

The background features a close-up of water splashing from a faucet, with a bowl of fresh fruit (rasberries, blackberries, and red grapes) in the lower-left corner. The text is overlaid on a light blue background with abstract teal wave-like shapes.

ANNUAL WATER QUALITY REPORT

WATER TESTING
PERFORMED IN 2015

Presented By
City of New Brighton

Our Mission Continues

This report presents the results of samples taken from New Brighton's drinking water between January 1 to December 31, 2015. The purpose of this report is to provide consumers with information about their drinking water and to increase their awareness of the need to protect Minnesota's precious water resources.

Please let us know if you have any questions or concerns about your water.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice from their health care providers about the City's drinking water sources. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Where Does My Water Come From?

New Brighton provides drinking water from ground water sources. Normally, 10 wells, ranging from 295 to 950 feet deep, draw water from the Mt. Simon, Prairie Du Chien, Prairie Du Chien-Jordan, and Mt. Simon-Hinckley aquifers and supply water to four treatment plants. In 2015, the majority of the water was provided from the Mt. Simon-Hinckley aquifers, which are capable of producing 4.5 million gallons per day.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Scott Boller, Public Works Superintendent, at (651) 638-2119.

Water Supply and Minneapolis Connection

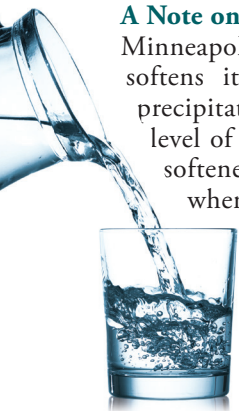
As you read the 2015 Water Quality Report, we want to update you with our efforts to ensure a safe and reliable drinking water supply for New Brighton water consumers. Last year at this time, you were informed of the discovery of low levels of 1,4-dioxane (dioxane) in some of the City's water supply wells. Since April 15, 2015, the City has provided water exclusively from its deep (dioxane-free) wells located in the Mount Simon/Hinckley aquifer. With last year's mild summer providing an ideal blend of mild temperatures and well-timed rains that resulted in less water use by residents, the deep dioxane-free wells were able to meet 100% of the demand for water.

Last summer's ideal conditions are not likely to be repeated, and it is possible that hotter and drier conditions could create a water demand in excess of the capacity of the dioxane-free deep wells. Because the planned expansion of the City's water treatment plant to install dioxane removal equipment will not be completed for another two summers, our attention has been focused on securing a safe, sufficient, reliable, and dioxane-free alternative water supply for the interim. To that end, we are in the process of constructing a connection to the Minneapolis water system that will provide the necessary capacity to meet all residential, business, and fire protection needs until the water treatment plant is upgraded. We plan on using only Minneapolis water until the dioxane treatment facility is operating and our water treatment plant has resumed normal operations. This decision allows the City to continue to deliver dioxane-free water to our residents.

Shortly after the July 4 weekend, we will transition to Minneapolis water. Minneapolis water is from a surface water source whereas New Brighton's is from ground water, so there are differences in the amounts of naturally occurring minerals. Additionally, Minneapolis uses different processes to treat and disinfect its water, including the use of an additive to help prevent corrosion in the pipes of the water system, homes, and businesses. This additive will ensure that the types of problems experienced in Flint, Michigan, will NOT be experienced in New Brighton. Although slight differences may be noticeable (smell and taste), they are aesthetic only and do not affect the quality or safety of the water. Experience has shown that most consumers will not notice differences once the transition has been made.

A Note on Water Softeners

Minneapolis, as part of its water treatment processing, softens its water. It uses a method called chemical precipitation (lime softening) to lower the hardness level of the water. Unlike the process many residential softeners use, which is called Zeolite or ion exchange, where the softening method includes the use of sodium, lime softening does not involve the use of sodium. This allows Minneapolis water users to water lawns and flowers with this type of softened water.



When transitioning to the Minneapolis water source, residents with water softeners will want to do one of two things:

- Bypass your water softener completely (if you are happy with the Minneapolis hardness level)

OR

- Adjust your home softener to your desired level of hardness (Minneapolis hardness level is 91 mg/L or 5.3 grains per gallon).

Information for Fish Aquarium Owners

Unlike New Brighton, Minneapolis uses chloramines instead of chlorine for tap water disinfection. Although chloramines are safe for most pets, they must be removed from tap water that is used for aquatic life in aquariums and ponds.

