



Role of Government in Groundwater Protection

Role of Federal, State, and Local Governments in Groundwater Protection

Subjects

Groundwater protection, aquifer protection, land use control, groundwater standards, federal legislation

Audience

Legislators, governmental officials, environmental organizations, industry, general public

Background

Groundwater is a vast resource that underlies the Earth's surface. About a quarter of all U.S. rainfall becomes groundwater. Groundwater provides much of the flow of many streams; many lakes and streams are "windows" to the water table. In large part, the flow in a stream represents water that has flowed from the ground into the stream channel. It is estimated by the U.S. Geological Survey that about 30 percent of U.S. stream flow is from groundwater, although it is higher in some locations, and less in others.

About 90 percent of our freshwater supplies lie underground, but less than 24 percent of the water Americans use comes from underground sources.

About 46 percent of the U.S. population uses groundwater for their drinking water source, including virtually all rural residents.

Groundwater conditions vary widely among regions based on differences in geology, climate, and topography.

Groundwater use varies with the demand of the local population and industrial and agricultural requirements.

Several federal statutes have groundwater components, although no single federal statute has been enacted to comprehensively address groundwater quality protection. The U.S. EPA, the USGS, and the U.S. Department

of Agriculture have the primary responsibility for groundwater activities at the federal level.

States have traditionally regulated water withdrawals and the permitting of water wells. The states have generally been the first to regulate activities which could adversely impact groundwater, Virtually all the states have either developed groundwater quality protection policies or are formulating or revising such policies.

Local government has traditionally controlled land use—a most important tool in managing

groundwater. Local government is closest to the people experiencing groundwater problems (which by their nature are usually limited in areal extent). Many local governments have enacted ordinances addressing groundwater quality.

Issue

Who should be responsible for groundwater quality protection?

Position

It is the position of the National Ground Water Association that a coordinated approach by all levels of government—federal, state, and local—is needed to effectively protect and manage groundwater quality. Assignment of groundwater quality management responsibilities must be based on the particular strengths of each governmental level and the nature of the resource.

The federal government's role should be one of research, technology transfer, and funding assistance. There is no need for enactment of comprehensive federal groundwater regulatory legislation at this time.

States have traditionally managed water development including regulating drillers, well construction and decommissioning, and water withdrawals. Such state efforts should continue to be encouraged and promoted. States should determine the level of protection afforded to groundwater. This level may vary with the use and value of the resource.

Local governments control land use, which is an essential element in protecting groundwater and preventing inappropriate uses of sites where the potential for exposure to wastes and/or contaminated groundwater exists. Federal and state groundwater protection and management efforts should recognize the need for land use controls and coordinate groundwater management with local governments.

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A coordinated approach by all levels of government is needed to effectively protect and manage groundwater quality.

References

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Dates

Originally adopted by the National Ground Water Association Board of Directors May 4, 1990, NGWA issue briefs are updated as needed to reflect changes in information, as noted here: technical amendment made February 4, 1992; brief reformatted August 2009; contacts updated April 19, 2012; technical update June 19, 2013; technical update July 21, 2014; technical update March 26, 2015; technical update February 24, 2016.

The National Ground Water Association is a not-for-profit professional society and trade association for the global groundwater industry. Our members around the world include leading public and private sector groundwater scientists, engineers, water well system professionals, manufacturers, and suppliers of groundwater-related products and services. The Association's vision is to be the leading groundwater association advocating for responsible development, management, and use of water.



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