

Water Data Collection and Management Subactivity

Program	FY 2000 Estimate	Uncontrol. & Related Changes	Program Changes	FY 2001 Budget Request	Change from FY 2000
Hydrologic Networks and Analysis	25,428	+827	+4,459	30,714	+5,286
Water Information Delivery	3,739	+122	⁽¹⁾ +4,700	8,561	+4,822
Total Requirements \$000	29,167	+949	+9,159	39,275	+10,108

¹ See Program Change section for details on Community/Federal Information Partnerships (+\$2,000) and Resource Management Decision Support (+\$2,700).

Water Information Delivery

Current Program Highlights

The Water Information Delivery program funds a small but vital portion of the overall information delivery activity of the USGS water resources programs. Delivery of basic hydrologic data is funded directly as a part of the overall cost of the data collection activity (funded by the Federal or State portions of the Federal-State Cooperative Water Program, by other Federal agencies, or by the Hydrologic Networks and Analysis Program). Also, publication of project-specific findings is funded within the cost of each project. The purpose of the Water Information Delivery program is to assure adequate delivery of results beyond the immediate needs of funding agencies or programs. In particular, it funds the extra costs (beyond the costs of producing a product required for immediate local needs) of preparing and printing USGS professional papers, hydrologic atlases, and circulars.

Scientific and technical information products are central to the accomplishment of the USGS mission and provide the most important vehicle by which the results of research and investigations are made available for use by other governmental agencies, the private sector, and the general public. For over a century, the USGS has been collecting, compiling, and archiving basic information on the water resources of the United States in national databases. The USGS and others use these data to create products that address significant and emerging regional and national water resource issues. In addition to these synthesis activities, advances in technology have made it possible to put the USGS national databases at the fingertips of every American via the World Wide Web (WWW). The USGS makes data that are collected in real time available to all within a few minutes or hours. During times of crisis, managers and emergency management agencies can now make critical decisions for saving lives and property based on up-to-date information. And because some users require timely data in critical situations, USGS is planning system enhancements to improve the reliability of WWW service.

Regional and National Synthesis Activities -- Scientific data and interpretations from USGS water resources programs are synthesized to create products that address significant regional and national water resources topics. These products will present regional or national perspectives and describe the current thinking on specific and relevant water resources issues. Products are customized to convey the appropriate information to targeted audiences. Target

audiences for synthesis products range from technical to general audiences. Products resulting from this synthesis effort include specialized databases, maps, and brief reports.

Reports Process Streamlining -- USGS publications such as professional papers, hydrologic atlases, and circulars remain important vehicles for releasing the results of water resources investigations. These products are a critical link to many USGS customers. The USGS Water Resources Investigations Activity is continually evaluating and improving its publications process to reduce costs and provide greater efficiencies in the approval and preparation process. The effort is resulting in decentralized publication procedures and greater use of new technologies such as desktop publishing. As part of this ongoing streamlining effort, customers are systematically queried for their opinions about USGS water resources products. The results from these customer surveys are being used to improve the delivery and quality of USGS information products.

Data System Enhancement -- In the past, requests for USGS hydrologic data came in a variety of forms: telephone, mail, e-mail, and walk-in. Virtually all of these requests required individual attention, with USGS staff retrieving data from our databases and tailoring a product to user needs. These products took many forms: paper, magnetic tape, floppy disks, or files delivered electronically. The data delivery systems for USGS hydrologic data are being reengineered so that in many cases customer needs can be filled without any direct intervention by USGS staff. This is accomplished by using the WWW as the retrieval mechanism. Use of the WWW to provide hydrologic data is beneficial for two reasons. The timeliness of data delivery is greatly enhanced. Response is now virtually instantaneous. It also results in great cost savings for the USGS, because USGS staff time is not consumed with filling and tailoring individual requests. At the present time, data sets accessible on the WWW include almost all USGS historical streamflow daily values, water use data, and continuous records of the past 7 days for many streamflow stations. The capability does not yet exist for such automatic delivery of water quality data or data on wells and springs, but initial capabilities for WWW delivery of water quality data and data on wells have been planned and developed, and are under review and testing.

Feedback from USGS WWW customer

"... your work continues to be of extraordinary value as a tool in managing and helping others understand the state of our watershed. By making real time data available and understandable you have awakened interest and concern at the very grass roots level where progress is being made in leaps and bounds toward the goals of swimmable and fishable waters. ... In my work, whether as a real estate broker in the Berkshire Hills of western Massachusetts, as a Conservation Commissioner for my town of Stockbridge, or as a local watershed project coordinator for the Housatonic Valley Association, USGS map products and on-line web sites provide exceptional value for my tax dollar because they empower all of us to do far better work than we could do on our own. That's what I have always thought government was supposed to do, and you-all have hit the mark dead center."

*Shepley W. Evans
Stockbridge, MA*

Recent Accomplishments

Water Resources Applications Software -- The USGS provides water resource application software across the WWW to a multitude of users who need tools for modeling ground water flow, analyzing stream channel geometry, computing sediment discharge, modeling precipitation runoff, analyzing flood frequency, modeling solute transport and biodegradation, and a myriad other purposes. Topical areas include software for geochemistry, ground-water, surface-water,

water-quality, and general use applications. On-line requests for software have averaged about 7,100 per month with approximately 95 percent from sources external to the USGS. To respond to the growing interest in available software, the USGS is now providing information on updates and enhancements of specific software applications to those who register for automatic notification. (http://water.usgs.gov/software/software_registration.html)

Online National Map of Daily Streamflow Color Codes What's Up or Down -- As a further enhancement to its online availability of real-time streamflow information, the USGS announced in June 1999 that this crucial information, which is used by emergency officials, water managers, and recreationists, is now available for the first time as a daily national map that shows at a glance what streams are up or down across the Nation. The map, which is updated at intervals throughout the day, was especially useful for checking on drought conditions in the Mid-Atlantic during the dry summer of 1999, and for checking on water-resources conditions around the country. In addition to the national map, users can also access tables of regional streamflow data. As a quick snapshot of streamflow activity in recent days, an animation feature on the pages shows 5 days of streamflow in sequence. The daily streamflow conditions map can be viewed at <http://water.usgs.gov/public/dwc/national_map.html>

USGS Cuts Costs by Publishing Reports on CD-ROM -- The USGS now offers many of its reports on CD-ROM, instead of the traditional paper format. Thus far this has resulted in substantial cost savings. For one annual data report which was released during the summer of 1999, this practice cut publication costs from \$16.35 per copy to \$1.13 per copy and allowed the USGS to produce 2,000 copies, compared to only 425 copies of the previous year's report. This practice makes it possible to distribute USGS scientific data and results to a much broader audience than was previously possible, and saves valuable resources so that more funding is available to support research and monitoring activities.