

WATER MANAGEMENT RESPONSIBILITIES

FOR THE RIO GRANDE BASIN

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The U.S. Army Corps of Engineers has been actively involved in water resource development in the Rio Grande Basin since the early 1940s and in a cursory way before then. Our active involvement followed the floods of 1941 in the Rio Grande Basin. The U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation (USBR) conducted joint studies during the mid 1940s, which resulted in companion reports by the two agencies (Corps of Engineers - House Document 243, and USBR House Document 653, 81st Congress, 2nd session). At the conclusion of these studies in 1947, the two agencies reached a joint agreement on a comprehensive, federal program for flood control and reclamation in the Rio Grande Basin in New Mexico. The agreement stated each agency's responsibility. The corps' was to construct three dams and reservoirs, the Bluewater Floodway, and rehabilitate the Rio Grande floodway levees. The USBR would have responsibility for Rio Grande channel rectification and rehabilitation of existing drainage and irrigation facilities within the middle valley.

The Flood Control Act of 1948 authorized the elements of the comprehensive plan of improvement for the Rio Grande with the exception of Chiflo Dam and Reservoir. From this authorization, the Jemez Canyon Dam was constructed and went into operation in 1954. The Abiquiu Dam project was substituted as a preferred alternative to the high and low Chamita projects on the Rio Chama and construction of this project was completed in 1963. A subsequent study and report lead to the authorization of the Cochiti Lake and Galisteo Dam projects. The construction of these projects was completed in 1975 and 1970 respectively.

The 1960 authorization legislation (Public Law 86-645) for the Cochiti and Galisteo projects contained the specific operating criteria for the Middle Rio Grande Flood Control projects. The federally mandated operating criteria is very specific on operational requirements with little latitude in the operation. The legislation does however, provide flexibility in the operation of the projects with advice and consent of the Rio Grande Compact Commission.

The operating criteria as set forth in PL 86-645 generally limits the operation of the Middle Rio Grande Reservoir projects to flood and sediment control. The only exception would be that storage may be allocated to permanent pools for recreation and fish and wildlife

purposes provided that water to establish and maintain such pools is obtained from sources outside the Rio Grande Basin (San Juan-Chama imported water). The operating criteria for the Middle Rio Grande projects are also very specific on how stored flood waters are withdrawn from storage. Generally the principles of flood control dictate that stored flood waters are released as rapidly as downstream conditions will permit. This principle allows for flood storage capacity to be available as soon as possible for subsequent events. However, the operating criteria for the Middle Rio Grande projects provides that during the months of July, August, September, and October when the natural inflow to Cochiti Lake at the Otowi gage is less than 1500 cubic feet per second (cfs), no water will be withdrawn from Cochiti Lake as long as the project has 212,000 acre-feet of available storage. Due to other language in the legislation, no flood waters are released from the other flood control projects during this period. However, if flood waters are released from the upstream projects, these waters will be retained in the Cochiti Lake project. Flood water "carried over" during this period is released from November 1 through March 31. The basis of this operational criteria was established by the three Rio Grande Compact states during the formulation of the Cochiti Lake project to ensure that water belonging to the users below Elephant

Butte Dam would actually be delivered to Elephant Butte.

The flood control operation of the past two years has been a real challenge, not only for the corps, but for all the federal and state agencies with water management responsibilities. There are several reasons for the challenge. Foremost, is that most all relevant laws, regulations and policy, and history are geared to water deficiencies rather than water excess. Similarly the laws, regulation and policies were formulated around the use of water for maximum beneficial economic return based on conditions and projections made 30 to 50 years ago. Today's increased interest in environmental, aesthetic, and special interest concerns, such as white water rafting and endangered species, were not integrated into the concepts for design and operation of these projects. Thus, no matter how noble the need or desire, the laws governing our actions generally preclude the corps from accommodating these needs and desires.

A couple of examples of these later-day needs and desires are the bald eagle population at Cochiti Lake, and the state of New Mexico statute known as "El Rio Chama Scenic and Pastoral River Act" enacted in 1977 (codified as Chapter 16, Article 4, NMSA, 1978).

