

This conservation message is brought to you by the West Greeley Conservation District (WGCD). WGCD is located in Weld County and covers more than 1.6 million acres.

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## March 2015 Conservation Message:

There are two primary types of water, surface water and groundwater. Surface water is the water found above ground in rivers, lakes, seas, etc. Groundwater isn't as obvious a resource but it is still important to recognize that groundwater stewardship is for everyone, not just well owners. Groundwater is vital to the health of the environment and humanity's wellbeing, as 44% of the U.S. population depends on groundwater for drinking water. But what exactly is groundwater? Groundwater is the water that soaks into the soil from precipitation and moves downward to fill cracks and other openings in beds of rock and sand. Groundwater is a renewable resource, however the recharge rate varies depending on environmental conditions and Mother Nature is notoriously slow.

The figure to the right depicts the water table. The purple area is the saturated soil or groundwater and is located below the water table. The pink area is above the water table and may be wet but does not stay saturated. This zone contains air and some water and is able to support vegetation.

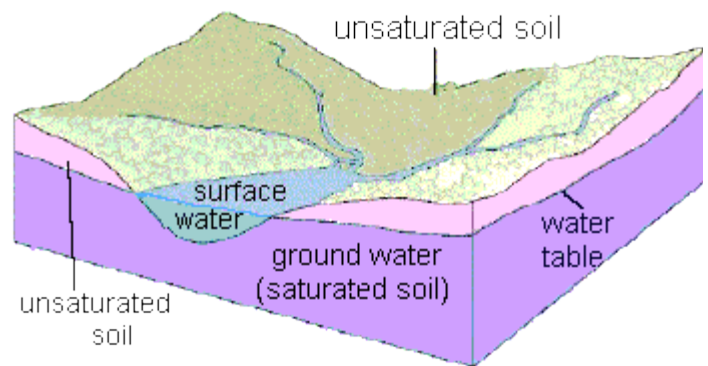
There is one hundred times more water in the ground than in all the world's rivers and lakes. Almost everywhere beneath the Earth's surface lies some water.

However, it is not always accessible, fresh enough, or may be difficult to locate or measure and is thus unavailable. Water at shallow depths (i.e. marsh) may be just a few hours old, water at moderate depths may be 100 years old, and water at great depths may be several thousands of years old. Almost all bodies of water, including lakes, rivers, and streams, are connected to groundwater resources.

Groundwater is used for many purposes including irrigation, public water supply, domestic water supply, livestock, industrial, and mining. Irrigation is the dominate use of groundwater resources. The Ogallala is the nation's largest aquifer, stretching from Texas to South Dakota. More than 90% of the water pumped from the Ogallala is used for agricultural irrigation. Wells that tap into groundwater can provide some of the highest quality drinking water. Wells must be drilled below the water table to access groundwater (refer to the above figure).

Groundwater depletion is the result of sustained groundwater pumping and is a problem in many areas. This is the result of pumping water out of the ground faster than it is replenished. Effects of groundwater depletion include the drying up of wells, reduction of water in streams and lakes, deterioration of water quality, increased pumping costs, and land subsidence. So what can you do to protect our groundwater? The following are ways in which we can all protect our groundwater resources:

- Don't pour water down the drain when there may be another use for it.
- Repair dripping faucets and toilets; one drip per second wastes 2,700 gallons of water a year.
- Install low flow household faucets and toilets and install energy/water efficient appliances.
- Turn the faucet off when not using the water (i.e. when you brush your teeth or do dishes).
- Plant native and drought resistant grasses and landscape plants.
- Raise the mower blade to a higher level to increase soil moisture and strengthen the root systems of your grasses.
- Properly store hazardous household substances (i.e. paints, paint thinners, petroleum products, fertilizers, herbicides, insecticides, and cleaning products) in secure containers.
- Mix hazardous household substances over concrete so spills can be cleaned or absorbed.
- Dispose of hazardous wastes at an appropriate waste disposal facility.
- Don't put hazardous wastes down the drain or in the toilet.



- Don't put waste down a dry or abandoned well.
- Service your septic system.
- If you have a water well, get a yearly maintenance check.
- Fix or replace any leaks in tanks which store hazardous substances.
- Decommission abandoned wells using a qualified water well contractor.

Sources: National Groundwater Association. Awareness Week. <http://www.ngwa.org/Events-Education/awareness/Pages/default.aspx>.

United State Geological Survey (USGS). The USGS Water Science School. <http://water.usgs.gov/edu/earthgw.html>.