

Philip Mutz grew up on a ranch in Eagle Nest, New Mexico. He earned a B.S. in civil engineering from the University of New Mexico and then spent two years in the U.S. Army, including a tour in the Philippine Islands. From 1946-1954 Phil was employed as a hydrologic engineer with the Bureau of Reclamation in Albuquerque and Monte Vista, Colorado. For the next two years Phil worked for the Colorado Water Conservation Board focusing on water resources investigations of the San Luis Valley in relation to the requirements for the delivery of water under terms of the Rio Grande Compact. For the following 34 years he worked for the New Mexico Interstate Stream Commission. Included in his various duties over the years was the operation and development of the Ute Dam and Reservoir Project. In 1990 Phil began providing consulting services to the New Mexico Office of the State Engineer and Interstate Stream Commission. In 1991 he was appointed by the Governor as New Mexico's Commissioner on both the Upper Colorado River and the Canadian River commissions.



Post Compact
Delivery of
Water by
New Mexico

POST COMPACT DELIVERY OF WATER BY NEW MEXICO

The Rio Grande Compact signed March 18, 1938, contains a schedule for delivery of water by New Mexico that uses the relationship of the recorded flow of the Rio Grande at the gaging station at Otowi Bridge near San Ildefonso to the recorded flow of the Rio Grande at the gaging station near San Marcial during the calendar year exclusive of the months of July, August and September. This “nine-month” schedule was adopted because the nine months that are included represented the best available relationship of the flows at the two gaging stations. Inclusion of the three other months, July, August and September, resulted in an erratic relation principally because of the wide variation in the discharge of the intervening tributary streams during summer thunderstorms.

The first year of Compact accounting was 1940 and both Colorado and New Mexico incurred under-deliveries. In the next two years, very large stream flow was predominant throughout the Rio Grande Basin and actual spill of water from Project Storage occurred in 1942. In accordance with provisions of the Compact, the debit/credit status as well as the accounting of releases from Project Storage began anew in 1943. Sufficient spill had occurred to spill all credit water in storage.

In 1943 and 1944, New Mexico accumulated substantial under-deliveries. As of January 1, 1945 the accrued status was a debit of 150,400 acre-feet.

On June 1, 1944, Commissioner McClure for New Mexico, requested a review of certain provisions of the Compact, pursuant to Article XIII, which provides for review of any provision that is not substantive in nature and which does not affect the basic principles upon which the Compact is founded. Commissioner McClure targeted review of the nine-month schedule stating that substantial quantities of water were being delivered past San Marcial during July, August and September.

The Rio Grande Compact Commission met on December 16, 1944 and adopted a resolution authorizing the Engineer Advisers to meet to

consider all data available bearing on the subject and report their findings and recommendations to the Commission at a later date.

The Engineer Advisers found that the task assigned required much time and effort. Finally, the Engineer Advisers reached agreement on a 12-month schedule of deliveries for New Mexico, which was submitted to the Compact Commission on February 24, 1947.

The Commission did not formally act on the report until its annual meeting held a year later in February 1948 at which time the Commission adopted a resolution finding:

- That because of changing physical conditions, reliable records of the amount of water passing the San Marcial stream gage are no longer obtainable and that the gage should be abandoned for Compact purposes.
- That the need for concurrent records at the San Marcial and San Acacia stream gages no longer exists and the San Acacia gage should be abandoned for Compact purposes.
- That it is desirable and necessary that the obligation of New Mexico to deliver water in the months of July, August and September be scheduled.
- That the change in gaging station and substitution of the new measurements recommended will result in substantially the same results so far as the rights and obligations to deliver water are concerned, and would have existed if such substitution of stations and measurements had not been made.
- That the recommended measurements and schedule be substituted for the nine-month schedule set forth in Article IV of the Compact.
- That the resolution was passed unanimously and shall be effective January 1, 1949 if within 120 days the Commissioner from each state shall have received from the Attorney General of his state an opinion approving the resolution.

