

Northeast Morgan County Water & Sewer Authority Annual Drinking Water Quality Report for 2018

We're very pleased to provide you with this year's Annual Quality Water Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. We purchase and re-chlorinate our water from Decatur Utilities, which is treated surface water from the Tennessee River. Northeast Morgan County Water & Sewer Authority, nemorganws.com did not incur any violations in year 2017.

This report shows our water quality and what it means to you. If you should have any questions about this report or concerning your water utility, please contact, Joel Bevel, Plant & Pumping Station Manager, Monday to Friday 7:00 a.m. to 3:30 p.m., at 256-778-8915.

We want our valued customers to be informed about their water utility, if you want to learn more, please feel free to attend any of our regularly scheduled Board meetings, which are held on the third Tuesday of every month, beginning at 4:00 p.m., in the conference room of the Water Department main office. If anyone needs to address the Board, please contact Grace Renfro, in Bookkeeping at 256-778-8915, to be placed on the agenda.

Mr. Chad Brooks is the Chairman of the Board
Mr. Don White is the Vice-Chairman of the Board
Mr. Geoff Halbrooks is the Secretary & Treasurer of the Board
Mr. Wayne Reed is the General Manager of NEMCWSA

Substances Expected to be in Drinking Water

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 the 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 processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- e) Radioactive Contamination, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that the tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water and must provide the same protection for public health. Northeast Morgan County Water & Sewer Authority routinely monitors for constituents in your drinking water according to Federal and State laws. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Important Information about Lead

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 private service lines and home plumbing. Northeast Morgan County Water & Sewer Authority 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 two minutes

before using the 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 (800-426-4791) or at www.epa.gov/safewater/lead.

All Lead and Copper monitoring from the distribution system collected in 2016 resulted below the MCL detection limit. Lead and Copper monitoring will resume June – Sept 2019.

Share this Report

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location.

Table Definitions and Abbreviations

- **Action Level:** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- **HRAA:** Highest Rolling Annual Average; based on seven quarters of testing.
- **MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to MCLG's 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 risk to health. MCLG's allow for a margin of safety.
- **MFL (Million Fibers per Liter):** The measure of the presence of asbestos fibers that are longer than 10 micrometers.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of disinfectant routinely allowed in drinking water. Addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.
- **mrem/year:** Millirems per year (a measure of radiation absorbed by the body).
- **NA:** Not applicable.
- **ND:** None detected.
- **NTU - Nephelometric Turbidity Units:** measurement of the clarity, or turbidity, of water.
- **pCi/L (picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- **Ppm (parts per million):** One part substance per million parts water, or milligrams per liter, explained in terms of money as one penny in \$10,000.
- **Ppb (parts per billion):** One part substance per billion parts water, or milligrams per liter, explained in terms of money as one penny in \$10,000,000.
- **Ppt (parts per trillion):** One part substance per trillion parts water, or milligrams per liter, explained in terms of money as one penny in \$10,000,000,000.
- **Ppq (parts per quadrillion):** One part substance per quadrillion parts water, or milligrams per liter, explained in terms of money as one penny in \$10,000,000,000,000.
- **Primary Contaminant:** Primary standards are legally enforceable standards that apply to public water systems. These standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and which are known or anticipated to occur in public water supplies.
- **RAA:** Rolling Annual Average.

- **Secondary Contaminant:** Secondary standards are non-mandatory guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health.
- **SU:** Standard units

Contaminant	MCL	Amount Detected
Bacteriological		
Total Coliform Bacteria	<5%	ND
Turbidity	TT	0.099
Fecal Coliform and E.coli	0	ND
Radiological		
Alpha emitters	15 pCi/L	ND
Beta/photon emitters	4 mrem/yr	Waived
Radium-228		ND
Uranium	30 ppb	Waived
Inorganic Chemicals		
Antimony	6 ppb	ND
Arsenic	10 ppb	ND
Asbestos	7 MFL	Waived
Barium	2,000 ppb	ND
Beryllium	4 ppb	ND
Bromate	10 ppb	ND
Cadmium	5 ppb	ND
Chloramines	4 ppm	ND
Chlorine	4 ppm	2.54
Chromium	100 ppb	ND
Copper	AL 1.3 ppm	.387
Cyanide	200 ppb	ND
Fluoride	4 ppm	1.10
Lead	AL 15 ppb	ND
Mercury	2 ppb	ND
Nitrate	10 ppm	.57
Nitrite	1 ppm	ND
Selenium	50 ppb	ND
Thallium	2 ppb	ND
Organic Chemicals		
2,4-D	70 ppb	ND
2,4,5-TP (Silvex)	50 ppb	ND
Acrylamide	TT	N/A
Alachlor	2 ppb	ND
Atrazine	3 ppb	ND
Benzo(a)pyrene [PAHs]	200 ppt	ND

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

The following tables show the results of the monitoring and testing for the period of January 1st to December 31st, 2017.

