

WATER QUALITY REPORT 2019

VILLAGE OF GRAND BEACH WATER DEPARTMENT

Message from the Superintendent

We are pleased to once again present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of your drinking water and the services we deliver to you every day. Our goal is to provide you with a safe and dependable supply of drinking water.

We are pleased to report that the Village of Grand Beach's drinking water is safe and meets all Federal & State requirements.

If you have any questions about this report or your drinking water, please contact Bob Dabbs, Superintendent, Village of Grand Beach Water Department at 269-469-1270. Additional information can also be obtained by attending Village Council meetings. These meetings are scheduled for every third Wednesday of each month at 7:30 p.m. at the Village Hall located at 48200 Perkins Boulevard. You are encouraged to attend these meetings, ask questions and participate in decisions that affect drinking water quality.

Water Source and Treatment

The Village of Grand Beach purchases its drinking water from the Village of Michiana, who in turn receives their drinking water from the City of Michigan City, Indiana.

The City of Michigan City (PWSID#: IN5246020) obtains its drinking water from Lake Michigan, a surface water source. The water is treated through a conventional treatment process, which includes Flocculation-Sedimentation (the mixing of Alum into the water to create "floc" which causes large particulate matter to settle out of the water) and Filtration (the removal of fine particulate matter from the water).

Chemicals added to the water include: Chlorine (for bacteriological removal), Alum (for large particulate matter removal), Fluoride (for prevention of dental decay), and Chloramines (a mixture of chlorine and ammonia which removes the chlorine odor from the water and allows the water to remain disinfected for longer time periods in the distribution system).

Monitoring and Reporting

The Village of Grand Beach, Michigan and the City of Michigan City, Indiana both routinely monitor your drinking water for contaminants in accordance with Federal and State laws. The tables, included in this report, provide the results of this monitoring for the period of January 1 to December 31, 2019.

Health and Safety Information

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 all of the following:

- **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 storm water 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 storm water runoff, and residential uses.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- **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 water runoff and septic systems.

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 (EPA) Safe Drinking Water Hotline at 800-426-4791.

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 (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Information for Vulnerable Populations

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 microbial contaminants are available from EPA's Safe Drinking Water Hotline 800-426-4791.

Effects of Lead in Drinking Water

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 Village of Grand Beach 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 at 800-426-4791 or at <http://epa.gov/safewater/lead>.

Water Quality Data

The tables below list the EPA's regulated drinking water contaminants that the Village of Grand Beach detected during the monitoring period. Unless otherwise noted, the data presented in this table is from testing done for the period of January 1 to December 31, 2019.

The State of Michigan allows the Village of Grand Beach to monitor for certain contaminants at intervals less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.

Water Quality Data

SUBSTANCE	MCL (mg/L)	MCLG (mg/L)	YOUR WATER (mg/L)	RANGE	SAMPLE DATE	VIOLATION	TYPICAL SOURCE OF CONTAMINANT
TOTAL TRIHALO-METHANES (TTHM)	0.08	N/A	0.018	-	2019	No	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	0.06	N/A	<0.002	-	2019	No	By-product of drinking water disinfection

SUBSTANCE	MRDL (mg/L)	MRDLG (mg/L)	YOUR WATER (mg/L)	RANGE	SAMPLE DATE	VIOLATION	TYPICAL SOURCE OF CONTAMINANT
CHLORAMINE	4.0	4.0	0.29	0.04 - 0.56	Daily	No	Water additive (disinfectant) used to control microbes

SUBSTANCE	MRDL (mg/L)	MRDLG (mg/L)	YOUR WATER (mg/L)	RANGE	SAMPLE DATE	VIOLATION	TYPICAL SOURCE OF CONTAMINANT
SODIUM	N/A	N/A	8.1	-	2019	No	Erosion of natural deposits

SUBSTANCE	ACTION LEVEL	EPA MCLG	90% of SAMPLES = THIS LEVEL	NO. SAMPLES > AL	SAMPLE DATE	VIOLATION	TYPICAL SOURCE OF CONTAMINANT
COPPER	1.3 (mg/L)	1.3 (mg/L)	0.39 (mg/L)	0	2019	No	Corrosion of household plumbing systems; Erosion of natural deposits
LEAD	15 (µg/L)	0 (µg/L)	2.3 (µg/L)	0	2019	No	Corrosion of household plumbing systems; Erosion of natural deposits

