## THE RELATIONSHIP OF WATER ISSUES: SOUTHEASTERN NEW MEXICO AS A CASE STUDY NEW MEXICO WATER RESOURCES RESEARCH INSTITUTE

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## CARLSBAD IRRIGATION DISTRICT

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First, I would like to thank the WRRI Advisory Committee, Tom Bahr, and Bobby Creel for having this meeting down in our corner of the state. Normally, we go to Santa Fe for the annual meeting. I think this meeting is good exposure for those of us in the water business, the farmers, and other water users in this part of the state. I hope we set a trend in having this annual meeting in different areas of the state each year. Hopefully all of you are enjoying the beautiful fall weather we are having in the lower Pecos Valley. This morning I will give you a briefing on the Carlsbad Irrigation District (CID), some important dates, and some of our future goals for the project.

Carlsbad Irrigation District actually began as one person's idea, the brain child of Charles Eddy, an original pioneer in southeastern New Mexico. A pioneer turned promoter, Eddy eventually promoted several projects in New Mexico and Colorado. I think he promoted a couple of railroad projects in New Mexico and some mining ventures in Colorado.

His first promotion was the Carlsbad Irrigation District, which at that time was called the Pecos Valley Land and Improvement Company. Originally, Eddy's concept was to secure public domain land by homesteading; provide a secure water supply by damming the Pecos River; construct canals and irrigation ditches to deliver water to the farm lands; promote the area's farming opportunities in the

eastern United States and in Europe; and to guarantee the protection of water rights for homesteaders.

The original concept had a lot of support in the territory of New Mexico because it would bolster the chances of statehood and encourage settlement of the lower Pecos Valley. The original concept took in the area from just above Roswell all the way to the state line. I have the original survey in the CID office in Carlsbad. It is really an interesting survey. It covers about five miles on either side of the Pecos River, all the way from above Roswell to the state line, and it was all done by hand including all of the lettering. Eddy commissioned this survey in the mid-1880s.

The first area Eddy selected for this promotional development was about where Lakewood is today, which is about where the old McMillan Reservoir is located. The area selected went from Lakewood all the way to the state line. It turned out to be the only area ever developed due to lack of financing and other problems.

Investment capital shortages seemed to be Eddy's major problem. Eddy generally solicited money from eastern investors to begin this project. Those of you from Carlsbad will recognize many of the names of these investors because so many of the streets in Carlsbad are named for these people: Arthur Mermod, James McKay, Charles Greene, Edgar Bronson, and probably the best known, James

Hagerman. Hagerman was probably the stoutest investor involved in the project. He eventually went on to develop his own irrigation project, the Hagerman Canal.

McMillan and Avalon dams were built in the mid-1880s. The townsites of Carlsbad, Otis, Loving and Malaga were laid out, although at the time they were laid out and surveyed, they were called by different names. Carlsbad, for instance, was called Eddy. The towns have all survived today. Canals were built; farms were established; the operation looked like it was going to be a success. However, the Pecos River is known for its devastating floods. Avalon and McMillan dams were washed out a couple of times by 1903. The flume that carries the canal across the Pecos River just above Carlsbad was washed out. The cost of rebuilding drained the capital the company had available for continued development.

The Pecos Valley Land and Improvement Company soon was sold, reorganized, and became the Pecos Improvement Company. That company was soon reorganized to the Pecos Water Users Association.

By the turn of the century, Charles Eddy had moved on to promote other things. I think his next venture was the building of the railroad from Carrizozo down through Orogrande to El Paso. Hagerman was broke and things looked pretty tough for the Pecos Waterusers Association.

In 1902, federal legislation was passed to assist in developing the West. That legislation lead to the organization of the Bureau of Reclamation, and immediately the water users involved in the Carlsbad area saw the chance to get some federal assistance.

Negotiations started in 1905 and were completed in 1907. The Bureau of Reclamation bought out the water users in the Carlsbad area. The water users assigned their water rights to the Bureau of Reclamation. The bureau came in with engineering practices that were state of the art with all of the financing backed by the taxpayers in the United States. The Reclamation Service rebuilt McMillan Dam, Avalon Dam, the flume, and upgraded and rebuilt many of the laterals and canal systems that delivered water to the farms. In other words, the Reclamation Service really shored up the project. The project was established with 48,000 acres of land within its boundaries containing 25,055 acres of water rights. The project was well on its way to being a productive venture.

In 1933, the Hope Decree established the priority dates of 1887-1888 for water rights for

theirrigation of the project, and established that the water rights are owned by the United States.

