



# NAVAL STATION GREAT LAKES 2020 CONSUMER CONFIDENCE REPORT

**THERE WERE  
NO  
DRINKING  
WATER  
VIOLATIONS  
RECORDED FOR  
THE NAVAL  
STATION GREAT  
LAKES  
WATER SYSTEM  
DURING 2019!**

## ***Sources of Drinking Water***

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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.

The Naval Station Great Lakes Water Treatment Facility, operated by PWD Great Lakes, draws its water from [Lake Michigan](#), a surface water source.

*Naval Facilities Engineering Command Mid-Atlantic (NAVFAC MIDLANT) Public Works Department Great Lakes is pleased to present to you the 23rd annual consumer confidence report (CCR). This report is intended to provide you with important information about your drinking water, including information on water quality, where your water comes from, and analytical results from the reporting period of January 1, 2019 through December 31, 2019.*

*The Public Works Department Great Lakes team is committed to providing our customers with the highest quality drinking water possible. In fact, we have never required an exemption or variance from the drinking water regulations set by the State of Illinois or the United States Environmental Protection Agency (USEPA).*

## ***USEPA on Drinking Water***

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 EPA's Safe Drinking Water Hotline at (1-800-426-4791).

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

**S**ome 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/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (1-800-426-4791).

# Great Lakes Regulated Contaminants Detected in 2019

INORGANIC CONTAMINANTS	Contaminant (unit of measurement)	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation?	Likely Source of Contamination
	Nitrate (as Nitrogen) (ppm)	0.37	0.37-0.37	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
	Barium (ppm)	0.019	0.019- 0.019	2	2	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	Fluoride (ppm)	0.4 (rounded)	0.436 - 0.436	4	4	NO	Erosion of natural deposits; water additive which promotes strong teeth; fertilizer discharge
DISINFECTANTS and DISINFECTION BY-PRODUCTS	Sodium (ppm)	8	8-8	n/a	n/a	NO	Erosion of naturally occurring deposits; used in water softener regeneration
	Arsenic (ppb)	2.0 (rounded)	2.2-2.2	0	10	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production
	Chlorine (ppm)	1	1-1	MRDLG = 4	MRDL = 4	NO	Water additive used to control microbes
	Total Haloacetic Acids (HAA5)*	16 (avg of samples)	8.6-27.3	n/a	60	NO	By-product of drinking water disinfection
LEAD and COPPER	Total Trihalo-methanes (TTHMs)*	36 (avg of samples)	17.15-52.4	n/a	80	NO	By-product of drinking water disinfection
	Contaminant (unit of measurement)	Result at 90th Percentile	# of Sample Sites Over Action Level	MCLG	Action Level	Violation?	Likely Source of Contamination
	Lead (ppb) Last Sampled 9-16-17	1.5	0	0	15	NO	Corrosion of household plumbing systems; leaching from wood preservation; erosion of natural deposits
Copper (ppm) Last Sampled 9-16-17	0.087	0	1.3	1.3	NO	Corrosion of household plumbing systems; erosion of natural deposits	
TURBIDITY	Limit (Treatment Technique)	Level Detected	Violation?	Likely Source of Contamination	TOTAL ORGANIC CARBON	The percentage of Total Organic Carbon (TOC) removal was measured each month. We met all TOC removal requirements set by IEPA.	
	Highest Single Measurement	1 NTU	0.083 NTU	NO			Soil runoff
	Lowest Monthly % Meeting Limit	0.3 NTU	100%	NO	Soil runoff		

DEFINITIONS: The tables in this CCR contain scientific terms and measures, some of which may require additional explanation.

**(MCLG) Maximum Contaminant Level Goal:** 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.

**(MCL) Maximum Contaminant Level:** 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.

**Highest Level Detected:** The single highest result of all samples collected during the Water Quality Report (WQR) calendar year. In some cases, it may represent a single sample if only one sample was collected.

**Range of Levels Detected:** The range of individual sample results, from lowest to highest, that were collected during the WQR calendar year.

**(MRDL) Maximum Residual Disinfectant Level:** 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.

**(MRDLG) Maximum Residual Disinfectant Level Goal:** 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.

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

**(ALG) Action Level Goal:** The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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

**n/a:** Not applicable.

**Coliform Samples:** Level I & II assessments may be required if a positive coliform sample is detected during routine sampling.

**Level 1 Assessment:** is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the water system.

**Level 2 Assessment:** A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and why total coliform bacteria have been found in the water system on multiple occasions.

**Turbidity:** A measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

**\*TTHM and HAA5:** The maximum contaminant level (MCL) for TTHM and HAA5 is 80 ppb and 60 ppb respectively and is currently only applicable to surface water supplies that serve 10,000 or more people. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have increased risk of getting cancer.

