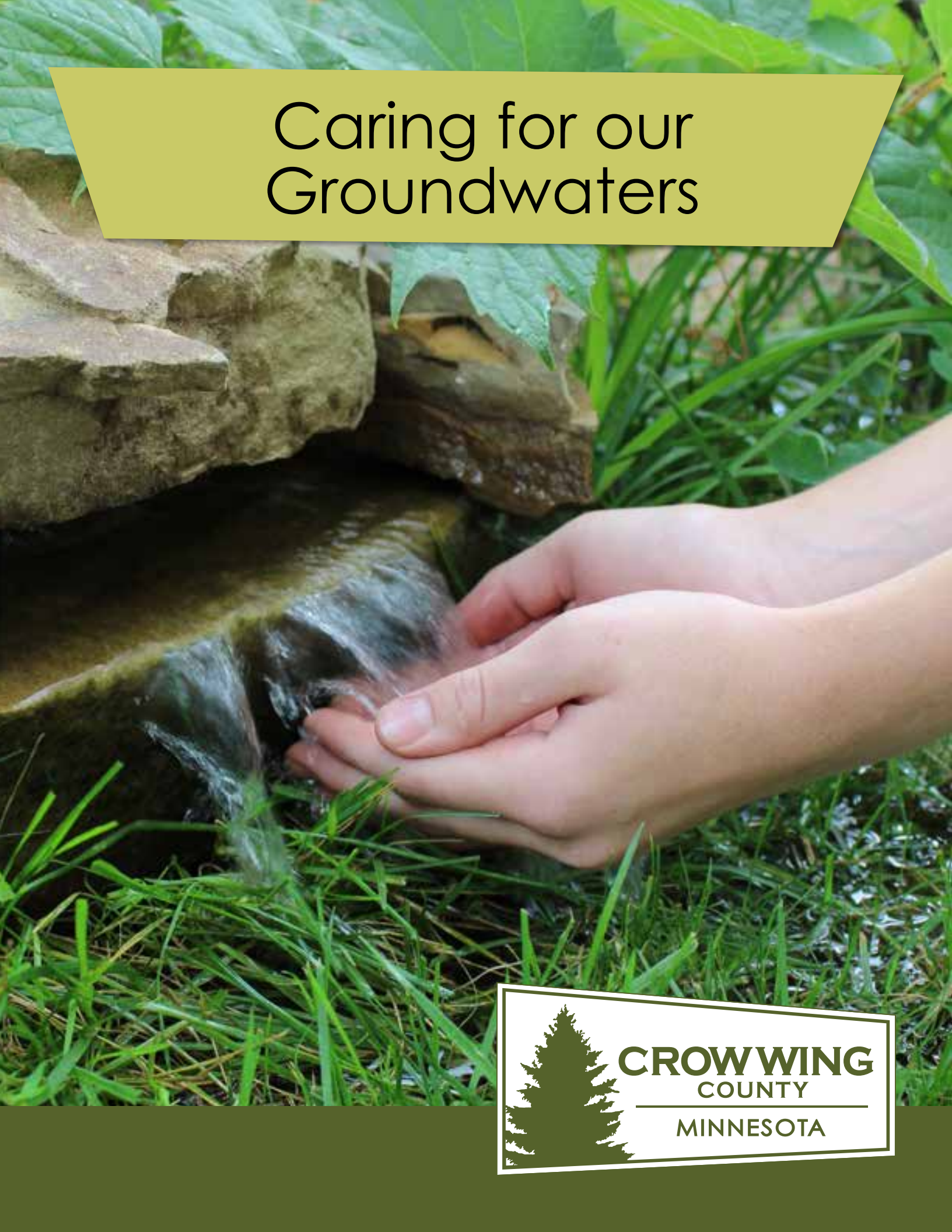
