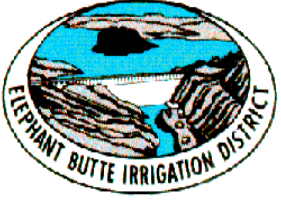


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GENERAL DATA AND INFORMATION

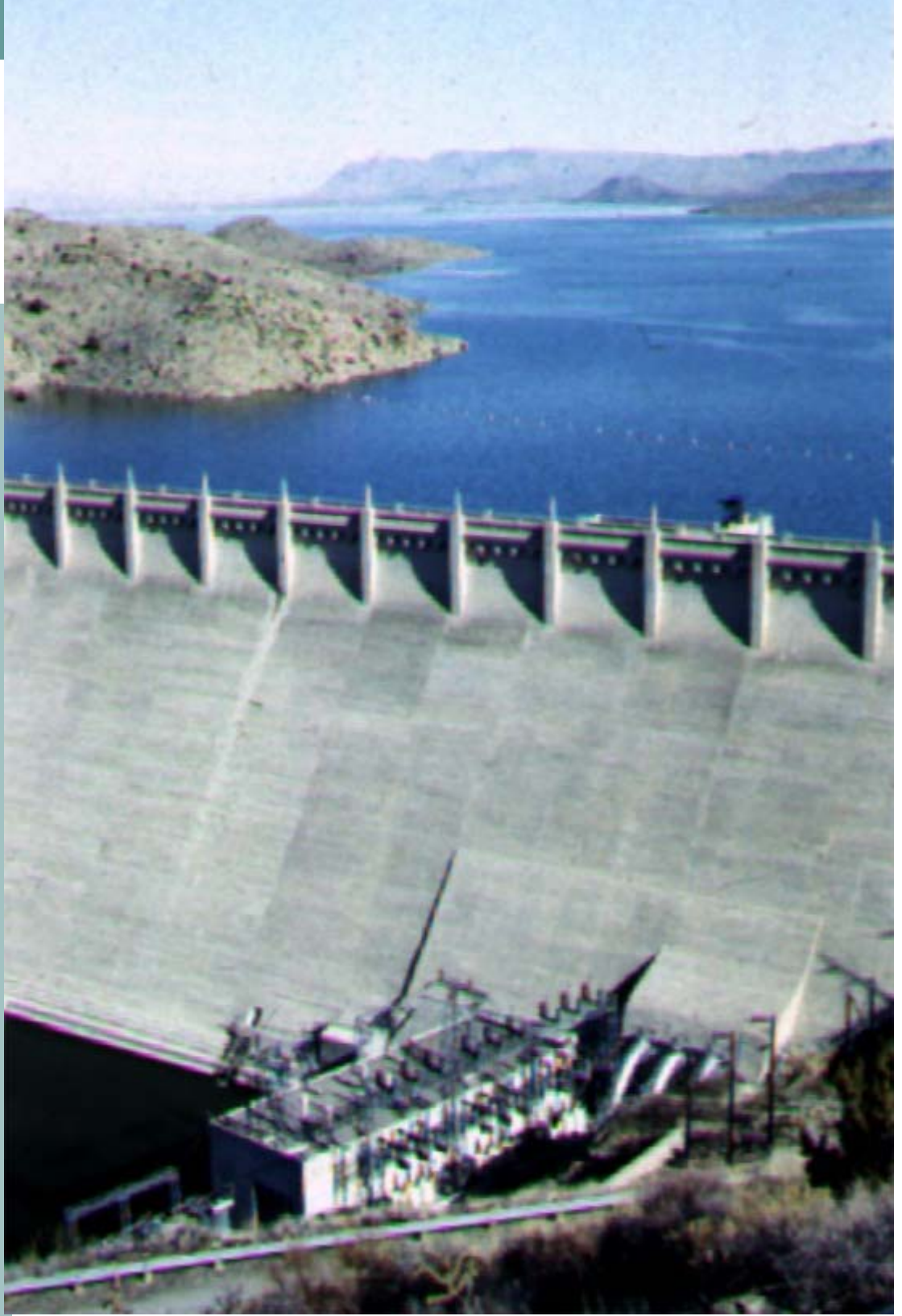
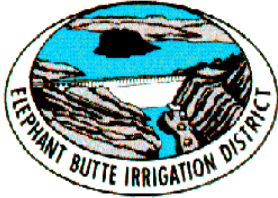


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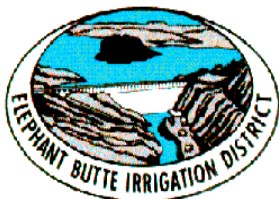


*“AGRICULTURE
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AND ECONOMY OF
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ENVIRONMENTAL
BENEFITS AS WELL”*

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INTRODUCTION

E B I D



October 15, 1998

As of this date forty-nine years ago, I became associated with the Elephant Butte Irrigation District, first as an employee of the Bureau of Reclamation's Rio Grande Project (1949-1980) and subsequently as a consulting engineer (1981 to present).

Through its inception in the early 1900's through 1978, the District was operated and maintained by the Bureau of Reclamation. Beginning in 1979, the District set up its own organization for operation and maintenance. After an initial "break-in period" the District has progressed rapidly in implementing new procedures and innovations in overall management, water measurement and accounting, automation of major structures and systematic replacement of structures.

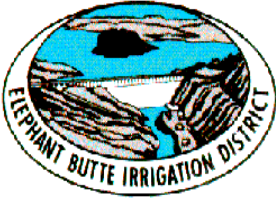
The District, along with the El Paso County Water Improvement District No. 1, forms the Rio Grande Federal Reclamation Project. This project was one of the earliest and largest projects built by the Bureau. It has always been considered to be one of the most successful. The Elephant Butte Irrigation District is the larger of the two districts forming the Rio Grande Project and by far its most successful

The District accounts for a large fraction (in some years over one-fourth) of the entire agricultural production of the State of New Mexico. Crops produced in the District are of the highest quality. A rather wide crop diversification is practiced by District water users thus precluding economic instability in the event of a crop failure or market collapse for one crop.

The leadership of the District is well aware of the coming competition and even litigation to divert its water resources to others and/or other uses. My assessment is that the District's management assisted by an excellent legal staff, will weather the coming conflicts and will emerge relatively intact as a viable and important agricultural entity with, however, a municipal-industrial adjunct. The District is well positioned to enter the next millennium. It has been my distinct pleasure to have had the opportunity to be associated with the Elephant Butte Irrigation District for these many years.

James W.(Jim) Kirby, P.E.

EBID



Acknowledgements

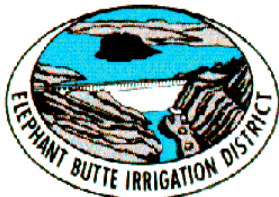
This booklet was originally prepared for the 1998 WRRI Conference Tour. This booklet was meant to be used as a guide to understanding the operation of Elephant Butte Irrigation District. It is hoped that this booklet will be used to generate a more definitive background and history of the District.

