MINUTES
of the
FOURTH MEETING
of the
DROUGHT SUBCOMMITTEE

October 14, 2013
NMSU Golf Course Banquet Room
Las Cruces

The fourth meeting of the Drought Subcommittee of the Water and Natural Resources Committee was called to order at 12:15 p.m. by Senator Joseph Cervantes, chair, in the Banquet Room of the NMSU Golf Course in Las Cruces.

Present
Sen. Joseph Cervantes, Chair
Rep. Brian F. Egolf, Jr., Vice Chair
Rep. Rodolpho "Rudy" S. Martinez
Sen. John Arthur Smith
Sen. Peter Wirth

Absent
Rep. Phillip M. Archuleta
Sen. Steven P. Neville
Rep. Tomás E. Salazar
Sen. Pat Woods

Advisory Members
Rep. Cathrynn N. Brown
Sen. Carlos R. Cisneros
Rep. Larry A. Larrañaga
Sen. Mary Kay Papen
Rep. Don L. Tripp
Rep. Bob Wooley

Sen. Stuart Ingle

Guest Legislators
Sen. Lee S. Cotter
Sen. Phil A. Griego
Sen. Benny Shendo, Jr.
Rep. Jeff Steinborn
Rep. Mimi Stewart

Staff
Jon Boller, Legislative Council Service (LCS)
Gordon Meeks, LCS
Jennifer Dana, LCS

Guests
The guest list is in the original meeting file.

Handouts

Handouts and other written testimony can be found in the meeting file or on the LCS web site at www.nmlegis.gov.

Monday, October 14

Introductions and Welcome

Dan Howard, provost, New Mexico State University (NMSU), welcomed the subcommittee to NMSU and gave a brief overview of the university's research projects regarding water and the work of the Water Resources Research Institute (WRRI), which has 80 faculty members working on water issues in one form or another. Dr. Howard also invited the committee to a reception at the WRRI following the meeting.

Gila River and Arizona Water Settlements Act (AWSA)

Craig Roepke, Interstate Stream Commission (ISC), briefly summarized the history of the AWSA, noting that the act was passed by Congress in 2004 to settle water rights claims in Arizona and the Gila River Basin and that it provides for the potential development of a project to use up to 14,000 acre-feet of water in the state, a 50% increase of what New Mexico has a right to use today. Mr. Roepke outlined the ISC's work plan, budget and time line for fiscal year 2014 and explained that the ISC is evaluating and assessing 15 proposed projects, three of which are diversion and storage projects. Preliminary results of most of the evaluations and studies should be available by January 2014, he added. The ISC, he said, must notify the secretary of the interior by December 31, 2014 of its intention to construct a New Mexico unit project to divert up to 14,000 acre-feet of water per year, in which case the state could receive an additional $62 million to construct the project.

Mr. Roepke also described the conditions that must be met before New Mexico can divert any of the AWSA water and the tension that exists between diverting water for irrigation and leaving water in the river during low-flow conditions. He suggested that diverting and storing flood flows could help alleviate this tension by making water available to both in times of shortages.

John Cornell, president of the Dona Ana County Associated Sportsmen and spokesman for the New Mexico Wildlife Federation (NMWF), conveyed the NMWF's opposition to a partially funded federal diversion and inter-basin water transfer pipeline on the Gila River. He said the NMWF does, however, support the expenditure of the tens of millions of dollars of federal funds available for locally identified water supply projects designed to meet the four southwestern counties' water needs. Mr. Cornell stressed the importance of sportsmen to the state's economy, noting that they contributed $579 million to New Mexico's economy in 2011, which was more than the combined receipts of $539 million for pecans, hay, cotton and chile. He said that the proposals to build large diversion and storage projects on the Gila River will cost far more than the nondiversionary alternatives, which he said could produce or save 22,000 acre-feet of water annually while still maintaining the Gila River's ecological and recreational values.

Luis Varela, Paola Rivera, Marco Chavez and Bianca Fernandez, members of the A.T.O.M.I.C. Youth Group of Santa Rosa de Lima Catholic Church in Las Cruces, presented a video of the group's recent visit to the Gila National Forest and hike along the West Fork of the Gila River. Each then spoke briefly about the experience and urged the subcommittee to preserve the Gila River as it is and protect its natural beauty and free-flowing nature.

