

2024 Annual Water Quality Report

The North Shore Water Commission, in cooperation with its member utilities, publishes a water quality report annually. The report is designed so you can clearly understand what's in your drinking water and how to obtain additional information. Thank you for being a valued customer!

North Shore Water Commission

The North Shore Water Commission (NSWC) operates and maintains the Water Filtration Plant at 400 West Bender Road in Glendale as well as the Raw Water Pumping Station located in Whitefish Bay. The NSWC is responsible for purifying and pumping potable water to its member utilities which include Fox Point, Glendale, and Whitefish Bay. In addition, water is also provided to some areas served by Mequon Water Utility via a wholesale water agreement. If you want to know more about water quality or this report, please contact the Plant Manager at (414) 963-0160 or at ekiefer@northshorewc.com.

Water Utilities

Each water utility is responsible for connecting customers to the water system, metering water use, billing, and responding to distribution problems such as main breaks. You can find out who your water utility is by checking your water bill. If you experience a water-related problem or have questions about your water bill, please contact your water utility for assistance.

Fox Point Water Utility	Glendale Water Utility	Whitefish Bay Water Utility
 The logo for Fox Point Water Utility features a stylized white fox silhouette on a blue background. Below the fox, the text "VILLAGE OF FOX POINT" is written in white and black.	 The logo for Glendale Water Utility includes the word "Glendale" in a large blue font, with "RICH PAST. BRIGHT FUTURE." in smaller blue text below it. To the right is a yellow sun icon and green wavy lines representing water.	 The logo for Whitefish Bay Water Utility is a circular seal. The outer ring contains the text "VILLAGE OF WHITEFISH BAY" at the top, "INCORPORATED" on the left, "MILWAUKEE CO., WIS." at the bottom, and "JULY 7, 1892" on the right. The center of the seal depicts a house and trees.
(414) 351-8900	(414) 228-1719	(414) 962-6690

Governance

Fox Point, Glendale, and Whitefish Bay jointly own the facilities of the North Shore Water Commission and share the costs of water production and facility improvements.

The NSWC is governed by three appointed Commissioners and three Alternates with equal representation from Fox Point, Glendale, and Whitefish Bay. Each member is appointed by his or her respective municipality for a term of one year. Annually, the responsibilities of Chairman, Secretary and Member are rotated giving each community equal share of authority.

Under normal circumstances, the NSWC convenes monthly and reviews the operation and maintenance of the water treatment facility as well as water quality concerns. After discussion, the NSWC votes on proposed action, spending, and budgets. Capital improvements, such as reservoir upgrades, must be unanimously approved and financed by the member communities.

Public Meetings

Regular meetings are usually held on the 2nd Wednesday of the month at 8:00 AM in the conference room located at 400 West Bender Road, Glendale. The public is welcome to attend any of our meetings. Please note that they may be held at different times or locations. You can view the agenda at <https://northshorewc.com/splash/meetings/> and find out more information about past or upcoming meetings. The agenda is typically posted 3 to 5 days prior to a meeting.

More Information About Us

For additional information about water quality on the internet, please visit WDNR's website at <https://dnr.wi.gov/topic/DrinkingWater>, the EPA's web site at <https://www.epa.gov/safewater>, or our web site at <https://www.northshorewc.com/splash>. For more information about our member communities visit: <https://www.villageoffoxpoint.com>, <https://www.glendale-wi.org>, and <https://www.wfbvillage.gov>.

Abbreviations and Definitions

Term	Abbreviation	Definition
Action Level	AL	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Disinfection By-products	DBPs	These are compounds that are formed when using a disinfectant.