My sincere thanks goes out to the District Staff and the Engineering Department who have worked so hard to put this booklet together.

Gary L. Esslinger

HISTORIC OVERVIEW

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Southern New Mexico has a rich and diverse history spanning from the Stone Age to the Space Age. Dating from 200 B.C., structures discovered in the Mesilla Valley are considered to be the oldest in the United States. The Mesilla Valley has been the gateway into the “New World”, used by Europeans in their search for vast riches. The Mesilla Valley has been the home to such notable characters as William Bonney, more commonly known as “Billy the Kid”, and Pat Garrett. It was considered to be the birthplace of the Atomic Age. However, regardless of the cultural or technological history of the area, it was the valley’s agricultural history which took center stage.

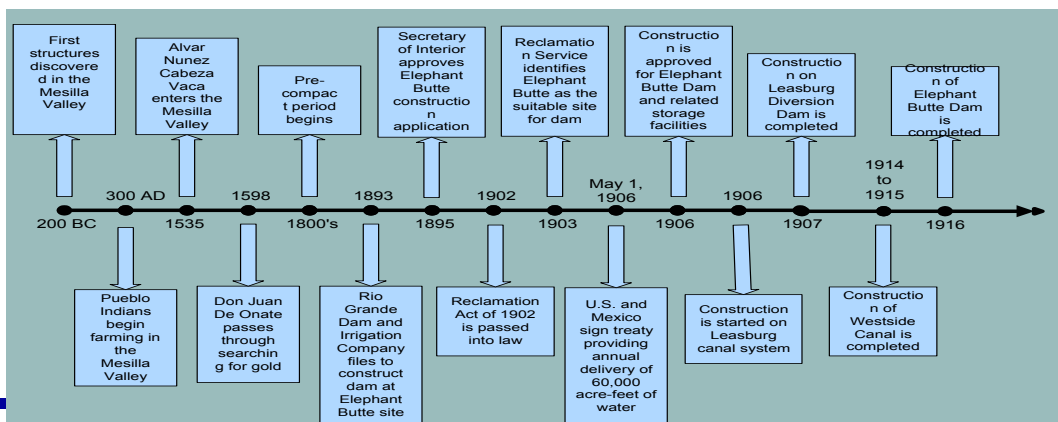
The early history of Elephant Butte Irrigation District begins with the legacy of the Rio Grande, which is 1,800 miles long and one of the world’s great rivers. It is the lifeblood for settlements, vital for agriculture, rich in history, and steeped in southwestern lore. In Mexico, the Rio Grande is called Rio Bravo (Brave River). The history of the Rio Grande has generated many legends, songs, and water disputes on both sides of U.S. and Mexican border. Known as the fifth longest river in North America, the Rio Grande begins in Colorado’s San Juan Mountains, bisects New Mexico, and serves as an 800-mile boundary between the United States and Mexico. It ends its 1,800-mile journey at the Gulf of Mexico. (U.S. Department of the Interior). Through erosion, silting, and shifting sands the course of the river is constantly changing, thus, requiring constant adjustment to the boundary. To quote the U.S. Department of the Interior “The river, yesterday and to-



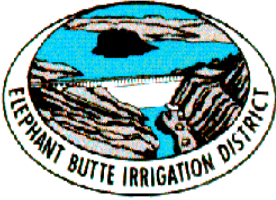
day...is a center of civilization, a center of life.”

With the mild climate, rich soil, and easy access to irrigation, the lower Rio Grande Valley has become a magnet for human habitation for many centuries. The valley’s earliest inhabitants left evidence of erect structures and agricultural artifacts dating back to 200 BC. In recent history, (300 AD), the area became home to the Pueblo Indians. These early Native Americans depended on agriculture for their livelihood, and in the process developed farming methods still being used in the 20th century.

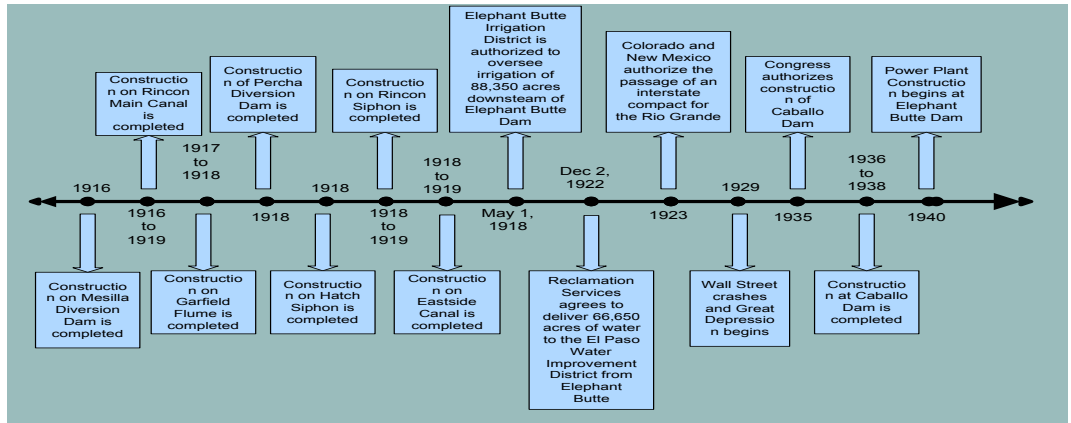
As the agricultural community grew in the Mesilla Valley during the 1840’s and 1850’s, various portions of the valley were irrigated by constructing canals and diversion structures placed at strategic points along the Rio Grande River. With the absence of modern technology, many of these structures invariably succumbed to flood waters and to the shifting of the river’s streambed. But, as a result of these trial and error methods, invaluable lessons were learned. This allowed Elephant Butte Irrigation District (EBID) and the United



EBID



**"FARMERS
WHO MASTER
NEW KINDS OF
SKILLS WILL
HAVE A
COMPETITIVE
EDGE"**



States Bureau of Reclamation (USBR) to construct an irrigation system capable of sustaining the needs of the entire agricultural community consisting of Southern New Mexico, Southwest Texas and Northern Mexico, bordering the Rio Grande. On June 15, 1918, Elephant Butte Irrigation District, Elephant Butte Water Users Association, and the United States of America entered into a contract to dissolve the Water Users Association and transfer all of the liabilities, benefits, rights and privileges, and project revenues solely to Elephant Butte Irrigation District (EBID).

