

## Impacts of Funding Reductions – U.S. Geological Survey Cooperative Program in Texas

On February 7, 2005, Tarrant Regional Water District (TRWD) hosted a meeting of representatives from local, state and federal agencies, educators, legislators, and consultants in the water community to discuss the impacts and ramifications of the United States Geological Survey (USGS) Cooperator Stream Gaging Program funding cuts. Seventy-five people representing forty entities attended the meeting. The purpose of the meeting was to voice the concerns of the water community and provide information to our representatives in Washington regarding the critical need for the USGS Cooperator Program.

At issue is the reduction of stream and reservoir gaging stations nationwide, with our focus on Texas. The cooperator program originally began as a 50/50 cost-sharing program between the USGS and local cooperators to fund gage operation and data collection. It has now shifted to a much higher cost share to the local cooperator, some as high as 75/25. Consequently, at a time when water supply, emergency management and environmental monitoring are increasingly critical, collection of the basic data is shrinking. The data is used by a number of agencies and individuals, well beyond the needs of the local cooperator. It is in the national interest to have a single integrated system providing real-time and historical streamflow information for all users, including water managers, emergency managers, recreational water users, engineers, and scientists. The USGS Cooperative Program design is to do this. However, in the current environment, approximately seventy stations are lost annually nationwide. This continued eroding of basic data collection compromises all aspects of water supply, flood warning and environmental protection.

### **Presentations**

Experts described uses of the data, how the data was funded, and noted studies that have determined which gages are critical to the water industry. David Marshall, Engineering Services Director for TRWD opened the meeting explaining TRWD's use of this information. Robert Hirsch, Associate Director of Water for the USGS presented the current national and Texas programs, how the program is funded, improvements to the system over time and the National Streamflow Information Program (NSIP) (see <http://water.usgs.gov/nsip/>).

David R. Maidment, Director of the Center for Research in Water Resources, University of Texas at Austin discussed the logic used in development of the NSIP. The National Research Council (NRC) developed the NSIP to design a base streamflow network of Federally funded gages in the United States expressly to ensure long-term viability for national needs. The NRC deems streamflow data a "public good" because many national interests are served by having access to this information. Dr. Maidment also presented a study by the USGS and the Texas Water Development Board (TWDB) that identified the optimum number and locations of streamflow gages in Texas (see <http://water.usgs.gov/pubs/wri/wri014155/>). Both studies showed additional gages need to be added in Texas to fulfill the requirements put forth in the studies.

Jerry Nunn, Hydrologist in Charge, National Weather Service (NWS) West Gulf River Forecast Center spoke next. He stated that forecasts developed by the NWS for flooding are based on USGS gage points, and this enables calibration of their models during flood events. The NWS does not fund gages, but depends upon other agencies to do so. A loss of the information would result in less accurate flood forecasts.

Last to speak was Tom Ray, a professional engineer with Lockwood, Andrews and Newman, and chairman of the Federal Affairs panel of the Texas Water Conservation Association. Tom presented the plan for a "Texas Water Day" in Washington D.C., to inform legislators of the statewide issues associated with water, one being the USGS cooperative gaging program.

## **Breakout Sessions**

In the breakout sessions, the cooperator agencies discussed the impact of the shift from the original 50/50 cost share to a cost share that holds the federal dollars constant and requires the local agencies to fund cost increases. Cooperative agencies have had to balance cost to benefit, and some have reduced the number of gages to the point that any further reductions would greatly hinder the operations of the local agency, not to mention others who use the data. All agencies agree that as more requirements are developed to monitor streamflow and the environment, there will be a need to increase—not decrease—the number of gages. Since all new gages are now completely funded by the local agencies, the cost may hinder the development of the network. The agencies recognize the continuously improving quality of the USGS system; keeping overall cost increases low while adding services and products. But with the Federal share of the program shrinking, the cooperators share is rising rapidly. They agreed that for the public welfare, safety and national security, monitoring is an issue best addressed by the USGS, not an assembly of independent local cooperators.

The educators and consultants discussed the numerous ways they use the data to study a wide range of water-related issues. They discussed that the data is very valuable because of the quality and availability of the records. Long-term consistent records are imperative in evaluating hydrology and ecology. The USGS maintained the necessary consistency in data at a comparatively low cost to the nation. The group expressed the need to better inform the public and groups using the data about the loss of the network. They see that water resources and public safety may be jeopardized by the continued decline of the system.

The Federal agencies discussed how the loss of the network might affect them. Emergency management personnel depend upon the accessibility and accuracy of all the USGS information. During flooding events, the USGS is actively measuring the flows, allowing changes due to scour and fill to be reflected in the peak elevations projected for the flood. Most of the agencies are contacted by recreational users for information on streamflow. They feel this group needs to be informed somehow about the declining network to see if they would add support for maintaining the system. The Federal agencies also understand the value of the long-term records for the studies they conduct. Without the information, their duties would be impaired.

The regulatory agencies discussed the need for the information in the compacts between Texas and neighboring states and Mexico. The unbiased USGS information provides the data to monitor compliance of the compacts. Some of the data developed is funded from the compact parties, and some from other local cooperators. The Texas Council on Environmental Quality needs the data to ensure water suppliers meet their water rights requirements and to establish and monitor water quality standards in the water bodies. A reduction in the program would increase the time required to develop programs, like the Total Maximum Daily Load Program currently being studied, because flow would somehow have to be estimated for the water quality sites.

## **Concluding Remarks**

A breakout group developed an outline of a plan of action, which was discussed. The group feels the highest priority is to convey the value of the information to the decision makers. The group needs to know the proposed five-year budget for the USGS, contact other states and professional groups and develop support to fully fund the USGS NSIP as well as the cooperative program. The group sees a need for an entity to be the communication point for everyone. TRWD will act for the immediate future to move forward on working in the water community to keep information flowing on supporting USGS funding and enlisting help from others.