



Environmental Health Bureau
Drinking Water

Care for MiWell Promotion Toolkit



Open your smart phone camera
and hover over the QR code
to access the Care for MiWell
Promotion Toolkit online.



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Introduction

The Michigan Department of Health and Human Services (MDHHS) Environmental Health Bureau (EHB) has identified gaps in drinking water informational resources, especially for private residential well owners. Because of this, we have developed the MiWell Drinking Water and Health Promotion Program. This program includes creative tools to help all Michiganders become actively involved in understanding their homes' drinking water.

This toolkit compiles the EHB resources that are currently available. They can be freely used by state and local organizations to promote drinking water education in their communities. The content of the toolkit will:

- increase Michiganders' knowledge and awareness of how drinking water may impact health.
- encourage Michiganders to take the right actions to reduce and prevent exposures.
- be updated as new materials are developed, so check back often to see what is new! You can also subscribe at bit.ly/Drinking-Water-Health-Newsletter to our drinking water and health newsletter so you'll be aware of updates.

Toolkit Purpose

This toolkit contains prepared, science-based social media messages, graphics, videos, and printable materials. All these materials are designed to make sharing drinking water information easy! Sharing information about drinking water and health helps support the outreach and education aims of the Drinking Water and Health Promotion Program. It also ensures that Michiganders know where their drinking water comes from and the simple actions they can take to ensure they're not being exposed to lead, arsenic, PFAS, coliform bacteria and *E.coli*, or other potential contaminants that can end up in our drinking water.

How to Use This Toolkit

We encourage you to share our materials through various avenues to reach more Michiganders with important information about drinking water and health. Consider social media platforms, websites, mailers, and more.

Click on each icon to download the image or document of interest. Once downloaded, you can share, save, or print the image or document.



Social Media Posts

The following social media posts have been designed to communicate critical drinking water information to Michigan residents. Topics covered include:

- Private Residential Well Drinking Water Testing
- Private Residential Well Maintenance
- Private Residential Wells
- Groundwater
- Learn Where Your Drinking Water Come From
- Drinking Water Contaminants

Posts are organized by social media platform. View and save images by clicking the icon/image. The image will open in a new window where you can then download and save to your files. You can copy and paste the post content to share along with the corresponding image.

Facebook/Instagram Posts

Topic: Private Residential Well Drinking Water Testing



Spring showers bring flooding water!

If you have a well, flooding water can be a problem. Water can collect contaminants found on the ground as it pools. If your well is poorly constructed or maintained, these contaminants could end up in your drinking water. Flood water can also carry debris that can damage the wellhead, allowing contaminants to enter your drinking water.

If flooding happens near your well, consider testing the water you drink for coliform bacteria, nitrate, and nitrite.

Learn about other times you should consider testing your well water at bit.ly/MiWellTesting. You can also call MDHHS Drinking Water Hotline 844-934-1315.



Do you know if your well water is safe to drink?

The only way to know is to test your water. In Michigan, private well water is not required to be routinely tested like a public water supply.

The Michigan Department of Health and Human Services recommends testing your well water:

- Every year for coliform bacteria, nitrate, and nitrite
- Every 3 to 5 years for arsenic, copper, and lead

Learn about other times you should test your well water at bit.ly/MiWellTesting. You can also call MDHHS Drinking Water Hotline 844-934-1315.



Be well water healthy! If you have a private residential well, routinely test your drinking water to know it's safe.

A United States Geological Survey study found that 23% of tested wells contained one or more contaminants above federal drinking water standards or health-based levels.

Learn more about testing your water at bit.ly/MiWellTesting. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



Have a private residential well and thinking about starting a family? Get your drinking water tested!

Contaminants may enter drinking water unnoticed. Many have no color, taste, or smell. Pregnant persons, infants, and young children's health can be more at risk from some contaminants.

Learn more at bit.ly/MiWellTesting. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



Are you looking to buy a home with a private residential well?

Test the water to make sure it's safe for you and your family! Learn more about testing and what to test for at bit.ly/MiWellTesting. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.

Check with the county to see what testing may be required before a real estate transaction.



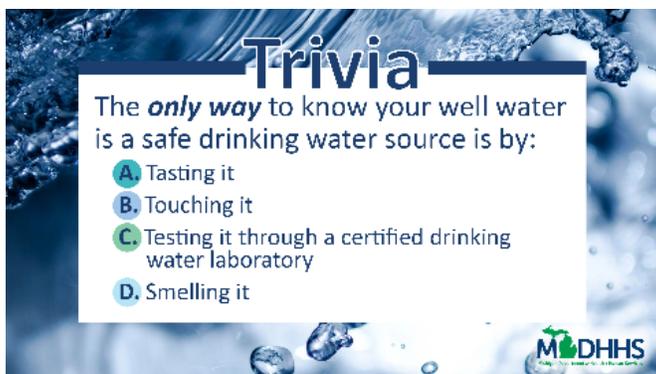
Are you a new homeowner with a private residential well?

Know the quality of your water to protect your health. Contaminants can enter drinking water unnoticed. Many have no color, taste, or smell and some can be harmful. Testing your water is the only way to know if it's safe.

Learn more about testing and what to test for at bit.ly/MiWellTesting. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



The correct answer is B. Test your residential well water every year for coliform bacteria. Learn more about testing your private residential well water at bit.ly/MiWellColiformBacteria or call MDHHS Drinking Water Hotline at 844-934-1315.



The correct answer is C. Test your residential well water routinely to ensure you have a safe drinking water source. Learn more about testing your private residential well water at bit.ly/MiWellTesting or call MDHHS Drinking Water Hotline at 844-934-1315.

Topic: Private Residential Well Maintenance



As a private residential well owner, have you ever wondered how safe your water is?

Contaminants can enter water undetected, as many have no smell, taste, or color. Protect your loved ones by keeping your water safe by knowing how to:

- Maintain your well
- Test your drinking water
- Treat your water, if needed

Learn more on how to keep your water safe at bit.ly/MiWellMaintenance. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



Taking care of your private residential well is good for your health! Protect yourself and your loved ones from contaminants that can make you sick by:

- Inspecting your wellhead and well system
- Creating a routine well maintenance schedule that includes testing your water
- Keeping a record of your maintenance to reference

Learn more about these well maintenance tips at bit.ly/MiWellMaintenance. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



Private residential well owners, do you check for cracks and openings on your wellhead and well cap several times a year?

A wellhead and well cap keep polluted rainwater, insects, and small animals from getting into the well. If these get in, it can make your water unhealthy.

Learn more about well maintenance at bit.ly/MiWellMaintenance. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



Own a private residential well? Never store, use, or dump harmful products in your yard. These can soak into the ground and contaminate the water you drink. Find a local household hazardous waste program to correctly dispose of products you no longer need: bit.ly/EGLEHazardousWaste.