Term	Abbreviation	Definition
United States Environmental Protection Agency	EPA	
Haloacetic Acids Group HAA5	HAA5	Monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid. This is a class of disinfection by-products.
Haloacetic Acids Group HAA6Br	HAA6Br	Monobromoacetic acid, dibromoacetic acid, bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, and tribromoacetic acid. This is a class of disinfection by-products.
Haloacetic Acids Group HAA9	HAA9	Monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, dibromoacetic acid, bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, and tribromoacetic acid. This is a class of disinfection by-products.
Health Advisory	HA	An estimate of acceptable drinking water levels for a chemical substance based on health effects information.
Health Advisory Level	HAL	The concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public notice. Health advisories are determined by EPA.
Health Index	HI	A Hazard Index is used to assess the potential health impacts associated with mixtures of contaminants. Hazard Index guidance for a class of contaminants or mixture of contaminants may be determined by the US EPA or Wisconsin Department of Health Services. If a Health Index is exceeded, a system may be required to post a public notice.
Locational Running Annual Average	LRAA	The average of four quarterly samples collected in one 12-month period at a specific sampling site.
Maximum Contaminant Level	MCL	This 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	MCLG	This 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.
Milligrams Per Liter	mg/L	One milligram per liter corresponds to one minute in 2 years or a single penny in \$10,000. Milligrams per liter is equivalent to parts per million (ppm).
Micrograms Per Liter	ug/L	One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000. Micrograms per liter is equivalent to parts per billion (ppb).
Nanograms 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. Nanograms per liter is

Term	Abbreviation	Definition
		equivalent to parts per trillion (ppt).
Nephelometric Turbidity Unit	NTU	Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
North Shore Water Commission	NSWC	
Not Applicable	NA	Not applicable.
Not Detected	ND	Laboratory analysis indicates that the constituent is not present. In other words, the analyte was below the detection limit.
Primary Health Groundwater Standard	PHGS	Public Health Groundwater Standards are found in NR 140 Groundwater Quality. The concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public notice.
Recommended Public Health Groundwater Standards	RPHGS	Groundwater standards proposed by the Wisconsin Department of Health Services. The concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public notice.
Secondary Maximum Contaminant Level	SMCL	Secondary drinking water standards or Secondary Maximum Contaminant Levels for contaminants that affect taste, odor, or appearance of the drinking water. The SMCLs do not represent health standards.
Trihalomethanes	TTHM	Chloroform, bromodichloromethane, dibromochloromethane, and bromoform. This is a class of disinfection by-products.
Wisconsin Department of Natural Resources	WDNR	

Source Water Assessment

The North Shore Water Commission purifies water from Lake Michigan. The latest evaluation by the Wisconsin Department of Natural Resources (WDNR) indicates our source water quality is susceptible to pollution and contaminants. Preserving the water quality of Lake Michigan is essential to maintaining your drinking water quality. For more information on the impacts to your source of drinking water, see the Source Water Assessment for North Shore Water Commission at <https://northshorewc.com/splash/materials/SWA-2002.pdf>.

Education 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 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 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 by-products 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 that 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 should provide the same protection for public health.

Health Information

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 safe drinking water hotline at (800) 426-4791. 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 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 the Environmental Protection Agency's safe drinking water hotline.

Lead Health Effects

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.

Additional Lead Information

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. North Shore Water Commission and your water utility 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 (and is stagnant), you can minimize the potential for lead exposure by flushing your tap for 3 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 <https://www.epa.gov/safewater/lead>.

The North Shore Health Department is another valuable resource. They can provide you with more information about the health effects of lead and how to test for lead in your home. Visit their website at <https://www.nshealthdept.org> or call (414) 371-2980.

Treatment Process

Our treatment process starts when water enters our intake crib located in Lake Michigan. Bar screens prevent large objects from entering the intake, and a mussel control system prevents zebra and quagga mussels from accumulating in our pipes and equipment.

Gravity forces the water to fill a large shorewell that has several raw water pumps submersed in it. After passing through another screen, lake water is pumped from this station to the main treatment plant.

Upon arriving at the main facility, aluminum sulfate (alum) and polymer are added to promote settling of solids. This water then travels very slowly through a system of rectangular basins that provide a location for particulate matter to accumulate.

