

# 2015 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. Via a wholesale water agreement, water is also provided to some areas served by Mequon Water Utility. If you want to know more about water quality or this report, please contact the Plant Manager at 414-963-0160 or at [info@northshorewc.com](mailto:info@northshorewc.com).

## Water Utility

Your water utility is responsible for connecting customers to the water system, metering, 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:** (414) 351-8900

**Glendale Water Utility:** (414) 228-1719

**Whitefish Bay Water Utility:** (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/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 the UV disinfection upgrade, must be unanimously approved and financed by the member communities.

## Public Meetings

Regular meetings are usually held on the 2<sup>nd</sup> 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 <http://northshorewater.org/index.php/meetings> to 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 web site at <http://dnr.wi.gov/topic/DrinkingWater>, the EPA's web site at <http://www.epa.gov/safewater>, or our web site at <http://www.northshorewater.org>. For more information about our member communities visit:

<http://www.villageoffoxpoint.com>, <http://www.glendale-wi.org/>, and <http://www.wfbvillage.org/>.

The NSWC is a proud member of the following associations:



## 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 lists 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. *Please note that we did not test for cryptosporidium or radon during 2015 because we were not required to.*

Parameter & (Units)	Compliance Status	Level Found (Range) <sup>‡</sup>	MCL	MCLG	Typical Source of Contamination / Notes
<b>Microbiological</b>					
Coliform (TCR)	☺	0%	Presence of coliform bacterian in >=5% of monthly samples	0	Naturally present in the environment.
<b>Inorganic Contaminants</b>					
Antimony (ppb)	☺	0.18	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	☺	0.56	10	NA	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics productions wastes
Barium (ppm)	☺	0.019	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	☺	0.50	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper (ppm) [Summer of 2015]	☺	0.048 <--90th Percentile 0 of 30 results were above AL-- range: 0.0034 to 0.110	AL=1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Cyanide (ppb) [4/21/2014]	☺	10	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	☺	0.8 (0.69 - 0.91)	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead (ppb) [Summer of 2015]	☺	9.1 <--90th Percentile 0 of 30 results were above AL-- range: ND to 15	AL = 15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Nickel (ppb)	☺	0.51	100	NA	Nickel occurs naturally in soils, groundwater and surface waters and is often used in electroplating, stainless steel and alloy products
Nitrate (NO3-N) (ppm)	☺	0.34	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)*	☺	9.3	NA	NA	NA
<b>Unregulated Volatile Organic Carbons (sum of following is defined as total trihalomethanes)</b>					
Bromodichloromethane (ppb) <sup>†</sup> [2014]	☺	6.2	NA	NA	By-product of drinking water chlorination
Bromoform (ppb) <sup>†</sup> [2014]	☺	0.4	NA	NA	By-product of drinking water chlorination
Chloroform (ppb) <sup>†</sup> [2014]	☺	5.1	NA	NA	By-product of drinking water chlorination
Dibromochloromethane (ppb) <sup>†</sup> [2014]	☺	3.8	NA	NA	By-product of drinking water chlorination
<b>Disinfection By-products (now currently being monitored by each water utility listed on next page)</b>					
HAA5 (ppb) [9/17/2013]	☺	12.7--Max (6.5 - 12.7)	60	60	By-product of drinking water chlorination
TTHM (ppb) [9/17/2013]	☺	25.2--Max (11.9 - 25.2)	80	0	By-product of drinking water chlorination
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>					
Hexachlorocyclopentadiene (ppb)	☺	ND	50	50	Discharge from chemical factories
<b>Unregulated Contaminants</b>					
Sulfate (ppm)*	☺	26	NA	NA	NA

<sup>‡</sup> Range is reported if contaminant was monitored more than once per year.

\* 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.

<sup>†</sup>Unregulated contaminants as individual contaminants; sum of these particular contaminants is regulated as total trihalomethanes (TTHM).