Learn more ways you can protect your drinking water at bit.ly/MiWellMaintenance. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



Have your private residential well system inspected!

As a private residential well owner, have you ever had your well system inspected?

Well systems should be inspected by a professional at least every 10 years. Making sure your well system is in good condition means safer water to drink!

Learn more well maintenance tips at bit.ly/MiWellMaintenance. You can also call the MDHHS Drinking Water Hotline at 844-934-1315.



Store and apply lawn products away from your wellhead.

Getting your lawn ready for spring?

As a well owner, remember to never store, use, or dump lawn fertilizers and pesticides near your wellhead. If your wellhead or cap has cracks or is not properly sealed, these products could get into your well. They can also seep into the ground and contaminate groundwater.

Always follow application instructions for fertilizers and pesticides and don't over-apply near the wellhead.

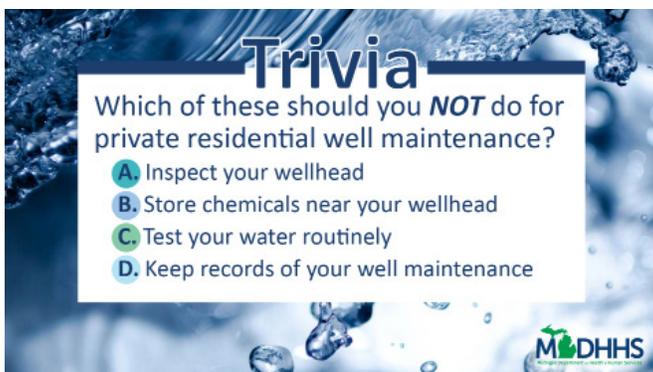
Learn more ways you can protect your well at bit.ly/MiWellMaintenance. You can also call MDHHS Drinking Water Hotline 844-934-1315.



Private well owners: Can you easily get to your wellhead for maintenance?

If you're not sure, now would be a good time to look. Your wellhead should always be easy to access, and structures should never be built over it.

Learn more well maintenance tips at bit.ly/MiWellMaintenance. You can also call MDHHS Drinking Water Hotline 844-934-1315.



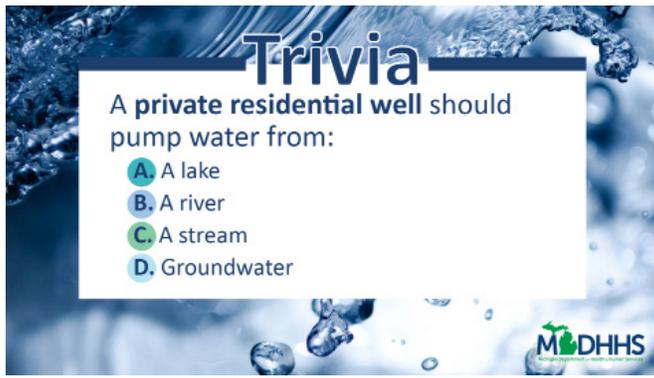
Trivia

Which of these should you **NOT** do for private residential well maintenance?

- A. Inspect your wellhead
- B. Store chemicals near your wellhead
- C. Test your water routinely
- D. Keep records of your well maintenance

The correct answer is B. Never store, use, or dump chemicals near your wellhead. Chemicals can get into your well or seep into the ground and contaminate the water you drink.

Learn more ways you can protect your drinking water at bit.ly/MiWellMaintenance or call MDHHS Drinking Water Hotline at 844-934-1315.



The correct answer is D. Private residential wells should pump groundwater from deep below the Earth’s surface. Groundwater is water from rain and snow that soaked into the soil and moved downward through cracks and other openings in rocks and sand over time. Learn more about ways you can protect your drinking water at Michigan.gov/EnviroHealth and choose “Care for MiWell” or call MDHHS Drinking Water Hotline at 844-934-1315.

Topic: Private Residential Wells



FACT!

There’s over one million Michiganders whose drinking water comes from groundwater pumped by a private residential well. Do you get your drinking water from a private residential well?

Learn more about wells at Michigan.gov/EnviroHealth and choose “Care for MiWell” or call MDHHS Drinking Water Hotline at 844-934-1315.



Did you know, contaminants, natural and human-made, can enter water unnoticed, since many have no smell, taste, or color? Some can be harmful to your health. Proper well maintenance and regular water testing can help protect the health of you and your family.

To learn how to protect your private residential well drinking water and your health, go to Michigan.gov/EnviroHealth and choose “Care for MiWell.”

Topic: Ground Water



Fact! Just under half of Michiganders use groundwater as their drinking water source. This includes both community public water supplies and private residential wells. Let’s keep our drinking water sources safe and protect the water you drink. Learn more about protecting your well at Michigan.gov/EnviroHealth and choose “Care for MiWell” or call MDHHS Drinking Water Hotline at 844-934-1315.



Myth! 95% of all the fresh water in the world (not including polar ice caps) is actually groundwater. In Michigan, 44% of residents get their drinking water from groundwater.

Learn more about groundwater and private residential wells at Michigan.gov/EnviroHealth and choose "Care for MiWell" or call MDHHS Drinking Water Hotline at 844-934-1315.

Topic: Where your drinking water comes from



Water is an essential part of all living things. It is also essential that you are aware of your own drinking water quality. Do you know where your drinking water comes from?

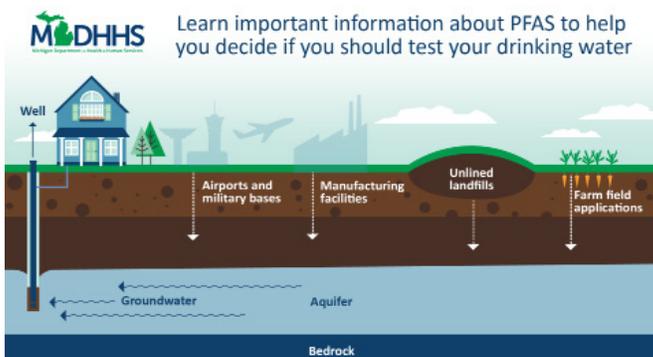
Go to bit.ly/DrinkingWaterSupplyTypes to learn more about Michigan's residential water supply types.



Have you ever wondered where your drinking water comes from or how it gets to your home? Let's follow water as it goes through our environment and becomes our drinking water in this short video.

To learn more about Michigan's residential water supply types go to bit.ly/DrinkingWaterSupplyTypes.

Topic: Drinking Water Contaminants



Learn important information about PFAS to help you decide if you should test your drinking water

Per- and polyfluoroalkyl substances (PFAS) have been used in the industry of manufacturing and commercial products for many years. When these products are made or used in industry, they are sometimes released into the environment. When this happens and depending on where you live, your well water could be impacted or contaminated by PFAS.