Rapid sand filters remove the remaining particulate matter and clean water is stored in a clearwell below the filters. There are intermediate pumps (sometimes referred to as transfer or low lift pumps) which force the filtered water through a fully redundant ultraviolet (UV) disinfection system which inactivates pathogens such as cryptosporidium. Before entering the UV reactors, fluoride is added to the water to prevent tooth decay. After passing through the UV reactors, sodium hypochlorite (a form of chlorine) is added to the water to disinfect any remaining pathogens.

Underground piping directs the water to our chlorine contact-time clearwells. While in these clearwells, chlorine has sufficient time to disinfect the water.

Our high service pumps draw water from these clearwells into a chemical feed vault where ammonium hydroxide (also referred to as aqua ammonia) is added. The ammonium hydroxide converts the chlorine to another disinfectant, chloramine, that is used by neighboring communities and can reduce disinfection by-products formation in the distribution system. Phosphate is also added to during our treatment process to reduce lead and copper leaching within pipes and plumbing fixtures in your home.

Water leaving the main facility is metered as it enters the mains of the member communities. Within the distribution systems of Fox Point, Glendale, and Whitefish Bay, there are metered interconnections that are kept open to improve pressure and water quality. The NSWC also reads and maintains these particular meters.

Officials

Please note that officers from the member communities rotate positions annually at the May meeting.

Fox Point

Office	Office Holder	Email	Phone
Member	Scott Botcher	sbotcher@villageoffoxpoint.com	(414) 351-8900
Alternate	Scott Brandmeier	sbrandmeier@villageoffoxpoint.com	(414) 351-8900
Fiscal Agent	Sara Bruckman	sbruckman@foxpointwi.gov	(414) 962-6690

Glendale

Office	Office Holder	Email	Phone
Secretary	Charlie Imig	c.imig@glendalewi.gov	(414) 228-1710
Alternate	Karl Warwick	k.warwick@glendalewi.gov	(414) 228-1702

Whitefish Bay

Office	Office Holder	Email	Phone
Secretary	Matt Collins	m.collins@wfbvillage.gov	(414) 962-6690
Alternate	Anna Christopherson	a.christopherson@wfbvillage.gov	(414) 962-6690

Cryptosporidium Monitoring

Cryptosporidium is a microscopic protozoan that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. The organism is found in many surface water sources (lakes, rivers, streams) and comes from human and animal wastes in the watershed. The NSWC uses an effective treatment process that is designed to remove and inactivate this pathogen. In 2024, cryptosporidium was not monitored.

Turbidity

In accordance with s. NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm that the filtered water is less than 0.30 NTU. Turbidity is a measure of the cloudiness of water. We monitor for turbidity because it is a good indicator of the effectiveness of our filtration system. During the year, the highest single turbidity measurement in our combined filter effluent was 0.19 NTU. The lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

Regulatory Compliance

We are proud to report that our system has not violated a maximum contaminant level or any other water quality standard. The following tables list the contaminants that were detected. This report may contain up to five years worth of water quality results. If tested annually, or more frequently, the results from the most recent year are shown on this report. If testing is done less frequently, the results are shown from the most recent testing event. The NSWC and its member water utilities are allowed to test for some contaminants less frequently than once per year.

Please note that the term "level found" is used throughout this report. The meaning of "level found" will vary depending on how many samples were collected in a year and the particular regulation it pertains to. If a contaminant was tested once in a year, a single value will be reported as "level found" without any additional explanation. If contaminant was tested more than one time during the year, the minimum and maximum values (range) will be reported below the level found in parentheses.

Monitoring Results Pertaining to the North Shore Water Commission (PWS# 24135155)

The NSWC and its member utilities work together to ensure the water it delivers meets or exceeds all water quality standards set forth by its regulatory agencies. The following sections show the contaminants that were detected by the NSWC in its monitoring.