MICROBIAL CONTAMINANTS	MCL	MCLG	DETECTIONS	VIOLATION	TYPICAL SOURCE OF CONTAMINANT
TOTAL COLIFORM BACTERIA	> 1 positive sample/month (5% monthly samples positive)	0	0	No	Naturally present in the environment

Monitoring Requirements Not Met for Grand Beach

We are required to monitor your drinking water for specific analytes on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During April 1, 2019 to June 30, 2019, we did not monitor or test for pH, alkalinity, calcium, conductivity, temperature, chloride and sulfate and, therefore cannot be sure of the quality of our drinking water during that time. Also, during October 1, 2019 to December 31, 2019, we did not monitor or test for conductivity and sulfate and, therefore cannot be sure of the quality of our drinking water during that time. However, these violations **do not** pose a threat to your supply's water.

What should I do? There is nothing you need to do at this time. This is not an emergency. You do not need to boil water or use an alternative source of water at this time. Even though it is not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

The table below lists the analyte(s) we did not properly test for, how often we are supposed to sample, for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date we collected follow up samples.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been taken	Date additional samples were taken
WQP ¹	1 sample per quarter	0	April 1, 2019 to June 30, 2019	June 23, 2019 to August 30, 2019
Conductivity Sulfate	1 sample per quarter	0	October 1, 2019 to December 31, 2019	January 1, 2020 to March 31, 2020

What happened? What is being done? We failed to take samples and have them analyzed within the required sampling periods. We are making every effort to ensure this does not happen again. Samples taken since then show that all results met acceptable limits. Sampling of Water Quality Parameters (WQP) are required to help us to determine the best way to reduce the amount of lead in the water. We will continue to work with the Department of Environment, Great Lakes, and Energy to resolve this issue as quickly as possible.

For more information, please contact Bob Dabbs, Village of Grand Beach, 28200 Perkins Boulevard, Grand Beach, Michigan, 49117 at 269-469-1270

¹ WQP are a group of analytes that are indicators of corrosivity. They include pH, alkalinity, calcium, conductivity, temperature, sulfate, chloride, and orthophosphate.

Definitions

Terms and abbreviations used in the tables in this report are defined as:

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

Maximum Contaminant Level (MCL): 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 (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 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 Level 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 contaminants.

Variances and Exemptions: EPA or State permission not to meet an MCL or a treatment technique under certain conditions.

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

N/A: Not applicable or not available.

ND: Not detectable at testing limit.

mg/L: milligrams per liter or parts per million (ppm).

µg/L: micrograms per liter or parts per billion (ppb).

The Village of Grand Beach is committed to providing you with safe, reliable and healthy water. We are pleased to provide you with this information to keep you fully informed about your water. We will be updating this report annually, and will also keep you informed of any problems that may occur throughout the year, as they happen.

For more information about your water, or the contents of this report, please contact Bob Dabbs at 269-469-1270. For more information about drinking water, visit the Michigan Department of Environment Great Lakes and Energy (EGLE) website at www.michigan.gov/egle.

WATER QUALITY REPORT 2019

DEPARTMENT OF WATER WORKS MICHIGAN CITY, INDIANA

PWSID IN5246020

Message from the Superintendent

We're pleased to once again present to you this year's Annual Water Quality Report. This report is 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 pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, you may contact the Main Office at (219) 874-3228, and speak to Randall E. Russell, Superintendent. We want our valued customers to be informed about their water utility. If you want to learn more you may attend the Water Board meetings. They are scheduled twice monthly on the 2nd and 4th Tuesdays at 7:00 p.m. in the Main Office, 532 Franklin Street.

Water Source and Treatment

The greater area of Michigan City receives its drinking water directly from Lake Michigan, a surface water source. It is treated through a conventional treatment process that includes Flocculation-Sedimentation (the mixing of Alum into the water to create "Floc" which allows large particulate matter to settle out of the water) and Filtration (to remove fine particulate matter and micro-organisms from the water). Chemical additions are also required which includes Chlorine (for bacteriological removal), Alum (to remove large particulate matter), Fluoride (to prevent dental decay), and Chloramines (the mixture of chlorine and ammonia which allows for longer disinfectant levels in the water distribution system and remove chlorine odor from the water).

