Written Testimony
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Committee on Energy and Natural Resources

on

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New Mexico Drought Preparedness Act of 2015

Respectfully Submitted By Adrian Oglesby
Middle Rio Grande Conservancy District, Vice-Chair
University of New Mexico Utton Transboundary Resources Center, Director

P.O. Box 581
87103-0581
1931 Second St. SW
Albuquerque, NM
87102-4515
505·247·0234
Fax # 505·243·7308

Rio Grande Water Development in New Mexico

The Upper Rio Grande originates in the San Juan and Sangre de Cristo mountain ranges in southern Colorado and northern New Mexico. It bisects the San Luis Valley in Colorado and the entire state of New Mexico with this reach culminating at Fort Quitman, Texas. This portion of the Rio Grande is administered under the Rio Grande Compact by a federal appointee and three Commissioners from Colorado, New Mexico and Texas with support from the United States Geological Survey, the Bureau of Reclamation, and the Army Corps of Engineers. The annual mean flow as measured at the Otowi gage in New Mexico is 1 million acre-feet with wide variation, ranging from 250,000 to 2.5 million acre-feet. Irrigated agriculture consists of approximately 600,000 acres in Colorado, 200,000 acres in New Mexico, 100,000 acres in Texas. Additionally, up to 60,000 acre-feet is delivered to lands within the Republic of Mexico via the Rio Grande Project under the 1906 Convention between the United States and Mexico. The predominate crop due to climate, water supplies and labor considerations is alfalfa. Other crops include potatoes, chile, corn, fruit and pecans.

Due to rapid development in Colorado in the late 1800s, water shortages occurred in New Mexico and Texas on lands that had been irrigated dating back to the 1600s. Litigation and international concerns led to the development of Reclamation's Rio Grande Project that built Elephant Butte and Caballo dams as well as a federal embargo against water development in Colorado and New Mexico pending the negotiation of the 1939 Rio Grande Compact. Since that time, there have been significant legal challenges raised by the states during drought periods that led to amendments to the Compact. There is currently a Supreme Court case whereby Texas alleges that New Mexico's water administration rules within the Mesilla Bolson are allowing excessive groundwater pumping that limits surface water deliveries through the riverbed to Texas, and by extension, to the Republic of Mexico. This case has been assigned to a Special Master and is proceeding at significant cost to the litigants and the United States.

The upper Rio Grande differs significantly from the Colorado River Compact. On the Colorado River the Secretary is the river master and can mediate differences between the

seven states given the United States' ownership of mainstem and tributary reservoirs serving all seven states. There are only two mainstem reservoirs on the upper Rio Grande, Elephant Butte/Caballo dams above Las Cruces and Cochiti Dam 60 miles north of Albuquerque, which is operated only as a flood control feature by the Corps of Engineers. Federal reservoirs were developed case-by-case for specific purposes with narrow authorities; they were not planned for use in administering the entire Rio Grande. This means that the upper states of Colorado and New Mexico have minimal storage options and must survive on the whims of the climate through a "run-of-the-river" type operation while meeting downstream delivery requirements as determined by the Compact. There have been a number of water short (drought) periods that have tested the resilience of the Compact. The 1950s was the worst, until the drought that began in the late 1990s and persists today. This has been the first period in recorded history where there has been far below average spring runoff for five consecutive years.

The Middle Rio Grande Valley and the Middle Rio Grande Conservancy District

The Middle Rio Grande Valley begins at the base of Cochiti Dam and extends some 160 miles south to Bosque del Apache National Wildlife Refuge. Approximately 65,000 acres are currently being irrigated in the Middle Rio Grande by the Middle Rio Grande Conservancy District (District). The District operates and maintains over 1,200 linear miles of canals, laterals, ditches and drains to meet the needs of its irrigators within six Native American Pueblos and four counties. The District serves the irrigation needs of the six middle Rio Grande Pueblos, which have 8,940 acres of lands with prior and paramount water rights and an additional 11,900 acres of reclaimed irrigated lands.

The District is a surface water management entity and does not hold any ground water permits for its operations. The middle valley water supply system is a "run-of-the-river" operation, meaning that the spring runoff and summer monsoons provide the predominant flows to four diversion dams in the middle valley. There is some upstream storage on the Rio Chama at El Vado Dam (maximum of 186,000 acre-feet) to supplement late summer base flows. El Vado storage is also limited by the terms of the Rio Grande Compact, making the middle valley subject to frequent shortages late in the season.

During the drought of the 1950s, the State Engineer "closed" the Middle Rio Grande basin to further unpermitted ground water appropriations. This required that new ground water wells be permitted and that their depletions be "offset" through the retirement of existing surface water associated with pre-1907 water rights. New Mexico and Colorado also incurred significant under deliveries to the Rio Grande Project during this period that severely restricted the District's use of El Vado Reservoir. This situation helped motivate completion of the San Juan-Chama Project to harness New Mexico's share of the Colorado River Compact, bringing an additional 96,000 acre-feet of water to the middle valley. This provided some relief but with shortages being experienced on the San Juan-Chama Project for the first time last year and likely this year, the climatic conditions and Compact restrictions are severely limiting the District's abilities to manage shortages during this prolonged drought.