Inorganic

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
Arsenic [2024]	NA	10 mg/L	1.1 ug/L	😊	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium [2024]	2 mg/L	2 mg/L	0.018 mg/L	😊	Discharge of drilling wastes; discharge from metal

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
					refineries; erosion of natural deposits
¹ Fluoride [2024]	4 mg/L	4 mg/L	0.79 mg/L (0.76 - 0.88)	😊	Erosion of natural deposits; Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (NO ₃ -N) [2024]	10 mg/L	10 mg/L	0.34 mg/L	😊	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits
Sodium [2024]	NA	NA	10 mg/L	😊	NA

Synthetic Organic Contaminants including Pesticides and Herbicides

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
Atrazine [2023]	3	3	0.018 ug/L	😊	Runoff from herbicide used on row crops.

Contaminants with a Health Advisory Level or Secondary Maximum Contaminant Level

The following tables list contaminants which were detected in your water and that have a Public Health Groundwater Standard (PHGS), Health Advisory Level (HAL) or a Secondary Maximum Contaminant Level (SMCL), or a combination of these. There are no violations for detections of contaminants that exceed Health Advisory Levels, Public Health Groundwater Standards or Secondary Maximum Contaminant Levels. Secondary Maximum Contaminant Levels are levels that do not present health concerns but may pose aesthetic problems such as objectionable taste, odor, or color. Health Advisory Levels are levels at which concentrations of the contaminant present a health risk. Public Health Groundwater Standards and Health Advisory Levels are levels at which concentrations of the contaminant present a health risk.

Substance	SMCL	HAL	Level Found	Status	Sources of Contamination
Sulfate [2024]	NA	NA	24.0 mg/L	😊	Runoff/leaching from natural deposits, industrial wastes

PFAS Contaminants with a Recommended Health Advisory Level

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a large group of human-made chemicals that have been used in industry and consumer products worldwide since the 1950. The following table list PFAS

contaminants which were detected in your water and that have a Recommended Public Health Groundwater Standard (RPHGS) or Health Advisory Level (HAL). There are no violations for detections of contaminants that exceed the RPHGS or HAL. The RPHGS are levels at which concentrations of the contaminant present a health risk and are based on guidance provided by the Wisconsin Department of Health Services.

Drinking water is one way that people can be exposed to PFAS. These substances can get in surface water from places that make or use PFAS. Also, certain consumer products can release PFAS which can enter surface water from runoff and other untreated wastes.

Please note that "Level Found" in this section is the maximum level found.

Contaminant	RPHGS or HAL (ppt)	Level Found	Range	Status
perfluorobutanesulfonic acid (PFBS) [2023]	450000	0.37 ppt	0.34 - 0.37 ppt	😊
perfluoroheptanoic acid (PFHpA) [2023]	N/A	1.10 ppt	0.96 - 1.10 ppt	😊
perfluorohexanesulfonic acid (PFHxS) [2023]	40	0.72 ppt	0.62 - 0.72 ppt	😊
perfluorohexanoic acid (PFHxA) [2023]	150000	1.50 ppt	1.20 - 1.50 ppt	😊
perfluorooctanesulfonic acid (PFOS) [2023]	20	2.10 ppt	2.00 - 2.10 ppt	😊
perfluorooctanoic acid (PFOA) [2023]	20	2.00 ppt	2.00 - 2.00 ppt	😊
PFOA and PFOS Total [2023]	20	4.10 ppt	4.00 - 4.10 ppt	😊

PFAS and the Fifth Unregulated Contaminant Monitoring Rule (UCMR5)

PFAS is a term used to describe a group of chemicals that have similar chemical properties. Unfortunately, these products have been shown to cause health effects including increased cholesterol, decreased antibody responses to vaccines, increased risk of thyroid disease, and decreased fertility in women. There is much still to learn about PFAS; health experts and regulators are actively researching PFAS and its effect on the human body and how to limit exposure.

