



Interpreting the Elephant Butte Irrigation District for Water Users

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Interpreting the Elephant Butte Irrigation District for Water Users

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Introduction

New Mexico and water have always been inescapably linked. There is no other resource that is as vital to New Mexico's agriculture, industry, recreation and environmental preservation and no other resource that has been so engulfed in controversy. Throughout New Mexico's water history, there have been heated debates and battles waged over who gets how much.

The controversy surrounding New Mexico's water supply is one of distribution and sharing. Water moving through New Mexico's lower Rio Grande Valley has created intense rivalries and legal charges between Texas and New Mexico. Intense disagreements have evolved over the manner in which water is developed and managed. Meeting the water needs of New Mexico's lower Rio Grande Valley into the next century will be a significant challenge for water suppliers.

Managers have been focusing on developing alternative water sources and reallocating existing water uses to meet the growing demand for the resource. These include water marketing and water transfers, leasing or selling water from one water user to another, urban water conservation programs and increased reliance on groundwater supplies.

This circular is a tool to assist water managers, producers and all users of Rio Grande Project water to understand the policies that govern the project's water use and distribution throughout the Elephant Butte Irrigation District (EBID). Current

policies related to water issues critical to New Mexico's lower Rio Grande Valley are summarized. These policies relate to the state engineer's adjudication process, the buying and selling of water rights by the city of Las Cruces and the city's water leasing programs, as well as water conservation issues. This circular is intended to assist Elephant Butte Irrigation District water users with understanding these water rights issues. It provides basic information about the lower Rio Grande Valley's water resources and Elephant Butte Irrigation District practices. The information is not intended to solve specific legal problems or deal with exceptions to general rules and law.

Rio Grande Project History

The Rio Grande is the fifth largest river in North America. It begins in Colorado's San Juan Mountains, divides New Mexico, and serves as an 800-mile boundary between the United States and Mexico. The 1,800-mile river ends at the Gulf of Mexico.

In the Mesilla Valley, during the 1840s and 1850s, there were various areas of the valley where canals were constructed for irrigation. Many of the canals were made unusable by flooding and river shifts. Under the Reclamation Act of 1902, contracts established a relationship with El Paso County Water Improvement District #1, the Elephant Butte Water Users Association (predecessor to EBID), and the U. S. Bureau of Reclamation to construct an irrigation

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system to sustain southern New Mexico's agricultural needs.

EBID Rio Grande Project Water

EBID is a quasimunicipal entity of the state of New Mexico. The district operates under New Mexico statutes §73-10-1 through §73-10-47 Irrigation District Cooperating with United States under Reclamation Laws; Formation and Management, and §73-11-1 through §73-11-55 Irrigation Districts Cooperating with United States under Reclamation Laws; Fiscal Affairs; Local Improvements and Special Powers.

A nine-member board of directors manages EBID. Each member is elected for a two-year term and represents one of Doña Ana County's nine city polling precincts. The board hires a treasurer/manager to oversee EBID's daily operations and carry out the board's directives. Gary Esslinger has served as the treasurer-manager for the past 15 years.

EBID operations are broken down into five major departments: operations, maintenance, general/administration, hydrology and engineering. The operations department is in charge of ordering and scheduling water. Maintenance maintains the canals, laterals and ditches owned and used by EBID to deliver water. Administration follows the board's directives and controls the accounting and billing. Hydrology communicates with the Bureau of Reclamation and EBID's water master for diversions of water. Hydrology's main operation is to measure and control the flow of water along the canal system. Engineering is responsible for any issues dealing with water-righted lands. This department works closely with the State Engineers office to help water-righted owners with any water rights under adjudication in the Lower Rio Grande Stream Adjudication.

