



Minneapolis

Water Quality Report 2009

Inside:

- ◆ Minneapolis tap water meets or surpasses all water quality requirements
- ◆ Ways to conserve water
- ◆ How we make your water clean and great tasting

Attention. If you want help translating this information, call 3-1-1.

Spanish:

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Somali:

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Hmong:

Ceeb toom. Yog koj xav tau kev pab dawb txhais cov xov no, hu 3-1-1.

TTY: 612-673-2626



From the river to your tap

The Mississippi River is the source for our tap water. Before it gets to your home, this water is filtered and treated by the City of Minneapolis. Water quality experts also test the water thoroughly in certified laboratories that can detect trace amounts of contaminants.

Whether you live in Minneapolis or another city, the tap water you get contains trace amounts of contaminants. These contaminants do not necessarily pose a health risk. Much depends on the substance and the amount dissolved. The table on the right shows results for Minneapolis tap water tests performed last year. Some contaminants listed were detected more than a year ago; they are included in the table along with the date that they were detected.

Nationwide, sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, naturally occurring minerals and, in some cases, radioactive material, can dissolve into it. The water can also pick up substances resulting from the presence of animals or humans. That's why the U.S. Environmental Protection Agency (EPA) regulates substances that can be harmful to human health and have at least a reasonable possibility of being found in water sources or finished drinking water. Our water is monitored for these regulated contaminants. Tests are performed weekly, quarterly or annually, depending on the substance being monitored. However, levels of many substances change little over time, or the chance of finding a detectable amount is low. In these instances contaminants are monitored less than annually.

Tests show that substances found in our drinking water were within federal safe drinking water standards. Those tests checked for levels of more than a hundred different contaminants. Only those detected are listed in the table. Tested substances fall into one of five main categories:

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 occur naturally 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 byproducts of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff and septic systems.

Radioactive contaminants, which can occur naturally or from oil and gas production and mining activities.

Understanding the laboratory results and terms

Levels of substances detected are either the highest amount found in the water or averages of all samples analyzed, depending on the regulation. If multiple samples were tested in 2008, the lowest and highest detected values are listed under range of detections. The highest level of a substance allowed in drinking water is the maximum contaminant level (MCL). The EPA sets this level. Some contaminants also have a maximum contaminant level goal (MCLG). This is an even more conservative level of the substance than the MCL, where it has no known or expected health risk. MCLGs add a margin of safety.

Minneapolis tap water exceeds federal standards in many areas. For substances that do have EPA maximum levels we assess our levels by comparing the detected amount to state standards known as health risk limits. If an unacceptable amount of any substance is ever found in our water, Minneapolis Water Works will notify residents immediately and take corrective action to eliminate the problem.

The MCL for lead and copper is known as the action level (AL). Exceeding this level triggers corrective action to get 90 percent of all samples below this concentration. There is convincing evidence that it is necessary to add a disinfectant to control microbial contaminants. The maximum residual disinfectant level (MRDL) is the highest level of a disinfectant allowed in drinking water. The MRDL goal is the level of disinfectant where it has no known or expected health risk. These goal amounts do not reflect the benefits of using disinfectants, only the level we should not exceed for safety.

"Turbidity" is a measure of water clarity. Certain treatment techniques are required to reduce turbidity (increase clarity) and eliminate microorganisms in the drinking water. Regulations require turbidity to be less than 0.3 nephelometric turbidity units (NTU) 95 percent of the time and less than 1 NTU all of the time.

The drinking water provided to customers may meet drinking water standards, but the Minnesota Department of Health has also

made a determination as to how vulnerable the source of water may be to future contamination incidents. If you wish to obtain the entire source water assessment regarding your drinking water, please call (651) 201-4700 or go online at: www.health.state.mn.us/divs/eh/water/swp/swa/index.htm.

If you have questions about City of Minneapolis drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water, please call (612) 661-4999.