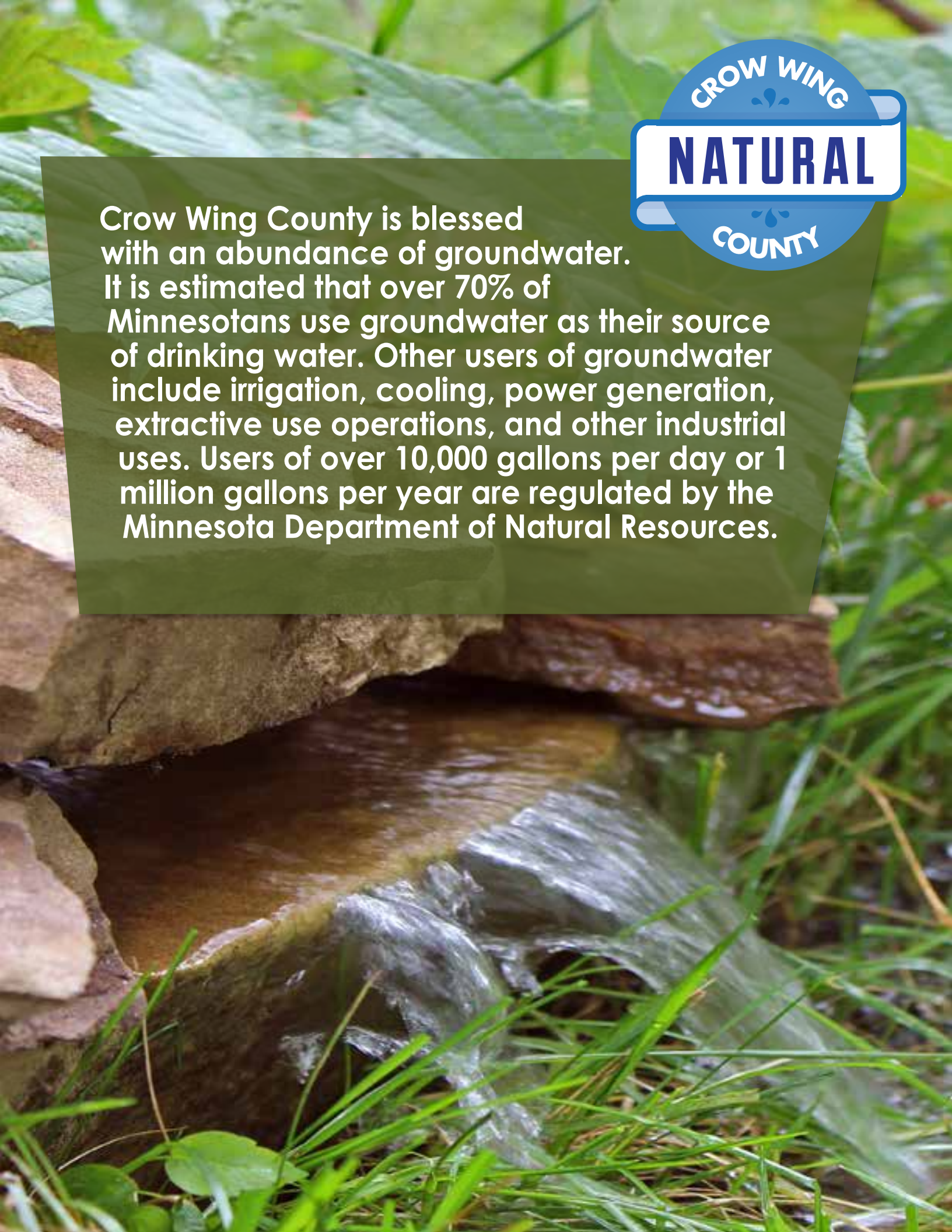