Recent advances in technology make it possible for laboratories to detect various PFAS compounds at extremely low concentrations. **In 2023, the NSWC and its member utilities were required to participate in a federal program called the Fifth Unregulated Contaminant Monitoring Rule (UCMR5).** It was during this time that we detected the following compounds leaving the water filtration plant:

perfluorobutanesulfonic acid (PFBS), perfluoroheptanoic acid (PFHpA), perfluorohexanoic acid (PFHxA), perfluorohexanesulfonic acid (PFHxS), perfluorooctanesulfonic acid (PFOS), and perfluorooctanoic acid (PFOA).

The levels found were very close to the limit of detection (LOD) established by our contracted laboratory. It is important to note that all of the levels found were below the minimum reporting levels (MRLs) established by EPA. Consequently, the outcome of the UCMR5 testing has left us in an unusual situation.

All of the samples that were submitted to EPA for compliance with UCMR5 have results of "less than MRL" because their database does not recognize levels below the MRL established for each contaminant. This applies to all samples collected for the NSWC, Village of Fox Point, City of Glendale, and Village of Whitefish Bay.

At the same time, the NSWC was required to monitor for PFOA and PFOS for compliance with state regulations under a different program. DNR requires laboratories to report levels above the LOD, which is how we discovered there are detectable levels of certain PFAS compounds in our drinking water. The levels of PFOA and PFOS detected in NSWC water are well below the water quality standards set by the State of Wisconsin. Please note that EPA has not established any enforceable regulatory limits for PFAS chemicals at this time.

Below is a complete list of all contaminants that were tested for UCMR5 compliance.

perfluorobutanesulfonic acid (PFBS); perfluoroheptanoic acid (PFHpA); perfluorohexanoic acid (PFHxA); perfluorohexanesulfonic acid (PFHxS); perfluorooctanesulfonic acid (PFOS); perfluorooctanoic acid (PFOA); 11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS); 1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS); 1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS); 1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS); 4,8-dioxo-3H-perfluorononanoic acid (ADONA); 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS); hexafluoropropylene oxide dimer acid (HFPO-DA)(GenX); nonafluoro-3,6-dioxaheptanoic acid (NFDHA); perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA); perfluoro-3-methoxypropanoic acid (PFMPA); perfluoro-4-methoxybutanoic acid (PFMBA); perfluorobutanoic acid (PFBA); perfluorodecanoic acid (PFDA); perfluorododecanoic acid (PFDoA); perfluoroheptanesulfonic acid (PFHpS); perfluorononanoic acid (PFNA); perfluoropentanesulfonic acid (PFPeS); perfluoropentanoic acid (PFPeA); perfluoroundecanoic acid (PFUnA); N-ethyl perfluorooctanesulfonamidoacetic acid ;(NEtFOSAA); N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA); perfluorotetradecanoic acid (PFTA); perfluorotridecanoic acid (PFTrDA); and lithium.



Monitoring Results Pertaining to the Village of Fox Point (PWS# 24105840)

The following table show the contaminants that were detected by the Village of Fox Point in its monitoring.

Disinfection By-Products

For monitoring location SSS-9:

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
HAA5 [2024]	60 ug/L	60 ug/L	12.2 ug/L	😊	By-product of drinking water chlorination
TTHM [2024]	0	80 ug/L	31.0 ug/L	😊	By-product of drinking water chlorination

For monitoring location SSS-10:

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
HAA5 [2024]	60 ug/L	60 ug/L	11.8 ug/L	😊	By-product of drinking water chlorination
TTHM [2024]	0	80 ug/L	32.0 ug/L	😊	By-product of drinking water chlorination

Lead and Copper

Please note that lead and copper do not have a maximum contaminant level. Instead they have an action level (AL). To determine compliance with the Lead and Copper Rule, all results collected from monitoring event are arranged lowest to highest and the 90th percentile value is evaluated. If the 90th percentile value is at or below the AL, no additional action is required². This process is applied for each water system.

Please note that "level found" in this section is the 90th percentile value from the latest monitoring event--these samples were collected between June 1, 2020 and September 30, 2020. **Of the 30 samples collected in 2020, 3 of the lead samples exceeded the action level of 15 ppb** and 0 of the copper samples exceeded the action level 1.3 ppm.