What you need to know about drinking water regulations

In order to ensure that tap water is safe to drink, the EPA limits the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulates contaminants in bottled water, which must provide the same protection for public health. The EPA standards we meet for tap water are even higher than those required for bottled water. 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 mean that water poses a health risk. You can find more information about contaminants and potential health effects by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

If you have special health requirements

Some water customers may be more vulnerable to contaminants in drinking water than the general population. They include people with weakened immune systems (including cancer patients undergoing chemotherapy, organ transplant patients and people with HIV/AIDS or other immune system disorders), some elderly people and infants. Anyone who is at a higher risk of infection should seek advice from their health care providers about drinking water. The Safe Drinking Water Hotline at (800) 426-4791 has guidelines from the EPA/Center for Disease Control to lessen the risk of infection by cryptosporidium and other microbial contaminants.

Lead and drinking water

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. The City of Minneapolis is responsible for providing high quality drinking water, but cannot control the materials used in household plumbing. To minimize the potential for lead exposure due to your plumbing, let your tap run for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, testing is available. 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 at www.epa.gov/safewater/lead.

Your water: taste and smell

Our water supply has its own unique challenges in the treatment process. We are subject to the weather and also seasonal changes. In the spring and fall, runoff can put higher concentrations of organic matter into the Mississippi River. This elevates the color of the river water and can also cause an increase in taste and odor causing components. The City has specific means of dealing with these issues. The change in chemical treatment with the use of permanganate and increased use of powdered activated carbon is the remedy.

The human nose can detect changes at extremely low levels. Increased technology for analysis has been able to detect these components at the same sensitivity that we taste and smell. The primary components we see are geosmin and methylisoborneol (MIB), which at high enough levels can produce an earthy smell. All disinfection chemicals and compounds used to address seasonal taste and smell issues exist at levels well below federally mandated exposure limits. Please remember that seasonal changes in taste and smell do not affect the safety of our drinking water. Although we detect a different taste or an odor these are not indicators of unsafe drinking water.

2008 Laboratory Testing Results for Minneapolis Water

Detected Substance	Units of Measure	MCL	MCLG	Level Found	Range of Detections	Typical Source in Drinking Water
Fluoride	ppm	4	4	1.01	0.91-1.07	Additive that promotes strong teeth; fertilizer and aluminum factory discharge; erosion of natural deposits
Haloacetic acids (HAA5)	ppb	60	0	27.34	0.7-36	By-product of drinking water disinfection
Nitrate (as Nitrogen)	ppm	10	10	0.22	—	Erosion of natural deposits; fertilizer runoff; leaching from septic tanks, sewage
Total trihalomethenes (TTHM)	ppb	80	0	35.29	8.4-34.9	By-product of drinking water disinfection
Total coliform bacteria	Positive Samples	present in >5% of monthly samples	0 present	1%	—	Naturally present in the environment
Turbidity	NTU	TT; < 1.0 and < 0.3	—	99.8% of samples less than 0.3	Highest reading 0.18	Soil runoff
Chlorine	ppm	(MRDL**) 4	(MRDLG**) 4	2.84	0.5-3.2	Water additive used to control microbes
Copper (8/14/2006)	ppm	90% of samples must be < 1.3 ppm (AL)	—	90% of samples < 0.12	0 out 50 samples > 1.3	Corrosion of home plumbing systems; erosion of natural deposits
Lead (8/14/2006)	ppb	90% of samples must be < 15 ppb (AL)	—	90% of samples < 5	3 out of 50 samples > 15	Corrosion of home plumbing systems; erosion of natural deposits
Sodium (2008)	ppm	No USEPA limit set	—	9.9	—	Erosion of natural deposits
Sulfate (2008)	ppm	No USEPA limit set	—	25.5	—	Erosion of natural deposits

AL: action level, the MCL for lead and copper **MCL: maximum contaminant level MCLG: maximum goal (level for a substance where it has no expected health risks) MRDL: maximum residual disinfectant level MRDLG: maximum residual disinfectant level goal pCi/L: picocurie per liter, a measure of radioactivity *ppb: parts per billion, or micrograms per liter of water ppm: parts per million or milligrams per liter of water ND: not detected NTU: nephelometric turbidity units TT: treatment techniques

Enjoy Minneapolis tap water

Minneapolis takes great pride in its drinking water. Minneapolis tap water is safe, great-tasting and economical. It's among the best tap water in the nation, and has even come out on top in blind taste tests against bottled water.

The City produces about 60 million gallons of tap water every day. That's enough to fill Lake of the Isles in a less than five days.