As defined by New Mexico statutes, irrigation districts cooperate with the federal government on Bureau of Reclamation projects. These statutes generally state that irrigation districts are to:

- Serve as a contracting agency for water users to arrange to repay construction obligations to the government and furnish funds for operation and maintenance; and in connection with other matters that must be agreed to, in contract for, between the government and water users. (§73-10-1 paraphrase)
- Serve as an agency for the assessment and collection of operation, maintenance and construction charges and the payment of same, to the government in accordance with contractual arrangements. (§73-11-28 paraphrase)
- Provide a water users' organization that might later be expanded for the purpose of assuming control of operation and maintenance upon transfer by the Bureau of Reclamation. (§73-10-45 paraphrase)

There are 90,640 acres of land within the EBID boundaries that have authorized water rights, with an estimated 7,900 water users. The Rio Grande Project covers 130 miles of land located in the Lower Rio Grande Basin from Caballo Dam to El Paso, Texas. Elephant Butte and Caballo reservoirs are operated and maintained by the U.S. Bureau of Reclamation. Snowmelt runoff from the Rocky Mountains in southern Colorado provides the bulk of the water that reaches the Rio Grande. Water delivery into the Elephant Butte and Caballo Reservoirs is guaranteed by the terms of the 1939 Rio Grande Compact, which states that Colorado and New Mexico must deliver a specified amount of water to Elephant Butte

Reservoir for use in southern New Mexico and West Texas. The irrigation season for the Rio Grande Project typically runs from mid-March to mid-October.

The average annual Rio Grande flow to Elephant Butte Reservoir is 937,570 acre-feet of water, but this flow can be erratic, ranging from 114,100 to 2,831,000 acre-feet per year. Water available to Elephant Butte Irrigation District is stored in the Elephant Butte and Caballo reservoirs until it is ordered for release by the irrigation district (fig. 1).

Water delivery in the EBID system was engineered as a gravity flow process (fig. 2). At no point along the Rio Grande Project is surface water irrigation pumped. The gravity flow process builds water up at different points throughout the canal system. When this water is released, the necessary surge allows water to continue flowing down the canal system instead of remaining at a laminar flow (sluggish). For example, if the average daily water use is 600 acre-feet and 1 acre-foot of water weighs 2,867,295 pounds, a significant amount of surface water force and velocity is needed to allow water to continue traveling along many miles of canals and laterals.

General Information for All Irrigators

Water Ownership

Surface and groundwater belong to the state of New Mexico. The state holds the water as a trustee for the people. Individuals may not own the water but merely acquire a right to use water under state law. There are limits to the amount of water users may take from the system. The water right laws of the 19 Western states, including those of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming, are based in large part on the law that governed mining claims. Under the miner's law, the first to make a claim to water and work it—put it to beneficial use—had a right superior to subsequent claimants. This “first in time, first in right” system applied to water use is known as the law of prior appropriation. New Mexico law uses the principle “first in time, first in right,” or prior appropriation based on the idea that the person who first puts water to beneficial use should have the better right to use against subsequent users. Early comers to the system have the “better” or senior right. They can take as much water as can reasonably be put to beneficial use.

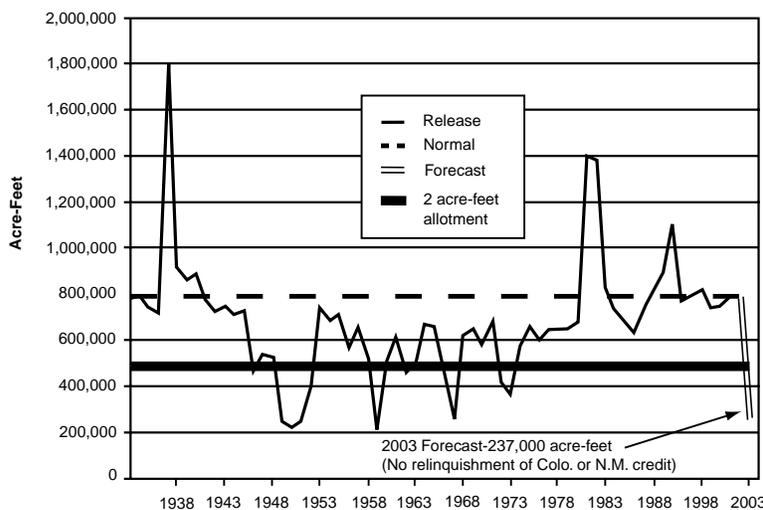


Figure 1. Historical releases from Caballo Dam.