Caring for our Groundwaters





Crow Wing County is blessed with an abundance of groundwater. It is estimated that over 70% of Minnesotans use groundwater as their source of drinking water. Other users of groundwater include irrigation, cooling, power generation, extractive use operations, and other industrial uses. Users of over 10,000 gallons per day or 1 million gallons per year are regulated by the Minnesota Department of Natural Resources.





Septic: Maintenance and Inspection

Protecting our groundwaters from human contaminants

Crow Wing County encourages landowners with septic systems to have their systems assessed for maintenance every three years. We promote proper septic and waste disposal practices. We also provide landowners with helpful information on financial assistance programs for septic system upgrades when available.

Land use requirements pertaining to septic systems in Crow Wing County are outlined in the Crow Wing County Land Use Ordinance and Minnesota Chapters 7080-7083, which are available on our website.

Please consult the Land Use Ordinance and Chapters 7080-7083 for further information on requirements and regulations or contact our office with any questions or comments. We look forward to working with you.



Scan for info
on septic permits

Septic FAQs

1 How do I get a permit to install a septic system?

Contact a state-licensed septic system designer to determine the appropriate system size and location for your property. After working with you, the designer will submit a design to Environmental Services for review. Once your design is approved by Environmental Services, you can submit an application with the appropriate fee. Crow Wing County has an online permitting system where you can apply, pay, and print out your septic permits online. This online permitting website is: <https://enviopermits.crowwing.us>

2 What do I need to do after I obtain a permit?

Unless the homeowner is installing the system, the responsibility generally shifts to the septic system installer. It is required that the installer contact Environmental Services for an inspection 24 hours prior to covering the system. Once the inspection is approved, a certificate of installation will be issued. See Crow Wing County Land Use Ordinance Article 37 for details.

3 Do I need a permit to replace my pump?

A permit is not needed in Crow Wing County for septic system maintenance such as pump replacement, manhole lid replacement, pipe repair, and filter cleaning/replacement. If you are unsure, please call Environmental Services and we will gladly answer your questions.

4 What is a compliance inspection?

A compliance inspection is used to determine if a septic system meets local and state requirements. The inspection must be conducted by a state-licensed inspector. The inspector looks at the septic tank(s) to determine if they are watertight. The inspector reviews the drainfield to ensure it has the minimum required vertical separation between the bottom of the drainfield and the periodically saturated soil or bedrock. Additionally, the inspector checks to see if the system is functioning properly overall. If the inspection passes, a certificate of compliance is issued.

A compliance inspection is required for all land use permits, public hearing applications, and property transfers. However, the inspection requirement does not apply if a compliance inspection was conducted within the last three years or the septic system was installed within the last five years or has a valid operating permit.

Septic FAQs

5 How can my system be failing?

Oftentimes we hear of systems “working” or that homeowners have never had a problem with the system despite the fact that an inspector just failed it. A septic system is not only considered failing if it is discharging to the ground surface or backing up into a dwelling, but it can also be failing if the bottom of the drainfield has less than the required vertical separation distance from the water table or any other restricting layer.

6 How can I take better care of my septic system?

Homeowners can start by working with a septic system professional to develop a management plan for their specific system. A management plan can help the homeowner understand the importance of a regular pumping schedule and how to establish the pumping schedule that is right for their specific system. A management plan can also help the homeowner understand the importance of monitoring water use, repairing leaky fixtures, limiting the use of antibacterial products and household cleaners, and knowing what types of products and medications are potentially detrimental to a septic system. For more detailed information regarding the use of your septic system and management plans, please visit the University of Minnesota website (www.septic.umn.edu). Maintaining your septic system will help optimize the lifespan and performance of the system which is both environmentally and financially beneficial.

7 Is septic maintenance required?

Minnesota Rules Chapter 7080 requires new systems to be assessed a minimum of every three years to determine if the tanks need to be pumped out. Crow Wing County requires that evidence of maintenance (tank pumping receipt, etc.) be submitted for all permits issued in the Shoreland District.

8 What can I do to prevent my septic system from freezing?

Although there is no one solution that will work for every situation, there are many things that can be done to help prevent septic systems from freezing. Here are a few ideas to start with.

- Do not mow the grass over the top of the drainfield in the fall.
- Spread 8-12 inches of loose leaves, hay, or straw on top of the drainfield, tank, and pipes.
- If you are going to be out of town for more than 2 days, have a friend or neighbor stop over periodically and use an appliance such as a dishwasher to inject warmth into the system.



Community wellhead protection planning

There are over 400 registered public water systems in Crow Wing County. The state of Minnesota requires that all public water systems have some sort of wellhead protection. The type of wellhead protection varies depending on the size of the system. At a minimum, a 200-foot buffer around public wells must be analyzed and managed for contamination. For larger systems, a full wellhead protection plan is developed which identifies the boundaries of the wellhead protection area and drinking water supply management areas (which is the political boundary of the wellhead protection area).

Outwash areas with a surficial geology of sands or gravels are the most critical areas to focus on in terms of both groundwater recharge and potential contamination. Many residents rely on this surficial aquifer for their source of drinking water. Since there is a direct connection from the surface to this aquifer, any contamination from human uses at the surface could have a direct effect. In addition, any disruptions to the recharge capacity of this aquifer could affect water levels in the groundwater and lakes / streams.