Today, EBID operates and maintains the Percha, Leasburg, and Mesilla Diversion Dams, as well as the entire canal and drainage system within the district. The district measuring stations are located at various points along the entire irrigation system. Some of these stations are located just below the Mesilla Dam, Three Saints Lateral, and the La Union East and West Canal systems. These monitoring stations enables

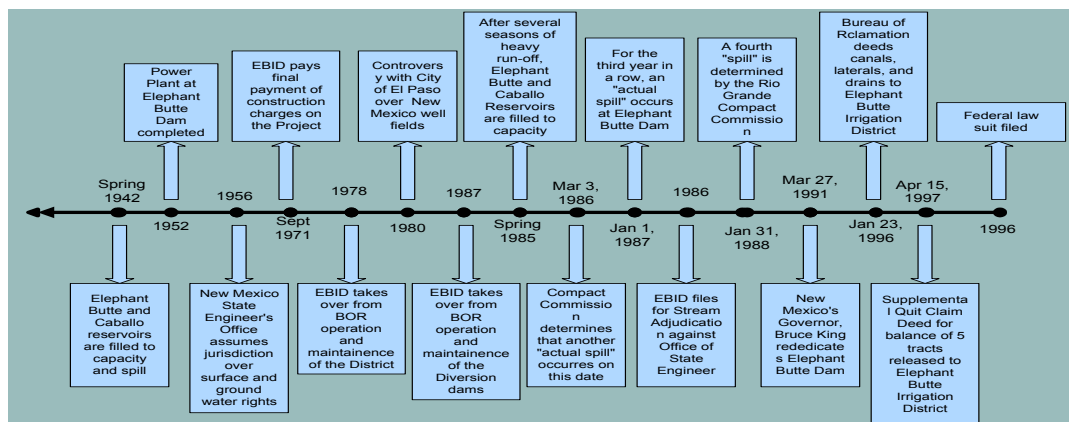
the District to effectively manage the water input and output flows through the various canals and laterals, thus better serving the community at large.

One of the major concerns historically challenging EBID was how to effectively manage water during the wet and dry years in this hot and arid region of the desert southwest. In 1947, the United States Geological Survey concluded a study on the possibilities of pumping water for irrigation should there be a serious shortage of surface water during the drought years. The data concerning irrigated acreage, annual diversions, canal wastage, canal seepage losses, water delivered to farms, and the drain flows of the drains was furnished by the United States Bureau of Reclamation. The report covered the history of the Rio Grande Project, various irrigation projects, and proposed management methods for wet and dry years.

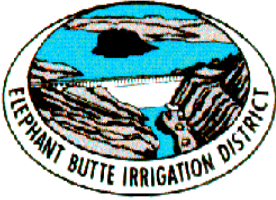
The Rio Grande Project covers an area which includes valley lands in the Rio Grande River basin both in New Mex-

ico and Texas, from Caballo Dam, southward to below the City of El Paso, a distance of about 130 miles. Just below Seldon Canyon, the valley widens into the Mesilla Valley, one of the largest valleys six miles in width at the point near Las Cruces, New Mexico. The El Paso Valley four to six miles in width, extends 90 miles southward from El Paso. Only the upper 40 miles is included in the Rio Grande Project.

Water from spring run-offs is stored in Elephant Butte and Caballo Reservoirs. Water is then released from the Caballo Reservoir and diverted from the Rio Grande, into canals in the Rincon Valley first at Percha Dam, 1.5 miles below Caballo Dam. In the Mesilla Valley, water flows by the Leasburg Dam at the head of the valley, and passes the Mesilla Valley Diversion Dam, six miles southwest of Las Cruces, New Mexico, and in the El Paso Valley, water by the American Dam, two miles from the International Dam. Water for the Mexican side of the El Paso Valley (Juarez



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Valley) is diverted from the International Dam.

Since the inception of the Rio Grande Project, an extensive system of drains has been constructed throughout the Project. From the 42 miles of drains located in the Rincon Valley, drain water is discharged into the river above Leasburg Diversion Dam and below the Mesilla Diversion Dam and then diverted for re-uses in the El Paso Valley.

In 1945, the total land irrigated by the Rio Grande Project was 154,775 acres, of which 16,272 were in the Rincon Valley, 83,271 acres in the Mesilla Valley, and 55,232 acres in the El Paso Valley. Of the 83,271 acres in the Mesilla Valley, 10,834 acres are located in Texas. In 1945, the division of irrigated lands between the two projects was 88,709 acres in New Mexico and 66,066 acres in Texas. Today, 90,640 water righted acreage is available for irrigation, within the Elephant Butte Irrigation District.

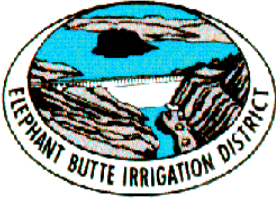
With ongoing development and research for better irrigation and water accountability being pursued by the District, in cooperation with the academic community at New Mexico State University, new methods are constantly being developed and tested in the agricultural community.



ACCUSATIONS THAT AGRICULTURE IS INEFFICIENT, WASTEFUL, HEAVILY SUBSIDIZED, AND OF LESS VALUE THAN OTHER WATER USES ARE OFTEN WITHOUT CITATION. THESE REFERENCES PERPETUATE A FALSE PERCEPTION OF AGRICULTURE IN THE WEST AND INSUFFICIENT ATTENTION IS PAID TO AGRICULTURE'S CONTRIBUTION TO THE LOCAL ECONOMY.

Cooperation and Relations

EBID



**“FEDERAL
WATER AND
AGRICULTURE
POLICIES WILL
BECOME LESS
GENEROUS AND
SUPPORTIVE OF
IRRIGATED
AGRICULTURE IN
THE FUTURE”**

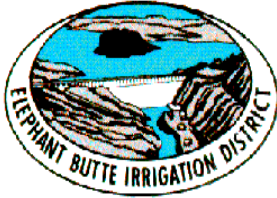


Water Politics in Southern New Mexico

Irrigation of land in New Mexico was influenced considerably by laws and customs of Indian, Spanish and Mexican cultures. Throughout history, water has dictated the course of human events in the arid Southwestern desert. Native Americans, Spanish colonists and all those who followed based their agricultural practices and commerce on the availability of this precious resource. Disputes over water led to wars, gun battles and court actions, some of which persist to this day.

Rapid urbanization in the Southwest in recent years has made water allocation and utilization problems even more acute, especially along the U.S.-Mexican border. As water reserves become depleted and fewer new supplies discovered, competition over existing sources will increase. This has created an atmosphere in which various political, economic and social entities feel they must fight to safeguard their individual interests.

E B I D



“THERE IS LITTLE CHANCE THAT A BUDGET CONGRESS WILL RESURRECT MULTIBILLION-DOLLAR FARM PROGRAMS”

Water Managers and Decision-Makers

THE INTERNATIONAL BOUNDARY AND WATER COMMISSION (IBWC):

The IBWC was established by the United States and Mexico as an agency charged with the responsibility to control and distribute Rio Grande waters. It operates key reservoirs for the lower Rio Grande, and resolves both boundary and pollution issues along the border. Its major role in the upper Rio Grande is to ensure delivery of water to Mexico under international treaties.

THE BUREAU OF RECLAMATION (BOR):

Congress, in passing the Reclamation Act of 1902, made a commitment to supporting major water development projects in the western United States, initially for irrigation and later for municipal use. The BOR is the agency, within the U.S. Department of the Interior, that administers this program.

The BOR was authorized by Congress in 1905 to build Elephant Butte Dam.