Substance	MCLG	AL	Level Found	Status	Sources of Contamination
Copper [2020]	1.3 mg/L	1.3 mg/L	0.082 mg/L (0.002 to 0.280)	😊	Corrosion of household plumbing systems; erosion of natural deposits; leach from wood preservatives
Lead [2020]	0	15 ug/L	12.0 ug/L (0.05 to 23)	😊	Corrosion of household plumbing systems; erosion of natural deposits.

To reduce the amount of lead that can transfer from lead-bearing fixtures and pipes to the water, the NSWC feeds a corrosion inhibitor that contains phosphate. The addition of phosphate has been determined by the EPA and WNDR to be one of the best available treatment processes for controlling lead in the distribution system.



Monitoring Results Pertaining to the City of Glendale (PWS# 24101682)

The following table show the contaminants that were detected by the City of Glendale in its monitoring.

Disinfection By-Products

Please note that "level found" in this section is the LRAA. This value can include data from a previous year.

For monitoring location SSS-03:

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
HAA5 [2024]	60 ug/L	60 ug/L	11.3 ug/L (6.7 - 11.5)	☺	By-product of drinking water chlorination
TTM [2024]	0	80 ug/L	21.4 ug/L (14.7 - 29.9)	☺	By-product of drinking water chlorination

For monitoring location SSS-16:

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
HAA5 [2024]	60 ug/L	60 ug/L	11.6 ug/L (5.1 - 11.7)	☺	By-product of drinking water chlorination
TTM [2024]	0	80 ug/L	21.9 ug/L (14.8 - 28.0)	☺	By-product of drinking water chlorination

Lead and Copper

Please note that lead and copper do not have a maximum contaminant level. Instead they have an action level (AL). To determine compliance with the Lead and Copper Rule, all results collected from monitoring event are arranged lowest to highest and the 90th percentile value is evaluated. If the 90th percentile value is at or below the AL, no additional action is required². This process is applied for each water system.

Please note that "level found" in this section is the 90th percentile value from the latest monitoring event--these samples were collected between June 1, 2020 and September 30, 2020. **Of the 33 samples collected in 2020, 0**

of the lead samples exceeded the action level of 15 ppb and 0 of copper samples exceeded the action level 1.3 ppm.

Substance	MCLG	AL	Level Found	Status	Sources of Contamination
Copper [2020]	1.3 mg/L	1.3 mg/L	0.029 mg/L (0.001 to 0.100)	☺	Corrosion of household plumbing systems; erosion of natural deposits; leach from wood preservatives
Lead [2020]	0	15 ug/L	5.4 ug/L (ND to 7.4)	☺	Corrosion of household plumbing systems; erosion of natural deposits.

To reduce the amount of lead that can transfer from lead-bearing fixtures and pipes to the water, the NSWC feeds a corrosion inhibitor that contains phosphate. The addition of phosphate has been determined by the EPA and WNDR to be one of the best available treatment processes for controlling lead in the distribution system.

Fourth Unregulated Contaminant Monitoring Rule

THIS SECTION PERTAINS TO THE FOURTH ROUND of the UCMR. These compounds are not regulated (unless noted otherwise), and therefore, have no additional reporting and/or treatment requirements. Glendale was selected by EPA to conduct this testing in 2018 and 2019.

Please note that "level found" is the average level during the calendar year.

Substance	⁴ SMCL	Level Found	Status	Additional Information
Manganese [2018-2019]	50 ug/L	1.0 ug/L (0.5 - 2.0)	☺	Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications.

For monitoring location SSS-03:

Substance	MCLG	MCL	Level Found	Status	Additional Information
HAA5 [2018-2019]	60 ug/L	60 ug/L	8.9 ug/L (6.2 - 14.0)	☺	By-product of drinking water chlorination.
HAA6Br [2018-2019]	NA	NA	7.0 ug/L (6.0 - 7.7)	☺	By-product of drinking water chlorination.

