2001 Water Quality Report

Dear Fridley Water Customers,

This is Fridley's third Annual Water Quality Report - a summary of the water quality testing and analysis required by the federal government along with additional data of interest about the City's water system. We are excited about this opportunity to better inform citizens about Fridley's outstanding water supply and treatment system.

All test results show Fridley's water is better than federal standards set by the United States Environmental Protection Agency.

Jon H. Haukaas,
Director of Public Works

Water System Overview

Fridley Source Water

Like most American cities of our size, we get our source water from underground aquifers. The City of Fridley maintains thirteen different wells. Details of these wells can be seen in the table below.

Fridley Water Supply Wells

Depth (ft)	Year Installed	Water-bearing formation
925	1957	Hinckley-Jordan
842	1961	Mt. Simon-Hinckley
840	1961	Mt. Simon-Hinckley
830	1961	Mt. Simon-Hinckley
845	1961	Hinckley-Franconia
250	1964	Shakopee
262	1966	Shakopee
265	1966	Shakopee
262	1966	Shakopee
199	1969	Drift
669	1970	Franconia-Jordan
276	1970	Jordan
332	1970	Shakopee

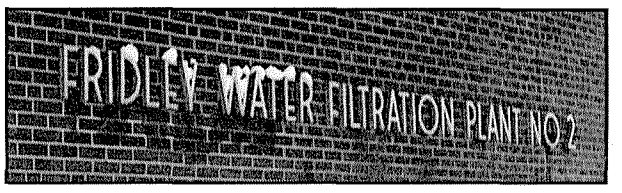
In addition to water from our own wells, we also receive a substantial portion of our water from the City of New Brighton. New Brighton water is also groundwater; their wells are drilled into the Mt. Simon, Prairie Du Chien, Prairie Du Chien-Jordan, and Jordan aquifers.

This arrangement benefits the City of Fridley in several ways. We are able to conserve water from our own wells, reduce wear and tear on well pumps, and have increased supplies during high demand periods. Finally, the interconnection between the two cities provides a back-up supply in case of a natural disaster that interrupts water service in one of the two communities.

Water Treatment

After the water is pumped from the ground, it undergoes several treatment processes which prepare it for consumption and household and industrial uses.

First, iron and manganese are removed from the water using a process known as oxidation and filtration. These harmless minerals are found in groundwater in both soluble and insoluble forms. The soluble forms are chemically changed (oxidized) to the insoluble form by chlorine. After they precipitate out of the water, they are then filtered out when the water passes through filters of specially formulated sand. Removing iron and manganese prevents staining, colored water, and improves the taste of tap water.



Potential microorganisms are killed using a process known as chlorimation. This treatment process uses chloramine as the disinfectant, instead of chlorine, which most communities use. Chloramine has a longer lasting and more far reaching effect in our water distribution system. It also has less of the chlorine odor. While Fridley was one of the first communities in Minnesota to use this process, it is now used by most large cities, including St. Paul and Minneapolis.

The water is also fluoridated according to Minnesota Department of Health regulations. Fluoride in water at a level of about 1 part per million has been shown to substantially reduce tooth decay.

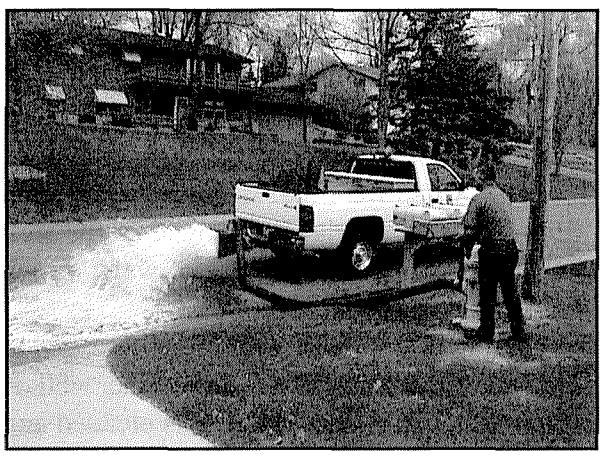
All treatment chemicals are measured frequently and carefully to ensure safe, effective amounts are being added.

Water Distribution

After treatment, the water is pumped directly to users or to one of the several storage facilities throughout the city. The water can take as little as a few hours or as much as a couple of days to get to your home, depending on the location of your home and water demand on any given day.

Fridley's water system is divided into three different zones based on elevation. Our pumps and tanks in these high, medium and low elevation zones enable us to maintain excellent water pressure.

To prevent mineral buildup in water mains, large volumes of water are purged through the pipes to loosen and remove deposits by opening fire hydrants and letting the water run until clear. When the hydrant is initially opened, the water often appears brown or orange due to iron buildup in the hydrant and water main.



Flushing takes place in the Spring and Fall each year and is an effective tool in keeping the water fresh year round.

The integrity of the water mains are checked whenever construction results in excavations near water pipes. We are planning a thorough, city-wide inspection of the water distribution system in 2002.

Synopsis

The staff of the Fridley water utility takes pride in providing a safe, aesthetically pleasing drinking water as well as high quality service to you, the customers and stakeholders. In pursuit of that mission, we consistently outperform federal and state standards for safe water. Our success is due in large part to the human and capital investments the community has made in our system.

The City provides free services to residents, such as on-site leak detection for consumers with high monthly water bills and home water quality testing for consumers with serious concerns about water quality. If you have questions or would like information on public meetings where decisions regarding drinking are made, contact the Fridley Water Department at 572-3561.

