NORTH SHORE WATER COMMISSION

2011 Annual Water Quality Report

The North Shore Water Commission is pleased to present you with this year's Annual Water Quality Report. This report is designed to keep you informed about the quality of water we deliver to you every day. If you have any questions about this report or other concern about water quality, please call our Manager Eric Kiefer at (414) 963-0160 or email Info@northshorewc.com. The public is welcome to attend any of our meetings; dates and times for scheduled meetings are posted at the Fox Point Village Hall, Glendale City Hall, and Whitefish Bay Village Hall. We also have additional information available at our office regarding our treatment process, source water protection, and UV disinfection.

Regulatory Compliance

Drinking water standards are regulations that U.S. Environmental Protection Agency (EPA) sets to control the level of contaminants in the nation's drinking water. These standards are part of the Safe Drinking Water Act (SDWA) that was signed into law in 1974. To continually improve the standards, the existing regulations are periodically updated to address the emergence of new technology and new research. These regulations are reviewed and then enforced by the Wisconsin Department of Natural Resources (WDNR).

Last year, as in years past, your tap water met all EPA and state drinking water health standards. The North Shore Water Commission vigilantly safeguards its water supplies and once again we are proud to report that our system has not violated a maximum contaminant level or any other water quality standard.

Summary of Monitoring

This table displays the number of contaminants that were required to be tested in the last five years. 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.

Contaminant Group	# Tested
Disinfection Byproducts	2
Inorganic Contaminants	16
Microbiological Contaminants	1
Radioactive Contaminants	3
Synthetic Organic Contaminants	26
Unregulated Contaminants	34
Volatile Organic Contaminants	20

Monitoring Results

We have learned through monitoring and testing that some contaminants have been detected; however, the EPA (Environmental Protection Agency) has determined that your water IS SAFE at these levels. All sources of drinking water are subject to potential contamination by contaminants that are naturally occurring or man-made. Those contaminants can be microbes, organic or inorganic chemicals, or radioactive materials. All 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 the water poses a health risk. Maximum Contaminant Levels are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people 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 from their health care providers about drinking water. EPA/CDC (Center for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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Parameter & (Units)	Compliance Status	Level Found (Range)	MCL	MCLG	Typical Source of Contamination
Microbiological					
Combined Filter Effluent Turbidity (NTU)	☺	0.05--Ave (0.03 - 0.10)	0.3 95% of time	NA	Soil Runoff
Inorganic Contaminants					
Antimony (ppb)	☺	0.26	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Barium (ppm)	☺	0.020	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper (ppm)* [Latest result from 2009]	☺	0.065--90th Percentile (0.001 - 0.190)	AL=1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Cyanide (ppb)	☺	21 (14-21)	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	☺	1.0--Ave (0.9 - 1.1)	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead (ppb)* [Latest result from 2009]	☺	6.9--90th Percentile (ND - 20)	AL = 15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Nickel (ppb)	☺	0.870	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)	☺	0.33	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	☺	9.50	NA	NA	NA
Radioactive Contaminants					
Gross Beta Particle Activity* (pCi/L)* [Latest result from 2008]	☺	2.5 ± 2.1	NA	NA	Decay of natural and man-made deposits. MCL units are in millirem/year. Calculation for compliance with MCL is not possible unless level found is greater than 50 pCi/L.
Radium, 226 + 228 (pCi/L)* [Latest result from 2009]	☺	1.11	5	0	Erosion of natural deposits.
Combined Uranium (ug/L)* [Latest result from 2009]	☺	0.34 ± 0.06	5	0	Erosion of natural deposits.
Gross Alpha Particle Activity (pCi/L)* [Latest result from 2009]	☺	0.46 ± 0.81	5	0	Erosion of natural deposits.
Gross Alpha (excluding radon and uranium) (pCi/L)* [Latest result from 2009]	☺	0.2	5	0	Erosion of natural deposits.
Disinfection By-products					
HAA5 (ppb)	☺	8.7--Ave (4.8 - 12.9)	60	60	By-product of drinking water chlorination
TTHM (ppb)	☺	13.7--Ave (8.6 - 16.8)	80	0	By-product of drinking water chlorination
Unregulated Contaminants					
Bromodichloromethane (ppb)	☺	5.33--Ave (3.60 - 6.50)	NA	NA	NA
Bromoform (ppb)	☺	0.04--Ave (ND - 0.15)	NA	NA	NA
Chloroform (ppb)	☺	5.80--Ave (2.70 - 7.60)	NA	NA	NA
Dibromochloromethane (ppb)	☺	2.55--Ave (2.30 - 3.00)	NA	NA	NA
Sulfate (ppm)	☺	27	NA	NA	NA

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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.

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://www.dnr.state.wi.us/org/water/dwg/SWAP/index.htm.

