Continued from front page

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-occuring or result from urban stormwater runoff, industrial or domestic 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 occuring 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 provide the same protection for public health.

Source Water Assessment: The State performed an assessment of our Lake Michigan source water in 2003 and completed it in 2004 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a six-tiered scale from "very-low" to "high" based primarily on geologic sensitivity, water chemistry and contaminant sources.

The susceptibility of our source is "moderate". A copy of the report can be obtained by contacting the Water Facilities Manager at 847-3487.

Health Effects of 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. If you have a lead service line, it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line.

The Northwest Ottawa Water Treatment Plant 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.

The City of Grand Haven contains 1,703 lead service lines, 2,755 copper service lines and 10 plastic service lines toatling 4,468 water service lines. The 2019 Lead and Copper samppling results ranged from 0 to 247 parts per billion for copper and lead samples ranged from 0 to 2.04 parts per billion.

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 at 800-426-4791 or at http://www.epa.gov/safewater/lead.

Methyl Tertiary-Butyl Ether (MTBE): This gasoline additive has contaminated some drinking water supplies across the country. Our drinking water does not contain MTBE.

PFAS: please visit our website for the latest results
https://www.grandhaven.org/nows-water-plant-pfas-results/
For more PFAS information go to: http://michigan.gov/

FACT:
The Northwest Ottawa Water System Provided 2.1

EnviroScape Environmental Education Models

The City of Grand Haven, Northwest Ottawa Water Filtration Plant and The Grand Haven – Spring Lake Sewer Authority are offering 4 models:

1. Watershed/Non-point Source Model
2. Coastal Model
3. Wetlands Model
4. Drinking Water & Wastewater Treatment Model.

enviroscape®
Hands-on Products for Environmental Education

These models are available as tools that demonstrate sources of water pollution and prevention. The good news is that they are *free of charge* to borrow and use. Below are example organizations that have used these models:

- **Schools (3rd thru 6th Graders)**
- **Church's**
- **Environmental Groups**
- **Cub/Boy/Girl Scouts**

All models have setup instructions and a teacher's guide.

City of Grand Haven

2019 Annual Drinking Water Quality Report

Northwest Ottawa Water System—City of Grand Haven, Grand Haven Charter Township, Village of Spring Lake, City of Ferrysburg, Spring Lake Township and Crockery Township

The City of Grand Haven is pleased to present this year's Drinking Water Quality Report. This report is designed to inform you about the quality of the water we deliver to you everyday. Our constant goal is to provide you with a safe and dependable supply of drinking water. We are committed to ensuring the quality of your drinking water.

Pictured above is the city's installation process of the retired 1950's Ranney Well Collectors (one of three). Designed to deliver 7 million gallons per day (MGD), but only could deliver 5 MGD. All three wells were removed in 2002.

Water is collected through submerged intakes located several feet under the bottom of Lake Michigan and is pre-filtered as it enters the treatment facility. The natural sand above the intakes provide the pre-filter barrier which complements the plant's direct filtration process.

We are pleased to report that your drinking water is safe and meets the Federal and State of Michigan drinking water health standards. The Northwest Ottawa Water System (NOWS) treatment plant and the City of Grand Haven routinely monitor for a variety of dissolved mineral and organic substances in your drinking water pursuant to state and federal laws.

This report is designed to give you detailed information which will ensure you of the quality of your drinking water. The tables in this brochure show the results of this monitoring from January 1st through December 31st, 2019.

If you have any questions about this report or your drinking water, please contact the Water Facilities Manager Joe VanderStel at 847-3487 or jvanderstel@grandhaven.org.

Moreover, to provide you with an opportunity for public participation in decisions, some of which might affect drinking water quality. The public is invited to attend the quarterly NOWS Administrative Committee meetings held at the Grand Haven City Hall Council Chambers. You may call the City of Grand Haven for an up-to-date meeting schedule.

All drinking water, including bottled water, may be reasonably expected to contain at least a small amount of some contaminants. It's important to remember that the presence of these substances 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

EPA's Safe Drinking Water Hotline at:

1-800-426-4791

To download or view this on-line go to:
www.grandhaven.org/departments/water-filtration/

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 cryptosporidium and other microbial contaminants are also available from the Safe Drinking Water Hotline.

The sources of drinking water (both tap and bottled water) include rivers, streams, lakes, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occuring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

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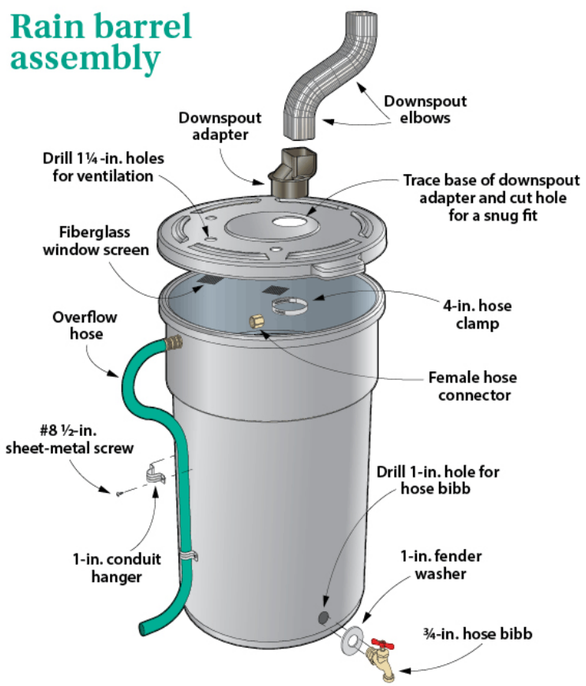
DEFINITIONS