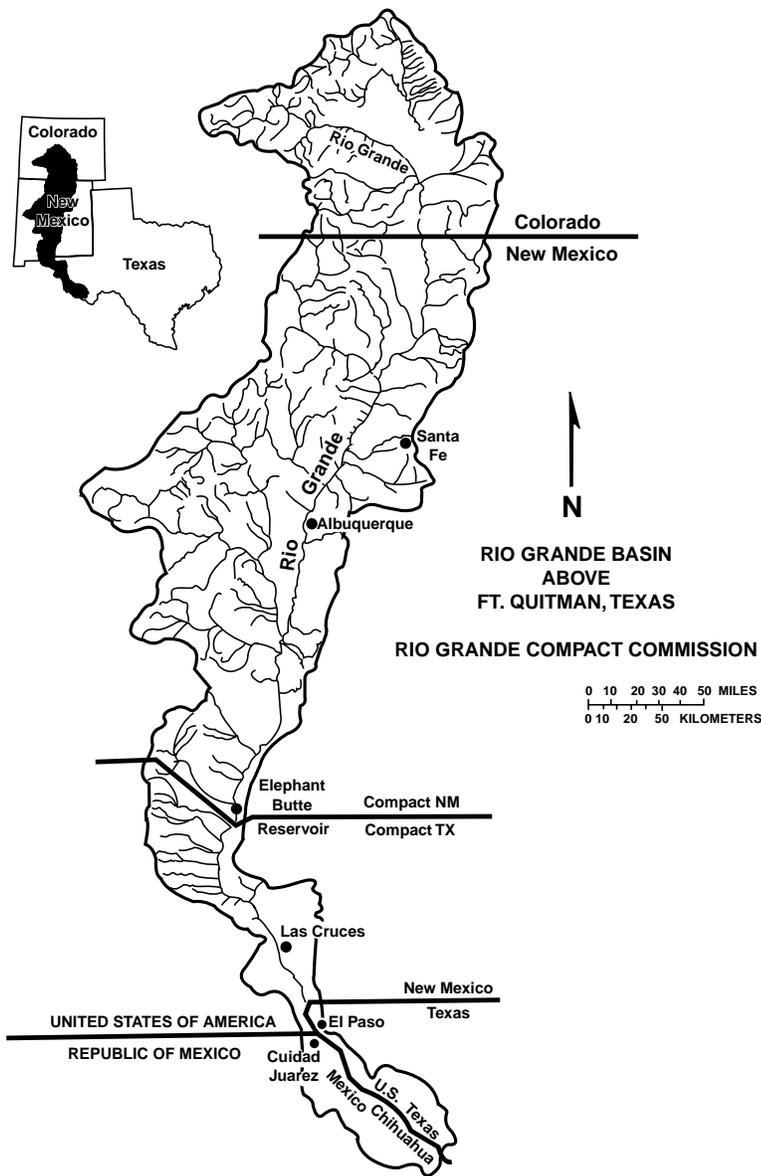


Figure 2. Rio Grande Compact gravity flow system.

Late comers or junior users take whatever water is left, if any. There is no sharing in times of shortage, and junior users must cease their water use until the senior right(s) is satisfied. This prior appropriation system is in direct contrast to the riparian system adopted in the eastern United States, where all shortages are shared and everyone along a stream has an equal right to take water for reasonable uses.

Water Rights

State law governs the appropriation of water in New Mexico. Generally, private citizens do not actually own water, but they have the right to use it. Under New Mexico law, a water right is a property right and cannot be taken without just compensation. The nature of the private property interest created by appropriation of water varies from state to state. People who divert water become the custodian of the water and have certain rights and duties with respect to other users and the state. These rights can be changed by the owner but not without permission from the state engineer. New Mexico's state engineer, who is appointed by the governor, maintains authority to supervise, measure, appropriate and distribute the state's water. Prior appropriation doctrine has the following key features: requirement for beneficial use²; first in time, first in right³; vested water rights that become a property interest⁴; and use it or lose it⁵.