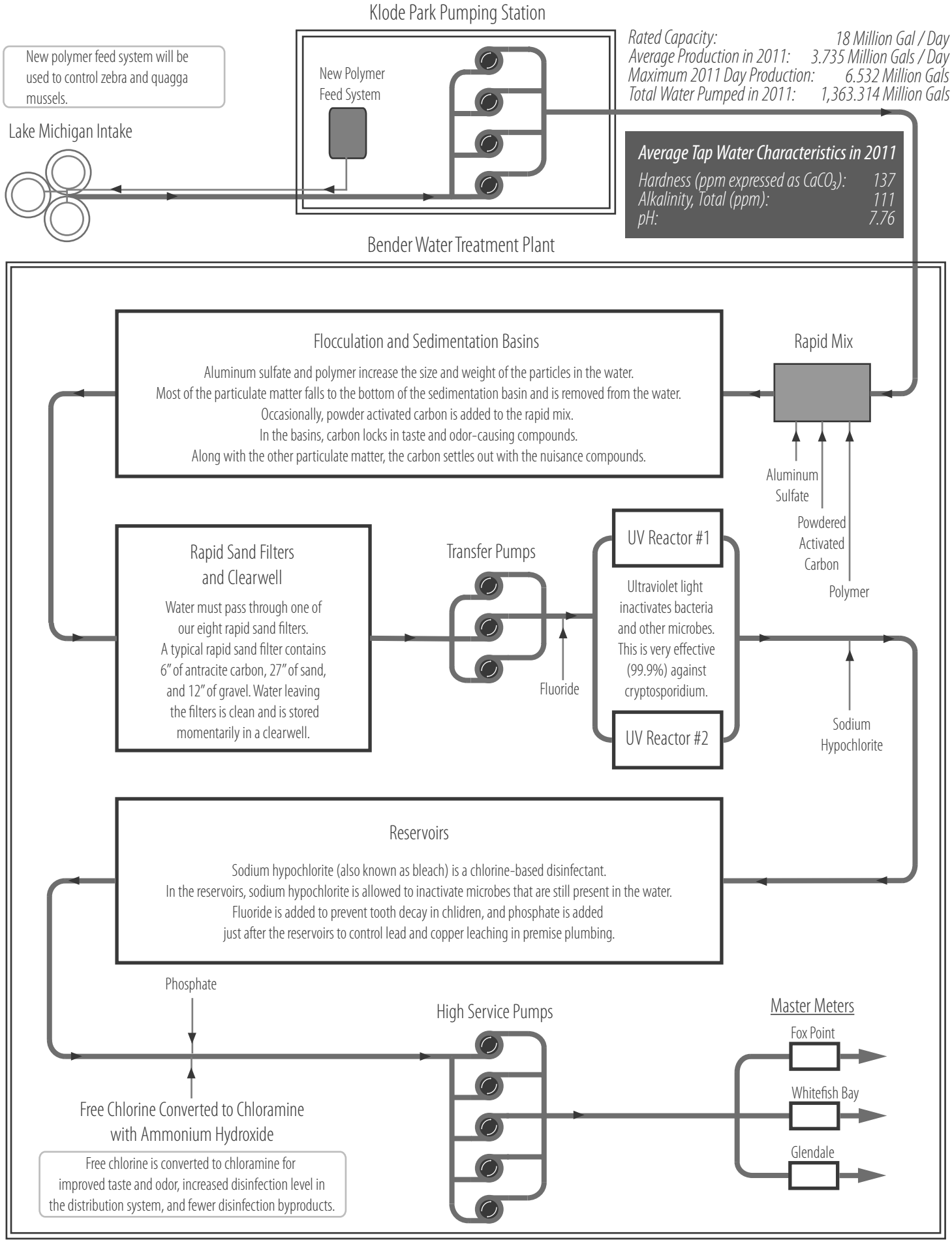
Education Information

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



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Organization and Structure

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 Commission consists of three appointed Commissioners and three appointed 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 Commission convenes monthly and reviews the operation and maintenance of the water treatment facility as well as water quality concerns. After discussion, the Commission 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.

Your specific water utility is responsible for connecting customers to the water system, metering, and billing end users.

Current Officials

Fox Point:	Michael West, Chairman
	(414) 352-2712
	Susan Robertson, Alternate
	(414) 351-8900; srobertson@vil.fox-point.wi.us
Glendale:	Richard Maslowski, Secretary
	(414) 228-1705; cityhall@glendale-wi.org
	Dave Eastman, Alternate
	(414) 228-1746; cityhall@glendale-wi.org
Whitefish Bay:	Dan Naze, Member
	(414) 962-6690; engineer@wfbvillage.org
	Richard Foster, Alternate
	(414) 962-6690
Management:	Eric Kiefer, Plant Manager
	(414) 963-0160; info@northshorewc.com

Special Monitoring Project

The Commission responded to recent reports suggesting a form of chromium called hexavalent chromium is present in Lake Michigan. Water utilities along Lake Michigan, including the Commission, have been voluntarily monitoring total and hexavalent chromium in 2011 and will continue monitoring in 2012.

According to the latest EPA release, chromium is a metallic element in the periodic table. It is odorless and tasteless. Chromium is found naturally in rocks, plants, soil and volcanic dust, humans and animals. The most common forms of chromium in the environment are trivalent (chromium-3), hexavalent (chromium-6) and the metal form, chromium-0. Chromium-3 occurs naturally in many vegetables, fruits, meats, grains and yeast. Chromium-6 and -0 are generally produced by industrial processes. Major sources of chromium-6 in drinking water are discharges from steel and pulp mills, and erosion of natural deposits of chromium-3. At many locations, chromium compounds have been released to the environment via leakage, poor storage, or improper disposal practices. Chromium compounds are very persistent in water as sediments.

At the time this report was written, no regulations have been developed by federal or Wisconsin regulatory agencies for hexavalent chromium. The Commission will work with EPA and the WDNR as this compound of interest is better understood by health and regulatory experts.

Additional Information

The main office and filtration plant is located at 400 West Bender Road, Glendale, Wisconsin. We also operate and maintain the Klode Park Pump Station in Whitefish Bay.

For additional information about water quality on the internet, please visit the WDNR's web site at http://dnr.wi.gov/org/water/dwg, the EPA's web site at http://www.epa.gov/safewater, or our web site at http://www.northshorewc.com. For more information about our member communities visit: http://www.vil.fox-point.wi.us/, http://www.glendale-wi.org/, and http://www.wfbvillage.org/.