**Have Questions?
Scan the QR code
to get answers.**



Well Sealing

Unused wells must be properly sealed to prevent direct contamination of groundwater. A well must be sealed by a licensed well contractor. This is because a well that is not in use, or abandoned, can be a source of groundwater contamination by providing a potential direct path for surface water runoff, contaminated water, or improperly disposed of waste to reach an uncontaminated groundwater source. Unused larger-diameter wells can also be a safety hazard for children and animals.

Protecting our groundwater assets

Wells are critical risk points for groundwater contamination.

Follow the guidelines below to best protect these groundwater access points:

Pesticides, herbicides & fertilizers

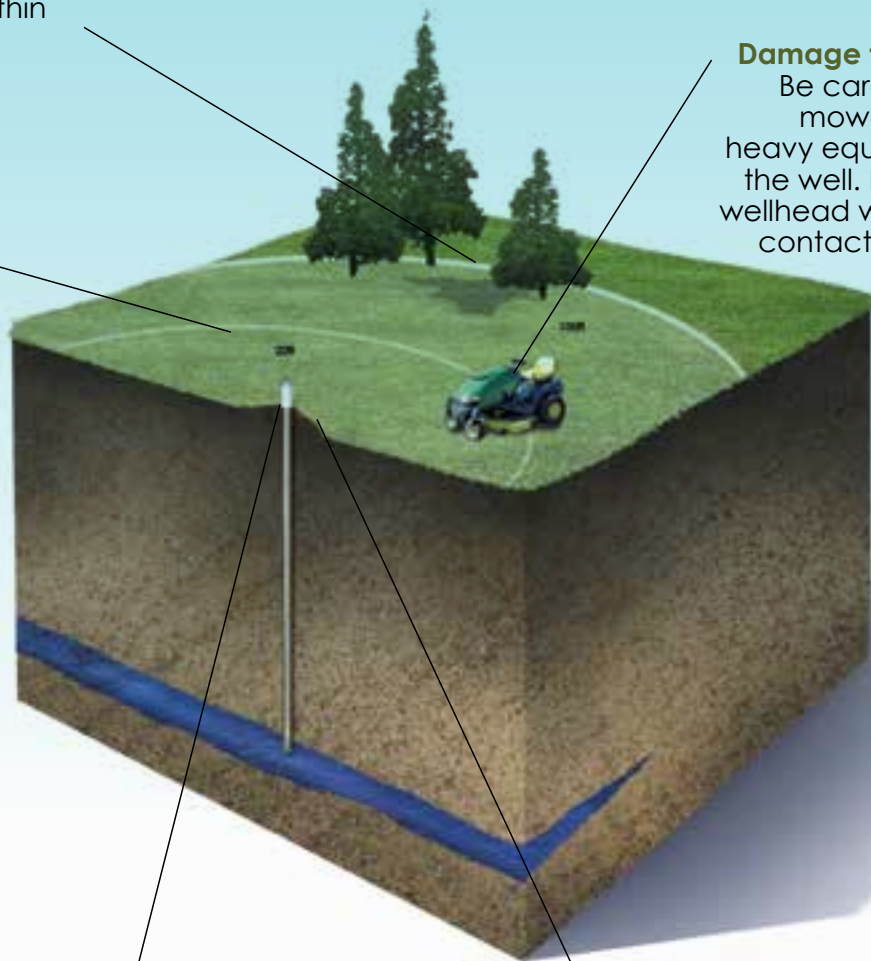
Never store or mix pesticides, herbicides, or fertilizers within 100 feet of a well

Planting trees

If planting trees, you should keep them at least 20 feet away from your well to avoid the root system from interfering with the well casing. Water-seeking trees like willows, maples, poplars and elms should be planted at least 50 feet away.

Damage to the wellhead

Be careful when using mowers or any other heavy equipment around the well. If you do hit the wellhead with equipment, contact a licensed well contractor to ensure no damage occurred.



Leave it open. Well, not really...

It is best to not cover the well with any decorative products such as wishing wells, fake rocks, etc. This leads to rodents or insects entering the wellhead and contaminating the water in your well. Your wellhead should, however, remain covered with its capping piece.

Sloped for drainage

The ground around the top of the well should be sloped for proper drainage avoiding any standing water over the area. The top of the well casing must be at least one foot above the top of the slope.