Having a private residential well means that you are responsible for your own water system. This includes taking care of your well system to protect your drinking water and health. Learn important information about PFAS. It could help you decide if you should test your drinking water. To learn more about PFAS in drinking water go to bit.ly/MiWellPFAS.

Topic: Well Assessed



MDHHS
Michigan Department of Health & Human Services

Do you know the condition of your private well?

Find out with the MDHHS Well Assessed Tool!

bit.ly/WellAssessedProject

This graphic features a blue well cap on a white well casing. The background is a dark blue gradient with white text. The MDHHS logo is in the top left corner. The URL is at the bottom.

Do you know how to assess, or check, the condition of your private residential well? Doing so is easy with the step-by-step Well Assessed Tool from MDHHS online at bit.ly/WellAssessedProject.



MDHHS
Michigan Department of Health & Human Services

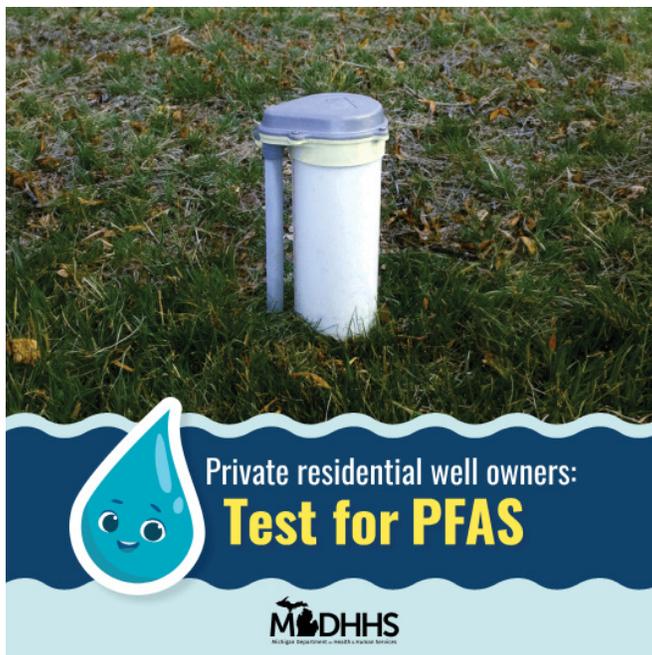
Complete a step-by-step well inspection to receive personalized resources!

bit.ly/WellAssessedProject

This graphic features a blue well cap on a white well casing. The background is a light blue gradient with green hills. The MDHHS logo is in the top right corner. The text is in a dark blue box. The URL is at the bottom.

The Well Assessed Tool from MDHHS will provide you with step-by-step instructions for inspecting your private residential well. When finished, you will receive personalized resources on how to continue to maintain your well. To participate, visit bit.ly/WellAssessedProject.

Topic: PFAS in Drinking Water

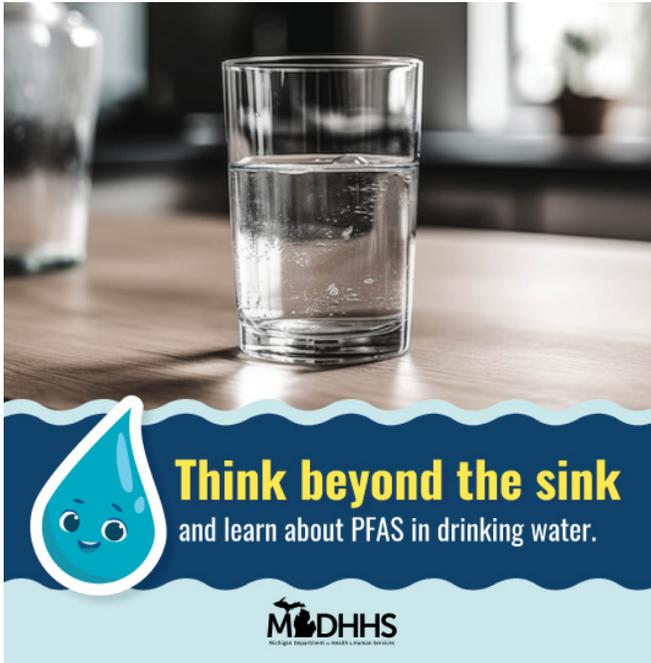


Private residential well owners:
Test for PFAS

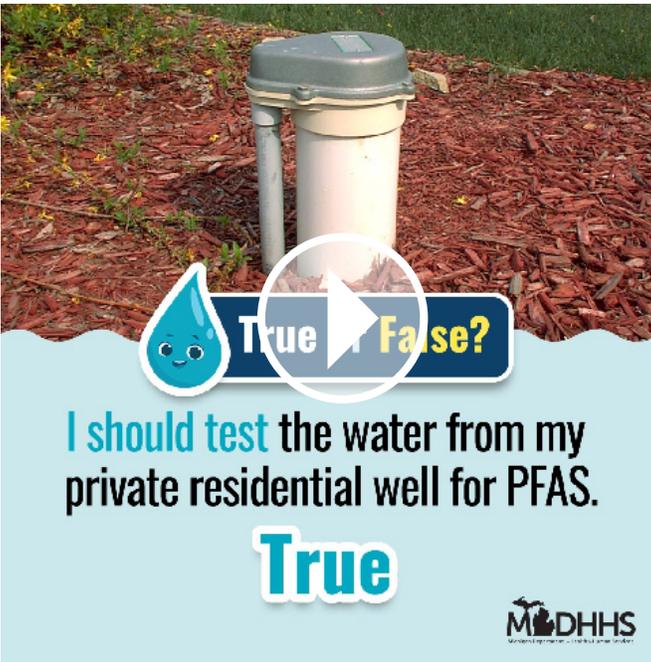
MDHHS
Michigan Department of Health & Human Services

This graphic features a photograph of a white well casing with a grey cap in a grassy area. Below the photo is a blue wavy banner with a cartoon water drop character. The MDHHS logo is at the bottom.

All private residential well owners should test for PFAS. Contact a certified drinking water lab to learn about testing options. Think beyond the sink and learn more at bit.ly/DrinkingWaterTesting.



Do you get your water from a private residential well? Testing your water for PFAS can be the first step to reducing potential exposure. Learn more at bit.ly/PFASWater.



PFAS (per- and polyfluoroalkyl substances) can be harmful, but you can test the quality of your drinking water to learn if there is PFAS in your water. Tap into the facts to learn about risks, testing, and next steps at bit.ly/DrinkingWaterTesting.