Substance	MCLG	MCL	Level Found	Status	Additional Information
HAA9 [2018-2019]	NA	NA	14.4 ug/L (11.2 - 18.8)	☺	By-product of drinking water chlorination.

For monitoring location SSS-16:

Substance	MCLG	MCL	Level Found	Status	Additional Information
HAA5 [2018-2019]	60 ug/L	60 ug/L	9.4 ug/L (6.7 - 13.9)	☺	By-product of drinking water chlorination.
HAA6Br [2018-2019]	NA	NA	8.1 ug/L (6.4 - 10.6)	☺	By-product of drinking water chlorination.
HAA9 [2018-2019]	NA	NA	15.8 ug/L (12.1 - 21.3)	☺	By-product of drinking water chlorination.

The following is a complete list of compounds that were tested under this regulation:

Bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, trichloroacetic acid, germanium, manganese, alpha-hexachlorocyclohexane, chlorpyrifos, dimethipin, ethoprop, oxyfluorfen, profenofos, tebuconazole, total permethrin (cis & trans), tribufos, 1-butanol, 2-methoxyethanol, 2-propen-1-ol, butylated hydroxyanisole, o-toluidine, quinoline, total microcystins, microcystin-LA, microcystin-LF, microcystin-LR, microcystin-LY, microcystin-RR, microcystin-YR, nodularin, anatoxin-a, cylindrospermopsin.

Other Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring. There were no "other unregulated contaminants" detected in the past 5 years that must be reported in this section of the report.

Other Compliance Issues

The Glendale Water Utility is required to report the following uncorrected significant deficiencies.

- The Glendale Water Utility does not have a valve exercising/replacement program that meets the requirements of the Wisconsin Department of Natural Resources (notified on October 17, 2022).

The Glendale Water Utility plans on correcting this deficiency by November 30, 2025.



Monitoring Results Pertaining to the Village of Whitefish Bay (PWS# 24105972)

The following table lists the contaminants that were detected by the Village of Whitefish Bay in its monitoring.

Disinfection By-Products

Please note that "level found" in this section is the LRAA. This value can include data from a previous year.

For monitoring location SSS-01:

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
HAA5 [2024]	60 ug/L	60 ug/L	10.4 ug/L (7.7 - 13.1)	☺	By-product of drinking water chlorination
TTHM [2024]	0	80 ug/L	22.2 ug/L (11.4 - 32.0)	☺	By-product of drinking water chlorination

For monitoring location SSS-02:

Substance	MCLG	MCL	Level Found	Status	Sources of Contamination
HAA5 [2024]	60 ug/L	60 ug/L	9.4 ug/L (3.2 - 10.4)	☺	By-product of drinking water chlorination
TTHM [2024]	0	80 ug/L	21.6 ug/L (14.2 - 29.1)	☺	By-product of drinking water chlorination

Lead and Copper

Please note that lead and copper do not have a maximum contaminant level. Instead they have an action level (AL). To determine compliance with the Lead and Copper Rule, all results collected from monitoring event are arranged lowest to highest and the 90th percentile value is evaluated. If the 90th percentile value is at or below the AL, no additional action is required². This process is applied for each water system.

Please note that "level found" in this section is the 90th percentile value from the latest monitoring event--these samples were collected between June 1, 2020 and September 30, 2020. **Of the 33 samples collected, 1 of the**

lead samples exceeded the action level of 15 ppb and 0 of the copper samples exceeded the action level 1.3 ppm.

Substance	MCLG	AL	Level Found	Status	Sources of Contamination
Copper [2020]	1.3 mg/L	1.3 mg/L	0.045 mg/L (0.001 to 0.160)	😊	Corrosion of household plumbing systems; erosion of natural deposits; leach from wood preservatives
Lead [2020]	0	15 ug/L	7.3 ug/L (0.04 to 16.0)	😊	Corrosion of household plumbing systems; erosion of natural deposits.