At its annual meeting held in February 1949, the Chairman of the Commission announced that he had received, pursuant to the resolution of the Commission at its meeting in February 1948, opinions from the attorney generala of Colorado, New Mexico and Texas that the substitution of stations and measurement of deliveries of water by New Mexico set forth in the resolution was within the powers of the Commission.

It should be noted that Article V of the Com-

compact provides that with the unanimous approval of the Commission, the gaging stations referred to in the Compact may be abandoned and another station established and new measurements shall be substituted that will result in substantially the same results, so far as the rights and obligations to deliver water are concerned, as would have existed if such substitution of stations and measurements had not been made.

It is ironic that Commissioner McClure for New Mexico during negotiation of the Compact, rejected a report by the Engineering Committee which recommended a schedule for New Mexico that was similar to the schedule substituted by the resolution of the Commission adopted in February 1948; Commissioner McClure cited the proposed 12-month schedule as well as other points in his rejection of the Committee's recommendation.

New Mexico continued to underdeliver water and when the 12-month schedule became effective on January 1, 1949, the accrued debit was 268,400 acre-feet. However, such accrued debit was within the limitations imposed by the Compact because sufficient 'debit water' was in storage in El Vado Reservoir.

The large, continuous flow in the Rio Grande resulting from the extensive precipitation that accrued through the watershed in 1941 and 1942 caused substantial damage to the channel of the river in the Middle Valley. The irrigation works of the Conservancy District, which were constructed in the early 1930s, were damaged, especially the outfalls for the drains that became clogged with sediment or were inoperative because the river aggraded due to sedimentation. Also an extensive delta area was created in the head of Elephant Butte Reservoir.

In 1942, the Bureau of Reclamation and the Corps of Engineers launched a program of coordinated studies of the problem area. Following the end of World War II, the joint studies were intensified and in November 1947 the Secretary of the Interior formally approved a detailed plan submitted by the two agencies. The plan included reconstruction of the irrigation works and financial reorganization of the Conservancy District, flood control reservoirs on the Rio Grande and Rio Chama, more drains in the Middle Valley and extensive rectification of the river channel between Velarde and Elephant Butte Reservoir. The joint

Middle Rio Grande Project was authorized by Congress in June 1948. This authorization was supplemented by a further act of Congress in 1950.

The authorization did not include a flood control reservoir on the Rio Grande as proposed in the 1947 plan. The authorization did include Jemez Canyon Reservoir and the Low Chamita Dam near the mouth of Rio Chama. Abiquiu Reservoir subsequently was constructed in lieu of the Low Chamita Dam. The authorization also included the low-flow channel from San Acacia to Elephant Butte Reservoir.

The Interstate Stream Commission cooperated closely with both federal agencies throughout the period of study and reviewed and commented on the several reports. Also, pending completion of the study and authorization of the Middle Rio Grande Project, the New Mexico Congressional delegation sponsored federal legislation providing funding to the Corps of Engineers to finance emergency flood control work on rivers in the state where conditions were critical. However, action on the legislation was delayed. Because some work on the Rio Grande was urgent, legislation was introduced in the 19th Legislature of New Mexico to expend moneys from the Improvement of the Rio Grande Income Fund, a state trust fund, to finance construction of acutely needed works. The legislature appropriated the funds to the Interstate Stream Commission in February 1949. The work was completed before the spring runoff of that year. In addition, the State Legislature in 1951 appropriated additional funds to finance construction of a pilot channel and drains in the flooded lands in the San Marcial area to partially drain these areas in advance of implementation of the authorized Federal Project. Both the Middle Rio Grande Conservancy District and Elephant Butte Irrigation District provided funds to supplement the state appropriations. Under this program, a small channel about 16 miles long was completed in early 1952.

