



NAVAL STATION GREAT LAKES 2015 (2014 Data) WATER QUALITY REPORT

**THERE WERE
NO
DRINKING
WATER
VIOLATIONS
RECORDED FOR
THE GREAT
LAKES
FACILITY
DURING 2014!**

Sources of Drinking Water

The 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 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 16th annual water quality report (WQR). This report is intended to provide you with important information about your drinking water, including information on water quality and where your water comes from.

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 USEPA'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.

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

Great Lakes Regulated Contaminants Detected in 2014

Contaminant (unit of measurement)	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Violation?	Likely Source of Contamination
<u>Inorganic Contaminants</u>						
Nitrate (as N) (ppm)	10	10	0.4	0.4- 0.4	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppm)	2	2	0.019	0.019- 0.019	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	4	4	1.10	1.11 - 1.11	NO	Erosion of natural deposits; water additive which promotes strong teeth; fertilizer discharge
Sodium (ppm)	n/a	n/a	7	7.1 – 7.1	NO	Erosion of naturally occurring deposits; used in water softener regeneration
Zinc (ppm)	5	5	0.006	0.006 - 0.006	NO	This contaminant is not currently regulated by the USEPA. However, the state regulates it. Naturally occurring; discharge from metal processing
<u>Disinfectants & Disinfection By-Products</u>						
Chlorine (ppm)	MRDLG= 4	MRDL= 4	1.0	1.0 – 1.20	NO	Water additive used to control microbes
Total Haloacetic Acids (HAA5)* (ppb)	n/a	60	18**	4.0 – 32.5	NO	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs)* (ppb)	n/a	80	36**	16.14 – 63.47	NO	By-product of drinking water disinfection

TURBIDITY	Limit (Treatment Technique)	Lowest Monthly % Meeting Limit	Violation?	Likely Source of Contamination
	0.3 NTU (Population served >9,999)	100%	NO	Soil Runoff
	Limit (Treatment Technique)	Highest Single Measurement	Violation?	Likely Source of Contamination
	1 NTU (Population served >9,999)	0.175	NO	Soil Runoff

Lead and Copper (unit of measurement)	MCLG	Action Level (AL)	90th Percentile	# of Sample Sites Over AL	Likely Source of Contamination
Lead (ppb)	0	15	< 2	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.181	0	Corrosion of household plumbing systems; Erosion of natural deposits

Total Organic Carbon (TOC): The percentage of TOC removal was measured each month. We met all TOC removal requirements set by IEPA.

Definition of Terms:

(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.

(MRDLG) Maximum Residual Disinfectant Level Goal: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.

(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.

Definition of Terms (continued):

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.

Sodium: There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.

***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.

mR/Yr: Millirems per year.

Water Conservation Tips

- 1) If you water your grass and trees more heavily, but less often, this saves water and builds stronger roots.
- 2) Use a bowl of water to clean fruits and vegetables, when finished, use it to water your house plants.
- 3) Turn the water off when brushing your teeth. Turn it on only to wet your brush and fill a glass of water, which you can use to rinse your mouth and toothbrush when you are finished.
- 4) When cleaning a fish tank, give the nutrient rich water to your plants.
- 5) Avoid flushing unnecessarily. Dispose of tissues, insects, and other such waste in the trash rather than in the toilet.
- 6) Mulch to retain moisture in the soil. Mulching also helps to control weeds that compete with plants for water.

Source Water Assessment Summary

The 1996 amendments to the Safe Drinking Water Act require that state agencies conduct source water assessments for all public water supplies in their state. The source water assessment process includes potential contaminant source inventories, and determining the susceptibility of the source waters to contamination. The Illinois Environmental Protection Agency (IEPA) conducted this assessment for the Naval Station Great Lakes' (NAVSTA) water source in May 2003. According to the assessment, our water intake has a low sensitivity to potential contamination and therefore greater protection from shoreline contaminants due to mixing and dilution. Although there are no potential contaminant sources within the noted critical assessment zone, there are several within the immediate source water area. However, it should be stressed that treatment employed by PWD Great Lakes is protective of their consumers, as demonstrated by our finished water history.

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.



The Great Lakes Water Treatment Plant filters, shown above, were originally built in 1942. Although the physical structure and the way they operate has not changed; the mechanical components, valves, controls and filter media have been upgraded throughout the years.

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. We 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 or at <http://www.epa.gov/safewater/lead>.