Conserve this resource. Although the City makes plenty of tap water for you to use, it's important to find ways to conserve water whenever possible. The less water you use, the lower your utility bill will be. It will also help ensure there will be plenty of water for everyone to have.

Ways to save on water use

In the bathroom:

- Older toilets can send 3½ to 5 gallons of water down the drain every flush. Newer 1.6 gallons-per-flush toilets can cut this amount by more than 50 percent.
- Repair leaky faucets and toilets quickly. A slow drip from a tap can waste 15 to 20 gallons of water per day, and a leaky toilet can waste hundreds of gallons a day.
- Ordinary shower heads use seven to 10 gallons of water a minute. Replacing them with low-flow shower heads can reduce that number to 2½ gallons per minute.
- If you're taking a bath, remember that every inch of depth equals about five gallons. The less you fill the more water you save.



In the kitchen:

- A typical kitchen faucet can go through up to 7 gallons of water in just one minute. Instead of running the tap to get cold water, put a pitcher of water in your fridge.
- A device called a low-flow aerator can screw right into kitchen faucets and reduce the flow of water to just 2½ gallons a minute. Look for them at your hardware store.
- When washing dishes by hand, never run water continuously. Instead, fill a basin or use a stopper in the sink for rinse water.
- If you have a dishwasher, make sure it's full before running. Dishwashers use 7 to 14 gallons per running, no matter how full they are.



In the laundry room:

- A washing machine uses 27 to 51 gallons per cycle. A big factor in water use is load size. Make sure the load size you set matches the amount of clothing you need to clean.
- When purchasing a new washing machine, pay attention to the "water factor" – the number of gallons of water needed for each cubic foot of laundry. The lower the number, the more water saved.



Outside the house:

- Before you turn on your sprinkler, figure out whether your lawn or garden needs water. Buy a rain gauge and use it to determine how

much rain your yard has received. A good rain can eliminate the need to water for up to two weeks.

- If you do need to water, avoid doing it during the day. Evaporation is lower during the early morning hours, which means more of the water gets to the roots.
- Adjust sprinklers so they don't water streets or sidewalks.
- Consider alternatives to big, thirsty lawns. Establish landscapes or garden areas with native and other plants or rock gardens that don't need as much water.
- If you're washing your car, use a bucket instead of a continuously running hose.



Water conservation rate coming in 2010

In an effort to get residents to conserve tap water, the State is requiring Minneapolis and all large public water suppliers in the metropolitan area to institute a water conservation rate structure by January 2010. The City of Minneapolis plans to do this by charging higher water rates from May to September starting next year. The City is still finalizing the rate structure that will be put in place. Once that's finalized, information on it will be sent to water customers in their utility bill and will also be made available on the City's Web site.

Making your water clean, safe and great tasting

Producing water that's safe and meets federal and state guidelines is a high priority for the City of Minneapolis. We make sure that the water we get from the Mississippi River is properly treated before sending it on to thousands of our customers.

For decades, the City treated its tap water using only sand filtration. This method filters the water through beds of sand before it's chemically treated. The City's first sand filtration plant went on line in Columbia Heights in 1913. A second and better designed plant began operations in Fridley in 1925, and was updated in the 1970s and 1980s.

In 1999 the City decided to replace both sand filtration facilities with newer plants that used newer filtering technology. At the time, it was believed the threat from source water pathogens and more stringent regulations would make sand filtration obsolete. The Columbia Heights Filtration plant, which was nearing the end of its useful life anyway, was replaced in 2005 with a membrane filtration plant. Plans were also made for the accelerated replacement of the Fridley Filtration plant, even though it could potentially keep producing clean, great tasting water 20 years or longer.

In the years that followed, tests have shown that the threat from source water pathogens was far less than originally perceived. That means that water produced by the new Columbia Heights plant and the existing Fridley plant meets guidelines set by the Minnesota Department of Health and the U.S. Environmental Protection Agency, and that a new plant at Fridley is not needed. As a result, the City has decided to cancel the accelerated replacement of the Fridley plant.

This is good news for the City and our water customers. Due to the current struggle all municipalities are facing with budgets and financing critical projects, cancelling this project frees up funds to be used on other important water projects. Also, this change will directly influence the rate increases, although it's too early to tell to what extent.