Twitter Posts (<280 characters)

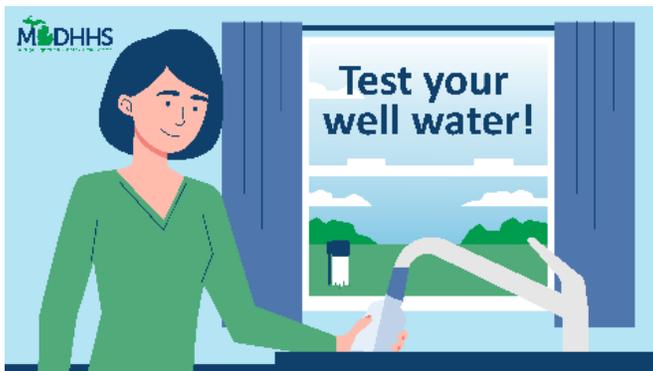
Topic: Private Residential Well Drinking Water Testing



Spring showers bring flooding water!

If you have a well, flooding water can be a problem. Water can collect contaminants found on the ground as it pools.

Learn about times you should consider testing your well water at bit.ly/MiWellTesting or call 844-934-1315.



Do you know if your well water is safe to drink? The only way to know is to test your water.

Learn about Michigan Department of Health and Human Services' recommendations for well water testing at bit.ly/MiWellTesting or call 844-934-1315.



Routinely test your well water to know it's safe to drink.

A USGS study found that 23% of tested wells contained one or more contaminants above federal drinking water standards or health-based levels.

Learn more about water testing at bit.ly/MiWellTesting or call 844-934-1315.



Have a private residential well and thinking about starting a family? Get your drinking water tested!

Pregnant persons, infants, and young children's health can be more at risk from some contaminants.

Learn more at bit.ly/MiWellTesting or call 844-934-1315.



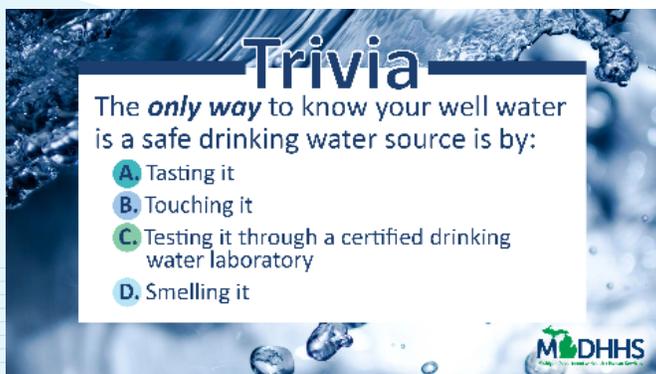
Are you looking to buy a home with a private residential well? Test the water to make sure it's safe for you and your family! Learn more about testing and what to test for at bit.ly/MiWellTesting or call 844-934-1315.



Are you a new homeowner with a private residential well? Contaminants can enter drinking water unnoticed. Many have no color, taste, or smell and some can be harmful. Test your water to know if it's safe. Learn more about testing at bit.ly/MiWellTesting or call 844-934-1315.



The correct answer is B. Test your residential well water every year for coliform bacteria. Learn more about testing your private residential well water at bit.ly/MiWellColiformBacteria or call MDHHS Drinking Water Hotline at 844-934-1315.



The correct answer is C. Test your residential well water routinely to ensure you have a safe drinking water source. Learn more about testing your private residential well water at bit.ly/MiWellTesting or call MDHHS Drinking Water Hotline at 844-934-1315.

Topic: Private Residential Well Maintenance



As a private residential well owner, do you wonder how safe your water is?

Protect your family by knowing how to:

- Maintain your well
- Test your drinking water
- Treat your water, if needed

Learn more on how to keep your water safe at bit.ly/MiWellMaintenance or call 844-934-1315.



Protect your family from harmful contaminants by:

- Inspecting your well system
- Creating a routine well maintenance schedule, including water testing
- Keeping a record of your maintenance

Learn more about well maintenance tips at bit.ly/MiWellMaintenance or call 844-934-1315.



Private residential well owners, do you check for cracks and openings on your wellhead and well cap often?

A wellhead and well cap keep polluted rainwater, insects, and small animals from getting into the well.

Learn more at bit.ly/MiWellMaintenance or call 844-934-1315.



Own a private residential well? Never store, use, or dump harmful products in your yard. Find a local household hazardous waste program to correctly dispose of products you no longer need: bit.ly/EGLEHazardousWaste.

Learn more at bit.ly/MiWellMaintenance or call 844-934-1315.



Have your private residential well system inspected!

As a private residential well owner, have you ever had your well system inspected?

Well systems should be inspected by a professional at least every 10 years.

Learn more well maintenance tips at bit.ly/MiWellMaintenance or call 844-934-1315.



Store and apply lawn products away from your wellhead.

Getting your lawn ready for spring?

As a well owner, never store, use, or dump lawn fertilizers and pesticides near your wellhead. They can seep into the ground and contaminate groundwater.

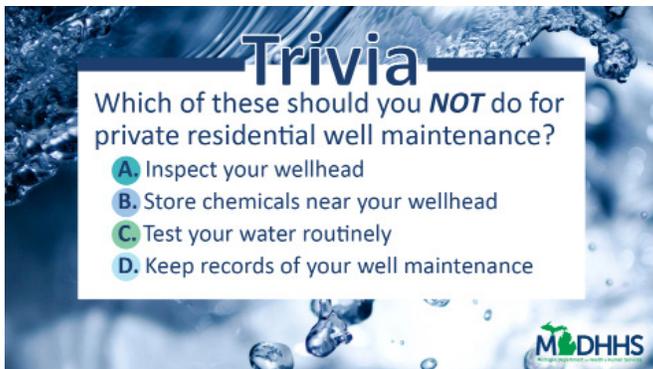
Learn more at bit.ly/MiWellMaintenance or call 844-934-1315.



Private well owners: Can you easily get to your wellhead for maintenance?

If you're not sure, now would be a good time to look. Your wellhead should be easy to access and structures should never be built over it.

Learn more tips at bit.ly/MiWellMaintenance or call 844-934-1315.



Trivia

Which of these should you **NOT** do for private residential well maintenance?

- A. Inspect your wellhead
- B. Store chemicals near your wellhead
- C. Test your water routinely
- D. Keep records of your well maintenance

The correct answer is B. Never store, use, or dump chemicals near your wellhead. Chemicals can get into your well or seep into the ground and contaminate the water you drink.

Learn more at bit.ly/MiWellMaintenance or call 844-934-1315.

Trivia

A private residential well should pump water from:

- A. A lake
- B. A river
- C. A stream
- D. Groundwater



The correct answer is D. Private wells should pump groundwater from deep below Earth’s surface. Groundwater is water from rain and snow that soaked into soil and moved downward through openings in rocks and sand. Learn more at Michigan.gov/EnviroHealth and choose “Care for MiWell” or call 844-934-1315.

