

Well Head Protection

What Is Wellhead Protection?

It is required by government agencies that water suppliers back and implement wellhead protection (WHP) practices. It is extremely important that WHP is enforced for the assurance of water quality for everyone; this is why we must be proactive with protecting our limited water sources. Wellhead protection regulators mandate standards for well sites in close proximity to other drinking water sources.

Why Do We Need to Protect It?

Contamination of drinking water has severe consequences as water is a limited resource and even more important a facet to humans as it is an everyday necessity. The water we have now will be the water we have 100+ years from now and forever.

Water Conservation

Preserving our Precious water supply is everyone's business.

Simple Tips for saving water:

- *Don't run water continuously for food preparation and dish washing.*
- Take showers rather than baths, and keep them short. Replace old shower heads with the new low-flow ones.
- Don't run the water continuously while brushing your teeth or shaving.
- Fix leaky faucets and toilets – the smallest drip can waste 20 gallons per day.
- Use the dishwasher and clothes washer only with full loads. And when purchasing new ones, specify those that are specially designed to use less water.
- Don't hose off driveways, walks and patios! Use a broom instead.
- Use a sponge and bucket of water to wash the car.
- Don't run the tap to get cold water. Keep a bottle in the refrigerator instead.

Help protect Princeton's most valuable natural resource

Princeton is fortunate to have plenty of fresh, clean water. Our community uses on an average of 540,000 gallons of this precious resource each day. On a hot summer day this quantity increases to over 1,000,000 gallons due to increased use for lawn sprinkling.

At Princeton Public Utilities, it's our business to provide for your water needs. We take our responsibility seriously, but it's really a responsibility we all share. Although water is easily accessible - as easy as turning on a faucet - it is still a finite resource that shouldn't be wasted. You can help us take good care of Princeton's water supply by conscientiously

managing your own water usage.

Saving water saves energy

Preserving long-term water quality is just one reason to conserve. Saving energy is another. It takes a lot of power to pump water from the ground and transport it safely to your home. The water that flows freely through your pipes is actually a carefully processed product - and you pay for every drop, whether you use it wisely or not. Conserving water not only puts more money in your own pocketbook, it lowers demand throughout the community which keeps the cost of producing water more affordable for everyone.

Vital facts about a vital resource

Water is such a vital part of our daily lives it's easy to take for granted how much we depend on it. Did you know:

- About 80% of the earth's surface is covered by water, but only about 1% is suitable for drinking.
- A person needs about 2-1/2 quarts of water per day from food and liquid sources to maintain good health.
- A person can live without food more than a month, but can survive a week or less without water.
- A five minute shower draws between 13 and 50 gallons of water, depending on showerhead design.
- If you let the faucet run, you'll use two gallons of water in the time it takes to brush your teeth.
- The average household consumes 107,000 gallons of water per year.
- The average person uses 75 gallons of water per day.

Water your lawn wisely

Lawn watering places a huge demand on the water supply in the summer. You can maintain a healthy green lawn with minimal watering by following these guidelines:

- Water early in the morning - between 4:00 a.m. and 10:00 a.m. is the best! Avoid watering later in the evening to prevent turfgrass diseases. *Do not water during restricted times* (10:00 a.m. to 6:00 p.m.).
- Watch the weather forecast to avoid watering in windy weather or before a rainfall.
- Adjust watering schedule to the season. Established lawns need little or no watering in the spring and fall. Requirements typically peak in June or July and begin tapering off in late August.
- Rule-of-thumb = 1 to 1.5 inches per week *minus rainfall* and keep intervals between waterings as long as possible to encourage deeper root growth.
- For sandy soils, apply 1/2" to 3/4" two times per week *minus rainfall*. Stop when soil is moist down to a 5" depth, or use a rain gauge to measure the amount to add. Typical sprinklers will add one quarter inch

per hour. Additional watering will simply drain below the root zone and leach minerals out of reach of the roots.

- Leave grass longer during hot weather (2.5 to 3.5 inches). It promotes deeper roots, shades growth crowns, and helps protect them from drying winds.

For more information, go to HYPERLINK "<http://www.extension.umn.edu/>" \t "_blank"www.extension.umn.edu and click on "garden" and "lawns"

Did You Know That...

- Less than one percent of Earth's water supply is suitable for drinking?
- Water is a finite resource. Water from your faucet may contain molecules that dinosaurs drank!
- In a recent survey, 88% ranked a shortage of good drinking water as their #1 environmental concern!
- How you use your land and your well not only impacts your water quality, but your neighbors water quality as well!

Most People In Minnesota Get Their Water From Wells!

Residents of Princeton rely on ground water for their drinking water supply. The Municipal Utility owns and operates four wells which draw water from a glacial aquifer several hundred feet underground. While unlikely, this aquifer could become contaminated by accidental or intentional land surface activities.

If you own your own well, your water supply may be even more vulnerable to surface contamination because it probably draws from a shallow aquifer.

What Is Groundwater?

Groundwater is the water that fills the small spaces between rock particles (sand, gravel, etc.) or cracks in solid rock. Rain, melting snow, or surface water becomes groundwater when it seeps in and fills these spaces. The top of this water-saturated zone is called the **Water Table**.

When water seeps in from the surface and reaches the **water table**, it begins moving towards points where it can escape, such as wells, rivers, or lakes.

An **aquifer** is any type of geological material such as sand or sandstone which can supply water to wells or springs.

The **groundwater** which supplies wells often comes from within a short distance of the well. How fast it moves depends on how much the well is pumped and what type of rock particles or bedrock it moves through.