² Beneficial use shall be the basis, the measure and the limit of the right to the use of water, and all waters appropriated for irrigation purposes. (§72-1-2, Water rights; appurtenant to land; priorities).

³ Priority in time shall give the better right. In all cases of claims to the use of water initiated prior to March 19, 1907...All claims to the use of water initiated thereafter shall relate back to the date of the receipt of an application therefore in the office of the territorial or state engineer. (§72-1-2, Water rights; appurtenant to land; priorities).

⁴ Any person, firm or corporation claiming to be an owner of a water right which was vested prior to the passage of Chapter 49, Laws 1907, from any surface water source by the applications of water therefrom to beneficial use, may make and file in the office of the state engineer a declaration in a form to be prescribed by the state engineer setting forth the beneficial use to which said water has been applied. (§72-1-3, Declaration of water rights vested prior to 1907).

⁵ When the party entitled to the use of water fails to beneficially use all or any part of the water claimed by him, for which a right of use has vested for the purpose for which it was appropriated or adjudicated, except the waters for storage reservoirs, for a period of four years, such unused water shall, if the failure to beneficially use the water persists one year after notice and declaration of nonuser given by the State Engineer, revert to the public and shall be regarded as unappropriated public water. (§72-5-28. Failure to use water).

Once water has been put to beneficial use, a portion of remaining unconsumed water often is returned to the source by seepage, drainage ditches or sewer pipes. At the point where water leaves the water right user's control and its usage ceases, any private property interest in the water ends and the water, in a sense, returns to the state's appropriation system.

Beneficial Use

New Mexico requires water right holders to make beneficial use of the water they take from the system. Beneficial use provides the measure and the limit of their rights. This means users may take only the amount of water they can use for a recognized beneficial use. For example, New Mexico recognizes municipal and industrial, domestic, irrigation and stock watering as beneficial uses.

In New Mexico, water users may hold their rights for as long as they use the water. They may sell, will or transfer their rights to others. Users may voluntarily give up their water rights. Also, they may forfeit their right by abandonment or statutory forfeiture.

Statutes Concerning Water Right Forfeiture and Abandonment

Water rights may be forfeited as a matter of statutory law or through abandonment. Forfeiture is the involuntary or forced loss of water rights, caused by the failure of appropriators or owners to put the water to beneficial use for four years. The statutes that govern the forfeiture of water rights are New Mexico Statutes Annotated §§72-5-28 and 72-12-8 (1991). Abandonment is the relinquishment of the rights by owners with the intention of forsaking and deserting the water right. Water that is forfeited or abandoned becomes available to others. Under prior appropriation when users no longer need their water, it can go to others

who will use it in a beneficial manner. Contact the Office of the State Engineer (OSE) for additional information about water right forfeiture and abandonment.

Office of the State Engineer

Territorial legislation created the Office of the State Engineer (OSE) to keep track of all water rights in the state and to prevent gross water misuse. Among other duties, the OSE is responsible for making sure that appropriators use no more than they are entitled to and that the water is put to beneficial use. The OSE approves all new appropriations and changes in place, purpose and use of water. The OSE decides how much water appropriators may claim initially and how much can be set aside for future use. Ultimately, a court in a stream adjudication proceeding will determine the exact nature of all water rights in a stream system. The OSE also decides whether users can change the source of their supply from surface water to groundwater and how much water may be needed to offset any impairment to other water rights.

Interstate Stream Compacts

The U.S. Constitution prohibits states from making treaties with other nations. States may enter into agreements, known as compacts, with each other. All compacts are approved by Congress and signed by the president. Compacts are above state laws and state constitutions.

New Mexico is a party to eight interstate compacts. These compacts regulate water sources that cross state boundaries and are between or interstate. They also provide ways to settle disputes among the parties. The Rio Grande Compact is the only compact agreement that affects waters within the boundaries of EBID. The Rio Grande Compact was entered into in 1939. It includes Colorado,

Table 1. Comparison of valuation process of 100 lots on 10 acres of land for surface water right conveyance with and without EBID water rights.