What does this mean for aquarium and pond owners?

Chloraminated water is superior to state and federal drinking water standards; however, chloramines are harmful to fish when they directly enter the bloodstream. Because fish and other aquatic animals take chloramines directly from the water into their bloodstreams through their gills, chloramines, like chlorine, must be removed from water used for keeping live fish and other aquatic life.

What types of aquatic life do chloramines affect?

Chloramines, like chlorine, will kill both salt and fresh water fish and other aquatic life, including Koi fish, lobster, shrimp, frogs, turtles, snails, clams, and live coral. Chloramines, therefore, like chlorine, must be removed from tap water before using it in your fresh or salt-water aquarium or pond.

How can I remove chloramines from my water?

A water-conditioning agent or an activated carbon filter specifically designed to remove chloramines must be used according to product instructions. If you are already using one of these products to remove chlorine, it is possible that the same product will also remove chloramines. Please read the product label. Your pet supplier should be able to provide further guidance.

Will letting water sit for a few days remove chloramines from tanks or pond water?

No. Unlike chlorine, which dissipates when water sits for a few days, chloramines are longer lasting and may take weeks to dissipate. This is not a safe method for removing chloramines.

Chloramine Removal for Home Dialysis

Chloramines in the public water supply need to be adequately removed by the dialysis unit's water purification system. Consult with your physician if you use home dialysis equipment. Most home dialysis service companies are able to make the necessary modifications to treat source water.

Chloraminated water can be used without treatment for general uses. For example, kidney dialysis patients can drink, cook, and bathe in the water, because the digestive process neutralizes chloramine before it reaches the bloodstream.

Unregulated Contaminant Monitoring Rule Program (UCMR3) Sampling Results

In 2015, New Brighton continued its participation in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. Unregulated contaminants are those for which the EPA has not established drinking water standards (called maximum contaminant levels or MCLs) under the Safe Drinking Water Act. The presence of a given compound does not necessarily equate to a health risk; the compound's concentration is a far more important factor in determining whether there might be health implications. UCMR3 benefits the environment and the public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. The MDH closely monitors both the concentrations of these compounds and the EPA's health studies. Complete results of the unregulated contaminant monitoring are available upon request from Cindy Swanson, Minnesota Department of Health, at (651) 201-4656.

On February 3, 2015, the MDH advised New Brighton that its UCMR3 tests had detected 1,4-dioxane (DX) in certain City wells. In response, on April 15, 2015, the City ceased operating those wells (and Water Treatment Plant 1), and began operating its deeper, uncontaminated Mount Simon-Hinckley wells as its sole source of water. Dioxane-free water was delivered to New Brighton residents from April 15 through December 31, 2015. For more information regarding the long-term DX solution or current drinking water updates, please visit the New Brighton Web site at <http://www.ci.new-brighton.mn.us/>. To learn more and help limit the volume of water used, please practice water conservation techniques and visit the water conservation page on the New Brighton Web site.

Lead in Home Plumbing

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. New Brighton 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 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 www.epa.gov/lead.

Source Water Assessment

New Brighton's water meets drinking water standards. The Minnesota Department of Health (MDH) has performed an assessment of New Brighton's water sources with respect to potential future contamination incidents. If you wish to obtain the entire source water assessment, please call (651) 201-4700 or 1-800-818-9318 (and press 5) during normal business hours. You can also view it online at www.health.state.mn.us/divs/eh/water/swp/swa.

Sampling Results

In 2015, the City took hundreds of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The State requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2015	15.4	0	7.3	ND–8.8	No	Erosion of natural deposits
Barium (ppm)	2012	2	2	0.04	ND–0.04	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2015	[4]	[4]	0.45	ND–2	No	Water additive used to control microbes
Combined Radium ¹ (pCi/L)	2015	5.4	0	7.5	1.5–7.5	No	Erosion of natural deposits
Fluoride (ppm)	2015	4	4	0.89	0.51–1.1	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2015	60	NA	2.6	1.2–2.6	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2015	80	NA	11.8	6.4–11.8	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	1.3	0.23	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	2.6	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹ Several 2015 water sampling events detected combined radium at levels slightly above the MCL. Because four quarterly samples are required to determine an average compliance value for this contaminant for 2015, the average level fell below the MCL. The City modified the filters on the wells with the combined radium detections to address any potential radium concerns.

Definitions

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

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.

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.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).