Parameter & (Units) Site	Compliance Status	Level Found (Range)	MCL	MCLG	Typical Source of Contamination / Notes
<b>-- THIS SECTION PERTAINS TO THE VILLAGE OF FOX POINT CUSTOMERS ONLY --</b>					
Disinfection Byproducts					
HAA5 (ppb)	☺	7.83 (7.47 - 7.83)	60	60	By-product of drinking water chlorination.
TTHM (ppb)	☺	13.64 (12.26 - 13.64)	80	0	By-product of drinking water chlorination.



Parameter & (Units)	Compliance Status	Level Found (Range)	MCL	MCLG	Typical Source of Contamination / Notes
<b>-- THIS SECTION PERTAINS TO THE CITY OF GLENDALE WATER CUSTOMERS ONLY --</b>					
Disinfection Byproducts					
HAA5 (ppb)	☺	10 <sup>^</sup> (4.93 - 10.60)	60	60	By-product of drinking water chlorination.
TTHM (ppb)	☺	19.8 <sup>^</sup> (10.47 - 19.50)	80	0	By-product of drinking water chlorination.

<sup>^</sup>Level found is the "locational running annual average." This value includes data from the previous year and can be higher or lower than levels detected in 2015.

Unregulated Contaminant Monitoring Rule 3 (UCMR3) <i>See notes about this testing on the last page.</i>					
Chlorate (ppb)* [2013]	☺	123--Ave (68.0 - 226)	NA	NA	Agricultural defoliant or desiccant; disinfection byproduct; used in chlorine dioxide production.
Chromium-Total (ppb)* [2013]	☺	0.37--Ave (0.24 - 0.46)	NA	NA	Sum of chromium in all valence states. See chromium-6 for more information.
Chromium-6 (ppb)* [2013]	☺	0.18--Ave (0.10 - 0.24)	NA	NA	Naturally-occurring element; used in making steel and other alloys; chromium-3 and -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.
Molybdenum (ppb)* [2013]	☺	0.14--Ave (ND - 1.1)	NA	NA	Naturally-occurring metal found in small amounts in soil and rock. It can also be found in groundwater, either naturally or as the result of industrial activities.
Strontium (ppb)* [2013]	☺	118--Ave (113 - 127)	NA	NA	Naturally-occurring element; historically, commercial use has been in the faceplate of cathode ray tubes.
Vanadium (ppb)* [2013]	☺	0.23--Ave (ND - 0.30)	NA	NA	Naturally-occurring metal; used as vanadium pentoxide which is a chemical intermediate and catalyst.



Parameter & Units	Compliance Status	Level Found (Range)	MCL	MCLG	Typical Source of Contamination / Notes
<b>-- THIS SECTION PERTAINS TO THE VILLAGE OF WHITEFISH BAY CUSTOMERS ONLY --</b>					
Disinfection Byproducts					
HAA5 (ppb)	☺	10 <sup>^</sup> (4.43 - 10.30)	60	60	By-product of drinking water chlorination.
TTHM (ppb)	☺	18.6 <sup>^</sup> (11.16 - 17.27)	80	0	By-product of drinking water chlorination.

<sup>^</sup>Level found is the "locational running annual average." This value includes data from the previous year and can be higher or lower than levels detected in 2015.

Unregulated Contaminant Monitoring Rule 3 (UCMR3) <i>See notes about this testing on the last page.</i>					
Chlorate (ppb)*	☺	84.6--Ave (81.6 - 86.7)	NA	NA	Agricultural defoliant or desiccant; disinfection byproduct; used in chlorine dioxide production.
Chromium-Total (ppb)*	☺	0.37--Ave (0.30 - 0.46)	NA	NA	Sum of chromium in all valence states. See chromium-6 for more information.
Chromium-6 (ppb)*	☺	0.19--Ave (0.15 - 0.22)	NA	NA	Naturally-occurring element; used in making steel and other alloys; chromium-3 and -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.
Molybdenum (ppb)*	☺	0.28--Ave (ND - 1.1)	NA	NA	Naturally-occurring metal found in small amounts in soil and rock. It can also be found in groundwater, either naturally or as the result of industrial activities.
Strontium (ppb)*	☺	125--Ave (121 - 128)	NA	NA	Naturally-occurring element; historically, commercial use has been in the faceplate of cathode ray tubes.
Vanadium (ppb)*	☺	0.12--Ave (ND - 0.24)	NA	NA	Naturally-occurring metal; used as vanadium pentoxide which is a chemical intermediate and catalyst.