Water Right (a)	Meter Size (b)	Developers Fee Per Acre-Foot Lot (10 Acres) (c)	Amount of Acreage (d)	No. of Lots (e)	Required Water Right Conveyance (f)	Project Water Right (g)	Surface Water Right Valuation Per Acre-Foot (h)	Excess (Shortage) Water Right (i)	Amount (Owed) Excess (j)
With EBID	5/8	\$0.239	10	100	23.9	30	\$781.67	6.10	\$ 4,768.19
Without EBID	5/8	\$0.239	10	100	23.9	0	\$781.67	(23.9)	(\$18,681.91)

Texas and New Mexico. It determines the distribution of water from the Rio Grande system among these three states. For purposes of the compact, EBID lies within the Texas portion of the compact.

Treaties

There are several treaties between the United States and Mexico that regulate water. In 1906, the two countries signed the Rio Grande Convention Treaty. The treaty provides for fair division of water in the Rio Grande. It requires that the United States deliver to Mexico 60,000 acre-feet of water annually. This water is stored in Elephant Butte and Caballo reservoirs. Releases for Mexico are coordinated with deliveries of Rio Grande Project water.

Water Rights Adjudication

All of the water rights in New Mexico’s lower Rio Grande Valley are being adjudicated in state court. It is a judicial process, by which claims of water right owners are resolved through a court administered process, the outcome of which is court-certified titles for the property rights. Adjudication of water rights provides:

- A certainty to water rights owned by individuals or entities, allowing monetary value of the water right,
- A foundation for active water management that enables improved and more efficient watershed planning and management of future water allocations, and
- Clearly established titles to the right to use water.

The current adjudication processes in the lower Rio Grande consist of two factors: one technical and one legal. The technical factor is a hydrographic survey that identifies the elements of each individual water right. The survey includes an aerial photograph and ortho and georectification, which is housed in a geographical information system (GIS) mapping program. After concluding the GIS mapping, the OSE completes the technical process with on-site ground validation. After mapping has been validated, the OSE will assess the total water righted acres owned by the water right claimant. These assessments are sent to water right claimants in the form of an Offer of Judgment in the stream adjudication.

Water right claimants can agree or disagree with the information regarding their water rights. If claimants feel the offer is not correct, they may reject the claim and begin working with the OSE Hydrographic Survey Bureau/Legal Services Division to resolve their disputes in informal mediation. During the offer phase, the OSE assists claimants and explains what information is needed to prove their water right claim in this informal setting. Information that could help water right claimants in justifying their claims includes: historical photographs, EBID records of irrigation water deliveries and acreage, deeds, real estate contracts, and survey plats (proving current or accurate ownership), and location of existing or abandoned wells.

The goal of stream adjudication is to establish the amount of irrigated acreage, type of use, point of diversion, priority date, amount of use and ownership of the water right. At this time, OSE offers exclude the amount of water (duty of water) associated with the claimants water rights (other than that right for a domestic well). As of May 2003, the OSE has completed more than 8,000 acres of the adjudication process within the lower Rio Grande Valley. For adjudication information, please refer to contact information in appendix A.

Las Cruces' Alternative Project

Las Cruces' utilities department has implemented a project called lease conveyance, an alternative for project water-righted land. Section 2-1342 of the Las Cruces Municipal Code (LCMC) Conveyance of Water Rights or Project Water Rights or Authorized Alternative upon Development states that "conveyance of water rights or project water rights is a prerequisite for development of land. Each landowner/developer shall convey surface or ground water rights or project water rights to

the city at the time of development." In order for developers/landowners to develop lands for housing, water rights (surface or ground) must be transferred from owner to city. Then the city can supply water to the development. Valuation of surface water right conveyance is based on the meter size placed on the land.

For example: Suppose a landowner has 10 acres of land that he subdivides into 100 lots and installs a standard (5/8 inch) meter on each lot.

