



# WATER FACT SHEET

U.S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR

## U.S. GEOLOGICAL SURVEY SUPPORT TO OTHER FEDERAL AGENCIES—GROUND-WATER ACTIVITIES

### BACKGROUND

Many Federal agencies are involved in ground-water-related activities for which technical and scientific support is provided by the U.S. Geological Survey (USGS). This support ranges from water-resources data collection and analysis to major investigations that address complex hydrologic problems related to contamination. Representatives of the USGS also serve on various committees established by other Federal agencies to aid them in guidance or coordination related to ground-water quantity and quality. Many memorandums of understanding have been developed to formalize this support. The USGS also provides assistance through informal contacts nationwide that take place daily with specialists of other Federal agencies. Among the Federal agencies to which the USGS provides or has provided technical support are the U.S. Departments of Agriculture, Defense, and Energy, the U.S. Environmental Protection Agency, the U.S. Nuclear Regulatory Commission, and other Bureaus within the U.S. Department of the Interior.

Many Federal agencies reimburse the USGS for technical support activities. In fiscal year 1987, this reimbursement accounted for 20 percent of USGS funding, about half of which was for ground-water activities. Many of the broader based ground-water activities conducted by the USGS as part of congressionally-funded programs also contribute directly and indirectly to the ground-water hydrology and water-quality information needs of other Federal agencies. The data collection, analysis, and interpretive studies on the Nation's water resources are documented in more than 1,000 reports that are produced annually by the USGS. These reports are used by Federal agencies in support of the ground-water phases of their missions. Examples of technical support provided by the USGS for selected Federal agencies are listed below.

- **Department of the Interior**—For the Bureaus of Indian Affairs, Land Management, and Reclamation, and the Office of Surface Mining, the USGS collects ground-water data, conducts studies of the availability and characteristics of ground water, and

evaluates the current and potential effects of water-resources development and hazardous materials on aquifer systems and water quality.

- **Department of Defense (DOD)**—The USGS has a long history of providing technical support to DOD to assist the department in fulfilling its responsibilities related to ground-water issues. For the Corps of Engineers (COE), the USGS collects hydrologic data, including various types of ground-water quantity and quality data, and investigates and evaluates effects of public-works activities on ground-water systems and ground-water quality. The USGS has conducted numerous ground-water-resources studies on military bases. The USGS role in support of the DOD has increased substantially since 1985, including extensive involvement with the U.S. Air Force (USAF) Installation Restoration Program that addresses problems of ground-water contamination at military bases.
- **Department of Energy (DOE)**—The USGS conducts investigations on ground-water conditions and the effects of underground nuclear explosions on the ground-water environment of test sites, on the effects of existing and potential nuclear-waste storage sites, and on interactions between radioactive materials and various geohydrologic environments. The USGS has conducted many studies at candidate DOE low-level radioactive-waste repository sites, and currently has the lead responsibility for characterizing the hydrology and geology of the Nation's proposed high-level radioactive-waste repository site at Yucca Mountain, Nev.
- **Environmental Protection Agency (EPA)**—The USGS collects various types of ground-water data, including ground-water-quality data; conducts studies in support of ground-water phases of EPA's mission and provides technical support on ground-water/hydrologic issues for toxic-waste cleanup actions; participates on EPA committees established

to provide the agency with technical guidance and assistance in preparing regulations; provides hydrologists on a part-time or full-time basis to augment EPA Region and Headquarters technical staff; and evaluates ground-water reports prepared by contractors to meet "Super Fund" requirements.

- Nuclear Regulatory Commission (NRC)—The USGS reviews interpretations of hydrologic conditions at sites being evaluated as potential high-level radioactive waste repositories, and assists in the development of technical criteria in support of NRC's regulatory responsibilities.

Selected activities in support of ground-water activities of other Federal agencies:

- Provide technical assistance so that EPA can develop standards for the release of low-level waste contaminants into the environment.
- Provide technical assistance so that NRC can prepare criteria for the selection of low-level waste burial sites.
- Conduct hydrologic investigations for DOE at the Nevada Test Site to define the rate and direction of ground-water flow in support of DOE's weapons testing programs.
- Provide geohydrologic information to DOE to aid in the evaluation of Yucca Mountain, Nev., as a principal candidate site for a nuclear-waste repository.
- Collaborate with EPA and the State of Georgia in producing a comprehensive data-management system for environmental data.

- Prepared reports that describe the hydrology of eastern and western coal areas for the Bureau of Land Management and Mines, and the Office of Surface Mining.
- Conduct hydrogeologic studies at more than 20 military installations and provide technical review for associated DOD reports.
- Provide hydrologic information that aids EPA, COE, and State and local agencies in the cleanup of toxic-waste disposal sites.
- Provide technical support and information to the Bureau of Reclamation, EPA, and various State agencies that aids in the development of Phase I of the High Plains States Ground-Water Demonstration Program.
- Provide to the COE technical evaluations of the effects of public works, such as the Cross Florida Barge Canal, on aquifer hydrology and water quality.
- Conduct hydrologic investigations in cooperation with the Department of Agriculture and EPA to evaluate the effects of agricultural chemicals on ground water.

For further information on technical and overview reports, and hydrologic data, contact:

U.S. Geological Survey  
Hydrologic Information Unit  
419 National Center  
Reston, Virginia 22092