Required separation distances from wells

Distance	Sources of contamination
3 feet	Building or Building Overhang
10 feet	Frost-proof Yard Hydrant / Electric Line, LP Tank, or Gas Pipe ***
20 feet	Kennel, animal building****, or confined area / Above ground petroleum storage tank greater than 1100 gallons / tested and approved plastic or cast iron sewer serving one building or more than 2 residences / In-ground Swimming Pool, Pit, or Unfilled Space less than 4 feet deep.
35 feet	Vertical Heat Exchanger / Lake, Stream, Pond, River
50 feet	Buried Collector or Municipal Sewer, Other Buried Sewer with Unapproved Materials or Untested / Horizontal Heat Exchanger Piping / Petroleum Storage Tank Below Ground greater than 1100 gallons / Septic or Holding Tank / Soil Dispersal System (Drainfield) less than 10,000 gallons per day** / Animal Feedlot** (1-300 animal units****) / Animal or Poultry Building** / Grave / Privy** / Unused well.
100 feet	Liquid Manure Storage with Approved Concrete or Composite Liner** / Petroleum Pipeline / Animal feedlot** (300+animal units****)
150 feet	Agricultural Chemical, Hazardous Substance, or Petroleum*
300 feet	Liquid Manure Storage without Liner** / Soil Dispersal System (Drainfield) greater than 10,000 gallons per day**

- * If safeguards are provided, the minimum distance may be shortened. Consult Minnesota Rules, Chapter 4725.
- ** A water-supply well that has less than 50 feet of watertight casing and is not cased through a confining layer, such as a clay layer, at least 10 feet thick is considered to be a “sensitive water-supply well,” and must be located at least twice the indicated distance from the potential contaminant source.
- *** A well between 5 and 10 feet from an electric transmission line, a gas pipe, or a liquid propane (LP) tank must be placarded, and work must not be performed on the well unless the line is deenergized and grounded or shielded, and the LP tank does not contain flammable gas.
- **** “Animal unit” is the average weight of the animal, divided by 1,000, and is equal to one slaughter steer or one horse.

Testing for contaminants

Should I be concerned with nitrates?

Nitrates are a common contaminant found in many wells in Minnesota. Too many nitrates in drinking water can cause serious health problems for young infants, including “blue baby syndrome” (or methemoglobinemia). Nitrates in the environment come from decomposition of plants and animal wastes. People also add nitrates to the environment in the form of fertilizers.

How often should I have my well tested for nitrates?

You should have a nitrate test every two or three years... more frequently if nitrates have been detected in previous samples.