ARMY CORP OF ENGINEERS:

The Corp of Engineers was directed by Congress, in 1824, to begin work on improving navigation in the nation's waterways. In the 20th century, the Corps' focus expanded to include flood control, hydroelectric power generation, recreation enhancement, and wetlands protection. The Corp is also responsible for controlling any dredging or filling within navigable waterways and associated wetlands under the "404 Permit" program.

RIO GRANDE COMPACT COMMISSION:

The Rio Grande Compact Commission was established to oversee effective operation of the provisions of the Compact. It is composed of a federal chairperson, appointed by the United States President, and three voting members, a representative designated by the Texas governor, and the state engineers of New Mexico and Colorado. The Commission

Water Politics in Southern New Mexico (Continued)

Recent events in the Lower Rio Grande Basin (LRG) of Southern New Mexico illustrate this conflict. The LRG includes that section of the river valley shared by Las Cruces and Doña Ana County in New Mexico. Immediately adjacent to the LRG on the other side of the Texas-New Mexico border is El Paso, Texas, and Ciudad Juárez in Chihuahua, Mexico, all of which share waters from common groundwater basins and the Rio Grande.

The evolution and operation of the Elephant Butte Irrigation District (District) is of interest and importance to the agricultural sector of Southern New Mexico and the State of New Mexico as a whole. Prior to the Rio Grande Project, irrigation within the Rincon and Mesilla Valleys was carried out by direct diversion from the river by several community ditch associations.

SECTION I: JURISDICTIONAL OVERVIEW OF WATER ALLOCATION IN THE LOWER RIO GRANDE BASIN

The Lower Rio Grande in Southern New Mexico, includes the headwaters of the Elephant Butte Reservoir south to the Texas state line. Rio Grande water issues for this stretch of the river involve two different nations--the United States and Mexico, as well as the part of the river from the Texas state line to Ft. Quitman. The allocation of water is governed by international treaty, a tri-state compact, federal reclamation laws, state statutes, and numerous contracts. The Rio Grande Reclamation Project Act (which approved the Rio Grande Project) was passed by Congress on February 25, 1905 (33 Stat. 814). The 1906 International Treaty with Mexico required an annual delivery of 60,000 acre feet of Rio Grande water (34 Stat 2953) to Mexico. The Rio Grande Compact, a tri-state agreement between Colorado, New Mexico and Texas, was approved by Congress in 1939 (53 Stat 785).

United States-- There is no national policy for groundwater apportionment. These public management questions are instead historically left to the states. The U.S. government argues, however, that it must be involved with any solution over reallocation of water in the Lower Rio Grande, if for no other reason than that any solution will require federal supervision.

Texas-- Texas is in its infancy in enacting groundwater regulations. Despite possible shortages in the State's major aquifers, especially the

What Is A Stream Adjudication?

THE LEGAL FRAMEWORK OF A STREAM ADJUDICATION

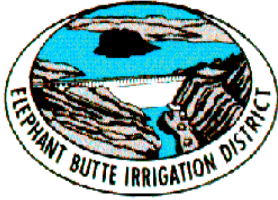
The legal mechanism used to prioritize everyone's right to water in a stream system is known as a "General Stream Adjudication." In effect, it is a lawsuit which joins all of the water users of a stream system.

In an adjudication, the court sets forth everyone's rights to surface and groundwater. The adjudication will determine how much water each user is entitled to and the priority date of such use. If there is an overdrafting of groundwater by junior users, which in effect is a taking of surface water, these junior users will be told to stop pumping.

We need to know the extent to which we have water resources available to us now and in the future. We must inventory our legitimate water supplies so we know how much of a sustainable resource we have. Then we can determine how much growth we are willing to support as a community, and what the tradeoff will have to be to support it. The process of taking inventory of legitimate water supplies is called the adjudication process.

A. THE ADJUDICATION PROCESS.

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Water Managers and Decision-Makers (Continued)

meets annually to review compliance with the compact over the preceding year, to hear reports from federal water management agencies, and to consider water management decisions that have interstate implications.

The BOR and the Corp are bound by federal statute to ensure that their actions, including reservoir operation, are consistent with the provisions of the Rio Grande Compact of 1938.

OTHER FEDERAL AGENCIES:

While the above three federal agencies play the most critical roles in the Rio Grande decisions, numerous other agencies are involved in various aspects of resource management.

THE BUREAU OF LAND MANAGEMENT

THE FISH AND WILDLIFE SERVICE

THE GEOLOGICAL SURVEY

THE DEPARTMENT OF AGRICULTURE

THE SOIL CONSERVATION SERVICE

STATE REGULATORY AGENCIES:

In order to ensure internal compliance with the Compact, as well as to effectively manage state waters, each of the three upper basin states has established procedures for regulating the use of water. The appropriate state agency typically reviews proposals for water right transfers and for new water appropriations, issues permits for ground water pumping, provides assistance relative to water development, and undertakes various other functions consistent with state water management policies. An important role is also played by the state game

**“THE WORLD FOOD MARKET
WILL OFFER AMERICAN
FARMERS A GROWING ARRAY
OF OPPORTUNITIES.”**

Water Politics in Southern New Mexico (Continued)

Ogallala aquifer in the High Plains, and the Edwards aquifer near San Antonio, the legislature has been reluctant to adopt laws to control groundwater usage. Texas subscribes to the English right-of-capture rule, allowing well owners to use underground water any way they choose. The only restriction is that usage must not cause a neighbor's property to sink. A failed effort in 1993 to manage the Edwards Aquifer suggests groundwater management issues may need to be resolved by the courts. A stumbling block to establishing statewide water policy is that East Texas has too much water, while West Texas has too little.

New Mexico – New Mexico has a comprehensive groundwater regulatory system based upon the doctrine of prior appropriation. Derived from Spanish law, this doctrine contains two central principles:

- 1 First user (appropriator) has the right to take and use the water; and
- 2 The right has priority against subsequent users as long as the first appropriator continues to put the water to beneficial use.

Each appropriator under this doctrine establishes a priority according to when and how much, water was first used. There is no provision for judging the relative benefit each user of a shared source derives, or seeks to derive, from the water use. In times of shortage, the newest users are the first to be denied water, regardless of the relative merit of their need. This approach creates an incentive to each land owner to protect himself against his neighbor's acts by putting to beneficial use as much of the resource as quickly as possible.

Mexico – Mexico is currently undergoing sweeping economic, social, and political changes that make it difficult to describe its legal mechanism for water policy and management decisions. Recent amendments to the Country's water laws have eased restrictions on use, ownership, and foreign control of agricultural land, and have led to a need for revisions in water policy. The revisions seek to “guarantee the conservation of water for social welfare and for industrial, agricultural, and services production . . . to create a more rational use of water and preserve its quality.” It adheres to the principal that “national waters” belong to the

WHAT IS A STREAM ADJUDICATION (Continued)

New Mexico has adjudicated water rights since the enactment of the surface water code in 1907. A water right adjudication is a process by which the ownership and extent of water rights are determined. It is similar to a quiet title suit to establish ownership of land.