Richard McInturff, administrator for the City of Deming, briefly described the history of the AWSA and how it provides an opportunity for New Mexico to develop one or more projects to use up to 14,000 acre-feet of water in the Gila Basin. Deming was part of the stakeholders' group that was formed to implement the process that led to proposals for the utilization of that water and for the use of up to $90 million for projects to meet water supply demands in the four-county region, he explained. Three proposals that are eligible for an additional $62 million are now under consideration by the ISC, one of which is the city's Southwest New Mexico Regional Water Supply Project proposal, he said. That proposal, he stressed, does not entail the construction of a dam but rather would use a caisson-type diversion that would divert water during flood-stage conditions to a side canyon reservoir. He said that the cost of construction for the project is estimated to be approximately $190 million, with operating and maintenance costs of $2.88 per 1,000 gallons. He cautioned that these are preliminary figures, given that full design and engineering plans are not yet done, and the National Environmental Policy Act (NEPA) process could take years to complete. Mr. McInturff also noted that the project is supported by at least 15 county, municipal and other local governing bodies in the southwest region.

Alex Thall, Gila/San Francisco Water Commission, said that according to a NMSU study, people have been diverting, irrigating and storing water along the Gila River since pre-Hispanic times, and he added that the Gila Basin is one of the most protected basins in the United States. He noted that the current allocation of water to New Mexico was based on use in the 1950s, when drought and wars resulted in a much reduced acreage from that which existed before those events. The AWSA, he explained, tries to address that problem by allowing the region to recapture at least some of the water lost during court battles in the 1960s. He said that no proposal being considered will dam the Gila River, but rather will divert and store water much like the existing diversion for Bill Evans Lake or Quemado Lake. Mr. Thall emphasized the need to wait for the NEPA process to run its course so that there will be a thorough assessment of the proposed project, with full public involvement.

Lori Weigel, Public Opinion Strategies, presented via webcast the results of a statewide survey of 500 voters on their opinions concerning water policy. Ms. Weigel said the results showed that New Mexicans put a high value on the state's rivers; that they reject both the concept and specifics of a river diversion project; that the more details that voters hear about a potential Gila River project, the less they like the idea; and that less than one-third of the voters support increased taxes to support the construction of a pipeline to divert water from the Gila River. Ms. Weigel noted that even in southwestern New Mexico, voters are divided in their initial opinions of the proposed Gila River diversion project.

Plains of San Agustin Ground Water Appropriation

Michel Jichlinski, project director, Augustin Plains Ranch (APR) Water Project, outlined a proposal to develop a well field in the Plains of San Agustin capable of producing up to 54,000 acre-feet of water per year for delivery by pipeline to the Rio Rancho-Albuquerque metropolitan region. Mr. Jichlinkski said that the aquifer underlying the basin is estimated to hold 50 million acre-feet of water and that the project will withdraw only 0.1% of that amount per year. In addition, he said, the project proposes to increase recharge of the aquifer by 54,000 acre-feet per year to ensure sustainability and nonimpairment. Mr. Jichlinski also noted that the $600 million project will be privately financed and will not require any financial outlay from the state.

Eileen Dodds, secretary of the San Agustin Water Coalition, reported that the APR's application to appropriate the 54,000 acre-feet was rejected by the state engineer, a decision that was confirmed by the district court and that is now being appealed by the APR. Ms. Dodds expressed concern about the amount of water available in the basin, noting that even with rainfall of eight to 14 inches late this summer, the soil is still dry at a depth of three or four inches, whereas before the drought in the spring of 2007, soil moisture was found as deep as five feet. She questioned whether it was wise to allow a withdrawal of over half of the estimated 100,000 acre-feet of annual recharge coming from the plain's 1,275,000 acres from an area overlying only 1.4% of that acreage. Since the 37 wells are concentrated on 18,220 acres, she explained, that area will be depleted at a much higher rate. Ms. Dodds also questioned whether the proposed plans for infiltration basins adequately took into account the complex geology underlying the basin, and cautioned that finite resources should not be tapped without first conducting a full hydrologic study.

