NORTH SHORE WATER COMMISSION

2006 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. Please attend any of our regularly scheduled meetings; dates and times for scheduled meetings are posted at the Glendale City Hall, Fox Point Village 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.

Ultraviolet Disinfection

Since the 1993 cryptosporidium outbreak in Milwaukee that affected over 400,000 people, the North Shore Water Commission proactively responded by making improvements to existing operations and by investigating new water treatment methods effective in the treatment of cryptosporidium. After conducting extensive research of emerging technologies, the North Shore Water Commission along with all of its member communities approved the installation of ultraviolet (UV) disinfection.

Our UV System is Now Operational!

We are pleased to announce that our UV system was successfully installed in 2006! Using UV light, this robust technology inactivates numerous pathogens such as cryptosporidium. Applied after our existing treatment process, UV greatly enhances our water quality.

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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.

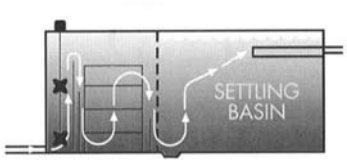
Source Water Assessment

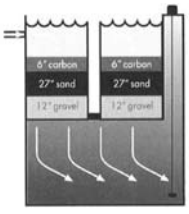
The North Shore Water Commission purifies water from Lake Michigan. A recent evaluation by the Wisconsin Department of Natural Resources (WDNR) indicates our source water quality is susceptible to pollution and contaminants. Preserving the water quality of Lake Michigan is essential to maintaining your 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.

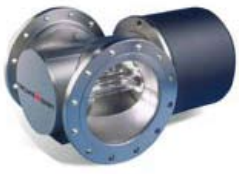
Treatment Process

Our treatment process starts with addition of potassium permanganate to control zebra mussels at our intake in Lake Michigan. From the intake, water is pumped into our state-of-the-art surface water treatment plant. Once in our plant, purification begins with the removal of dirt and other suspended matter by using a coagulant called alum; this treatment chemical causes smaller particles to form a larger mass that is too heavy to stay in water. Depending on the quality of our source water, additional chemicals such as activated carbon may be added at this point to aid in the removal of taste and odors. At the end of this first stage, a majority of suspended matter is settled out in the sedimentation basins.

Next, the water is purified by rapid sand filtration and is disinfected with sodium hypochlorite. Following conventional treatment, the water is then pumped through our new UV disinfection system. Remaining bacteria, viruses, and pathogens are inactivated as filtered water travels past our UV lamps. To control lead and copper leaching in residential plumbing, a corrosion inhibitor is added after UV treatment. Fluoride is also added to the water to prevent excessive tooth decay in children. Our treated water is stored in our reservoirs until it is pumped into the distribution systems.







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Parameter & (Units)	Compliance Status	Level Found (Range)	MCL	MCLG	Typical Source of Contamination
Microbiological					
Combined Filter Effluent Turbidity (NTU)	☺	0.04--Ave (0.02 - 0.15)		NA	Soil Runoff
Volatile Organic Contaminants					
TTHM (ppb)	☺	14.7--Ave (12.1 – 19.2)	80	0	By-product of drinking water chlorination
Inorganic Contaminants					
Barium (ppm)	☺	0.017	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium (ppb)	☺	0.3	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Copper (ppm)	☺	0.076--90th Percentile (ND - 0.250)	AL=1.3	13	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Fluoride* (ppm)	☺	1.1--Ave (0.8 - 1.5)	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead (ppb)	☺	13--90th Percentile (ND - 28)	AL = 15	0	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate (NO3-N) (ppm)	☺	0.35	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	☺	9.5	NA	NA	NA
Radioactive Contaminants					
Gross Alpha Particle Activity (pCi/L)* 2/27/2002	☺	0.8--Ave (0.0 - 0.8)	15	0	Erosion of natural deposits
Disinfection By-products					
HAA5 (ppb)	☺	13--Ave (8 - 27)	60	60	By-product of drinking water chlorination
Unregulated Contaminants					
Bromodichloromethane (ppb)	☺	5.43--Ave (4.6 – 6.7)	NA	NA	NA
Bromoform	☺	0.26--Ave (ND - 0.43)	NA	NA	NA
Chloroform (ppb)	☺	5.83--Ave (3.8 – 8.4)	NA	NA	NA
Dibromochloromethane (ppb)	☺	3.23--Ave (2.6 – 3.8)	NA	NA	NA
Sulfate (ppm)	☺	30	NA	NA	NA
Other Parameters					
Alkalinity (ppm)	☺	103	NA	NA	NA
Hardness (ppm)	☺	137	NA	NA	NA
pH (pH units)	☺	7.32	NA	NA	NA

*Required fluoride sample for period 01/01/06 to 01/31/06 was not analyzed due to shipping error.

Note: Two required total organic carbon (TOC) samples for period 11/01/02 to 11/30/02 were sampled on 10/31/02.

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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	1
Inorganic Contaminants	16
Microbiological Contaminants	1
Radioactive Contaminants	1
Synthetic Organic Contaminants	27
Unregulated Contaminants	33
Volatile Organic Contaminants	21

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 – 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.

Results

We are proud that your drinking water meets or exceeds all federal and state requirements. We have learned through our 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. Immunocompromised 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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Organization and Structure

The North Shore Water Commission consists of three appointed Commissioners and three appointed Alternates with equal representation from Glendale, Whitefish Bay, and Fox Point. Each member is appointed by his/her respective municipality for a term of one year. Annually, the responsibilities of Chairperson, 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. 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. Furthermore, the distribution, metering and billing of all water used is the responsibility of each member community.

Location

The water filtration plant is located at 400 West Bender Road, Glendale, WI 53217. If you would like to arrange a visit or request more information, please call (414) 963-0160.

Management

Eric Kiefer
Manager
info@northshorewc.com, (414) 963-0160

Roger C. Johnson recently retired as Plant Manager after dedicating over 40 years to the water treatment profession. Eric Kiefer, the former Assistant Manager, oversees daily operations and is responsible for your water quality.

Current Commissioners and Alternates

Richard Maslowski
Commissioner, Chairperson
cityhall@glendale-wi.org, (414) 228-1705
Richard Maslowski is the City Administrator of Glendale and has served as Commissioner for over 27 years.

Mary Jo Lange
Commissioner, Secretary
engineer@wfbvillage.org, (414) 962-6690
Mary Jo Lange is the Village Engineer for Whitefish Bay and has served as Commissioner for over 4 years.

Michael West
Commissioner, Member
(414) 352-2712
Mike West is the Village President of Fox Point and has served as Commissioner for over 7 years.

Susan Robertson
Alternate
srobertson@vil.fox-point.wi.us, (414) 351-8900
Susan Robertson is the Village Manager of Fox Point and has served as Alternate for over 11 years.

William Huegel
Alternate
(414) 352-8020
William Huegel is the Alderman of 3rd District and has served as Alternate for over 16 years.

Rita Cheng
Alternate
(414) 962-6690
Rita Cheng is on the Whitefish Bay Village Board as Trustee and has served as Alternate for a year.

Additional Information

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.