The adjudication process consists of two phases:

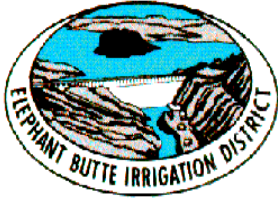
1. A technical phase in which a hydrographic survey is performed to identify, map, and report the status of water use in a particular stream system or groundwater basin; and
2. A legal phase in which water use is litigated in court and court orders are issued stating how much water each user has a right to divert and use for a specific beneficial purpose.

A hydrographic survey is usually the first step taken in a stream adjudication. A survey can begin in one of several ways:

1. The State Engineer, based upon the direction given him by state law, can decide to conduct a survey to determine the extent of a water supply, plan for its development, or collect information for water rights adjudication. The areas chosen by the State Engineer are by statute to be river systems mostly used for irrigation.
2. A judge can issue a court order for a survey to obtain the information necessary for determining the water rights involved in an adjudication lawsuit when the adjudication is filed by private parties.

Before any field work takes place in a survey, the Office of the State Engineer (OSE) reviews water right records for the survey area and prepares flight line maps for aerial photography. Cropping patterns and

E B I D



Water Managers and Decision-Makers (Continued)

and fish departments charged with protection of threatened and endangered species, as well as by parks and recreation departments responsible for state protected river segments.

The focal point of water administration in New Mexico is the Office of the State Engineer (OSE). The New Mexico legislature provided the OSE with the power of "general supervision of waters of the state and of the measurement, appropriation, and distribution thereof."

The New Mexico State Engineer is also a member of the New Mexico Interstate Stream Commission, and serves as its executive officer. The NM Interstate Stream Commission (not to be confused with the Rio Grande Compact Commission) is a state agency that assists in the construction of irrigation works, cooperates in the development of federal water projects, conducts interstate litigation, and funds water research, development and conservation projects.

In Colorado, state control of water resources is divided among three entities. First, the Division of Water Resources, headed by the Colorado State Engineer, is responsible for surface water administration and for the permitting of wells. State water courts also play a significant role, as every application for new or modified water rights in Colorado must be adjudicated. Finally, the Colorado Water Conservation Board, composed of 13 members from around the state, was created by the legislature to aid in the protection and development of state waters "in order to secure the greatest utilization of such waters."

The Colorado State Engineer appoints a Division Engineer, headquartered in Alamosa, to administer water rights and to

The Rio Grande Project was among the first developed after the passage of the Reclamation Act of 1902.

Water Politics in Southern New Mexico (Continued)

state – hence to the people of Mexico.

SECTION II: HISTORY OF WATER POLITICS IN THE LOWER RIO GRANDE BASIN

Elephant Butte Irrigation District's Rights and Interests in the Lower Rio Grande

On December 22, 1904, the Elephant Butte Water Users Association was formed to provide for and distribute to the lands of the holders of shares of the association an adequate supply of water for the irrigation of members lands. The Association was formed to enter into any contract with the United States Government to acquire and construct necessary facilities. The ownership of a share of stock in the Association carried with it the right to have delivered a proportionate amount of all stored and developed water.

The Rio Grande Project was authorized on February 25, 1905, as a Bureau of Reclamation Project, under the authority of the Reclamation Act of 1902, to construct a dam on the Rio Grande as part of a general system of irrigation.

On June 27, 1906, the Elephant Butte Water Users Association and the El Paso Valley Water Users Association entered into a "Construction Contract" with the United States. This contract obligated the individual shareholders to pay for the construction of the irrigation works of the Rio Grande Project, and also to pay the costs of yearly maintenance and operation. The 1906 contract recognized that the rights to the use of water from the proposed irrigation works would be appurtenant to the designated lands owned by the shareholders.

Historically, water distributed by the Elephant Butte Irrigation District (District) has been used for agricultural purposes. As irrigated land has been converted to urban development, the water associated with it has been reassigned to other qualified land within the district. The District has resisted pressure to convert the associated water to nonagricultural uses because the agricultural demand remains. However, the District also understands that it must address these water management issues with creative thinking and a willingness to address the demands for regional solutions. State law grants the District the power to lease or rent

WHAT IS A STREAM ADJUDICATION (Continued)

crop irrigation requirements are computed, municipal, industrial, stock and domestic water uses are analyzed. Land ownership is verified with courthouse records. Although a hydrographic survey gathers information on land ownership, it does not establish legal ownership or property boundaries. The investigation only produces evidence of the location, amount, and ownership of water use within the adjudicated area.

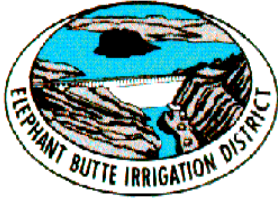
Following this work, OSE staff conducts a field check of all water uses and draws maps depicting the areas of water use. The maps and other data are compiled into a report which lists all the known uses of water in the survey area. For each water claimant the following information is included:

- Owner of the water right
- Purpose of water use
- Priority
- Point of water diversion
- Place of water use
- Amount of acreage irrigated
- Amount of water required for use.

The complete report, available to the public upon request, is then sent to the Office of the State Engineer's legal staff, which begins work on the legal phase of the adjudication process.

The present adjudication effecting the Lower Rio Grande Stream Sys-

EBID



The federal agencies responsible for water management need to coordinate better to assist local-interested planning and management effort, rather than institute top down water management

Water Managers and Decision-Makers (Continued)

assist in managing waters in the Rio Grande Basin within Colorado. Similarly, a water court in Alamosa has jurisdiction to hear all intrastate water matters arising in this region. Water administration in Texas is overseen by a three member Texas Water Commission appointed by the governor. The Commission has jurisdiction over the issuance of water rights permits, water quality control, ground water programs, and other components of state water management efforts. Water development and conservation activities are taken under the direction of the Texas Water Development Board.

In a region of scarce surface water supplies, regulation of water quality is especially important. Each of the three states of the upper basin has a complex array of programs that set quality standards for surface streams and groundwater, and that regulate permits for discharges into these waters. Surface water quality standards are established in Colorado by the Water Quality Control Commission. This eleven member body is responsible for establishing the overall water quality control program of the state, promulgating regulations, and issuing permits for the discharge of wastes. The State Department of Health provides administrative staff to carry out the programs and enforce the regulations of the commission.

New Mexico has a similar system. Its Water Quality Control Commission sets stream standards and promulgates regulations for most water quality programs, but all administrative functions are carried out by the Environmental Improvement Division of the Health and Environment Department. As in other states, water quality regulation is achieved through a large number of independently authorized programs, including those to regulate discharges into surface streams, hazardous waste, underground storage tanks, radioactive mill tailings, and the provision of water

Water Politics in Southern New Mexico (Continued)

the use of water to municipalities within or without the District, provided no vested or prescriptive right to the use of the water is attached to the lease.