Agricultural Water Conservation Hydrology

Phil King, Department of Civil Engineering, NMSU, outlined several definitions of water conservation and stressed that one size does not fit all when it comes to implementing conservation measures. A given conservation measure may result in less diversions from a river but still not result in less depletions to the system, while another may reduce diversions but actually increase depletions to the system. An example of the latter can happen with the conversion from traditional to high-efficiency irrigation, he explained. Less water needs to be applied to a crop with drip irrigation than with traditional flood irrigation, and yields per acre increase; but more water is actually used by the crop and thus "lost" to the system due to much reduced return flows, Dr. King explained. As such, he said, conservation measures need to fit in with the local hydrology and with the institutional setting. When evaluating what conservation measures to encourage, Dr. King said to consider effects on return flow and water quality, quantify potential impairment of other water rights and look at surface water/ground water interactions.

Sam Fernald, WRRI, picking up where Dr. King left off, compared the effect of agricultural water conservation measures in different hydrologic regions of New Mexico. Dr. Fernald compared the effect of agricultural conservation methods in regions of relict ground water, such as the Ogallala aquifer, with those in regions where surface water is connected to

ground water, such as the Rio Grande aquifer system. In the former, he noted, targeted water delivery methods and high irrigation efficiency can maximize crop yields without necessarily impairing existing water rights because the aquifer system is not dependent on recharge from crop irrigation in the region. In contrast, he explained, where surface water is connected to ground water aquifers as it is along much of the Rio Grande, increasing irrigation efficiency may result in increased crop yields and reduced diversions, but also less water being returned to the system, i.e., increased depletions, which may impair the water rights of other water users in the basin. Therefore, he cautioned, authorities need to guard against instituting one size fits all policies with regard to agricultural conservation. Dr. Fernald also encouraged the development of a statewide hydrologic water budget to integrate regional conservation solutions.

Gary Esslinger, Elephant Butte Irrigation District (EBID), outlined how the district has coped with the drought, noting that the lower Rio Grande has broken all the wrong records this year, including the latest first release from project storage — June 1; the earliest shutdown of release — July 17; the smallest volume of release — 168,607 acre-feet; and the smallest allotment to EBID farmers — 3.5 inches. The EBID has implemented several measures to help cope with the effects of drought, he explained, including the diversion, delivery, retention and infiltration of storm water; re-plumbing the irrigation system to save more than 12,000 acre-feet of water per year; and providing water for environmental uses to minimize the drought's impact on endangered species. Mr. Esslinger also pointed out that a huge problem facing residents in the lower Rio Grande region is the existence of over 100 aging, underdesigned PL-566 flood control dams. The dams have given residents a false sense of security, he said, and there are inadequate laws regulating development below such dams. With greater severity and frequency of storm events in the Mesilla Valley, more attention needs to be given to this problem, he said.

Steve Wilmeth, South Central New Mexico Stormwater Management Coalition, stressed the need for better strategies and community planning for future development and growth. Part of that strategy needs to emphasize flood management at the valley's edge, he explained, and increase efforts at upslope watershed management. Slowing and spreading flood flows can maximize benefits from rain events, he said, while also helping temper the effects of climate change.

Dino Cervantes, general manager of Cervantes Agribusiness, explained that Cervantes Agribusiness operates on about 1,200 acres in New Mexico and also has operations in Mexico. The business raises chile, cotton, corn, pecans and market vegetables, he said. Most of the business's land in New Mexico is part of the EBID, which in the 1980s and 1990s delivered a full allocation of three to four acre-feet of water to its members, compared to 3.5 inches this year. Consequently, more than 20% of Cervantes Agribusiness's land is fallow even though commodity prices are at record levels, he explained, and the farm spent $10 million last year on electricity to pump water to make up for the lack of surface water, most of which flowed to Texas. He also said that his farm was one of the first to install drip irrigation in the valley 20 years ago but that he quit using it because he was afraid of losing water rights. Some of the methods that the farm is using to save water are laser-leveling of fields, using a GPS system to

take out weeds, replacing the soil in pecan orchards and using systems that turn on pumps to water plants only when the plants need it.

Scott Verhines, state engineer, talked about hazard creep, describing the problems presented by development occurring below flood control dams and the lack of maintenance of many of those dams. He said this is a problem that needs to be addressed by working with the owners of those dams collectively.

The subcommittee approved the minutes from the last meeting without objection.

There be no further business, the subcommittee adjourned at 5:00 p.m.