\* 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.

## Abbreviations and Definitions

Not Applicable (NA): Not applicable.

Not Detected (ND): Laboratory analysis indicates that the constituent is not present.

Parts Per Million (ppm) or Milligrams Per Liter (mg/l): One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts Per Billion (ppb) or 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.

Parts Per Trillion (ppt) or Nanograms Per Liter (nanograms/l): One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts Per Quadrillion (ppq) or Picograms Per Liter (picograms/l): One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries Per Liter (pCi/L): Picocuries per liter is a measure of the radioactivity in water.

Millirems Per Year (mrem/yr): measure of radiation absorbed by the body.

Million Fibers Per Liter (MFL): Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

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

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

Maximum Contaminant Level (MCL): The "Maximum Allowed" (MCL) 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): The "Goal" (MCLG) 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.

Total Coliform Rule (TCR): This is the regulation that pertains to disinfectant and bacteriological monitoring.

## 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 <http://northshorewater.org/images/materials/SWA-2002.pdf>.

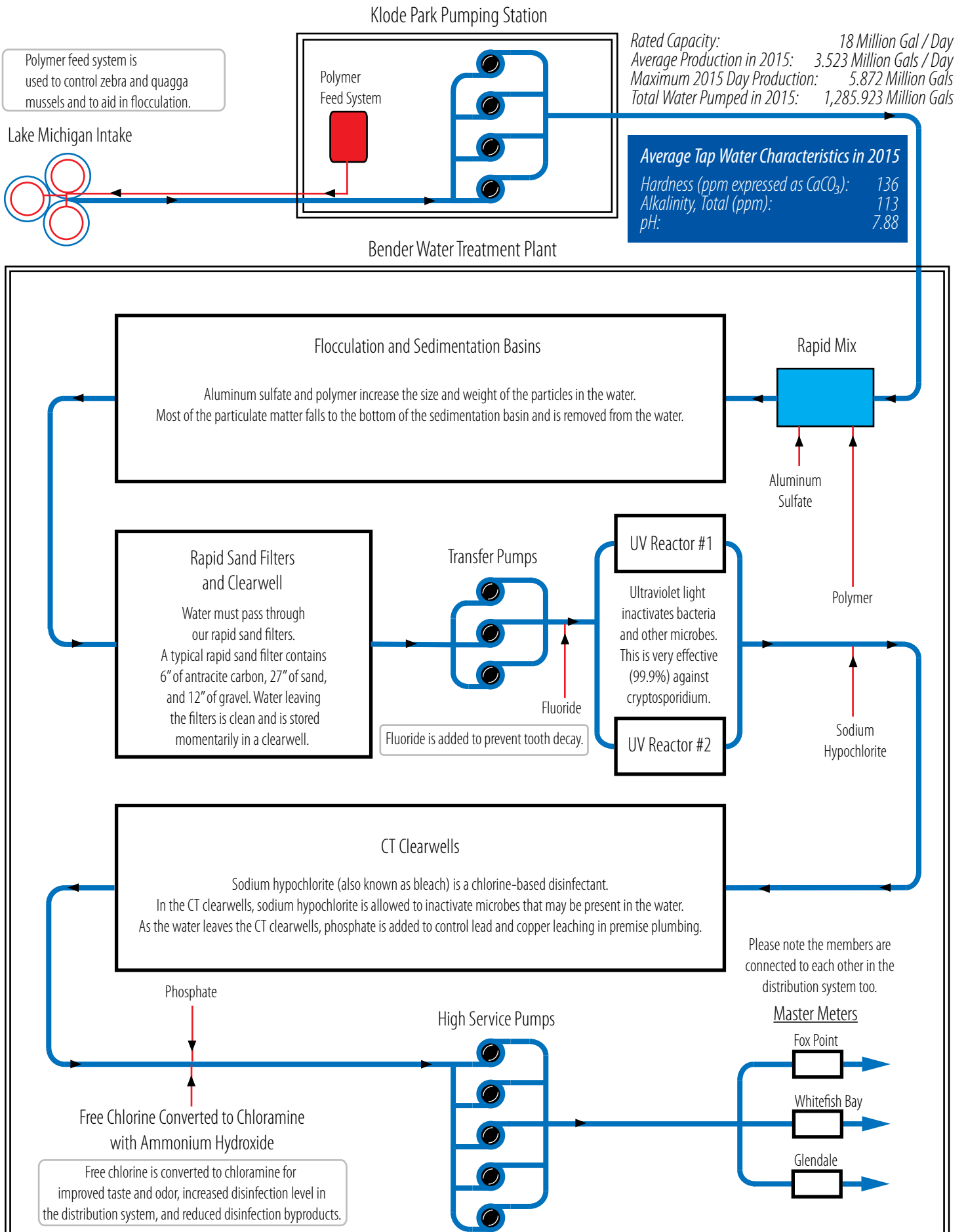
## Education Information

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:

- 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.

# Overview of the North Shore Water Commission's Water Treatment Process



## 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 (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 (800-426-4791).

### -- 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 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 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Staff

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. All full-time staff that participate in operations, including Mr. Kiefer, have a WDNR Municipal Waterworks Operator Certification.