Using table 1, the required water rights conveyance is 23.9 acre-feet (c*e) of water. If the subdivided land to be developed contains 10 acres of EBID project surface water rights, these rights would supplement the cost of installing city water into the new developed subdivision. Using this example, the amount of water rights needed is 23.9 acre-feet of water. The city will pay the excess water rights of 6.10 (g-f) acre-feet. Conveying excess water rights to the city is required per Section 2-1342.B.1 LCMC, "If the conveyance amount exceeds an amount equal to the City's then current average annual water use for a specific customer class, the City will purchase the difference based on the valuation for Project water rights set by City Council resolution or as otherwise approved by the City Council."

As of June 2002, the Surface Water Right Valuation Fee based on city of Las Cruces Resolution No. 00-212 was \$781.67 for 10 acres of land within EBID project water. The result in this example is that the city obtains the required water rights for development and the developers/landowners receive payment for excess water rights in the amount of \$4768.19 (h*i).

If the developers/landowners subdivision does not have EBID project water rights or groundwater rights to convey to the city, then they will need to pay the city for shortage water rights in the amount of \$18,681.91 (h*i). Thus, the developers/landowners benefit by working within the

lease conveyance program and passing the savings onto homebuyers. Working within the city's lease conveyance program, costs to developers is more than 25 percent of developing a new water right for 100 lots.

Irrigator Information

Types of Water Users

Three types of irrigators receive water from EBID: farm rate, small tract and lift pump. Each irrigator type follows guidelines that manage how and when water is delivered to individual land tracts.

Land parcels of 2 acres or more are classified as farm rate. Farm rate irrigators are given an initial water allotment and have options to purchase an additional allotment when water is available.

Small tract water users are owners of parcels with less than 2 acres. Small tract users are allowed to water on a set schedule predetermined by the EBID board. This schedule usually allows small tract users to water nine to 11 times during the irrigation season.

Lift pump water users usually are treated as farm rate, except that a meter is attached to their turnout to measure the amount of water applied to their land.

Some lands within the district have been suspended permanently. Parcels that qualify for permanent suspension include seep lands or high lands. Seep lands are those situated next to an arroyo, bosque, swamp or riverbed and areas where the water table is less than 3 feet deep and cannot use water beneficially. High lands are areas where water cannot be delivered by a gravity flow distribution system (hills or mountains).

Within the EBID distribution system, there are certain restrictions associated with using project water:

- Yearly assessments must be paid.
- Landowners with 2 or more acres can use or not use project water.

Users have the option to sell to other EBID water users (2 acres or more), or to use EBID as a broker. Water sales through EBID are not always guaranteed. See conserved water for additional information on this subject.

- Landowners have the option to suspend surface water rights. This option is normally done when the land is isolated and water is inaccessible for delivery. Landowners may not have used water for a substantial time and do not foresee use in the near future. Landowners have the option to reapply for project water but must meet certain EBID criteria. See Land Classification (reclassification) for additional information.
- Landowners with less than 2 acres who do not pay assessments may have project water rights suspended by EBID, which can result in liens against their properties that include water rights.

Assessments

The EBID Board of Directors sets the yearly charges for water right holders. Assessments are levied on lands that are capable of receiving water through EBID's water delivery system. Assessments are broken down into three basic charges: general, operating and maintenance (O&M) and reservoir fee. There can be additional charges listed on the bill for administrative, reclassification and local improvement district (LID).

The general charge is billed to all landowners within the EBID district boundaries. Even those landowners with permanently suspended water rights are still charged the general charge.

The operating and maintenance fee, set each year by the board, supports maintenance and operation that pertains to landowners receiving water at their farm ditch gate. This can include such expenses as repair and maintenance of canals, laterals and sublaterals owned by EBID, equipment, salaries and legal and other expenses that result from water deliveries.

The Bureau of Reclamation's reservoir charge is for storing the yearly water allotment. This charge is prorated by each water righted acre and billed accordingly.

Additional Charges

The administrative fee is a charge of \$10 per contract not per account. A landowner may have one account with several contracts. This fee is not based on the total acreage owned but on the location of irrigated land. For example, if a farmer owns land in three different locations within the EBID boundary, such as in the Hatch, Mesilla and San Miguel areas, then he would have one account and three contracts with EBID for an additional charge of \$30 (\$10 per contract) on his initial bill.

