



# drinking water

keeping it safe for all of us





# Safe drinking water

is no accident. Many drinking water experts from federal, state, and local governments as well as other environmental groups work to protect this valuable resource. It depends on many people, including **you**, to keep it this way.

In this guide, you will learn:

- 💧 Where your drinking water comes from,
- 💧 How your health is protected by testing and treating drinking water, and
- 💧 What you can do to help protect safe drinking water now and for the future.

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***Minnesota is the “Land of 10,000 Lakes ...”***

*but we get most of our drinking water from groundwater and rivers. Minnesota also has a few unusual sources of water like quarries and former mine pits.*

# Drinking Water Comes from Rivers, Lakes, and Aquifers

Drinking water comes from surface water or groundwater. **Surface water** is water from lakes and rivers. **Groundwater** is water taken from an aquifer — a natural underground layer of sand, gravel, or porous rock, that contains water.



## Drinking Water: Public Water Supply or Private Well

Safe drinking water is essential to our lives, whether it comes from a public water supply or private well.

Minnesota's **public water supplies** provide water to people in their homes and where they work or play — schools, factories, and resorts. Public water supplies are regulated by the Minnesota Department of Health (MDH), while the supplier manages the system. The water supply must meet standards of the Safe Drinking Water Act.


A **private well** is another way Minnesotans get their drinking water. The construction of private wells is regulated by MDH, which requires a water test when a new well is constructed. After that, the well owner must protect and maintain the well to make sure that the well continues to provide safe drinking water.



# Drinking Water Must Be Tested to Make Sure it is Safe

Public water supplies are regularly tested for more than 100 contaminants that can cause concern for people's health such as bacteria, nitrate, pesticides, solvents, and metals. MDH or the public water supplier collects the required water samples.

Private well owners are responsible for testing their own drinking water, except for samples collected when a new well is constructed. It is important to test the water from your well because it could contain bacteria or other contaminants that can harm the health of you and your family. Proper maintenance is also important.



The federal Safe Drinking Water Act was passed in 1974. The law protects the nation's public water supply. The Environmental Protection Agency (EPA) and MDH work together to keep our water safe.

Did you know that you can find out more about your public water supply? The Consumer Confidence Report includes information about the source of the water and testing and monitoring results. Ask your public water supplier or check their website.



***MDH recommends testing your well water for:***

*Coliform bacteria every year,*

*Nitrate every couple of years, and*

*Arsenic at least once.*

*You should have your well water tested if anyone in your household becomes pregnant or if a baby may be fed formula made with water from your well.*



***Testing your private well water is simple.***

*Contact your county health or environmental program for testing information and instructions.*



***Water affects both our personal health and our communities' economic health.***

*Our body needs water to function properly.*

*Business, farming, and manufacturing need a reliable supply of clean water to succeed.*



***Investing in water pays off.***

*The EPA estimates that Minnesota will need to spend about 7 billion dollars over the next 20 years to maintain our water facilities that treat and deliver safe drinking water.*



# Contaminants Come from Natural Sources and Human Activities

Contaminants are substances that may be harmful to human health. They can occur naturally in the environment or as a result of human activities.



Some ways contaminants can get into drinking water include:

- 💧 Naturally occurring elements including arsenic, radium, and manganese
- 💧 Products we use, including medicines, personal care products, lawn and garden products, and household cleaners
- 💧 Farming practices such as fertilizers and pesticides, large scale animal farms, and irrigation and drainage systems
- 💧 Industrial waste disposal, past and present
- 💧 Water pipes and plumbing can release lead and copper into the water, and
- 💧 Leaks and spills of gasoline, oil, and other products


# Safe Levels of Contaminants

Drinking water standards, the highest level of a contaminant allowed in drinking water, are set by the federal government.

Public water supplies are tested for more than 100 contaminants that can affect people's health. If these contaminants show up at a level higher than the standard, the public water supplier must tell residents and customers and correct the problem.

Some contaminants do not have a federal drinking water standard. MDH has developed guidance for some of these unregulated contaminants. Minnesotans can use this guidance to better understand the safety of their drinking water.

Information about any contaminant, regulated or unregulated, found in a public water supply must be made available through the Consumer Confidence Report.



Testing for contaminants in private well water is to be done by the private well owner. Some tests can be expensive, so it is important to know what (if any) contaminants may be present in your area. Contact your county health or environmental program, the Minnesota Pollution Control Agency (MPCA), or MDH for more information.

New and emerging threats to Minnesota's drinking water are discovered, assessed, and monitored by EPA, MDH, MPCA, the Minnesota Department of Agriculture, and citizens, like you.