**AvG:** Regulatory compliance with some MCLs are based on a running annual average of monthly samples.

**Unit of Measurement Definitions:**

**ppm:** Parts per million, or milligrams per liter (or one ounce in 7,350 gallons of water).

**ppb:** Parts per billion, or micrograms per liter (or one ounce in 7,350,000 gallons of water).

**NTU:** Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

**mrem:** Millirems per year. A measure of radiation absorbed by the body.

## Coliform Bacteria Sampling

Maximum Contaminant Level Goal (MCLG)	Total Coliform Maximum Contaminant Level (MCL)	Highest Number of Positive Samples	Fecal Coliform or E. Coli Maximum Contaminant Level	Total Number of Positive E. Coli or Fecal Coliform Samples	Violation?	Likely Source of Contamination
0	1 positive monthly sample	1	SEE BELOW	0	NO	Naturally present in the environment

## Revised Total Coliform Rule Information

Water treatment and the delivery of treated water to consumers has received heightened public attention recently. Regulatory bodies such as the EPA and the IEPA review treatment processes, look for new contaminants, and other related issues that can be added or modified to better protect public health. A part of this process involves reviewing current regulations. As new technologies or better analytical methods are developed, regulatory bodies amend regulations imposed on public water supplies. In calendar year 2016, the IEPA instituted the Revised Total Coliform Rule (RTCR). Coliform testing is a routine analytical procedure that checks for fecal bacteriological contamination. The goal is to disinfect treated water to render these bacterium harmless if consumed. That is why the maximum contaminant level goal is established at zero. When reviewing this consumer confidence report you may notice that PWD Great Lakes had one positive sample. However this is not a violation because the repeat sampling was negative. Possible causes for positive samples vary. These include but are not limited to false positives, sample collection error, or lab error. When a positive sample occurs supplies must repeat the sampling process at the positive site along with sampling additional sample sites from one service connection upstream and one downstream. If the repeat samples are negative, the sample site is cleared. If repeat samples indicate the presences of bacteria then a violation would be incurred, the water supply must issue a boil order and continue repeat sampling until the samples are negative for contaminants. Supplies must also utilize an assessment processes in order to identify the source of contamination and eliminate the cause.

### Possible Source Water Contaminants

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 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.
- 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.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

### Information on Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead found in drinking water is primarily from materials and components associated with service lines and home plumbing. **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. Removal of your aerator for cleaning will also aid in lead reduction.** 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

## Source Water Assessment Summary

We want our valued customers to be informed about their water quality. If you would like to learn more, please reach out to the Public Works Department (PWD) for any questions, comments or concerns you may have. Contact information for the water supply can be found on the last page of this report. The source water assessment for our supply has been completed by the Illinois EPA (IEPA). To view a summary version of the completed Source Water Assessment, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the IEPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

Source of Water: Naval Station Great Lakes' susceptibility is defined as the likelihood for the source water of a public water system to be contaminated at concentration that would pose a concern. The IEPA considers all surface water sources of community water supply to be susceptible to potential pollution problems. The very nature of surface water allows contaminants to migrate into the intake with no protection, only dilution, which is the reason for mandatory treatment for all surface water supplies in Illinois. NSGL's intake has a low sensitivity and therefore greater protection from shoreline contaminants due to mixing and dilution. Although there are no potential sources within NSGL's critical assessment zone, there are several within the immediate source water area. Also, the combination of the land use, the proximity of storm sewer outfalls, Pettibone Creek and sewage pumping stations add to the susceptibility of our intake. It should be stressed however, that the treatment employed by the water plant and the staff is protective of our consumers, as noted by our facility's finished water history.



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GREAT LAKES, IL 60088

## 3114A Pump House Modernization

PWD Great Lakes recently completed the renovation of a water booster station located in Forrestal Village. This booster station takes water from the treatment plant and ground level water storage tanks and pumps it at a higher pressure to fill the elevated water storage tank. It helps provide pressure and water supply for all of the housing areas on base as well as the Lovell Federal Health Care Center (FHCC). Renovation of this booster station replaced pumps originally installed in the 1940s. The renovation also replaced the piping, valves and electrical systems inside the station. A follow up project is also underway that will replace the computer control systems that allow for automatic and remote operation of the booster station from the water treatment plant on Mainside. PWD Great Lakes is committed to continually updating our water system to provide you with the best quality water and service possible.



Pictured at left: 2 new centrifugal pumps each capable of pumping 1500 gallons per minute or 90,000 gallons per hour or 2.16 million gallons per day.

Pictured below: Booster Station 3114A in Forrestal Village. Built in the 1940's this booster station provides water to all of the housing areas as well as the Lovell FHCC.



## Coronavirus/COVID-19

We are all currently dealing with the Novel Coronavirus COVID-19 and the unprecedented challenges and health impacts it brings. PWD Great Lakes has implemented a multi-faceted approach to ensure uninterrupted service to our customers and ensure your water quality remains at the highest level. We have implemented social distancing, health screening and increased cleaning measures. Protecting our employees is our highest priority so that we can continue to provide safe water for all of Great Lakes.

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VIOLATIONS  
RECORDED FOR  
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WATER SYSTEM  
DURING 2019!**

## Contact Us!

Water Plant Supervisor  
Denzel Jines  
(847) 688-2121 x139

Water Complaints:  
24 hours  
(847) 688-2121 x138