Not all accounts are charged a local improvement district (LID) assessment. It is assessed to accounts located within flood control dam areas. These earthen control dams (Donā Ana Flood Community, Filmore, Mesquite and Tortugas) were built to protect lands from severe flooding. Dams are operated and maintained by EBID, and the EBID board set the annual charge. The charge is not suspendable and is considered a permanent assessment against the property it is attached to.

Conserve water charges consist of water ordered from the previous fiscal year but not billed. Some irrigators may order water after the billing cut off of Oct. 6 and use it before the reservoir closes the gates (usually Oct. 15). The conserve water charge will reflect this use.

The one-time reclassification fee is \$50 per acre. This fee will be billed to landowners over five years. People who own temporarily suspended property can apply for reclassification, as long as certain criteria are met and the tax assessments are paid. For additional information, see Land Classification.

Billing

Billing for EBID assessments are mailed at the beginning of the EBID fiscal year, Nov. 1, and become delinquent on Feb. 1. Delinquent charges after February will be subject to a one-half percent interest rate per month until paid. Additional water allotments are billed on a monthly basis at a rate predetermined by the board. Monthly billing statements are mailed on the second Tuesday of each month. Irrigators who become delinquent can not order water during the irrigation season.

Maintenance

EBID has 357 miles of irrigation canal, lateral and sublaterals within its delivery system. It has a scheduled maintenance program during the irrigation season, which includes mowing, spraying and grading water delivery system. Before the irrigation season begins, canals are cleaned for silt buildup, mowed and sprayed for weeds. During the irrigation season, maintenance work continues moving in a rotation from north to south. Spraying canals requires herbicides approved for use over water. Mowing takes place only when laterals are low in water. Ditches within the system are cleaned every five years.

Cleaning or repairing farm gates on ditches not owned by EBID are the landowners' responsibility. EBID requires that farm ditches are clean of debris and weeds before water is delivered.

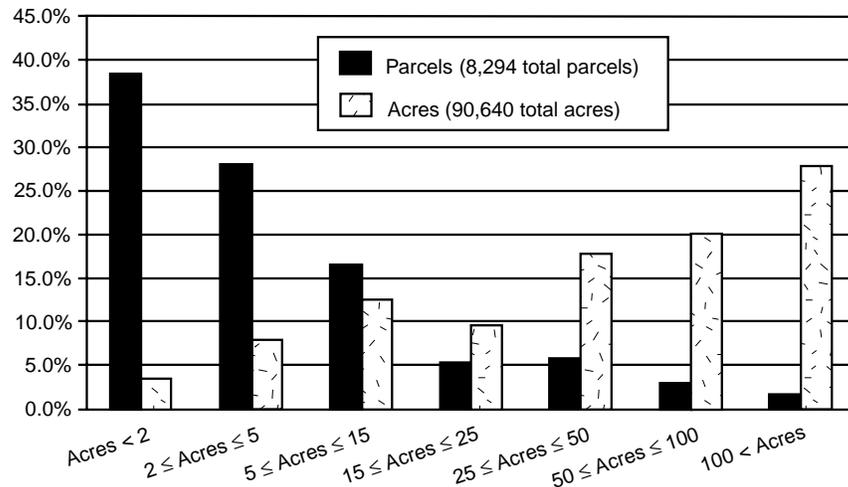


Figure 3. Comparison of land parcels to water use.

Conservation Water

During the irrigation season, users may have some conserved (unused allocated) water. This water remains in the conservation pool, which is located at the Elephant Butte Reservoir. Farm rate users can either broker their personal conserved water or instruct EBID to broker the water for them. EBID does not charge for this service. Any conserved water that is not used out of an irrigator's allocation by July 1 will be transferred to the conservation pool. Small tract users are not allowed to broker their conserved water.