Topic: Private Residential Wells



Myth X OR Fact ✓

Over 1 million households in Michigan use a private residential well for their drinking water.



FACT!

There’s over one million Michiganders whose drinking water comes from groundwater pumped by a private residential well. Do you get your drinking water from a private residential well? Learn more about wells at Michigan.gov/EnviroHealth and choose “Care for MiWell” or call 844-934-1315.



MDHHS Michigan Department of Health & Human Services

Having a private residential well means you are responsible for your own water system! This includes taking care of your well system to protect your drinking water and health.

Did you know, contaminants can enter water unnoticed, since many have no smell, taste, or color? Some can be harmful to your health. Proper well maintenance and water testing can help protect the health of you and your family. To learn more go to Michigan.gov/EnviroHealth and choose “Care for MiWell.”

Topic: Ground Water



Myth X OR Fact ✓

44% of Michigan residents get their drinking water from groundwater.



Fact! Just under half of Michiganders use groundwater as their drinking water source. This includes both community public water supplies and private residential wells. Learn more about protecting your well at Michigan.gov/EnviroHealth and choose “Care for MiWell” or call 844-934-1315.



Myth! 95% of all the fresh water in the world (not including polar ice caps) is groundwater. In Michigan, 44% of residents get their drinking water from groundwater.

Learn more about groundwater and private residential wells at Michigan.gov/EnviroHealth and choose "Care for MiWell" or call 844-934-1315.

Topic: Where your drinking water comes from



Water is an essential part of all living things. It is also essential that you are aware of your own drinking water quality. Do you know where your drinking water comes from?

Go to bit.ly/DrinkingWaterSupplyTypes to learn more about Michigan's residential water supply types.



Have you ever wondered where your drinking water comes from or how it gets to your home? Let's follow water as it goes through our environment and becomes our drinking water in this short video.

To learn more about Michigan's residential water supply types go to bit.ly/DrinkingWaterSupplyTypes.

Topic: Drinking Water Contaminants



Learn important information about PFAS to help you decide if you should test your drinking water

When per- and polyfluoroalkyl substances (PFAS) are made or used in industry, they are sometimes released into the environment.

Learn important information about PFAS to help you decide if you should test your drinking water. To learn more go to bit.ly/MiWellPFAS.



Educational Material

The following educational material have been developed and designed to communicate critical drinking water information to Michigan residents. Material in this toolkit provide in depth information about:

- where your drinking water comes from
- best drinking water practices, and
- common drinking water contaminants.

View and save the fact sheet by clicking on the icon/image. The material will open in a new window where you can then download and save to your files.

Fact Sheets

Drinking Water Contaminants

Coliform Bacteria

Coliform Bacteria in Drinking Water for Well Owners

What are coliform bacteria?
Coliform bacteria are found in soil, surface water, on plants, and in the intestines of warm-blooded animals and people. One type of coliform bacteria called fecal coliform (F. coli) is a sign that fecal waste is in the water. Some types of F. coli in drinking water can make you sick.

What health problems can coliform bacteria cause?
Most coliform bacteria are not harmful. However, some can make you sick. A person that has been exposed to these bacteria may have an upset stomach, vomiting, fever, or diarrhea. Children and the elderly are more at risk from these bacteria.

Take **2** coliform bacteria seriously when found in drinking water. Some **1** can make you sick or even cause death.

Vomiting	Upset Stomach
Fever	Diarrhea

How does coliform bacteria get into your well water?
When coliform bacteria are washed into the ground by rain, melting snow, or irrigation, it can get into drinking water. Coliform bacteria can be from:

- Woodlands, pastures, or fields used
- Wild or domestic animal waste
- Improperly maintained septic systems

Coliform bacteria can enter your water if you have:

- A damaged wellhead (the part of the well that's above ground) including the casing and/or well cap
- An unsealed or abandoned well in the area
- A new well not properly disinfected
- Drinking water pipes connected to non-drinking water sources such as water waste, laundry tanks, or garage floors

Damaged wellhead with cracked well cap and exposed wires.
Photo provided by Barry Dean, Bureau of Health Department

Iron

Iron in Drinking Water

Some iron is essential for our health. When too much iron is in water, it can change its taste, color and smell.

Tip into the facts about iron to learn if you should consider testing your drinking water to protect your health.

How iron gets into drinking water

- Iron is naturally occurring mineral in soil and rocks. As water moves through soil and rock, iron can dissolve into lakes, rivers, groundwater that become your drinking water.
- Some areas in Michigan have naturally higher levels of iron in groundwater.
- Iron can get into drinking water from plumbing made with iron, like pipes, fittings, valves and faucets.

Problems with iron in drinking water

People consume iron from many sources daily and some iron is necessary, but too much iron can be harmful to health.

Drinking water with greater than 1 mg/L of iron could increase your risk for:

- Iron-related problems
- Nausea

Drinking water with greater than 3 mg/L of iron could change the taste, color and smell of the water including:

- Staining of toilets, sinks, laundry and pots
- Metallic taste

How to find out if iron is in your drinking water

Step 1. Know where your water comes from.

- Learn about the different water supply types to determine where your water comes from at Michigan.gov/LifeandHealthResources

Public Drinking Water Supply	Private Drinking Water Supply
<ul style="list-style-type: none"> • City/Community Residential Water • Shared Residential Well Water 	<ul style="list-style-type: none"> • Private Residential Well Water

Nitrate and Nitrite

Nitrate and Nitrite in Drinking Water for Well Owners

What are nitrate and nitrite?
Nitrate (NO₃) and nitrite (NO₂) are forms of nitrogen in the environment. Both natural and human-made. Large amounts of nitrate in drinking water can be harmful to a person's health because nitrate can change into nitrite in the human body.

What health problems can nitrate and nitrite cause?
Swallowing high amounts of nitrate and/or nitrite can cause a condition called methemoglobinemia that may be life threatening. This condition affects the blood's ability to carry oxygen. Infants younger than six months of age and pregnant women are more at risk of developing this condition. Others can develop this condition too, such as those with genetic conditions or reduced stomach acidity. It's important to talk with your doctor or your child's doctor if you have concerns about methemoglobinemia.

Pregnant Women and Infants
During pregnancy, the body's ability to carry oxygen changes. When combined with high amounts of nitrate, a pregnant woman's chances of developing this condition increase. Methemoglobinemia is commonly called blue baby syndrome in infants younger than six months of age. Infants can develop this condition when given water or formula made with water that has high amounts of nitrate. Infants have less acid in their stomach, resulting in more bacteria that change nitrate to nitrite. Having too much nitrite in the body affects the blood's ability to carry oxygen. This causes the skin around the eyes and mouth to turn a bluish color. Methemoglobinemia can cause death if not addressed. Immediately stop using the water and contact your child's doctor if you notice these symptoms.