The District's Board of Directors has held to the position that the District water is to be used strictly for irrigation on lands having district surface water rights appurtenant to the land. Its main goal is to provide water for agriculture.

The District is a quasi municipality, or public corporation, and as such it is a political subdivision of the state. Upon the formation of the District in 1919, the EBWUA granted all of its interests to the District by contract. The District also assumed the repayment obligation to the United States for the construction of the Project.

Under New Mexico law, irrigation Districts are given broader powers than the powers granted to water user associations. These broader powers include annexation, taxation, and bond issuance. (See §73-10-1 et. seq. New Mexico Statutes Annotated.) The initial function of the District was to collect revenues from area surface water users to repay the debt owed to the federal government for the construction of the District's irrigation and drainage system. In addition, the District handled relations between area surface water users and the Bureau of Reclamation. All operation and maintenance remained under the control of the Bureau of Reclamation until the District had repaid the construction debt.

In 1971 when the District repaid the construction debt owed to the federal government, negotiations began which detailed and resulted in the transfer of the operation and maintenance from the Bureau of Reclamation to the District. In 1992 the District received a deed turning over title and ownership to the District's canals, laterals, and drains to the EBID.

FEDERAL PRESENCE IN THE LOWER RIO GRANDE BASIN

On February 25, 1905, Congress authorized the building of the Rio Grande Project to serve New Mexico and Texas. The Elephant Butte Water Users Association and El Paso Water Users Association were formed to contract with the United States to build the project. Elephant Butte Dam was completed in 1916 and stores fifty-seven percent of the water for use within Elephant Butte Irrigation District and forty-three percent for use in Texas by the El Paso County Water Improvement District #1.

WHAT IS A STREAM ADJUDICATION (Continued)

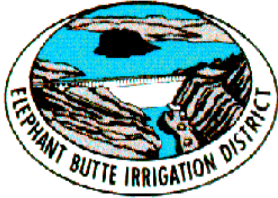
tem was filed by Elephant Butte Irrigation District over 10 years ago. All water right owners in the affected stream system or groundwater basin are included, or will be joined, in the suit.

Each water right owner is sent an offer of judgment by the Office of the State Engineer. This document is a proposed agreement between the water right claimant and the State which defines what the state believes is:

- The amount of the water right,
- The water right's priority date,
- The place and purpose of water use,
- The point of water diversion,
- The source of water, and
- The ownership of the right.

The water right owner may either accept or reject the Offer. Objections are usually resolved through investigations; however, the owner has a right to a court hearing. If a water right owner fails to act within the

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Water Managers and Decision-Makers (Continued)

through public supply systems

Texas has the most centralized approach to water regulation. The Texas Water Commission, as noted above, regulates water quality as well as water rights and brings, under one agency, administration of most water quality programs. The Texas Department of Health oversees drinking water programs and the Texas Railroad Commission handles water quality programs related to mining.

Links between water quality regulation, water rights administration, water planning, and other water-related activities of the states are achieved through joint participation of officials from the different agencies on regulatory boards, such as the water quality commissions of New Mexico and Colorado. Only Texas has brought these functions together in a single agency to achieve greater coordination in policy development.

INDIAN GOVERNMENTS:

Several Pueblo Indian tribes reside within the Rio Grande Basin, and control significant amounts of land and water.

SPECIAL WATER DISTRICTS:

Many water districts have been formed in the Rio Grande Basin in order to provide an organizational structure capable of raising revenue and providing management authority over the control and distribution of water (primarily irrigation supplies) in particular areas. These include the Elephant Butte Irrigation District, the Middle Rio Grande Conservancy District, the San Luis Valley Water Conservancy District, El Paso County Water Improvement District No. 1, and numerous others. Such districts are generally considered semi-public agencies, and are created pursuant to a legal framework spelled out by state statute.

COMMUNITY ACEQUIAS AND DITCH ASSOCIATIONS:

Not all local water use and management organizations are large nor have been given the power

Water Politics in Southern New Mexico (Continued)

Under Section 8 of the Reclamation Act, the United States must apply to the states for water which will be used in its reclamation projects. The Reclamation Service (now the Bureau of Reclamation) gave notice to the New Mexico Territorial Engineer (now the New Mexico State Engineer) in 1906, that the federal government intended to appropriate 730,000 acre feet of water per year from the unappropriated waters of the Rio Grande, which water would be impounded for the Rio Grande Project in Texas and New Mexico. In 1908 an additional filing was made to appropriate all of the unappropriated waters of the Rio Grande and its tributaries.

Additionally, as the result of the 1906 Mexican Treaty 60,000 acre-feet of water stored in Elephant Butte Reservoir, must be delivered to the Acequia Madre near El Paso, Texas for Mexico.

NEW MEXICO WATER RIGHTS IN THE LOWER RIO GRANDE.

New Mexico, like most western states, adopted the prior appropriation doctrine with respect to the acquisition of water rights. Basically, the doctrine means that the first appropriator of water in time has the better right in times of shortage. This contrasted greatly with the riparian system in the east where all water users share equally in times of shortage.

New Mexico law authorizes the creation of two different types of water districts to manage surface water: conservancy and irrigation districts. Within the context of a conservancy or irrigation district, a water right holder is an individual who has been issued the right to use surface water within an irrigation or conservancy district. The water right holder does not own the corpus or body of water used in the irrigation of cropland, rather he owns the right to use the surface water.

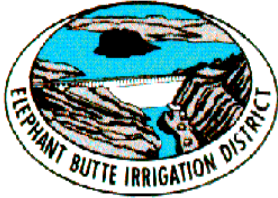
Although irrigation and conservancy districts are both formed by water right holders, the reasons behind each are different. In 1919 New Mexico enacted comprehensive irrigation district laws as an amendment to an earlier 1909 irrigation law. It provided for the voluntary organization of landowners and irrigators into irrigation districts. The 1919 law included special provisions authorizing irrigation districts to cooperate closely with the federal government under Federal Reclamation Law. Irrigation districts have been formed primarily for the management and allocation of surface water. The major irrigation districts formed in cooperation with the United States under Reclamation laws are Carlsbad Irrigation District and Elephant Butte Irrigation District.

WHAT IS A STREAM ADJUDICATION (Continued)

specified time, the court may issue a default judgment, adjudicating the water right described in the Offer. When an Offer has been signed by both the State and the owner, the court enters an order confirming the agreement.

When all water rights have been settled between the state and the water right owners, other water claimants, may challenge the water rights of others. Hearings on any challenges are held. After they are resolved, the court issues a final decree which defines the rights of every water right owner within the stream system or groundwater basin.

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Water Managers and Decision-Makers (Continued)

to levy a property tax by the state. In fact, the most prevalent type of entity that controls water distribution in the Rio Grande basin has functioned effectively for centuries. These are the community acequias and ditch associations.

It is estimated that 1,000 acequias exist in New Mexico, with scores in the Colorado portion of the Rio Grande basin as well. Their operation is based upon centuries of custom in which the water users of the acequia (or local ditch system) collectively agree to certain practices and responsibilities in order to receive their fair share of the water. A “mayordomo” is elected by the ditch owners to properly distribute the water supply and to ensure that all acequia users shoulder their share of maintenance work.