To reduce the amount of lead that can transfer from lead-bearing fixtures and pipes to the water, the NSWC feeds a corrosion inhibitor that contains phosphate. The addition of phosphate has been determined by the EPA and WNDR to be one of the best available treatment processes for controlling lead in the distribution system.

Fourth Unregulated Contaminant Monitoring Rule

THIS SECTION PERTAINS TO THE FOURTH ROUND of the UCMR. These compounds are not regulated (unless noted otherwise), and therefore, have no additional reporting and/or treatment requirements. Whitefish Bay was selected by EPA to conduct this testing in 2018 and 2019.

Please note that "level found" is the average level during the calendar year.

Substance	⁴ SMCL	Level Found	Status	Additional Information
Manganese [2018-2019]	50 ug/L	1.1 ug/L (0.6 - 2.2)	😊	Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications.

For monitoring location SSS-01:

Substance	MCLG	MCL	Level Found	Status	Additional Information
HAA5 [2018-2019]	60 ug/L	60 ug/L	8.6 ug/L (5.7 - 13.5)	😊	By-product of drinking water chlorination.
HAA6Br [2018-2019]	NA	NA	7.1 ug/L (5.7 - 9.7)	😊	By-product of drinking water chlorination.

Substance	MCLG	MCL	Level Found	Status	Additional Information
HAA9 [2018-2019]	NA	NA	14.8 ug/L (11.0 - 22.3)	☺	By-product of drinking water chlorination.

For monitoring location SSS-02:

Substance	MCLG	MCL	Level Found	Status	Additional Information
HAA5 [2018-2019]	60 ug/L	60 ug/L	8.7 ug/L (6.3 - 13.5)	☺	By-product of drinking water chlorination.
HAA6Br [2018-2019]	NA	NA	7.6 ug/L (6.4 - 9.8)	☺	By-product of drinking water chlorination.
HAA9 [2018-2019]	NA	NA	15.4 ug/L (11.5 - 22.3)	☺	By-product of drinking water chlorination.

The following is a complete list of compounds that were tested under this regulation:

Bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, trichloroacetic acid, germanium, manganese, alpha-hexachlorocyclohexane, chlorpyrifos, dimethipin, ethoprop, oxyfluorfen, profenofos, tebuconazole, total permethrin (cis & trans), tribufos, 1-butanol, 2-methoxyethanol, 2-propen-1-ol, butylated hydroxyanisole, o-toluidine, quinoline, total microcystins, microcystin-LA, microcystin-LF, microcystin-LR, microcystin-LY, microcystin-RR, microcystin-YR, nodularin, anatoxin-a, cylindrospermopsin.

Other Unregulated Contaminants



Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring. There were no "other unregulated contaminants" detected in the past 5 years that must be reported in this section of the report.

Staff of the Commission

Eric Kiefer has been the Plant Manager since 2007. He received a Bachelor of Science degree with a major in chemistry from the University of Wisconsin Oshkosh as well as a Master of Business Administration degree from Marquette University. Recently, he has earned A+, Linux+, Network+ and Security+ certifications from [CompTIA](#). All full-time staff that participate in operations, including Mr. Kiefer, have a WDNR Municipal Waterworks Operator Certification. If you have a question regarding your water quality, please contact Mr. Kiefer at ekiefer@northshorewc.com or (414) 963-0160.

Associations

The NSWC is a proud member of the following associations:

Association	Logo
American Water Works Association	
Wisconsin Section of the American Water Works Association	
Water Research Foundation	
West Shore Water Producers Association	West Shore Water Producers Association

Footnotes

1. "Level found" is the average level during the calendar year. Fluoride is tested throughout the year, the level found includes results from an annual test and 12 monthly split samples. ←
2. Ten percent (10%) of the results are at or above the 90th percentile and ninety percent (90%) of the samples are below. ←←←
3. The sum of these compounds is equal to TTHM. Individually, these compounds are not regulated. ←
4. USEPA set a Secondary Maximum Contaminant Level (SMCL) for manganese. The SMCL is based on staining and taste considerations. There currently isn't an MCL or MCLG set for this contaminant. ←←