How does nitrate get into your well water?
When nitrate seeps into the ground it can get into drinking water. Nitrate is more likely to enter your water if you have a shallow well, damaged well casing and fittings, a well not within a city sewer underground or nearby unsewered or abandoned wells. Nitrate found in drinking water is often from:

- Fertilizers
- Livestock waste
- Failing septic tanks, cesspools and drywells

Coliform Bacteria (Spanish)

Coliform Bacteria (Arabic)

Nitrate and Nitrite (Spanish)

Nitrate and Nitrite (Arabic)

Per- and Polyfluoroalkyl Substances (PFAS)

Michigan PFAS Response Website

PFAS in Drinking Water for Private Residential Well Owners

Per- and polyfluoroalkyl substances (PFAS) have been used in the industry of manufacturing and consumer products for many years. When these products are made or used in industry, they are sometimes released into the environment. When this happens and depending on where you live, your well water could be impacted or contaminated by PFAS. Having a private residential well means you are responsible for your own water system. This includes taking care of your well system and knowing your surroundings to protect your drinking water and decide if you should test your drinking water.

How PFAS get into drinking water

- PFAS are a large group of human-made chemicals that do not occur naturally in our environment. PFAS are used in many commercial products such as stain repellents, fast food wrappers, and waterproofing sprays. They are also used in manufacturing processes.
- When PFAS are released in the environment from the sources listed below, they can seep into groundwater which becomes drinking water.

Common sources of PFAS in groundwater

- **Airport and Military Bases:** PFAS have been and continue to be used in firefighting foam. Groundwater contaminated with PFAS near airports and military bases is often associated with the use of firefighting foam.
- **Manufacturing facilities:** PFAS have been used in manufacturing. They can be released into lakes and rivers during production or may be in industrial waste that seeps into the soil and groundwater.
- **Unlined Landfills:** PFAS are used in many different consumer products that eventually end up in landfills. PFAS in unlined landfills can seep into groundwater.
- **Farm field applications:** PFAS may be in treated biosolids which are materials produced during the processing of wastewater. Biosolids are sometimes used on farmland as fertilizers. Once applied, it can seep into groundwater.

Lead

Lead in Drinking Water

Lead can be found throughout a person's environment, including their home, home built before 1976 can contain lead-based paint and dust, which is well established cause of child exposure to lead.

People can also be exposed to lead in household drinking water by the corrosion of older water service lines and pipes, fixtures and fittings inside the home. This can occur in homes served by a private residential well or city/community residential water supply. Children are of the highest risk to health effects, but exposure may be reduced to lead in their drinking water, if you are pregnant, lead can harm your baby.

As a leader in the nation in lead exposure prevention, the Michigan Department of Health and Human Services (MDHHS) recommends that Michigan households take the necessary steps to Get Ahead of Lead to stay safe and protect against the threat of lead in drinking water. Learn more about the statewide "Get Ahead of Lead" strategy by visiting Michigan.gov/GetAheadOfLead.

MDHHS recommends that all Michigan households use a certified lead-reducing drinking water filter that has been listed if they are vulnerable to lead in the following:

- Lead or galvanized plumbing
- A lead service line carrying water from the street to their residence.
- Old fixtures and fittings that were sold before 2014.

the filter will be able to remove some of the lead in that plumbing, such as:

- Replacing pre-2014 faucets.
- Getting a lead inspection and replace needed plumbing.

How lead gets into drinking water

The most common source of lead in drinking water is plumbing made with lead—the pipes, fittings, fixtures and faucets. Lead can get into your drinking water when plumbing containing lead begins to break down or dissolve.

Lead service lines or galvanized plumbing. Some older homes on a city/community residential water supply may have lead service lines or galvanized plumbing that may cause lead contamination in drinking water when corrosion happens.

Parts of a well system. Homes that get water from a shared or private residential well may have lead in parts of the well system, like a packer or brass components of a submersible pump and they corrode and add lead to water.

Steps to Get Ahead of Lead in Your Drinking Water

Michigan Get Ahead of Lead Website

Steps to Get Ahead of Lead in Your Drinking Water

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MDHHS recommends that all Michigan households use a certified lead-reducing drinking water filter that has been listed if they are vulnerable to lead in the following:

- Lead or galvanized plumbing
- A lead service line carrying water from the street to their residence.
- Old fixtures and fittings that were sold before 2014.

Use a filter well you are able to remove some of household lead plumbing, such as:

- Replacing pre-2014 faucets.
- Get a lead inspection and replace needed plumbing.

How to reduce lead in drinking water

Use a point-of-use (POU) water filter. A certified lead-reducing filter can reduce lead in drinking water. Filters are rated to reduce lead, but do not guarantee that all lead will be removed from drinking water.

A POU water filter reduces contaminants at the point water being used, such as drinking water. For certification on the filter package, NSF/ANSI Standard 53 for lead reduction and NSF/ANSI Standard 55 for particulate reduction (P2). It is important to follow the manufacturer's directions. For more information on choosing a POU water filter, go to Michigan.gov/GetAheadOfLead. For technical assistance with installation, call 1-800-456-4643.

Consider replacing older plumbing, pipes, and fixtures that may corrode and add lead to water. Color, rust, fittings and valves sold before 2014 may contain up to 1% lead, even if they are "lead-free." Look for replacement faucets, valves, P201 or after and make sure they are NSF 61 certified or marked to comply with the 2014 general act law. Check your plumbing or hire a plumber to know what parts should be replaced to reduce lead in your drinking water.

Drinking Water Best Practices

Drinking Water Testing

Protect Against the Unknown: Test Your Drinking Water from Your Well

Contaminants in drinking water can harm everyone's health. Some can cause short-term health problems while others can cause long-term health problems.

As a well owner, you can protect your family's health by testing your water regularly.

Why is it important to test your drinking water?
Testing will keep you informed about your water quality and help identify problems. Testing the water used for drinking, cooking, food, or mixing powdered infant formula is especially important.

Pregnant women, infants, and young children's health can be more at risk. It's important to talk with your doctor if you have health concerns.

- Some contaminants can pass from the mother to the fetus. This is the risk of harm to their health and development.
- Babies drink more for their age than children and adults. This can result in higher exposure to toxins that adults, which could increase risk of harm to their health.



When should you test your drinking water, and for what?
Wells are required to be tested for coliform bacteria when installed or repaired in Michigan. Based on where you live, you may be required to test your water at other times, such as during real estate transactions.

Call your local health department to learn more about when you need to test your water. They may also recommend additional testing based on water conditions in your area.

	Every Year	Every 3 to 5 Years
Coliform Bacteria and E. coli	Arsenic	
Nitrate	Copper	
	Lead	

Other times to consider testing your water:

- A household member becomes pregnant.
- An infant or young child is living in the home.
- Flooding has happened near the well.
- Repairs were made to the well.
- The water's taste, color, or smell changes.

