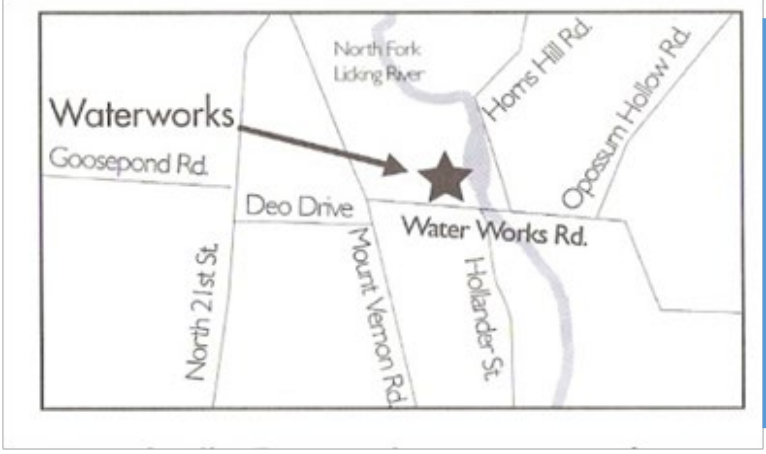
Unregulated Contaminants

Table of Unregulated Contaminants			
Contaminants	**Sample Year**	**Average Level Found (ug/L)**	**Range of Detection**
Ethoprop	2019	**0.0326**	**0.0326 - 0.033**
Total HAA5	2019	**18.646**	**6.6 - 26.5**
Total HAA6	2019	**5.616**	**3.5 - 8**
Total HAA9	2019	**22.749**	**9.55 - 32.8**
Bromochloroacetic Acid	2019	**3.406**	**1.88 - 5.23**
Bromodichloracetic Acid	2019	**1.11**	**0.71 - 1.66**
Chlorodibromoacetic Acid	2019	**0.382**	**0 - 0.57**
Dibromoacetic Acid	2019	**0.549**	**0 - 0.68**
Dichloroacetic Acid	2019	**11.364**	**4.68 - 18**
Trichloroacetic Acid	2019	**5.307**	**1.22 - 8.05**

Unregulated contaminants are those 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. In (year of report) (Public water system) participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4). For a copy of the results please call 740-349-6765

Water Treatment Plant & Distribution System Quick Facts





- 15 MGD DESIGN 7.5 MGD PRODUCED DAILY
- 18,410 ACTIVE ACCOUNTS
- 206 MILES OF WATER MAIN
- 2,075 FIRE HYDRANTS
- 118 MG/L HARDNESS
- 6.1 MG STORAGE TANKS
- 3 BOOSTER STATIONS

Written comments can be addressed to:

City of Newark

Division of Water and Wastewater

164 Waterworks Road

Newark, Ohio 43055

Email: wateradm@newarkohiowater.net

Web: www.newarkohiowater.net

Newark City Council meets at City Hall, 40 West Main St. at 7 p.m. the first and third Mondays of each month.

For comments or questions regarding the Water Quality Report, plant processes, plant tours or how to participate in decisions regarding our drinking water, call:

Water Facilities Manager
Mr. Shawn L. Wagner at (740) 349-6765

Or

Water Facilities Asst. Manager
Mr. Don D. Dyar at (740) 349-6766