Monitoring & Measuring Contaminants

The Department of Water Works of Michigan City, IN routinely monitors for contaminants in your drinking water according to Federal and State laws. The Table on the back shows the results of our monitoring for the period of January 1st to December 31st, 2019. 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 (800) 426-4791.

It is important to know that 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 systems disorders, some elderly, and infants can particularly be at risk and 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* are also available from the Safe Drinking Water Hotline (800) 426-4791.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. The Department of Water Works 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 (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

OTHER RELATED DATA

The sources of drinking water (both tap 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 human activity. Contaminants that may be present in source water are:

1. **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural, livestock operations and wildlife.
2. **Inorganic Chemical Contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
3. **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, stormwater runoff and residential uses.
4. **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.
5. **Radioactive Contaminants**, which can be naturally occurring or be the result of oil and gas productions and mining activities.

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

Water Quality Analysis

The following chart lists the highest recorded level in Michigan City in 2019 and the highest allowed by the USEPA. Michigan City water has met all EPA requirements.

DATE	CONTAMINANT	MCL	MCLG	UNIT	RESULT	MIN	MAX	SITES OVER VIOLATES AL	LIKELY SOURCES	
8/13/2019	Barium	2	2	mg/l	0.019	0.02	0.02	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
Valid until 12/31/2020	Lead (90th percentile)	15 (AL)	0	ug/l	6	ND	11	0	No	Corrosion of household plumbing systems. Erosion of natural deposits
Valid until 12/31/2020	Copper (90th percentile)	1.3 (AL)	1.3	mg/l	0.33	ND	0.78	0	No	Erosion of natural deposits; Corrosion of household plumbing systems: Leaching from wood preservatives
2019	Fluoride	4	4	mg/l		0.94			No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharges from fertilizer and aluminum factories
8/13/2019	Nitrate-Nitrite (as N)	10	10	mg/l	0.29				No	Erosion of natural deposits, runoff from fertilizers, leaching from septic systems-sewers
2019	Total Trihalomethanes	80	0	ug/l	18.5	14.3	25.2		No	By-product of drinking water chlorination
2019	Total Haloacetic Acids	60	0	ug/l	4.1	0.0	8.6		No	By-product of drinking water chlorination
2019	Total Organic Carbon	TT	TT	mg/l	2.70	1.40	9.10		No	Naturally present in the Environment
8/13/2019	Sodium	N/A	N/A	mg/l	8.1				No	Metals; Erosion of natural deposits
2019	Turbidity (lowest percentage)	TT **	TT**	%	100%	100%	100%		No	Soil runoff
2019	Turbidity (Maximum level)	1	1	NTU	0.06	0.04	1.00		No	Soil runoff
2019	Chloramine residual	4 MRDL		mg/l	1.37	0.15	1.95		No	Water additive (disinfectant) used to control microbiological organisms
2019	Total Coliform 40/month	5%	0%	%	2.5%	0%	2.5%		No	Naturally present in environment

Definitions

MCL: Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.

MCLG: Maximum Contaminant Level Goal, the level of a contaminant in drinking water below which there is no known or expected risk to health.

MRDL: Maximum Residual Disinfectant Level, the highest level of disinfectant allowed in drinking water.

MRDLG: Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected risk to health.

AL: Action level, the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

NTU: Nephelometric Turbidity Unit, is the measure of clarity of the water

mg/l: milligrams per liter, a measurement for concentration equivalent to ppm = one part per million

ug/l: micrograms per liter, measurement for concentration equivalent to ppb = one part per billion

pCi/l: picocuries per liter, a measurement of radiation

P*: Potential violation, one that is likely to occur in the near future, subject to other applicable requirements.

ND: Not detected, the result was not detected at or below the analytical method detection level.

Special Note on Turbidity: ** The turbidity treatment technique (TT) requires that at least 95% of the total combined effluent turbidity samples shall not exceed 0.3 NTU (1.0 NTU for slow sand and diatomaceous earth filtration systems). At least 95% is required to be in compliance. In addition, the maximum turbidity level cannot exceed 1.0 NTU at anytime.