Carbofuran	40 ppb	ND
Chlordane	2 ppb	ND
Dalapon	200 ppb	ND
Di(2-ethylhexyl)adipate	400 ppb	ND
Di(2-ethylhexyl)phthalates	6000 ppt	ND
Dibromochloropropane	200 ppt	ND
Dinoseb	7 ppb	ND
Diquat	20 ppb	ND
Dioxin [2,3,7,8-TCDD]	30 ppq	Waived
Chloramines	4 ppm	ND
Chlorite	1 ppm	ND
Endothall	100 ppb	ND
Endrin	2 ppb	ND
Epichlorohydrin	TT	N/A
Glyphosate	700 ppb	ND
Heptachlor	400 ppt	ND
Heptachlor epoxide	200 ppt	ND
Hexachlorobenzene	1 ppb	ND
Lindane – Gamma BHC	200 ppt	ND
Methoxychlor	40 ppb	ND
Oxamyl [Vudate]	200 ppb	ND
PCBs	500 ppt	ND
Pentachlorophenol	1 ppb	ND
Picloram	500 ppb	ND
Simazine	4 ppb	ND
Toxaphene	3 ppb	ND
Benzene	5 ppb	ND
Carbon Tetrachloride	5 ppb	ND
Chlorobenzene (VOC-Mono, Di or Tri)	100 ppb	ND
Dibromochloropropane	200 ppt	ND
o-Dichlorobenzene	600 ppb	ND
p-Dichlorobenzene	75 ppb	ND
1,2-Dichloroethane	5 ppb	ND
Contaminant	MCL	Amount Detected
1,1-Dichloroethane	7 ppb	ND
Cis-1,2-Dichloroethylene	70 ppb	ND

trans-1,2-Dichloroethylene	100 ppb	ND
Dichloroethane	5 ppb	ND
1,2-Dichloroethane	5 ppb	ND
Ethylbenzene	700 ppb	ND
Ethylene Dibromide	50 ppb	ND
Styrene	100 ppb	ND
Tetrachloroethylene	5 ppb	ND
1,2,4-Trichlorobenzene	70 ppb	ND
1,1,1-Trichloroethane	200 ppb	ND
1,1,2-Trichloroethane	5 ppb	ND
Trichloroethylene	5 ppb	ND
TTHM (DU Average) HRAA	80 ppb	20.1
TTHM (NEMCWA Avg) HRAA	80 ppb	38.8
HAA5 (DU Average) HRAA	60 ppb	18.0
HAA5 (NEMCWA Avg) HRAA	60 ppb	30.7
Toluene	1 ppm	ND
Vinyl Chloride	2 ppb	ND
Xylenes	10 ppm	ND
TOC	TT	1.5
Chlorine Dioxide	800 ppb	ND
Bromate	10 ppb	ND
Bromodichloromethane	N/A	7.97
Chloroform	N/A	12.2
Dibromochloromethane	N/A	1.94

Vanadium	0.4	0-0.8
----------	-----	-------

In order for us to better serve you we would like to ask our customers to lend us a hand. Some of the things that would help us tremendously are listed below.

- Our policy requires that the Authority has access to your meter at all times. Please remember that if for any reason you choose to construct a fence surrounding the meter, a gate will be required in order for the Authority to perform routine tasks.
- One thing that may help more than any of these is to report any water theft or tampering of service to the Authority. Thousands of gallons are lost each year due to such acts.
- Make sure you update your account information at the office so we have your current mailing address and phone number on file.

As a reminder, **all developers** need to contact our office for any changes to the policy and procedures that may apply to the construction and development of new subdivisions.

If you have questions about this report or any other water quality issues, please contact Joel Bevel, Plant and Pump Station Manager from 7:00 am – 3:30 pm Monday - Friday at 256-883-7750 or 256-778-8915.

We work around the clock to provide you with quality water and 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.

TABLE OF DETECTED UNREGULATED CONTAMINANTS		
Contaminants	Amount Detected (ug/L)	Range (ug/L)
UNREGULATED CONTAMINANTS-EPA uses the unregulated Contaminant Monitoring (UCM) program to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Drinking Water Act (SDWA).		
Entry Point Data (Water Treatment Plant)		
1,40dioxane	0.14	0.1-0.2
Strontium	66	57-74
Chromium-6	0.06	0.05-0.07
Chlorate	83	27-130
Vanadium	0.4	0-0.7
Distribution System Data		
Strontium	68	58-74
Chromium-6	0.10	0.08-0.12
Chlorate	85	30-130

