

ANNUAL

WATER
QUALITY
REPORT

Water testing performed in 2009



PWSID#: 1860024

This report was prepared by:
Joint Powers Water Board
11100 50th St NE
Albertville, MN 55301

Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1, 2009, and December 31, 2009. The events of the past year have presented many of us with challenges we could not have imagined. Yet, in spite of this, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future, but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

For more information about this report, or for any questions relating to your drinking water, please call Kelly Daleiden, Utility Manager, at (763) 497-3611. A great deal of information can also be found on our website at www.jointwaterboard.com.

Community Participation

You are invited to attend and/or participate at our regularly scheduled Water Board meetings and voice your concerns about your drinking water. We meet the fourth Monday of each month beginning at 6 p.m. at the Water Treatment Plant, 11100 50th St NE, Albertville, MN.

Where Does My Water Come From?

All water delivered to Albertville, Hanover, and St. Michael residents is groundwater. Eight wells, ranging in depth from 240 to 504 feet, draw water from the Mt. Simon, Ironton Galesville, and Quaternary Buried Artesian Aquifers. The Mt. Simon and Ironton Galesville are bedrock aquifers, while the Quaternary Aquifer is in the shallower deposits left behind by the glaciers of the last Ice Age.

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 can acquire 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.

Sprinkling Restrictions in Effect for 2010

Conserve and Save Money. Calendar Sprinkling is Mandatory. May 1st through Sept. 30th
*ODD addresses may water on ODD days only

*EVEN addresses may water on EVEN days only

*The day BEGINS at MIDNIGHT and ENDS at MIDNIGHT

*You CANNOT sprinkle between 10 a.m. and 7 p.m. EVER.

Exceptions:

*New sod and seed is exempt for 60 days only but you MUST notify the Water Dept. at (763) 497-3611; exemption can only be claimed once every three years except under extenuating circumstances.

*Kids CAN run in the sprinkler at any time, but DO NOT leave the sprinkler running or unattended or you will be subject to a fine.

*A violation will cost \$75 the first time and goes up by \$25 for each additional violation.

*Feel free to HAND water vegetables, flowers, and trees that need it.

Watering Tips to Save You Time AND Money

*Automatic sprinklers should have a timer and a moisture sensor.

*Have your sprinkler heads adjusted so they don't water the sidewalks, driveway, house, or street.

*Water ONLY when the grass shows signs of stress. (Grass that is under stress doesn't spring back after you step on it.)

*Watering a little heavier and less frequently will allow roots to grow deeper, and they will be more resilient and less susceptible to drier conditions.

*If you do not have an automatic sprinkler, you can purchase a hose timer for very little money at the local hardware store.

*PLEASE, do not sprinkle in the RAIN!

*If you can, always water during the night hours; there is less wind, less evaporation, better soaking down to grow deeper roots.

*Delay starting watering in the Spring to allow the roots to grow deeper.

*Let the grass grow a little longer; it will hold water better and dry out more slowly.

*There is nothing wrong with letting the lawn go dormant in dry weather; it will turn green when it gets wet again.

Thank you for your cooperation and efforts to be a smart consumer!

What Causes the Pink Stain on Bathroom Fixtures?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, toothbrush holders and on pets' water bowls is caused by the growth of the bacterium *Serratia marcescens*. *Serratia* is commonly isolated from soil, water, plants, insects, and vertebrates (including man). The bacteria can be introduced into the house through any of the above-mentioned sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to continually clean and dry the involved surfaces to keep them free from bacteria. Chlorine-based compounds work best, but keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth. Chlorine bleach can be used periodically to disinfect the toilet and help to eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence.

Serratia will not survive in chlorinated drinking water.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

Fixtures with Green Stains

A green or blue-green stain on kitchen or bathroom fixtures is caused by tiny amounts of copper that dissolve in your home's copper plumbing system when the water sits unused overnight. Copper staining may be the result of a leaky faucet or a faulty toilet flush valve, so be sure your plumbing is in good working order.

Copper stains may also be caused by overly hot tap water. Generally speaking, you should maintain your water temperature at a maximum of 120 degrees Fahrenheit. You should consult the owner's manual for your heater or check with your plumber to determine your current heat setting. Lowering your water temperature will reduce the staining problem and save you money on your energy bill.

Also keep in mind that a tap that is used often throughout the day usually will not produce copper stains, so if you flush the tap for a minute or so before using the water for cooking or drinking, copper levels will be reduced.

Source Water Assessment

Congress requires that states prepare source water assessments for all public water supply systems. The Joint Powers Water Board's Source Water Assessment was completed by the MN Department of Health in March 2003 and concluded that source water susceptibility was determined to be LOW. This means that the source of drinking water is covered by one or more layers of fine-grained material that probably protect it from potential sources of contamination. Additionally, the Source Water Assessment determined that none of the contaminants regulated under the federal Safe Drinking Act for this public water supply system has been detected in the source water. A listing of these contaminants can be found at www.epa.gov/safewater.

Customers may get a copy of the completed assessment at the Joint Powers Water Treatment Plant Office. It is also available on the Internet at www.health.state.mn.us/divs/eh/water/swp/swa.

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 www.epa.gov/safewater/hotline/.

Lead and Drinking Water

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 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/safewater/lead.

How Is My Water Treated?

Iron and manganese are harmless minerals found in groundwater throughout Minnesota. They can cause stains on laundry and fixtures and can impart unwelcome tastes to the water. The natural groundwater here contains very high concentrations of these minerals, but they are reduced through a process of oxidation and filtration in our plant. The current water treatment includes this process, along with the addition of fluoride for healthy teeth and a corrosion inhibitor to help prevent corrosion of your household plumbing. Finally, the water is disinfected with sodium hypochlorite (bleach) in order to prevent bacteria from growing in the distribution system on the way to your home.



Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40% of total water use). Toilets use about 4-6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

Should I use hot water to make baby formula?

No. Hot water may contain impurities such as rust, copper, and lead that come from the hot water heater and plumbing in your house. These impurities can generally dissolve into hot water faster than into cold water.

What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, don't use any container with markings on the recycle symbol showing "7 PC" (that's code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state allows us to monitor 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
Alpha Emitters (pCi/L)	2007	15.4	0	5	NA	No	Erosion of natural deposits
Barium (ppm)	2005	2	2	0.24	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2009	[4]	[4]	1.16	0.8–1.4	No	Water additive used to control microbes
Combined Radium (pCi/L)	2007	5.4	0	3.6	NA	No	Erosion of natural deposits
Fluoride (ppm)	2009	4	4	1.33	1.3–1.4	No	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2009	60	NA	10	NA	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	53	NA	No	By-product of drinking water disinfection
Tap water samples were collected for lead and copper analyses from sample sites throughout the community (Lead was not detected at the 90th percentile)							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2007	1.3	1.3	1.03	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
UNREGULATED SUBSTANCES ¹							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE			
Sodium (ppm)	2009	10	NA	Erosion of natural deposits			
Sulfate (ppm)	2009	7.94	NA	Erosion of natural deposits			

¹ Monitoring for unregulated contaminants as required by U.S. EPA rules (40 CFR 141.40) was conducted in 2009. Results of the unregulated contaminant monitoring are available upon request from Cindy Swanson, Minnesota Department of Health, at (651) 201-4656.

Definitions

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