Endangered Species Act litigation led to a 2003 Biological Opinion for Middle Rio Grande water operations. This solidified the Middle Rio Grande Endangered Species Collaborative Program that authorized Reclamation to acquire San Juan-Chama project water from "willing" lessors to address habitat needs and set up a scientifically based adaptive management approach to conserve endangered species. The District is a prominent member of the Collaborative Program along with three federal agencies and twelve other state, tribal and local entities. The District has made significant commitments

to off-set its actions and implemented conservation measures to advance the recovery of the silvery minnow, southwestern willow flycatcher, the yellow-billed cuckoo, and the meadow jumping mouse. The added conservation actions associated with the District's and Reclamation's operations have significantly enhanced the in-river conditions within the system but have reached their limitations based on water availability and the relative inflexibility of the federal reservoir system. The 2003 Biological Opinion is prescriptive and inflexible. The District is hopeful that the forthcoming 2016 Biological Opinion will move the Program in a new direction that addresses both the needs of the species and the water users in an objective scientifically-based adaptive management process within both the limits of available water, human and fiscal resources.

The New Mexico Drought Preparedness Act of 2015, sponsored by both Senators Udall and Heinrich, is principally designed to build upon and enhance the Secure Water Act of 2008. It will provide resources and flexibilities necessary to address changing climatic conditions in the desert southwest and help agencies, irrigation districts, and other water users to better cope with the wide variations in water supplies while meeting the requirements of the Endangered Species Act.

Section three of the New Mexico Drought Preparedness Act proposes the establishment of a water acquisition program that is designed to assist in providing voluntary leasing options for farmers and other water right holders. This will allow for additional water to remain to support endangered species and to assist the District with water management and efficiency improvements. The District generally supports this effort with the understanding that leasing actions are only useful if there is actual water available for the purpose identified. Taken in concert with other sections of the bill, this water-leasing program can be a useful but limited tool for promoting agricultural and ecological resiliency. The District is uniquely positioned to sponsor a "pilot" leasing program for assuring that pre-1907 water rights remained tied to the land, while affording an opportunity for a targeted water supply to be available to sustain important habitat areas located south of Isleta Diversion Dam.

Section four of the New Mexico Drought Preparedness Act provides funding to address areas the District believes are necessary for water management in the long-term, particularly in reaches of the river where summer drying is a common occurrence even in "good" water years. Actions already taken by the District to strategically deliver water to the river can be significantly enhanced by investments in efficiency measures focused on enhancing habitat where water is consistently available.

Section five of the New Mexico Drought Preparedness Act addresses the need to provide critical flexibility within the federal reservoir system, with a particular emphasis on Cochiti Dam and Reservoir given that it is on the mainstem at the top of the Middle Rio Grande. Having the appropriate degree of authority provided to the Corps and/or Reclamation for managing a "conservation" pool for operational purposes will allow for spring pulse re-regulation to more accurately meet fish spawn and recruitment flows, preserve in-system flows during monsoon events, and generally assist with Compact delivery needs (assuming the three states can agree on needed adjustments to the Compact). If the Army Corps of Engineers cannot deviate from current operations and retain the ability to modify operations in the long-term, spawning of the silver minnow will be difficult and the species may not be recovered. We fully recognize the potential impacts that any changes to Cochiti authorization may have to Cochiti Pueblo and we fully support any action necessary to address their concerns. This is especially important given the physical and social damage that the construction of Cochiti Dam inflicted on Cochiti Pueblo.

Section six of the New Mexico Drought Preparedness Act addresses the need for a comprehensive review of the upper Rio Grande that includes federal reservoir authorities, the Rio Grande Compact, and water management practices within the basin. We support such a study and have become a primary local partner with Reclamation in the development and completion of such a basin-wide study that is already funded. The District recommends that funding from this bill be dedicated to an independent science panel to provide a peer view process to help guide the Upper Rio Grande Basin Study process and provide assurance that it will have a scientifically-based focus with a sound and comprehensive review of policy matters with meaningful participation by agencies, Pueblos and other interests.

The District supports sections seven through thirteen of the Act as they mirror much of what is in other drought resiliency bills, specifically Senator Feinstein's bill to assist California with its challenging water supply problems. We hope that there is relief in the near term as climatic conditions shift in the direction of a strong El Niño for the severely dry southwest - but hope is not a plan. These bills are designed to provide resiliency in times of drought. The Middle Rio Grande Conservancy District will continue to do its part within its capabilities to achieve long-term and continuous improvements to preserve the agricultural and cultural uses of water while preserving the outstanding natural resources of the Middle Rio Grande Valley.