

PANEL

Federal Water Quality Information Responsibilities, Activities and Needs

Julian E. Pylant, Lieutenant Colonel
District Engineer

Albuquerque District
United States Army Corps of Engineers

It is certainly a pleasure to be here today to talk about a subject, the importance of which cannot be overstated. The theme of the 28th Annual New Mexico Water Conference is water quality and this federal panel is addressing specific federal activities in water quality data gathering and interpretation. These are particularly pertinent subjects for the U.S. Army Corps of Engineers, as we consider our involvement in the management of water resources in New Mexico and in the Albuquerque District. The corps owns and operates seven reservoir projects in New Mexico. These projects help manage more than 60 percent of the surface water supply in New Mexico. As a major part of the federal government's Middle Rio Grande Project, the corps built the Jemez Canyon, Abiquiu, Galisteo and Cochiti projects. In the Pecos River Basin, we built and now operate, Two Rivers Dam on the Rio Hondo near Roswell and our most recently completed project, Santa Rosa Lake on the Pecos River near Santa Rosa. In the Canadian River Basin, the corps constructed Conchas Dam in the 1930s which has been operated by the Albuquerque District since that time. We monitor the quality of the water supplies stored in Abiquiu, Cochiti, Santa Rosa and Conchas lakes by conducting monthly surveys of some of their physical and chemical parameters. These lakes are used by the public for outdoor recreation. These data have been collected since

1975 and serve as baseline information for the management of these water resources projects. The Albuquerque District also cooperates with the U.S. Geological Survey (USGS) by providing funds necessary for the collection and publication of water quality data at the various stream gauging sites throughout our jurisdiction in New Mexico.

Water quality is also considered in our authorized studies for additional water resource development in New Mexico. Each of our planning studies is performed in compliance with federal environmental regulations such as the Fish and Wildlife Coordination Act, the National Environmental Policy Act and the Clean Water Act. The Albuquerque District plays an active role in fulfilling the responsibilities charged to the Secretary of the Army by Section 404 of the Clean Water Act. By virtue of this law, we have the task of regulating more than 4,600 miles of New Mexico streams, major tributaries and adjacent wetlands. Historically, the corps has been involved in the regulation of the nation's waterways since passage of the 1899 River and Harbor Act. When Congress passed the Federal Water Pollution Control Act in 1972, the scope of the corps' regulatory program was broadened to include protection of water quality as well as navigation. Section 404A of the act required that the corps control the placement of fill and the discharge of dredge material in navigable waters. The specific purpose of the requirement was to restore and maintain the chemical, physical and biological integrity of the nation's waters. Last year, several enactments had some far-reaching reforms for the corps' regulation. These reforms have, by reducing unnecessary paperwork, speeded publications processing and extended the use of more convenient national permits. These new regulations also give more au-

thority and responsibility in general permits to those states which are developing general permit programs. The Clean Water Act also created a federal grant program to assist in the planning, designing and construction of wastewater treatment plants and sewer interceptors. The U.S. Army Corps of Engineers has an interagency agreement with the Environmental Protection Agency (EPA) to manage construction and the associated grant administration for those projects which EPA determines grant eligible. The Albuquerque District now is managing 20 actual construction contracts which are being conducted under 15 separate EPA grants for communities throughout New Mexico. The federal share of these contracts amounts to about \$56 million. Because of the diverse and multidisciplinary responsibilities carried out by professional engineers, biologists, outdoor recreation specialists and managers of my staff in planning and managing New Mexico's water resources, we will continue to have a comprehensive water quality data collection and evaluation program. I see a particular need in the Rio Grande Basin within New Mexico for an understanding of aquatic systems and impacts upon those systems such as was proposed by the Institute of Ecology at the University of Georgia in 1979. That report, on the role of sediment and nutrients in the aquatic environment, demonstrated a need for an overall, unified or holistic approach to water quality related research. Their overall or holistic approach was proposed as an alternative to previous work which had followed fragmentary or component analysis patterns of research and data collection. Information derived from a systems approach to research and data collection could be immensely important and useful to those of us who manage dynamic and integrated systems of water resource development such

as the network of federal reservoirs I've described here in New Mexico. The management of these water resources must be responsive to a myriad of objectives including, but certainly not limited to, public safety, water deliveries, economics and environmental quality. The near future promises to be even more demanding on the skills of those managing water resources. The needs and concerns of the public are becoming more diverse as society develops, changes and creates additional usage of our water supply. For my staff, these future trends already have begun to evolve in our jurisdictions outside New Mexico as well as within the state.

Within the Arkansas River Basin in Colorado, river user densities and conflicts among users such as fishermen and river floaters have increased to an extent that consideration of these types of recreational activities have become a significant factor in the permit process. Outside our area, the conflicts between fishermen and canoe enthusiasts on the Current River in southcentral Missouri have become known nationally. I don't, however, have to look to Missouri or even Colorado to see the increasing diversity of recreation activity making its way to the forefront of water resource management.

In the recently concluded session of the New Mexico State legislature, a bill to establish an extensive state park along the Rio Grande in Bernalillo County was passed. This public action can be considered a formal recognition of the need to more thoroughly integrate a growing demand for recreation along the state's riparian corridors.

The U.S. Army Corps of Engineers is experiencing considerable public pressure to consider river floating and fish habitat in its water regulation activities. Aided by the field data collection expertise of the

USGS, my staff has for the last four years, monitored the response of the Rio Grande to the operation of Cochiti Dam. We've documented a dramatic change in the physical appearance of the stream for the first 20 miles or so below the dam. Clear water leading into the lakes has removed previous deposits of sand and silt. What remains is a stream lined with cobbles and large gravel which, when combined with the improved quality of the clear water itself, has probably activated much greater biological activity in the stream. We're looking forward to the same general response on the Rio Chama below Abiquiu Dam due to the increased storage of San Juan/Chama project water and, of course, the resulting decreased amounts of sediment in the river. The challenge remains for the development of a method to bring data such as in streamflow recommendations for fishery enhancement, river floating, etc., into some forum where they can be considered along with specific requirements for flood control and traditional uses such as irrigation. Such a forum would improve our potential to manage the overall resource without neglecting any one segment. I also perceive a need to develop an increased amount of coordination and cooperation among the agencies who use water and water quality information. As our nation continues its struggle to control the enormous federal budget deficit, pressures on programs such as basic water quality data collection must become more efficient or, as an alternative, be cut back in scope. Pressures like that will intensify. I believe that responsible federal agencies must commit themselves to reevaluating our needs, determining innovative means, or providing information which is necessary to satisfy our common needs. We have to evaluate better methods for identifying information needs and implementing information col-

lection, to sharing programs within and among our agencies. We have to eliminate overlapping and redundancy and, in fact, do our job more efficiently. We have to spread the available funding where it can do the best for all of our programs. Conferences and seminars such as the one we are participating in here today are an initial step toward that end.