## Turbidity Monitoring

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 it because it is a good indicator of the effectiveness of our filtration system. During the year, the highest single entry point turbidity measurement was 0.09 NTU. The lowest monthly percentage of samples meeting the turbidity limits was 100 percent.

## Unregulated Contaminants Monitoring Rule (UCMR3)

EPA periodically requires water systems to test for unregulated contaminants to better understand their occurrence in drinking water. These compounds are not regulated, and therefore, have no additional reporting and/or treatment requirements. Glendale was selected by EPA to conduct this testing in 2013 and Whitefish Bay was selected to do the same from the summer of 2014 to 2015

The following compounds were tested under UCMR3: 1,2,3-trichloropropane, chlorodifluoromethane (HCFC-22), vanadium, chromium, perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), bromomethane, 1,3-butadiene, molybdenum, chromium-6, perfluorobutanesulfonic acid (PFBS), chloromethane, 1,1-dichloroethane, cobalt, chlorate, perfluorohexane sulfonic acid (PFHxS), bromochloromethane (Halon 1011), 1,4-dioxane, strontium, perfluorooctane sulfonic acid (PFOS), perfluoroheptanoic acid (PFHpA).

## Current Officials\*

Fox Point: Michael West, Member  
(414) 352-2712  
Scott Botcher, Alternate  
(414) 351-8900; [sbotcher@villageoffoxpoint.com](mailto:sbotcher@villageoffoxpoint.com)  
Kelly Meyer, Fiscal Agent  
(414) 351-8900; [kmeyer@villageoffoxpoint.com](mailto:kmeyer@villageoffoxpoint.com)

Glendale: Dave Eastman, Chair  
(414) 228-1746; [d.eastman@glendale-wi.org](mailto:d.eastman@glendale-wi.org)  
Richard Maslowski, Alternate  
(414) 228-1705

Whitefish Bay: John Edlebeck, Secretary  
(414) 962-6690; [j.edlebeck@wfbvillage.org](mailto:j.edlebeck@wfbvillage.org)  
Paul Boening, Member  
(414) 962-6690; [p.boening@wfbvillage.org](mailto:p.boening@wfbvillage.org)

Management: Eric Kiefer, Plant Manager  
(414) 963-0160; [info@northshorewc.com](mailto:info@northshorewc.com)

\*Officers from the member communities rotate positions annually at the May meeting.