Private Residential Well Maintenance

Drinking Water Well Maintenance

Maintaining your well and the surrounding area is important for protecting your drinking water and your health. Here are tips on how to maintain your well through regular inspections, testing, and treatment.

Well Inspection

Wellhead and Well Cap

Check the wellhead (the part of the well that's above ground) and the well cap (the part that covers the wellhead) several times a year. Look at the wellhead casing and cap for any cracks or openings that shouldn't be there. The cap keeps rainwater, insects, and small animals from getting into the well.

If you find problems, contact a registered well driller. To find a registered well driller in your area, visit Michigan.gov/WellDrillers and choose "Directory of Registered Constructors."

Well System

- Have a registered well driller inspect the well system every 10 years or as needed. The inspection will include the condition of the well, pump, storage tank, piping, and valves. When it's time for a new well, contact a registered well driller for installation and to properly abandon (plug or seal) the old well.

Surroundings

Look around your well to see if items or materials are nearby that could impact your well.

- Do not store, use, or dump harmful materials, such as paint, fertilizer, pesticides, and motor oil near the wellhead. If you do use lawn fertilizer, follow the application instructions. Don't over apply near the wellhead.
- Keep the top of your wellhead 22 inches above the ground. Slope the ground away to help keep water from ponding near the wellhead.
- Do not plant shrubs and trees near the well.
- Be sure you can easily get to your wellhead for maintenance and/or for pump replacement. Never build a deck or porch over a wellhead. Buildings should be at least 3 feet from the wellhead.
- Keep dog kennels or animal holding areas at least 50 feet from your well.
- If your house has a septic system it's important to maintain it. Poor maintenance can lead to contaminants getting into your drinking water.

Routine Well Maintenance

Regular maintenance is recommended for your well, including water testing and inspection. Having a maintenance routine will keep you informed of your drinking water quality and possibly identify problems.

Water Testing

Michigan homeowners are required to test their drinking water for coliform bacteria when a well is installed. Consider testing your drinking water if flooding has happened near your well, your well has had repairs, or you notice changes in your water's taste, color, or odor. The Michigan Department of Health and Human Services (MDHHS) recommends testing:

- Every year for coliform bacteria, E. coli, nitrate, and nitrite.
- Every three to five years for arsenic, copper, and lead.
- Check with your local health department to see if there are other times you need to test your drinking water. They may recommend other testing based on water conditions in the area.

Cleaning your Aerator

Cleaning Your Aerators

What are aerators and when should they be cleaned?

There are screens on faucets called aerators. Aerators help keep pieces of lead and other particles from getting into your water. Clean your drinking water faucet aerator at least every six months. If there is construction or repairs to the public water system or pipes near your home, clean your drinking water faucet aerator every month until the work is done.

Follow the steps below to clean your aerators:

- 1** The small round piece on the bottom of your faucet is the aerator (pronounced: air-ay-tor).
 - Unscrew the aerator from the bottom of the faucet.
 - You should be able to unscrew it with your fingers, but you might need a wrench if it's stuck.
- 2** Your aerator might not look the same as this, but it's okay.
 - Now that the aerator is off, let's clean it.
- 3** While you only need to use water to rinse off your aerator, these things might make it easier to clean it:
 - An old toothbrush
 - A glass of vinegar
- 4** Soaking the aerator in vinegar will loosen some of the grime. You can soak it as long as you want, but even the minutes will help.
 - The toothbrush makes it easy to scrub the inside. Don't use that toothbrush for brushing your teeth again.

Private Residential Well Maintenance (Spanish)

Private Residential Well Maintenance (Arabic)

Cleaning your Aerator (Spanish)

How to Find out if Lead May Be in Your Drinking Water

How to Find Out if Lead May Be in Your Drinking Water

As a leader in the nation in lead exposure prevention, the Michigan Department of Health and Human Services (MDHHS) recommends that Michigan households take the necessary steps to Get Ahead of Lead to rate and protect against the threat of lead in drinking water. Learn more about the statewide "Get Ahead of Lead" strategy by visiting Michigan.gov/GetAheadOfLead.

MDHHS recommends that all Michigan households use a certified lead-reducing drinking water filter if their home has or if they are uncertain if it has one of the following:

- Lead or galvanized plumbing.
- A lead service line carrying water from the street to their residence.
- Old faucets and fittings that were sold before 2014.

Use a filter and you are able to remove sources of household lead plumbing, such as:

- Replace pre-2014 faucets.
- Get a lead inspection and replace needed plumbing.

If you would like to find out if lead is in your drinking water, follow the suggestions below.

Check your home's plumbing

- Older plumbing and faucets can be made of materials like lead that can harm your health. These could get into your drinking water.
- Faucets made before 2014 may contain lead. Regulations in 2014 lowered the amount of lead allowed in faucets.
- Older pipes may be more likely to have plumbing which used lead, such as leaded or galvanized pipes or copper with lead solder.
- Check your home's plumbing or hire a plumber to learn if any of your plumbing may contain lead.
- Visit Michigan.gov/PlumbingChecklist for the MDHHS Home Plumbing Lead Checklist to help you find out if your home's plumbing might contain lead or visit Michigan.gov/GetAheadOfLead and click on the "How to Find Out if You Have Sources of Lead in Your Water" link to watch a short video on checking your home's plumbing for lead.

Possible plumbing materials

- Lead
- Copper
- Galvanized Steel
- Plastic

Know Your Drinking Water Drinking Water Supply Types

Drinking Water Supply Types

Type 1
Community Public Water Supply

- Provides water to at least 25 residents or 15 living units year-round.
- Some examples are municipalities (cities, towns, etc.), apartments, nursing homes and manufactured housing communities.
- The water is pumped from surface water (lakes, rivers) or groundwater using water wells.

Type 2
Non-Transient Non-Community Public Water Supply

- Provides water to at least 25 of the same people for at least six months or more a year, but not for year-round residential living.
- Some examples are schools, daycares and office buildings that have their own water system.
- Water is typically pumped from groundwater using water wells.

Type 2
Transient Non-Community Public Water Supply

- Provides water to at least 25 people for at least 60 days a year, but does not serve the same 25 people for more than six months of the year.
- Some examples are hotels, restaurants, campgrounds, gas stations and churches.
- Water is typically pumped from groundwater using water wells.

Type 3
Public Water Supply

- All other public water supplies that provide drinking water not considered a Type 1 or Type 2 are considered a Type 3.
- Some examples are small apartment complexes or condominiums, duplexes and very small businesses. Ownership of multiple Type 3 wells may change the drinking water supply type.
- Water is pumped from groundwater using water wells.

Private Residential Well

- Provides water to a single-family residential home. Water is pumped from groundwater using a water well.