Parts per million (ppm) - A measurement of concentration. One part per million corresponds to one minute in two years.
Parts per billion (ppb) - A measurement of concentration. One part per billion corresponds to one minute in 2000 years.
Maximum Contaminant Level (MCL) - The "Maximum allowed" (MCL) is the highest level of contaminant that is allowed in drinking water. MCL's are set close to the MCLG's as feasible using the best available treatment technology.
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 Goal (MCLG) - The "Goal" (MCLG) is 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.
Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
NTU - Nephlometric Turbidity Unit. Turbidity level shall not exceed 0.3 NTU in 95% of the samples every month. This is the measurement of suspended material that is found in water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
pCi/l - pico curies per liter (a measure of radioactivity).
Unregulated Monitoring - Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate those contaminants.
Gross Alpha emitters, Radium 226 & 228 - Radionuclide contaminants that give off ionizing radiation. The state allows NOWS to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All data is representative of the water quality, but some are more than one year old.
Maximum Residual Disinfectant Level - Means the highest level of a disinfectant allowed in drinking water, (MRDL). There is convincing evidence that an addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal - Means the level of drinking water disinfectant below which there is no known or expected risk to health (MRDLG). MRDLGs do not reflect the benefits of the use of disinfectant to control microbial contaminants.

Listed below are contaminants/substances detected in the Northwest Ottawa Water System. (Not listed are the hundreds of other contaminants for which we tested and that were not detected)

Unregulated Contaminants Monitoring Rule (UCMR4)

As your supplier we found it necessary to inform our customers that the required "unregulated contaminants monitoring" round 4 results for 2019 (Assessment Monitoring) are available. This monitoring series concludes in December 2020. The intent of this rule is to provide baseline occurrence data that the EPA can combine with toxicological research to make decisions about potential future drinking water regulations. For more information concerning these "unregulated contaminants" please feel free to contact our water plant staff at 847-3487.



What are the benefits of using a rain barrel?

In addition to saving water in the yard and garden, rain barrels can save money, energy, protect the environment and provide plants with untreated "soft water" free of dissolved salts or sediment. Using a rain barrel will reduce the amount of storm water runoff into local community water systems which may reduce flooding and stress on the water system.
https://www.canr.msu.edu/news/rain_barrels_are_economical_and_ecological

REGULATED MONITORING AT THE CUSTOMER TAP							
Compliance is determined using 90th percentile (i.e.. 9 out 10 samples must be below the AL)	**Violation Yes/No**	**Action Level (AL)**	**MCLG**	**90th Percentile**	**Year Sampled**	**Number of Samples Above AL**	**Likely Source of Contamination**
Lead (ppb)	**No**	15	0	1.38	2019	0	Corrosion of household plumbing systems **Copper and Lead testing is performed once every three years. (next is 2022)**
Copper (ppb)	**No**	1300	1300	33	2019	0	

REGULATED AND UNREGULATED MONITORING AT THE TREATMENT PLANT AND DISTRIBUTION SYSTEM							
Substance	**Violation Yes/No**	**Highest Level Detected**	**Unit Measurement**	**Range of Detection**	**MCL**	**MCLG**	**Likely Source of Contamination**
Total Coliform/E. coli Bacteria	**No**	0% System Wide	Presence or Absence	Never detected	5% of monthly samples		Naturally present
Turbidity shall not exceed 0.3 NTU in 95% of the samples every month	**No**	0.14	NTU	0.02 to 0.14 Yearly Avg. = 0.04	1.0 (TT)		Soil runoff (Turbidity is a measure of the cloudiness of the water.)
Chlorine Residuals *NOWS system wide avg.	**No**	1.42 (RAA) *1.03	ppm	0.30 to 1.94	MRDL= 4.0	MRDLG = 4.0	Water additive used to control microbes based on a Running Annual Average (RAA)
Fluoride (point-of-entry)	**No**	1.06	ppm	1 sample/ year	4	4	Water additive that promotes strong teeth
Chloride	**No**	17	ppm	1 sample/ year			Runoff from fertilizer and septic tanks
Sodium	**No**	9	ppm	1 sample/ year			Mineral and nutrient erosion
Sulfate	**No**	22	ppm	1 sample/ year			Mineral and nutrient erosion
Gross Alpha (2015)	**No**	2	pCi/L	(0.64±1.29) 1 sample/ 9 years	15	0	Past analysis records for Gross Alpha and Radium 226 & 228 are well below the MCL; therefore these will only need to be tested every 9 years (scheduled for 2024)
Radium 226 & 228 (2015)	**No**	2	pCi/L	(1.11 ± 0..91) 1 sample/ 9 years	5	0	
Barium (2019)	**No**	20	ppb	1 sample/ 9 years	200	200	Erosion of natural deposits
Selenium (2019)	**No**	Not Detected	ppb	1 sample/ 9 years	50	50	
Arsenic (2019)	**No**	Not Detected	ppb	1 sample/ 9 years	10	0	
Nitrate	**No**	0.4	ppm	1 sample/ year	10	10	Runoff from fertilizer and septic tanks
Available Cyanide (2016)	**No**	Not Detected	ppb	1 sample/ 9 years	200	200	Discharge from steel metal factories; discharge from plastic and fertilizer factories
REGULATED MONITORING IN THE DISTRIBUTION SYSTEM							
Total Trihalomethanes (TTHM)	**No**	LRAA= 40	ppb	10 to 54	80	0	By-product of drinking water chlorination Compliance is based on a Locational Running Annual Average (LRAA)
Haloacetic Acids (HAA5)	**No**	LRAA= 22	ppb	6 to 41	60	0	