



The 15th annual National Groundwater Awareness Week, March 10-16, 2013, is part of a growing national movement to raise public awareness about groundwater and water well stewardship.

Groundwater is something we don't always think about, but it is all around us, or more specifically, beneath us! Groundwater is essential to the health and well-being of humanity and the environment.

The California Geological Survey uses groundwater information in a variety of ways. Near earthquake faults, the depth to groundwater is important in evaluating the risk of **liquefaction**. Strong ground shaking of water-saturated soils can lead to liquefaction that can cause a building's foundation to sink. Liquefaction can also disrupt buried pipelines that transport water, fuel and waste products into and out of communities. Knowledge of depth to groundwater is used to design structures to counter the effects of liquefaction.

http://www.conservation.ca.gov/cgs/shzp/Documents/SHZ_FactSheet.pdf

Near surface water can be a factor in **landslide susceptibility**. After a rainy season, some hillsides can be weakened by the increase in water absorbed into the soil and rock. Engineering geologists look for conditions that can lead to landslides and provide corrective measures. When areas are affected by landslides, geologists map out the nature and extent of the slide so that it is documented for repair work and future land use planning.

<http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS58.pdf>

In a similar way, any **changes to a natural drainage** area can cause changes in the groundwater. When **timber is harvested for wood**, special attention and planning is given to make sure that new roads and logging plans do not increase erosion or disrupt the area's ability to safely absorb rainfall.

<http://www.conservation.ca.gov/cgs/fwgp/Pages/index.aspx>

Some **natural resources** are associated with groundwater. Sand and gravel essential to the construction of our highways and homes, is often mined near rivers or old river floodplains. Regulations are in place to prevent contamination of ground water by mining.

http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS_52_map.pdf

U.S. Groundwater Facts

- An estimated 99 percent of all available fresh water in the world is in the form of groundwater.
- Groundwater provides much of the flow of many streams; often lakes and streams are "windows" to the water table.
- Scientists estimate U.S. groundwater reserves to be at least 33,000 trillion gallons — equal to the amount discharged into the Gulf of Mexico by the Mississippi River in the past 200 years.
- The United States uses 79.6 billion gallons per day of fresh groundwater for public supply, private supply, irrigation, livestock, manufacturing, mining, thermoelectric power, and other purposes.
- Groundwater is tapped through wells placed in water-bearing soils and rocks beneath the surface of the Earth. There are nearly 15.9 million of these wells serving U.S. households, cities, business, and agriculture every day.
- Irrigation accounts for the largest use of groundwater in the United States, about 67.2 percent of all the groundwater pumped each day. Some 53.5 billion gallons of groundwater are used daily for agricultural irrigation from more than 407,913 wells. Irrigation is a major reason for the abundance of fresh produce and grains that we all enjoy.

Additional Groundwater Resources:



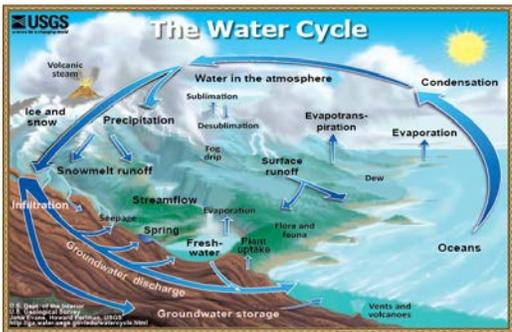
National Groundwater Awareness Week page:

<http://www.ngwa.org/Events-Education/awareness/Pages/default.aspx>

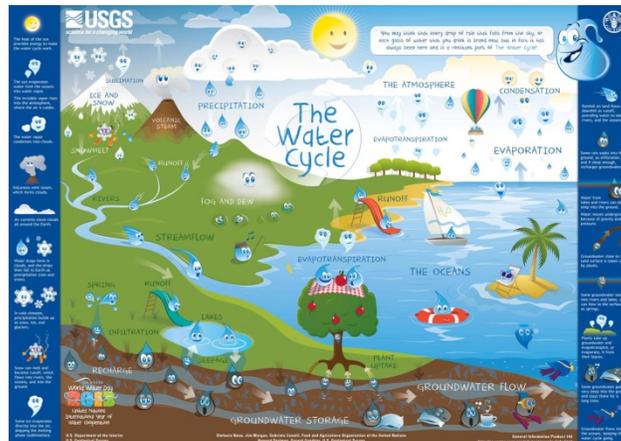


New Water Cycle Posters from the U.S. Geological Survey:

<http://ga.water.usgs.gov/edu/watercycle.html>

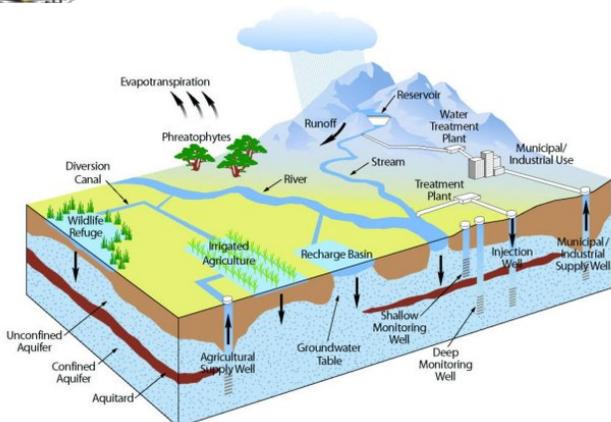


<http://ga.water.usgs.gov/edu/watercycle-kids.html>



California Department of Water Resources Groundwater Information:

<http://www.water.ca.gov/groundwater>



http://www.water.ca.gov/groundwater/groundwater_basics/hydrologic_cycle.cfm