***Private well owners are responsible to:***

*Hire a licensed well contractor to construct, maintain,  
or repair a well (if you don't do your own repairs). For a list of*

*licensed well contractors, go to*

*[www.health.state.mn.us/divs/eh/wells/lwc/lwccounty.cfm](http://www.health.state.mn.us/divs/eh/wells/lwc/lwccounty.cfm)*



*Hire a licensed well contractor to seal unused wells.*



*Test the well's water.*



***Public water suppliers often treat the water to:***



*Disinfect water by adding chlorine to kill bacteria and other microbes that can cause illness,*



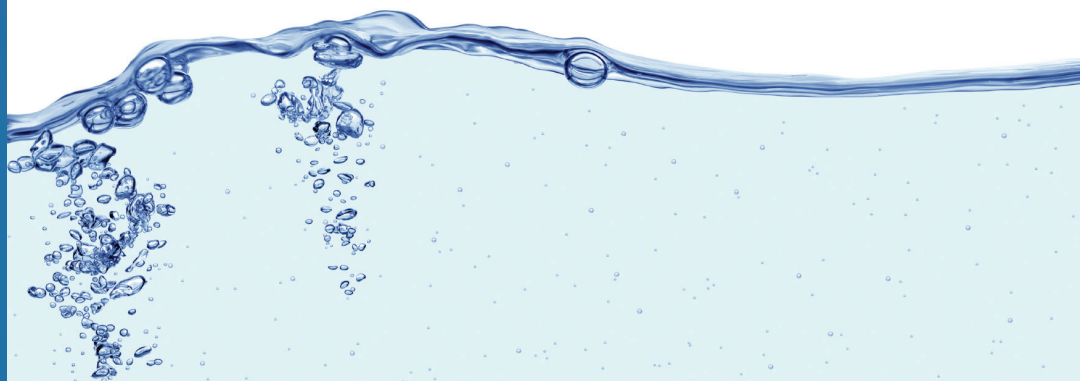
*Improve dental health by adding fluoride, or*



*Remove contaminants to meet federal standards.*

# Treatment May Be Necessary

Public water suppliers may use many ways to treat the water. Drinking water may be treated to improve its taste and odor or to take out contaminants to make it safe to drink. MDH regularly inspects public water supplies to make sure possible problems are found and fixed.



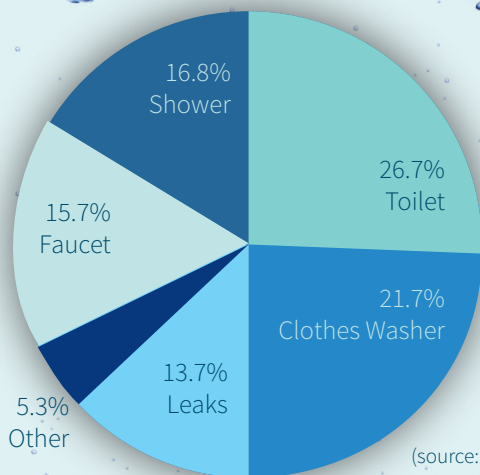
Private well owners may need to use filters or other devices designed to treat drinking water in the home. These devices remove substances that affect the taste, color, and odor of drinking water, as well as take out contaminants.

When selecting any water treatment device, it is important to choose one designed and certified to remove the contaminants of concern. Also remember the filters and devices must be maintained and the water tested periodically.

# Take Action to Protect and Conserve Our Drinking Water

We all must do our part in maintaining this valuable resource — from the source to the tap. Taking responsibility in our homes, neighborhoods, and communities is of vital importance. Activities that we do on the land affect the health of our water sources. Drinking water is a limited resource. Make our drinking water a priority:

- 💧 Use water wisely and safely,
- 💧 Remove or manage possible contamination sources, and
- 💧 Plan for future generations.



**Typical Daily Water Use**

(source: [www.epa.gov/WaterSense/pubs/indoor.html](http://www.epa.gov/WaterSense/pubs/indoor.html))



## In Your Home

💧 Save water by fixing leaky faucets, running full loads of laundry or dishes, and taking shorter showers.

💧 Use soaps, lotions, and detergents that are biodegradable and less toxic.

💧 Don't flush leftover medicines, paints, oil, or antifreeze down the sink or toilet. Look for safe ways to dispose of them.

💧 Use water-saving appliances. Look for the WaterSense label. Install low-flow showerheads and toilets.



## In Your Yard

💧 Landscape your yard to reduce the need for watering and prevent or filter runoff. Make a rain garden (a safe distance away from a well). Install a rain barrel.

💧 Minimize your use of fertilizers and pesticides.

💧 Clean up chemical spills immediately and store chemicals safely away from wells, lakes, rivers, streams, and stormwater drains.

💧 Use a licensed well contractor to seal unused wells.

💧 Maintain your sewage treatment system, including periodic inspections.



Environmental Health Division  
625 Robert Street North, P.O. Box 64975  
St. Paul, Minnesota 55164-0975  
651-201-4600  
800-383-9808

email: [health.drinkingwater@state.mn.us](mailto:health.drinkingwater@state.mn.us)  
web: [www.health.state.mn.us/drinkingwater](http://www.health.state.mn.us/drinkingwater)