Table of Detected Contaminants

Substance (Units)	Year Sampled	MCL	MCLG	Amount Detected	Range	# of Analyses	Compliance Achieved	Typical Source
Microbiological Contaminants – Directly related to the safety of drinking water.								
Filtered Water Turbidity (NTU) ¹	2017	TT	NA	0.099	.023-0.099	²	Yes	Soil runoff
Total Organic Carbon (ppm)	2017	TT	NA	1.5	1.3-1.9	¹²	Yes	Soil runoff
Disinfectant & Disinfection Byproducts – On February 15, 2006, EPA instituted a new rule for water systems call the Stage 2 Disinfectant and Disinfection Byproducts Rule that deals with trihalomethanes (TTHM) and haloacetic acids (HAA5). The rule changed some existing sample sites and added additional sites as well as changing the ways that averages will be calculated. NEMCWSA has been actively sampling the distribution system to ensure that we will be 100% in compliance when the new rules are implemented on January 1, 2012.								
Chlorine (ppm)	2017	4.0	NA	2.54 (RAA)	2.33 – 2.94	³	Yes	Added during the treatment process as a disinfectant
2017 Sites Total HRAA Trihalomethanes (ppb)	2017	80	NA	38.8	9.4 – 90	16	Yes	Disinfection byproduct
2017 Sites HRAN Haloacetic Acid (ppb)	2017	60	NA	30.7	16.9 – 40	16	Yes	Disinfection byproduct
Standard list of Primary Drinking Water Contaminants (Inorganic Chemicals). We detected the following substances in this category.								
Fluoride (mg/L)	2017	4	4	1.10	0.38 – 1.10	365	Yes	Water additive which promotes strong teeth, erosion of natural deposits, discharge from fertilizer and aluminum factories
Nitrate (mg/L)	2017	10	10	0.57	0.57	1	Yes	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
Standard list of Secondary Drinking Water Contaminants⁶ (Inorganic Chemicals). We detected the following substances in this category.								
Alkalinity (mg/L)	2017	NA	NA	58	41 – 63	365	Yes	Naturally occurring
Aluminum (mg/L)	2017	0.2	NA	<0.050	<0.050	1	Yes	Natural mineral, byproduct of treatment process
Calcium (mg/L)	2017	NA	NA	23.4	23.4	1	Yes	Natural mineral
Carbon Dioxide (mg/L)	2017	NA	NA	6.7	6.7	1	Yes	Naturally occurring
Chloride (mg/L)	2017	250	NA	18.8	18.8	1	Yes	Natural mineral, salt
Color	2017	15	NA	4	ND – 4.0	365	Yes	Naturally occurring
Hardness	2017	NA	NA	81.2	81.2	1	Yes	Natural mineral
Iron (mg/L)	2017	0.3	NA	0.10	0 – 0.10	365	Yes	Natural mineral
Magnesium (mg/L)	2017	NA	NA	5.55	5.55	1	Yes	Natural mineral
pH (su)	2017	NA	NA	7.20	6.90 – 7.30	⁷	Yes	Treatment process
Sodium	2017	NA	NA	9.35	9.35	1	Yes	Natural mineral, salt
Specific Conductance	2017	NA	NA	230	230	1	Yes	Naturally occurring
Sulfate (mg/L)	2017	500	NA	15	15	1	Yes	Natural mineral
Total Dissolved Solids	2017	500	NA	120	120	1	Yes	Natural mineral
Forming Agent (MBAS)	2017	0.5	NA	<0.05	<0.05	1	Yes	Surfactants, detergents

¹ Turbidity is a measurement of the cloudiness of the water. DU monitors this parameter because it is a good indicator of the effectiveness of the filtration system.

² DU has 40 filters where finished water turbidity is measured continuously and recorded every 15 minutes.

³ Chlorine in finished water is measured continuously. Chlorine Residuals in the distribution system are measured approximately 20 times per week at various locations.

⁴ This is an average of all the 2017 sites TTHM sample results.

⁵ This is an average of all the 2017 sites HAA5 sample results.

⁶ Secondary standards are non-mandatory guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health.

⁷ Finished water pH is monitored continuously.

To better serve you we now offer bill paying options which we feel are great conveniences. We now accept credit and debit cards, (Visa, Master Card and American Express) or Automatic Bank Drafts as forms of payments. There will be a .25 cent charge on all bank drafts, but the convenience will be well worth it.

The Authority is also in the process of installing radio read meters. Radio read meters will eventually be installed system wide. Special care should be taken when plumbing or any other type of work is being performed in or around these systems. Tampering with or damage to these new systems could be very costly. The Authority now offers a small personal meter reading monitor at cost for those who have a radio read meter, it can be mounted in the house, if you're close to the road, or carried in your car. You can check your meter reading with the simple push of a button; it also features a red warning light if water has passed through the meter every hour for the past 24 hours, just call the office for more information. Our regular office hours are Monday through Friday 8:00 a.m. to 4:30 p.m. Please call our office, if you have questions at 256-778-8915.