Although acequias are based on tradition, the New Mexico legislature has statutorily recognized their authority and spelled out certain provisions regarding their formation and operation. Also, less traditional ditch associations have been formed in recent years as corporations and other collective organizations. The purpose of such ditch associations are, however, similar to traditional acequias, in that they are designed to set up a fair system for distributing water, and allocating responsibilities to irrigators who share the same ditch system.

MUNICIPALITIES:

As reflected in the preceding description of the BOR and other water entities, early water management efforts in the Rio Grande basin were driven by the needs of agriculture. In recent decades, another major sector in water resource management has arisen with the expansion of municipal water use. Albuquerque, EL Paso, and other population centers have become major players in the water management arena, and are currently the focus of significant efforts and controversies involving limited water supplies.

El Paso has been at the center of

Water Politics in Southern New Mexico (Continued)

Water in New Mexico is under the regulatory authority of the Office of the State Engineer. The State Engineer is responsible for the enforcement of water right priorities as well as administrative control of all water basins. It was not until September of 1980 that the State Engineer took administrative control over the Lower Rio Grande Basin (LRG).

New Mexico law provides that water may be appropriated, or taken for use, on the basis of three principles.

1. All surface and groundwater belongs to the public and is subject to appropriation for beneficial use. An appropriator does not own the water, only the right to divert the water, impound and/or use it.
2. Beneficial use is the basis, measure, and limit of the right to use water. Agricultural, domestic, recreational, municipal, industrial and other uses are considered beneficial as long as there is no willful waste of water.
3. Priority of appropriation gives the better right. Priority is based upon the date on which construction of works for the beneficial use of water began or on which a notice of intention or an application to appropriate water was filed with the State Engineer. The user with the earliest priority date is entitled to receive a full appropriation before those with later, or junior, priorities receive theirs. This concept is referred to as the doctrine of prior appropriation.

The State Engineer, who is appointed by the Governor and confirmed by the Senate, is responsible for the administration of the State’s surface and groundwater according to these principles.

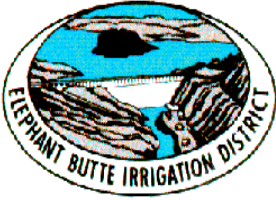
PRIORITY ENFORCEMENT

The State Engineer manages the LRG in a format known as a “stream related basin.” Basically, he must not only consider the diversion of surface water, but he must also look at the interrelationship between the river (surface water) and the pumping of water (groundwater). This is in contrast to a non-stream related basin where there is only the pumping of groundwater, i.e., the Hueco Basin. In this situation, the State Engineer calculates the total amount of water in the Basin and then calculates a 40-year life for the water to be pumped out. He reserves a certain amount of water for emergencies and domestic use by individual home owners. He then administers the pumping based on his 40-year calculation. Currently, the State Engineer is trying to decide whether the area east of Interstate 10 on the east mesa near Las Cruces, New Mexico, is within a separate basin without any connection to the Rio Grande. If so, this “Jornada Basin” will be administered differently from the stream related Lower Rio Grande Basin. Questions concerning inter-basin transfers of water from the Jornada Basin to the Lower Rio Grande Basin will have to be answered.

The easiest way to understand the hydrology of the Lower Rio Grande Basin is to imagine a bathtub full of sand that is slightly elevated at one end. If the faucet is turned on, the bathtub will fill until the sand is fully saturated. The water will then flow across the top of the sand and flow out the end of the bathtub. This represents the situation of the Rio Grande, and the groundwater that is stored beneath it. The Rio Grande, over hundreds of years, has stored water in certain formations underneath it.

Irrigation districts have been formed primarily for the management and allocation of surface water.

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Water Managers and Decision-Makers (Continued)

controversy as it has attempted to acquire additional water supplies through applications to the New Mexico State Engineer for groundwater permits. The denial of that application may in the future force El Paso to increase its acquisitions of agricultural water rights in West Texas, something which is now restricted by contractual arrangement with local irrigation districts. El Paso's decisions about how to meet its future water needs will undoubtedly remain a powerful force in shaping water management in a large part of the Rio Grande basin.

Water Politics in Southern New Mexico (Continued)

Then imagine if a straw is driven into the bathtub's sand and start drawing out water. The water which used to flow across the sand at the top of the bathtub now flows down into the bathtub to fill in the gaps left by the taking of water through each of the straws. The amount of water that used to flow out the end of the bathtub is reduced.

Similarly, the pumping of wells eventually leads to a cone of depression that is filled in by the surface water of the Rio Grande. Water which formerly found its way down the river into Texas and Mexico is now first replacing the water taken by pumps. This is a problem because under New Mexico law, the senior right cannot be affected by a junior user. In other words, the pumping of groundwater may not affect or impair the use of the surface water which is senior in time.

THE PECOS RIVER EXPERIENCE.

Years ago the State of Texas sued the State of New Mexico claiming that groundwater pumping in New Mexico had diminished the flows of the Pecos River reaching Texas. The United States Supreme Court, which has original jurisdiction involving one state suing another, agreed with Texas. The State of New Mexico was told to deliver the water it had wrongfully kept from reaching the Texas state line as well as to keep up with its current deliveries.

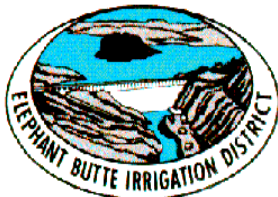
On February 26, 1996, State District Judge Harold Byrd entered his opinion regarding ownership of the water rights in the Carlsbad Project. The Court was of the opinion that the beneficial ownership of Project water rights is vested in landowners in the Project measured by the amount of water devoted to beneficial use. Ownership of water rights in the Project are appurtenant to land in the Project upon which they are devoted to beneficial use. Project water rights are not owned by the United States or the Carlsbad Irrigation District (CID). The determination of ownership of Project water rights by members of CID does not preclude adjudication of storage and diversion rights of the US/CID and members of CID and these rights will be determined in the proceedings. The issue of whether it was necessary to adjudicate the elements of Project water rights to landowners individually was deferred and will be determined during the course of subsequent proceedings.

The Court was also of the opinion that the United States and the CID have certain diversion, storage, and distribution rights and interests in



"THERE IS NO MORE CHEAP WATER AS MORE USERS THIRST FOR IT."

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Project water. Under the Reclamation Act, the United States has authority to divert, store and distribute Project water for the use and benefit of the landowner. In addition, the United States and the CID have certain rights and interests in storage and distribution of Project water in order to accomplish the purpose of the Reclamation Act.

THE EL PASO LITIGATION.

In 1980 the City of El Paso, through its Public Service Board, filed applications to appropriate over 270,000 acre-feet (1 acre-foot is approximately 325,900 gallons) of water from the LRG and Hueco Basins for use in El Paso. This amount of water equated with the amount of water the District delivers to 90,000 irrigated acres of farm land at three acre-feet per acre. The City of Las Cruces uses approximately 13,000 acre-feet of water per year.

