ANNUAL WATER QUALITY REPORT

Reporting Year 2021

Presented By

Elk River Municipal Utilities

PWS ID#: 1710004

We've Come a Long Way

Once again, we are proud to present our annual water quality report covering the period between January 1 and December 31, 2021. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office, or you may search "Elk River" at swareport.web.health.state.mn.us/SWA_Default.html. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources. About 90 percent of our drinking water supply management area is considered non-vulnerable, and less than 10 percent is vulnerable. Our Wellhead Protection Plan has many items that address limiting or stopping potential contamination.

It is important to seal unused wells and contact your county or city to update records. Every unused well is a potential pipeline to contamination if left unsealed. The same goes for contaminants that are put on the ground or in water. Things that are absorbed into the ground or flow to a waterway percolate down to drinking water sources in variable time lines. This can affect our drinking water. Please use caution when using chemicals and getting rid of items that may affect the environment.

Where Does My Water Come From?

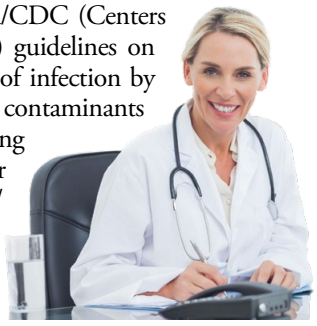
Elk River Municipal Utilities (ERMU) wells are supplied from the Mt. Simon-Hinckley Aquifer. Eight wells, four water towers, over 123 miles of water main, 1,289 fire hydrants, and just under 3,000 valves are maintained by ERMU. In 2021 ERMU pumped over 977 million gallons of water. We are proud to serve over 5,400 water customers.

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. We are responsible for providing high-quality drinking water, but we 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 two 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 at (800) 426-4791 or online at: www.epa.gov/safewater/lead.

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 about drinking water from their health care providers. 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 online at: http://water.epa.gov/drink/hotline.



Questions?

For more information about this report, or for any questions relating to your drinking water, please call Elk River Municipal Utilities at (763) 441-2020. Visit www.ermumn.com if you'd like to view this report in a digital format.

Pressure Vacuum Breaker Devices – Inspections Free for Residential Customers

Pressure vacuum breaker (PVB) testing is now offered at no charge to our residential customers! Appointments are available for testing from late April until mid-October. The time line may be adjusted depending on the irrigation season, as freezing temperatures will not allow for systems to be operational. PVB devices are required to be tested annually by a backflow prevention-certified professional. We will test to be sure the device is working. If it is not, you will need to replace it or have the device repaired by a certified technician. These backflow prevention devices are required in every plumbing system that has an irrigation system. They are located on the outside of your home, likely where the irrigation line extends from the interior. You can book an appointment with ease online, or feel free to call our offices at (763) 441-2020.

What Is Backflow?

Backflow is the reversal of flow of nonpotable water, contaminants, or other substances into the treated drinking water system. Backflow could impact the quality of the water in homes, businesses, and other facilities, with the potential to create health hazards when the water is used for drinking, cooking, or bathing. Although these undesirable occurrences are rare, the effects on the community's health and safety can be significant. Most homes and businesses utilize backflow prevention devices to limit the risk of contaminating the community water supply. Some customers are required to install and maintain these devices on the main water service lines.

A loss of pressure within a plumbing system that has no backflow prevention device may allow water to be drawn back into the system and contaminate it. Consumption of the contaminated water could result in severe illness. In addition, once a plumbing system is contaminated, any contamination can be drawn into the community water supply and compromise the water for many others.

What Is a Backflow Prevention Assembly?

The mechanism designed to prevent backflow is known as a backflow prevention assembly. The most common of these mechanisms installed on irrigation systems are PVB or reduced pressure zone devices.

Backflow prevention devices are required on irrigation systems, and you may notice them alongside your house. The device protects you by preventing water that has been released into your irrigation system from being drawn back into the home, avoiding potential consumption in the case of a loss of system pressure.

If you have questions on backflow prevention, please contact HydroCorp at (844) HYDRO INFO (493-7646) with any questions regarding cross-connections and backflow prevention.

What Is a Cross-Connection?

Cross-connection refers to any connection between a potable (drinkable) water supply and nonpotable sources, including liquids, solids, and gases that could contaminate drinking water. Irrigation systems present a risk of contamination from stagnant water, lawn chemicals, or fertilizers.

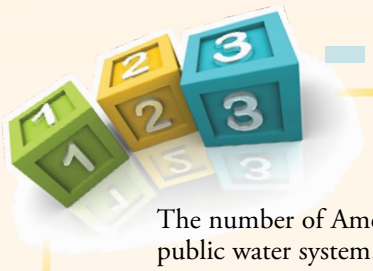
Water Main Flushing

We flush each hydrant annually to identify any operational issues, so that they may be repaired and functional in the event of an emergency. Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.



BY THE NUMBERS

The number of Americans who receive water from a public water system. **300 MILLION**

1 MILLION The number of miles of drinking water distribution mains in the U.S.

The number of gallons of water produced daily by public water systems in the U.S. **34 BILLION**

135 BILLION The amount of money spent annually on maintaining the public water infrastructure in the U.S.

The number of active public water systems in the U.S. **151 THOUSAND**

199 THOUSAND The number of highly trained and licensed water professionals serving in the U.S.

The age in years of the world's oldest water, found in a mine at a depth of nearly two miles. **2 BILLION**

Water Softening

ERMU does not treat our water for hardness. Our system has 16 grains per gallon. Feel free to contact us if you have any questions on the topic. Please be mindful that oversoftening water may cause corrosion.

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, which 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.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less 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
2,4-D (ppb)	2017	70	70	0.25	NA	No	Runoff from herbicide used on row crops
Barium (ppm)	2018	2	2	0.02	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2021	[4]	[4]	0.79	0.69–0.87	No	Water additive used to control microbes
Fluoride (ppm)	2021	4	4	0.72	0.70–0.74	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Gross Alpha Particles (pCi/L)	2020	15.4	0	3.6	ND–3.6	No	Erosion of natural deposits
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2021	60	NA	7.4	1.60–7.40	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	1.7	ND–1.70	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2021	80	NA	12.5	7.7–12.5	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 %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2019	1.3	1.3	0.28	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2019	15	0	1.8	0/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Manganese (ppb)	2019	0.41	ND–0.81	NA
Sodium[1] (ppm)	2021	3.58	3.40–3.58	NA
Sulfate (ppm)	2021	7.76	2.95–7.76	NA

[1] In-home water softening can increase the level of sodium in your water.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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.

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).