



Protecting Fauquier County's groundwater protects our drinking water, environmental vitality and quality of life.

Groundwater



Sources of Information

Virginia Department of Environmental Quality
703-583-3800
<http://deq.state.va.us>

Fauquier County Environmental Services
540-422-8840

www.fauquiercounty.gov/government/departments/environmental

Fauquier County Water and Sanitation Authority
540-349-2092
www.fcwsa.org

National Response Center
800-424-8802
<http://nrc.uscg.mil>

Virginia Department of Health
540-347-6400
www.vdh.state.va.us

U.S. Environmental Protection Agency
800-438-2474
www.epa.gov

FAUQUIER COUNTY

Department of Community Development

PLANNING DIVISION

10 Hotel Street
Third Floor

Warrenton, Virginia 20186
Phone: 540-422-8210
Fax: 540-422-8211

Additional information available online at
www.fauquiercounty.gov



FAUQUIER COUNTY

Department of Community
Development

What Is Groundwater?

Groundwater is simply water that lies below the Earth's surface, whether held by the soil or lying in voids contained within bedrock. The source of groundwater is precipitation that fell on the Earth's surface. Some of this water evaporates, some is consumed by plants and animals, some runs off the surface and washes into lakes and streams, and some sinks and enters the local groundwater. Groundwater in one location may be connected to groundwater in another location. A particular system of interconnected groundwater is called an aquifer.

Interesting Facts about Aquifers

Many aquifers are instantaneously replenished after a surface rain. These aquifers are said to be "young" water. Aquifers containing "old" water

may have been replenished by rain that fell on the Earth's surface thousands of years ago.

Types of Groundwater Aquifers

Some of the bedrock voids are so small they are microscopic. For instance, a brick contains microscopic pores. A brick placed in water, will slowly absorb some water and begin filling these pores. Water moves through these aquifers slowly.

On the other end of the spectrum is bedrock containing large voids such as caves or the spaces between large-sized gravel. Water moves through these aquifers quickly. There are many aquifers that flow as fast as some surface rivers. An example of this is West Virginia's Cacapon Mountain aquifer, which is a tributary of the Potomac River.

Fauquier County Aquifers

The most common type of aquifer in Fauquier County is fractured bedrock aquifer. A type of rock that normally does not hold a lot of water may hold a lot of water if there is a large fracture or crack in the bedrock. In these aquifers, water may flow very fast in the direction of the crack, but very slowly between the next series of cracks. Water flow in these aquifers is highly variable, depending upon the direction of the cracks and how connected they are to each other.

Since most of the County's aquifers are the fractured bedrock type, things placed on the surface may find their way to the groundwater, unfiltered, within hours or days. Activity on the surface has a direct effect upon the groundwater quality. 84% of the residents in Fauquier County rely on groundwater for their drinking water. It is therefore critical to properly dispose of household cleaners, medications, paint products, auto fluids and gardening chemicals. The Fauquier County Environmental Services Department operates a Household Hazardous Waste (HHW) program to enable citizens to properly dispose of these materials. Responsible stormwater management, good landscaping, construction and agricultural practices, including the proper dosage of fertilizers and other house and farm chemicals, are also important in protecting the aquifer.