El Paso claimed that there was unappropriated groundwater in the LRG not currently being used by New Mexico that could be taken and put to immediate beneficial use. After eleven years of litigation, the City withdrew its applications primarily based on the District’s commitment to help the City more efficiently receive and use the Texas portion of surface water supply out of the Rio Grande Project. The New Mexico-Texas Water Commission was formed to help implement the court settlement. Thus far, ongoing planning has centered on El Paso accessing project water on a year-round basis and also a better conveyance system that increases water quality and quantity. With these two experiences in mind, the District initiated the stream adjudication process in the LRG.

One of the most recent proposals coming from the Commission is to construct one or several regional water plants south of the Caballo Reservoir in New Mexico and Texas. These plants could provide treated surface water to the cities of Las Cruces and El Paso as well as the numerous small communities, including colonias, in Dona Aña County and El Paso County. With these proposals, there are numerous operational, legal, and environmental hurdles that must be overcome. For example, District farmers are very concerned that any change in operations could affect groundwater pumping for agricultural purposes, affect the agricultural drain system which leaches salts from the soils, and affect return flows to the river.

To date, none of the Rio Grande within the Rio Grande Project has been adjudicated. As a result, there is no priority administration of water use or basis for evaluating the priority of a particular water right. The lack of adjudicated rights precludes the development of a secure market within which to purchase water rights, or the right to use water. Because of the long-term financial planning and cost to construct surface water treatment plants, municipalities need long-term water supply contracts which can provide some degree of certainty as to

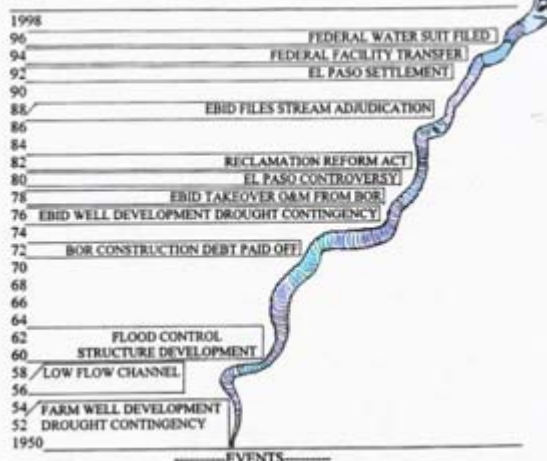
the priority of the water for which it has contracted. Also, it is imperative for the region to draft a drought management plan providing as much certainty as possible to a priority of uses in the event of severe drought.

SECTION III: THE LEGAL FRAMEWORK OF A STREAM ADJUDICATION

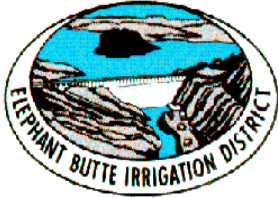
It will be up to the State Engineer to determine how much groundwater may be pumped without impairing the rights of the Rio Grande Project to deliver surface water. The legal mechanism used to prioritize everyone’s right to water in the basin is known as a “General Stream Adjudication.” In effect, it is a lawsuit which joins all of the water users of a stream system.

In the adjudication, the court sets forth everyone’s rights to surface and groundwater. It will determine how much water everyone is entitled to and the priority date of their use. If there is an over-drafting of groundwater by junior users, which is in effect taking surface water, these junior users will be told to stop pumping.

POLITICAL, SOCIAL, ECONOMIC IMPACTS



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We need to know the extent to which we have water resources available to us now and in the future. We must inventory our legitimate water supplies so we know how much of a sustainable resource we have. Then we can determine how much growth we are willing to support as a community, and what the tradeoff will have to be to support it. The process of taking inventory of legitimate water supplies is called the adjudication process.

CONCLUSION

The District's historical and legal research has turned up the following points:

On June 15, 1918, the Elephant Butte Water Users Association entered into an agreement with the United States and the Elephant Butte Irrigation District where the Water Users Association dissolved and the irrigation district assumed the liability for distribution and drainage works. In addition, the District received an assignment of all of the associations assets and rights.

The United States agreed to release the individual shareholders and the lands of the shareholders of the association from liens on their property as security for the repayment of the construction obligation once the District assumed the obligation for repayment of the construction of the Rio Grande Project.

Congress contemplated under the Reclamation Act, that when the District completed repayment of its allocated construction costs for the Project in 1973 the United States should no longer be the record holder of the Project water rights. Their rights in the water rights were extinguished with pay-out.

The priority dates for the Project water supply relate back to the dates in filings by the United States in 1906 and 1908. The River Alluvium which underlies the Rio Grande and which forms the supply for many shallow wells located within the District is part of the Project supply. The full irrigation of the Project lands within this region was the intent and purpose of the appropriations.

Throughout the history of the Project, there has been an increasing use of groundwater to supplement the supply of surface water available from the Rio Grande. This use of groundwater commenced at least as early as the 1940s and probably earlier. In the early and mid-1950s, the Rio Grande Project in New Mexico suffered water shortages because of a series of droughts in the watershed of the upper Rio Grande in Colorado and New Mexico and because of the up-stream use of water in excess of Rio Grande Compact entitlements. This severely impaired the ability of the members of the irrigation district to continue to grow crops with surface water, and led to increased groundwater pumping in the early and mid-1950s. Most of these wells have been drilled into the shallow aquifer which constitutes the Rio Grande alluvium, and others have been drilled into the underlying aquifer known as the Santa Fe Formation. These wells have been used, replaced, and supplemented by additional wells for the same purposes over the years.



The surface water delivery within the District contributes tremendously to the recharge of the River Alluvium and Santa Fe Formation in the Lower Rio Grande.

Each owner of water-righted land of the District is entitled to water the acreage listed in their contract based on available Project water supply.

State statutes provide for the equitable distribution of Project water to all of its water users and generally govern how the District operates and manages the water it distributes to its water users.

The District will defend the right of its water users to have delivered and use all of the Project water supply that the

90,640 acres of water-righted land within the District is entitled to use. Additionally, the District will defend any and all attempts by federal or state agencies to obtain or use the District's share of Project water for purposes that do not benefit its water users.

Given the dynamic institutional context within which water allocation issues are currently determined, it would appear that maintenance of the status quo with respect to allocation of water by the District is unlikely. The District is a management entity whose current policy has been directed solely toward agriculture. However, in looking to the future, it appears to be appropriate to consider the District as a water management entity which must address water management within broader parameters than those currently perceived to be relevant. The District's management goals will involve future deliveries of water to residential, commercial, and industrial uses as well as the traditional agricultural uses.

The District's water management activities and ongoing planning in anticipation of a more diverse constituency's future needs will be essential if the District is to maintain the perception that it is and will continue to be an appropriate trustee of this critical resource.

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“WATER IS THE TRUE WEALTH IN A DRY LAND”