

**Annual Drinking Water Quality
Report North Hanover School District
For the Year 2021, Results from 2020**

PWSID # NJ (0326323)

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

You can also refer to the EPA web-site at www.epa.gov/safewater/ccr1.html for any updates or for downloading the CCR guidance document. It should also be noted that New Jersey regulates some volatile organic compounds, which are not regulated at the federal level and certain volatile organic compounds at more stringent levels than at the federal level.

Our source is (2) ground water wells that draw their water from the Raritan Aquifer, over 160 feet deep. The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for North Hanover School District which is available at www.state.nj.us/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system to obtain information regarding your water system's Source Water Assessment. This water system's source water susceptibility ratings and a list of potential contaminant sources is attached.

The source water assessment performed on our 2 sources determined the following:

NORTH HANOVER SCHOOL DISTRICT SOURCE WATER ASSESSMENT

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at www.state.nj.us/dep/swap or by contacting the NJDEP, Bureau of Safe Drinking Water at (609) 292-5550. The source water assessment performed on our sources from determined the following:

PWS ID #0326323 NORTH HANOVER SCHOOL DISTRICT	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radio-nuclides			Radon			Disinfection Byproduct Precursors		
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Sources																								
Wells – 1		X			X			X			X		X			X			X			X		
GUDI – 0																								
Surface water Intakes - 0																								

The table above illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

If a system is rated highly susceptible for a contamination category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels.

We are pleased to report that our drinking water is safe and meets federal and state requirements.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact our licensed operator (Gregory Byles, Environmental and Technical Services LLC) at (609) 861-7000. We want our valued customers to be informed about their water utility.

The North Hanover School District routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2020. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- 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. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

DEFINITIONS

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

Parts per million (ppm) or Milligrams per liter (mg/L) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/L) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Part per trillion (ppt) or Nanogram per liter (ng/L) – one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000,000

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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.

Maximum Contaminant Level Goal -The "Goal"(MCLG) is 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.

Recommended Upper Limit (RUL) – Recommended maximum concentration of secondary contaminants. These reflect aesthetic qualities such as odor, taste or appearance. RUL's are recommendations, not mandates.

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 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

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 infections. 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Units of Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants:						
Total Coliform Bacteria	N	0 Positive Quarterly Sample	col/100ml	0	1 Positive quarterly	Naturally present in the environment
Inorganic Contaminants:						
Nitrate (as Nitrogen)	N	Sampled 03/18/2020 <1 mg/L	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Copper	Y	90 th percentile Sampled 06/04/2020 0.0 mg/L Sampled 12/16/2020 0.0 mg/L	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits

Lead	Y	90 th percentile Sampled 06/04/2020 0.0 mg/L Sampled 12/16/2020 0.0 mg/L	ppm	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
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***Due to a positive lead result during a sampling event in June of 2019 we were required by the NJDEP to submit a Corrosion Control Treatment Report by June 14, 2020. We failed to submit that plan in a timely matter resulting in a violation. The CCTR has since been submitted to the State and all steps regarding water treatment at North Hanover Elementary have been followed closely with the State's recommendations. As you can see above the 90th percentile results for both lead and copper sampled in 2020 were zero.**

Disinfection By-Products: Stage 2						
Total Trihalomethanes (TTHM)	N	Sampled on 09/23/2020 DBP2-1 6.24 µg/L LRAA-0.006 DBP2-2 11.21 µg/L LRAA-0.011	ppb	N/A	80	By-product of drinking water disinfection
Haloacetic Acid (HAA5)	N	Sampled on 09/23/2020 DBP2-1 13 µg/L LRAA-0.013 DBP2-2 20.3 µg/L	ppb	N/A	60	By-product of drinking water disinfection

The state of New Jersey allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. 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 infections. 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Regulated Disinfectants	Level Detected		MRDL	MRDLG
	(Average)	(High)		
Chlorine	0.31	0.37	4.0 ppm	4.0 ppm

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

Maximum Residual Disinfectant 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.

ADDITIONAL INFORMATION

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for all of these types of contaminants.

Health effects language:

Microbiological Contaminants:

- (1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.
- (2) TTHMs [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
- (3) Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (4) Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of MCL over many years may have an increased risk of getting cancer.
- (5) Nitrate. Infants below the age of six months who drink water-containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
- (6) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
- (7) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
- (8) Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of MCL over many years may have an increased risk of getting cancer.

(9) PFAs. PFAs can be found in consumer products such as stain resistant coatings for upholstery and carpets, water resistant outdoor wear. PFAS cannot be boiled out of water. If tap or well water is found to contain PFAS people may choose to use home water filters or bottled water for drinking and cooking. The New Jersey Department of Health advises that infant formula and other beverages for infants, such as juice, should be prepared with bottled water when PFOA or PFOS are elevated in drinking water.

As you can see by the table above, our system had a violation. We are working hard to make sure your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents had been previously detected. Despite the lead exceedance in 2019, the EPA has determined that your water IS SAFE at the current levels sampled.

We constantly monitor for various constituents in the water supply to meet ALL regulatory requirements.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 the 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 at 1-800-426-4791.

When the state issues water restrictions, North Hanover School District asks everyone to adhere to the state regulations. If you have any drought related questions you can contact a drought hotline representative at 1-800-448-7379 or visit the New Jersey drought website at www.NJDrought.org.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Nitrate: Nitrate in drinking water at levels above 10 PPM is a risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

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 service lines and home plumbing. We are 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 you water tested. Information on lead in drinking water is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Special Considerations Regarding Children, Pregnant Woman, Nursing Mothers, and Others:

Children may receive a slightly higher amount of a contaminant present in the drinking water than adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the case of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

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 infections. 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If you have any questions about this report or concerning your water utility, please contact Gregory Byles of Environmental and Technical Services LLC at (609) 861-7000.

We at North Hanover School District work hard to provide top quality water to every tap. 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.