In 1938, the water users within the project contracted with the Bureau of Reclamation to operate and maintain the project. Up until that time, the Bureau of Reclamation actually ran day-to-day operations of the project. At that point, the Carlsbad Irrigation District was formed.

Fort Sumner Dam was constructed in the mid-1930s. The CID condemned and subsequently purchased the land on which the reservoir and the dam site. This land was then deeded to the federal government as an enticement for the government to build the dam. The dam was financed and built by the federal government under a repayment contract by the Carlsbad Irrigation District. The construction cost of Fort Sumner was repaid in full by the water users of the Carlsbad Irrigation District in 1987.

The Pecos River Compact was signed between Texas and New Mexico in 1947. This compact provided for setting a diversion in acre-feet to be enjoyed by the Carlsbad Irrigation District and setting priority dates on the water. The interpretation and compliance of this compact was actually the core of the recent *Texas v. New Mexico* lawsuit. There are many litigation matters Carlsbad Irrigation District has and is currently involved in to protect its water rights.

Santa Rosa Dam was completed in the mid-1970s. As required by the Pecos River Compact, some of Carlsbad Irrigation District's storage rights were moved to Santa Rosa at that time so water could be stored in Santa Rosa. Along came Brantley Dam, authorized in the 1970s and completed this year. Brantley Dam is on line to replace the water storage of McMillan Dam. Consequently, there is no longer a McMillan Reservoir; that storage is authorized to be stored at Brantley.

The Carlsbad Irrigation District is authorized by state engineer orders to store 176,500 acre-feet of water in four reservoirs: Avalon, Brantley, Fort Sumner, and Santa Rosa. Today, Carlsbad Irrigation District irrigates 25,055 acres of land when the water is available and serves in excess of 500 families. We are still at the mercy of the undependable water supply of the Pecos River. Even though we have an adequate storage authorization, even though we have four reservoirs in which we can store water, there are still many, many years during which we are unable to deliver 3 acre-feet to the farms. Fortunately, during the last five years, we have been able to deliver 3 acre-feet each year to the farms because of good rainfall. Next year looks like an entirely different picture. The water is not there

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and unless some heavy rains occur in the Pecos drainage, the water is not going to be in storage for next year.

The project is restricted in the variety of crops that can be grown because of the high salt content of the water and the alkali buildup in the soil. Sometimes, the water is as high as 3,500 ppm of salt content. Basically, we are 60% alfalfa hay, 30% cotton, pecans, small grains, and some permanent pasture, and truck farming makes up the balance. In 1988, the total market value of crops produced from the project exceeded \$11 million.

The Carlsbad Irrigation District has just signed a contract with the Bureau of Reclamation to assume the operation and maintenance of Fort Sumner Dam, Brantley Dam, and the Water Salvage Project. The Water Salvage Project involves the clearing of salt cedar along the Pecos River from just below Santa Rosa, New Mexico, down the river to just below Pecos, Texas. Up to now, these projects have been carried out with government financing and federal employees. The new concept involves the federal government contracting with the Carlsbad Irrigation District to do these jobs, which we feel we can do cheaper, resulting in lower costs to the taxpayer. Those of you in the Pecos Valley are going to see more and more Carlsbad Irrigation District employees along the lower Pecos River, either in salt cedar clearing or the operation and maintenance of the reservoirs.

The future goals of the Carlsbad Irrigation District are to meet our financial obligations and to repay our lenders. The Carlsbad Irrigation District has repaid all of its obligations to the federal government except the repayment obligations on a portion of Brantley Dam's construction costs. That repayment obligation goes into effect this year. Other goals include maintaining our existing structures so we can make adequate deliveries to the farms, keeping assessments to the farmers as low as possible, and keeping water rights for the citizens and farmers in the Carlsbad area.

It goes without saying, the overriding priority is to make the most efficient use of the water possible. We have been doing several things to continue to promote and implement new ideas to make efficient use of the available water.

Carlsbad Irrigation District has been faced with numerous challenges in the past. I am sure we will be facing more in the future. We have always been able to deal with these through the support we receive from our water users, local governments, elected officials, and state government. A good example of this is that just in the past year, CID was

obligated by the Bureau of Reclamation to replace the needle valves that make the releases from Fort Sumner Reservoir with hydraulic gate valves. This cost the district somewhere close to \$350,000. The legislators in the last session were generous enough to appropriate money to the district to cover those costs because of the public benefit received by the existence of Fort Sumner Dam. We have always been supported by elected officials and local people and I am optimistic this will continue into the future. I am very optimistic about the future of both the irrigation project and the Carlsbad area becoming more diversified and that this diversification will result in a more secure future.