Disclaimer: This document provides general information about drinking water supply types. The many factors involved in type classification decisions by local health departments and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) could not be included here. To learn more visit Michigan.gov/EGLE.

Postcards

Mailing Postcard

MICHHS
Michigan Department of Health & Human Services

Learn what you can do to protect your drinking water and health!

Maintain your well.

Test your drinking water annually or as needed.

Understand your drinking water test results.

Consider a home water filter or treatment system if needed.

MICHHS
Michigan Department of Health & Human Services

Having a private residential well means you are responsible for your own water system. This includes taking care of the well system to protect your drinking water and your health.

- Natural and human-made contaminants can enter water unnoticed as many have no smell, taste, or color.
- There are many ways water can be contaminated. **Check for damage to your well cap or casing and monitor for low water pressure.** These may indicate that your well system is not working as expected which could lead to water contamination.
- Proper well maintenance and regular water testing can help identify how contaminants enter the well system and if they are in the water.

Taking care of your well system can protect the health of you and your family. Work with your local health department or a Michigan-registered well driller if you have questions or you find any problems with your well.

Visit Michigan.gov/EnviroHealth and under "Our Programs" select "Care for MiWell" to learn how to protect your private residential well drinking water and your health.

MDHHS-Pub-1370 (2-22)

Non-Mailing Postcard

MICHHS
Michigan Department of Health & Human Services

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Taking care of your well system can protect the health of you and your family. Work with your local health department or a Michigan-registered well driller if you have questions or you find any problems with your well.

Visit Michigan.gov/CareforMiDrinkingWater and select "Care for MiWell" to learn how to protect your private residential well drinking water and your health.

MDHHS-Pub-1370 (2-22)



Worksheets

The following worksheets have been designed to be fun and entertaining for school-aged children while they also learn about drinking water. These can be used in classrooms or as fun at-home activities for children.

All worksheets are standard letter 8.5 x 11 size and one page. View and save the worksheets by clicking on the icon/image. The worksheet will open in a new window where you can then download and save to your files.

Worksheets

Designed for Upper Elementary+

MI WELL WATER
Well Water Test Maze

START

Testing water is the only way to know if your water is safe to drink! Contaminants can enter the water used for drinking. Some can be harmful to your health.

Make your way through the maze to collect a water sample for testing.

TEST!

MDHHS
Michigan Department of Health and Human Services

To learn more about testing your drinking water, visit Michigan.gov/EnviroHealth and choose "Care for MIWell".

Designed for Middle School+

MI WELL WATER

These words are about well water and making sure it's safe to drink. How many can you find?

Words are hidden in the water droplet. They can be read forward or backward and found across, diagonal, or up and down.

k
 a s a
 n v n h r
 k s k o e v o
 z z c a c f e r r
 j q e n n f y u z e w
 l c t a a d e e q b t m c
 t l i n s p e c t a a z g
 g d a e h l l e w r v w x f u
 y x t z w n o o p n e d i t b
 j q n o i t a n i m a t h o c v d
 h i z m h e a l t h s y u r l i j
 v a t l q m z y l o o r e o u x a v r
 m n n n v u i e x h c t a r l y g z d
 s v a o n o i t u l l o p g a v r p z
 l n e m t a e r t w a t e r t e s t b
 z g t b s p w e l l c a p p d i y z
 o q c y t i l a u q r e t a w a w o
 x g y y a o r o t a r e a t e c u a f
 c r e t a w g n i k n i r d p w o f i
 t i a d y f h b r o a w i o b s p
 q l t y r o t a r o b a l z g u h
 o l m m c o v j j m h d z g i
 c f m e t s y s l l e w u
 a d z g l b s v d

Clean
 Contamination
 Drinking Water
 Faucet Aerator
 Groundwater
 Health
 Inspect
 Laboratory
 Maintenance
 Pollution
 Safe
 Treatment
 Water Quality
 Water Test
 Well
 Well Cap
 Well Head
 Well System

MDHHS
Michigan Department of Health and Human Services

Michigan.gov/EnviroHealth and choose "Care for MIWell"



Videos

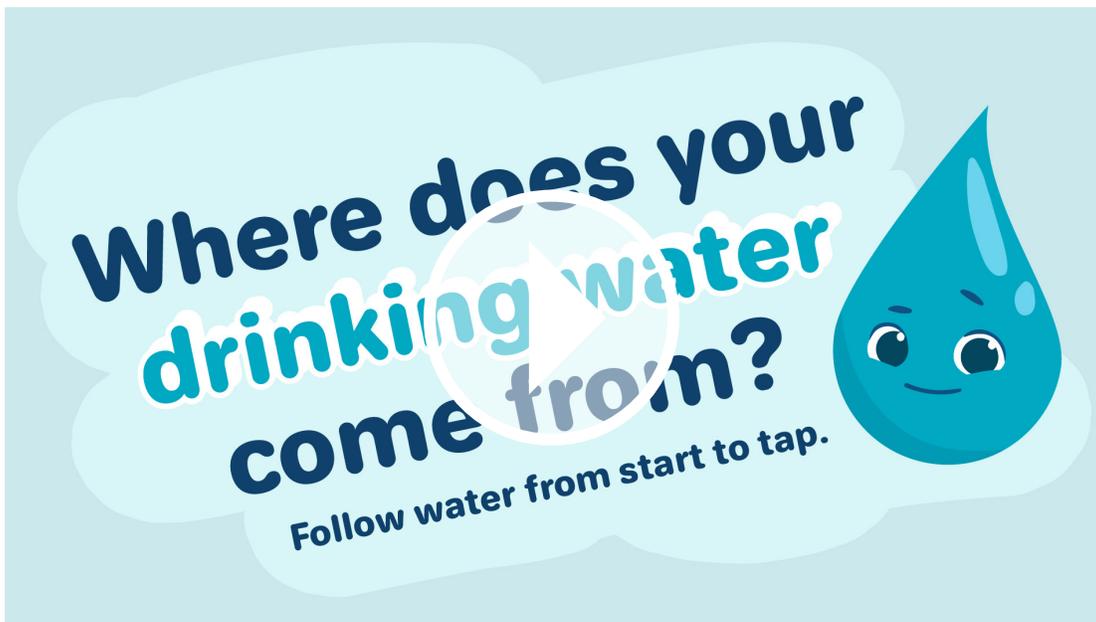
The following videos have been designed to help explain topics related to drinking water and health. View the video by clicking on the icon/image. The video will open in a new window. You can then copy the link to the video to share!

Videos

Where does your drinking water come from? Follow water from start to tap.



Where does your drinking water come from?
This video is appropriate for Elementary age students.





Contact Us

To request printed materials (while supplies last), please complete this [request form](#). You can also call the MDHHS Drinking Water Hotline at 844-934-1315 to request supplies or if you have any questions about the materials we have provided.