2011-2014 Nitrate Results

Shallow, sand point wells

- 0 - 1 ppm
- 1 - 5 ppm
- 5 - 10 ppm
- 10+ ppm

Deeper, drilled wells

- 0 - 1 ppm
- 1 - 5 ppm
- 5 - 10 ppm
- 10+ ppm

MDA Long Term Network

- 0 - 1 ppm
- 1 - 5 ppm
- 5 - 10 ppm
- 10+ ppm



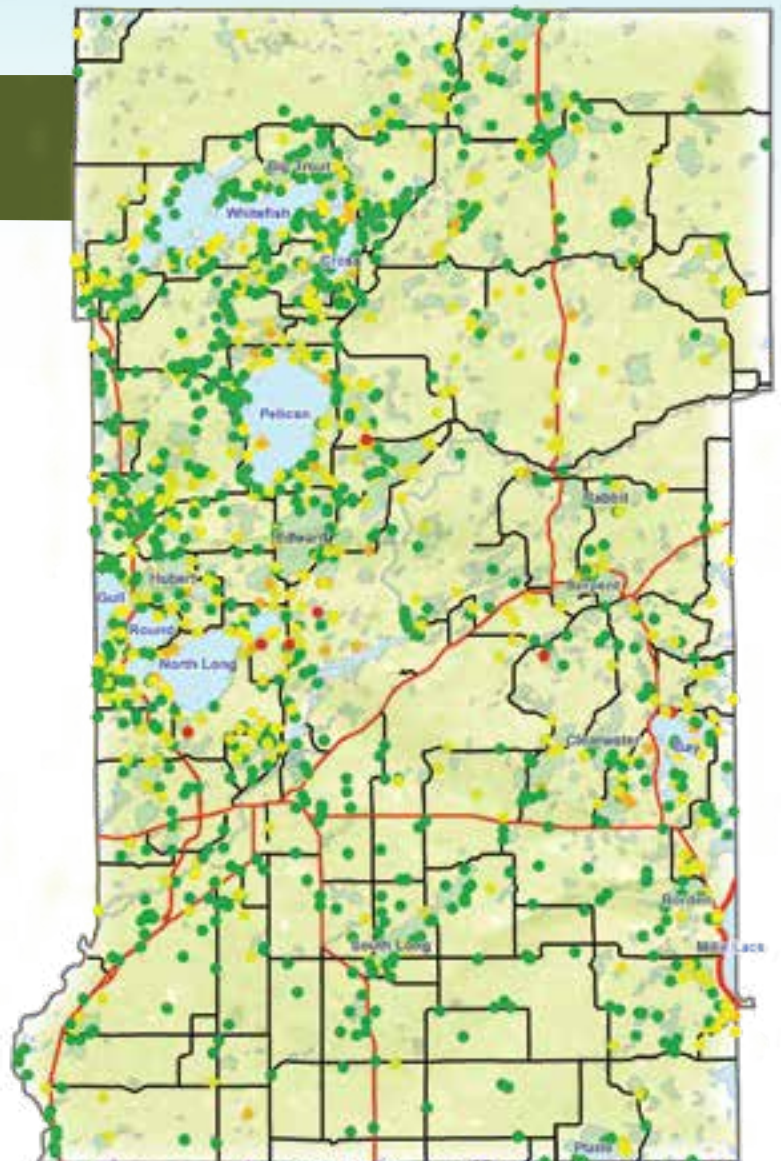
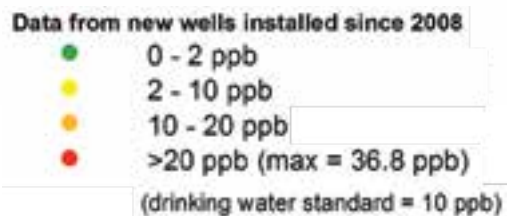
Testing for contaminants

Should I be concerned with arsenic?

Despite its reputation as a poison, arsenic is like any toxic substance; its effects depend on how much and how long people are exposed to it.

Arsenic is a part of the earth's crust and occurs naturally in soil and rock. Arsenic from soil and rock can dissolve into groundwater, the primary source of drinking water for much of Minnesota. When arsenic occurs in well water, the source is almost always a natural source.

2008-2013 Arsenic Levels



4 things you can do...

While there are many things you can do to help protect our groundwater, the most important 4 steps are as follows:

1

Maintain your septic system

Crow Wing County encourages landowners with septic systems to have their systems assessed for maintenance every three years. We promote proper septic and waste disposal practices. We also provide landowners with helpful information on financial assistance programs for septic system upgrades when available.

2

Seal unused wells

A well that is not in use, or abandoned, can be a source of groundwater contamination by providing a potential direct path for surface water runoff, contaminated water, or improperly disposed of waste to reach an uncontaminated groundwater source. Local, state, or federal funds may be available to help.

3

Routinely test your drinking water

Nitrates and arsenic are commonly found in many wells in Crow Wing County. Too many nitrates in drinking water can cause serious health problems for infants while long-term arsenic exposure can have many negative health effects. Nitrates in the environment come from decomposition of plants and animal wastes while arsenic is generally naturally occurring. Nitrates and arsenic are tasteless and odorless, so routine testing is important. In addition to the nitrate testing clinics offered by Crow Wing County, there are several certified laboratories in the area that can conduct nitrate, arsenic, and other testing for minimal cost.

4

Properly dispose of household hazardous waste, petroleum products, & pharmaceuticals

Take toxic chemicals like weed killers, pesticides, paint thinners, strippers, wood preservatives, furniture polish, cleaning chemicals, and bleach to the household hazardous waste facility site at the Crow Wing County landfill. There are also a number of pharmaceutical and used oil drop sites through the County. Go to www.crowwing.us for more info.

PROTECT OUR GROUNDWATER!

YOU CAN HELP

Call 218-824-1010 to speak with one of our specialists.
We're ready to help you.

www.crowwing.us

Crow Wing County is committed to being a leader among Minnesota counties in providing best in class professional natural resource management that support local economies, protects water and wildlife resources, and provides diverse recreational opportunities.



Scan for more info