The record does not reflect a wintering population of bald eagles in the vicinity of Cochiti Lake prior to the

construction of the project. Thus neither the authorization of the project, nor the original Environmental Impact Statement addressed the bald eagle habitat. Subsequent to initiation of storage, a significant wintering population of bald eagles has been attracted to the lake area due to the permanent pool. The Endangered Species Act placed the bald eagle in a category that indicates special attention be directed to the eagles. The corps has very little flexibility to enhance the eagle habitat since the project operation is spelled out in federal legislation, and the corps has little control of project lands except for flowage easements. The majority of the lands are controlled by either the U.S. Forest Service, the National Park Service or the Cochiti Pueblo. We are nevertheless under considerable pressure by a concerned public, whose interests are the bald eagles to protect and enhance the eagles' habitat by manipulating reservoir levels and releases.

The New Mexico El Rio Chama Scenic and Pastoral River Act of 1977 was enacted for the preservation, protection and maintenance of the natural and scenic beauty of designated portions of the Chama River. The authorization of a federal dam on the Rio Chama predates the state statute by 30 years and the construction of the Abiquiu Dam project predates the statute by 13 years. Section 16-4-6.E. of the statute states: "Nothing in El Rio Chama Scenic and Pastoral Act

shall be construed as being incompatible with existing state property laws. Nothing shall be construed to be incompatible with regulation of river flow for flood control or beneficial uses of water." To an engineer, it would seem reasonably clear that the act recognized the Abiquiu project and the operation of the project. Nevertheless the district attorney of Santa Fe has filed suit against the United States and the secretaries of the Army and Interior, essentially claiming the operation of the Abiquiu project and the Middle Rio Grande reservoirs are in violation of the New Mexico statute. A final decision in the case is still pending.

The 1985 operation of the Middle Rio Grande flood control projects was viewed by many as a conservation operation in lieu of a flood control operation since it involved integrating the Elephant Butte and Caballo projects into the overall flood control operation of the Rio Grande. As indicated previously, the normal water shortage in the basin had allowed certain conditions to develop that are not acceptable under conditions of high reservoir pools and reservoir spills. As examples, the Rio Grande channel through Truth or Consequences needed to be improved from about a 2,500 cfs capacity to 5,000 cfs capacity to reduce the risk of damage from potential spills from Elephant Butte. The earth dike at Elephant Butte showed signs of

distress in the fall of 1985 due to pool stages in Elephant Butte that had not been experienced for more than 40 years. These potentially hazardous items demanded remedial measures that required the upstream flood control dams be operated to minimize the risk and provide river conditions that allowed the remedial work.

The 1986 snowmelt runoff brought some new problems and challenges. With the conservation pools in most of the reservoirs full and basin conditions which produced larger than expected runoff, the flood from the runoff and reservoir releases extended into the Rio Grande below El Paso. This brought an additional interest into focus. The Rio Grande below El Paso is under the jurisdiction of the International Boundary and Water Commission and forms the boundary between the United States and Mexico. Because water reaches below Fort Quitman, Texas, farmers on both sides of the border have developed lands adjacent to the river. However, with the releases exceeding demand from Elephant Butte and Caballo reservoirs, large areas of the lands were flooded, and requests were received to operate the Middle Rio Grande flood control projects to achieve flood reduction in this area of the Rio Grande. Because the original authorization did not limit the reaches where flood control would be provided, the projects were operated to give limited relief to property owners in these lower

reaches of the Rio Grande.

In summary, I believe that the U.S. Army Corps of Engineers' Middle Rio Grande flood control projects have been a good investment for the taxpayers and to the water resource interest in the three Rio Grande Compact states. I believe the future potential benefits of these projects when operated in conjunction with the other federal projects in the basin, will be extensive. However, to maximize the benefits of the projects will require a comprehensive, unified approach by all interests to achieve a balance in use, with all interests gaining in the process.