2001 Water Quality Report

Monitoring Report Summary

All public water systems in the United States are required to test their source water and water sampled from the distribution system. This is how EPA monitors water safety. The table at the bottom of this page lists substances that were detected in laboratory testing during the past year. There are about 80 regulated substances that we are required to monitor; these have had Maximum Contaminant Levels established by the Safe Drinking Water Act. We also monitor unregulated substances because they may affect the safety and quality of drinking water, and they are important for establishing future drinking water regulations. They are evaluated by Minnesota Department of Health standards known as Health Risk Limits to determine if they pose a threat. Testing is not required for each parameter every year; some parameters listed below were detected in previous years' testing. Since the City of Fridley also uses water from New Brighton sources, testing results from both cities are listed. **No substance was detected at a concentration that exceeded Environmental Protection Agency (EPA) or State of Minnesota limits for safe water.**

Special Information Available From:

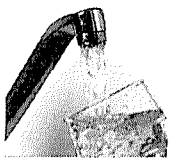
EPA United States Environmental Protection Agency

"...to protect human health and to safeguard the natural environment..."

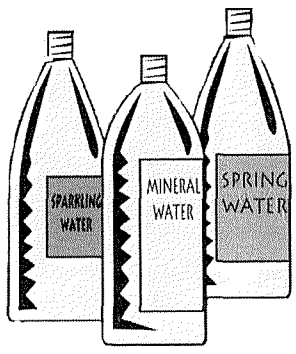
The United States arguably has the safest public drinking water supply and delivery systems in the world. However, if you have special health requirements, you should know some people may be more vulnerable to contaminants found in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system 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/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hot-Line at 800-426-4791.

Drinking Water Regulations

In order to ensure tap water safety, EPA sets regulations that limit contaminants in public water supplies. EPA sets national standards for drinking water based on existing scientific data to protect against health risks while considering available treatment technology and cost. These national standards prioritize contaminants and limit their amount in public drinking water. Testing ensures public water supplies are meeting these limits. If a limit is exceeded (violation), the water utility must notify residents and remedy the problem.



Contaminants in bottled water are regulated by the Food and Drug Administration (FDA). The FDA sets limits that protect the public in the same manner as tap water regulations.



Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Their presence does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Monitoring For Water Safety

Fridley residents drink water pumped from underground aquifers. The sources of public drinking water, however, vary from city to city. Sources of raw (untreated) water for other cities and water bottling companies can also include rivers, lakes, ponds, reservoirs, and springs, in addition to groundwater wells like ours. As rainwater and snowmelt travel over the land and down into the ground, minerals, radioactive material if present, and substances resulting from people, wildlife, and farm animals can dissolve into the water. Laboratory testing at the Minnesota Department of Health and at independent laboratories screens for the following contaminant groups in source water:

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.

Lab Testing Results
Fridley Water 2000

Substances Controlled at the Treatment Plant	Units of Measure	Highest Guidelines Allow (MCL)	Water from Fridley Sources: Level Found in Water	Water from Fridley Sources: Range Detected	Water from New Brighton Sources: Level Found in Water	Water from New Brighton Sources: Range Detected	Advised Maximum (MCLG)	Below Guidelines	Typical Source of Substance
Fluoride	ppm	4.0	1.27	0.97-1.6	1.15	1.0-1.2	4.0	X	Additive, natural deposits; fertilizer.
Nitrate as Nitrogen	ppm	10	0.81	ND-0.81	0.81	ND-0.81	10	X	Erosion of natural deposits; leaching from septic tanks, sewage; fertilizer runoff.
Nitrite as Nitrogen	ppm	1.0	0.03	ND-0.03	NOT DETECTED		1.0	X	Erosion of natural deposits; leaching from septic tanks, sewage; fertilizer runoff.
Total Trihalomethanes	ppb	100	0.1	—	0.1	—	100	X	By-product of drinking water chlorination.
Barium (1999)	ppm	2.0	0.1	—	0.07	—	2.0	X	Erosion of natural deposits; drilling waste and metal refinery discharge.
Alpha Emitters (1999)	pCi/L	15	2.2	—	NOT DETECTED		0	X	Erosion of natural deposits.
Combined Radium (1999)	pCi/L	5.0	0.6	—	NOT DETECTED		0	X	Erosion of natural deposits.
Total Coliform Bacteria	positive samples	Present in 1 monthly sample	Present in 1 monthly sample*	—	Results not relevant to Fridley system		Present in no samples	X	Naturally present in the environment.
Sodium (1999)	ppm	unregulated	6.5	—	6.5	—	—	X	Erosion of natural deposits.
Sulfate (1999)	ppm	unregulated	24	—	24	—	—	X	Erosion of natural deposits.

Substance Controlled in the Fridley Distribution System	Units of Measure	Action Level (AL): 90% of Samples Must be Below this Level	Number of Samples Over the Action Level	90% of Samples Were Below this Level	Below Guidelines	Typical Source of Substance
Lead	ppb	15	1 out of 30	6.4	X	Home plumbing corrosion; natural deposits.
Copper	ppm	1.3	3 out of 30	1.2	X	Home plumbing corrosion; natural deposits; wood preservatives

Key to Terms: MCL: Maximum Contaminant Level (The highest amount allowed in drinking water. Set as close to MCLGs as feasible using the best available treatment technology). **MCLG**: Maximum Contaminant Level Goal. (The level below which there is no known or expected risk to health. MCLGs allow for a margin of safety). **Action Level:** the concentration which, if exceeded, triggers treatment or other requirement the system must follow. **PPB:** parts per billion. **PPM**: parts per million. **pCi/L:** Picocuries per liter, a measure of radioactivity. **ND:** not detected. *Follow up sampling showed no contamination present.