During the period 1943-1950, inclusive, the flow of the Rio Grande was in the aggregate, below average. In 1950, at the request of the Conservancy District, an intricate arrangement was finally agreed upon to permit the District to release New Mexico debit water held in El Vado Reservoir to provide water to sustain at least the perennial crops in the Middle Valley. The arrangement included

relinquishment to Texas of an equivalent amount of Colorado credit water being held in storage in Elephant Butte Reservoir. In exchange, Colorado was to be able to store water in Platoro Reservoir scheduled for completion in 1951.

Runoff in 1950 was about 50 percent of normal. At the end of 1950, usable water in storage in Elephant Butte Reservoir was less than 400,000 acre-feet and storage in El Vado Reservoir was only about 29,000 acre-feet.

In 1949 and 1950, New Mexico accumulated small over-deliveries under the 12-month schedule, and as of January 1, 1951, the accrued debit was reduced to 263,100 acre-feet.

In 1951, the situation on the Rio Grande quickly became very serious for New Mexico. As of January 1, 1951, New Mexico was in its first violation of the Rio Grande Compact because the accrued debit exceeded the limitations of the Compact. Because there was less than 400,000 acre-feet of usable water in Elephant Butte and Caballo reservoirs, storage could not be made in El Vado Reservoir. Further, Texas demanded the release of the 29,000 acre-feet of debit water remaining in El Vado, which would drain the reservoir. The resulting releases from El Vado created much publicity in the newspapers. The Indian pueblos contended that their rights were superior to the Compact and, under their arrangement with the Conservancy District, water should be stored in El Vado for their use. The Department of Game and Fish took the position, supported by thousands of sportsman, that complete draining of El Vado could not be justified.

Releases of storage from El Vado were stopped by the Conservancy District before the reservoir drained completely because of threatened damage to the outlet works due to problems with ice. A request was made by Texas to release the remaining storage and the State Engineer was unable to enforce the request without Court action. Subsequently, storage was increased by the District during the spring runoff. Release of storage followed but only in quantities just sufficient to augment the flow of the Rio Grande to supply the demand in the Middle Valley.

In May 1951, the Conservancy District resolved that its policy is to take care of the needs of the farmers in the District insofar as possible.

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Storage in Elephant Butte Reservoir was reduced to its lowest level since initial filling and only contained 19,000 acre-feet on September 30, 1951.

Texas was not sympathetic and in October 1951 filed suit in the U.S. Supreme Court against the State of New Mexico and the Conservancy District alleging violations of the Rio Grande Compact citing accrued debit in excess of the limitations of the Compact and operation of reservoirs contrary to the Compact provisions.

Thereafter, the United States submitted a memorandum to the Court concluding that the United States was an indispensable party to the action.

In 1954, the Special Master appointed by the Court recommended that the suit be dismissed in the absence of the United States as an indispensable party because of the rights of the Indians.

Construction of the features of the Middle Rio Grande Project proceeded during the 1950s. In February 1957, the suit brought by Texas was dismissed by the Court because of the absence of the United States as an indispensable party.

The channel rectification and other works of the Middle Rio Grande Project began to show positive effects even prior to completion. New Mexico's delivery of water improved beginning about 1957 with over-delivery of the Compact obligations. New Mexico's accrued debit status, which aggregated 529,000 acre-feet at the end of 1956, was erased at the end of 1972. New Mexico was in Compact compliance in 1970 when the accrued debit was reduced to 182,000 acre-feet.

New Mexico has been in continuous compliance with its delivery obligation since 1969 and at the end of 1998 had an accrued credit of 153,000 acre-feet. Abundant precipitation in the watershed beginning in 1983 and continuing to date has contributed as well as other factors including improvement of water conveyance facilities in the Middle Valley under the cooperative program of the Interstate Stream Commission, the Conservancy District and the Bureau of Reclamation. Funding of a large portion of the work is from the Improvement of the Rio Grande Income Fund. Other contributing factors likely include a full supply of water for the Conservancy District and return flow from groundwater pumping.