Farm tract users have two options available for purchasing conserved water (when water is available). The first option is to reserve and prepay for conserved water. Users are able to reserve up to 1 acre-foot. The advantage to reserving conserved water is that irrigators can count on having this water. However, if the gates at the dam close before the water is ordered and/or delivered to their property, then irrigators lose the water and do not receive credit on their accounts. The second option is to order water on a monthly basis. Pooled water can be ordered, delivered and charged monthly

to users. The advantage is that users can continue to order water and if gates close early, they don't lose out on any prepaid water. The disadvantage is that they have no guarantee that water will be available. The rule is first come, first served. Conserved water is billed to users on a monthly basis. Users are not allowed to order additional water unless their monthly bill is paid in full.

Small tract users are not allowed to broker conserved water. Within the EBID delivery system, flat rater irrigators make up close to 40 percent of EBID accounts (fig. 3), but they account for only 3 percent of the total irrigation water. For example, compare flat rate water use to the early use of the telephone. In the early 1930s, most people did not have a telephone; they saw no use for it except for emergencies. Those that did have a phone used a party line, which served as many as 30 people, each paying \$10 per year. Lots of people with little use. Party lines were used because the cost of installing individual phone lines was high compared with the amount of use. To allow flat raters to buy and sell water, EBID needs to increase their operational capacity, increasing their cost and irrigator assessments. With flat

raters using such a small amount of irrigated water, it would not be cost effective for the delivery system. EBID has alternative programs for small tract users that allow for flexibility in water delivery. For further information, see the section on small tract programs.

EBID Water Conservation Program

The EBID water conservation program helps individual irrigators invest in water-saving technology. EBID commits a lump sum loan to landowners at a low interest rate (5 percent) for 15 years to help with capital outlay costs for on-farm water conservation systems. Financial assistance can be used for such water conservation practices as laser leveling, concrete lining ditches, drip irrigation systems, meters and refurbishing wells. The program is for all water users. To sign up for the program or to receive a detailed list of all water conservation practices covered, please contact the EBID controller.

Farm Rate Irrigators

Land Classification

Landowners with 2 acre-feet of land or more are considered farm rate. Farm rate users are allotted and billed for an initial allotment, which can never be more than 2 acre-feet of water. However, during years of water shortage (drought), the initial allotment can be set lower than 2 acre-feet. Each year, the Bureau of Reclamation uses information about snowpack and rainfall to determine the amount of water that will be in the reservoir and available for irrigators in New Mexico's lower Rio Grande Valley. Reservoir levels as well as Rio Grande Compact and Bureau of Reclamation policies determine the amount of deliverable water to EBID, El Paso County Water Improvement District #1 and Mexico.

Reclassification

Farm rate landowners who have temporarily suspended their water use can reapply for reclassification and receive project water, if the following criteria are met:

- Land must be located inside EBID's boundaries.
- Land must not be isolated from an irrigation service.
- Land must be capable of receiving water in a reasonable time from existing water delivery facilities.
- Land must be capable of growing commercial crops as evidenced by a crop history.
- Land must not show any evidence of salinization (alkali).
- Land surface must be a minimum of 4 feet above the water table as of August in years when a full allocation of water and the water take are considered normal.
- Title to land must be legally vested in the name of the applicant.
- Land cannot be subject to flooding.

Legal landowners must submit written requests to EBID for reclassification and show proof of all the criteria listed above. At this time, the waiting period for reclassification is 4 to 6 years.

Assessments

In 2003, the yearly charge for the initial allotment was \$50 per acre of land. It consisted of the general charge, operating and maintenance and reservoir charges. The general charge for fiscal year 2003 was \$1.51 per acre of land within the EBID

boundaries. The operating and maintenance charge was \$47.18 per water-righted acre. The reservoir charge was \$1.31 per water-righted acre. Before the beginning of each new fiscal year, the EBID board and treasurer estimate the cost and expenses that will be needed for the following year from their budget.

General charge	\$ 1.51
Operating and maintenance fee	47.18
Reservoir charge	1.31
Total	\$ 50.00

When available, conservation water (extra allotments) for 2003 is \$20 per-acre-foot. Charges do not include the administration fee.

Renters

A large number of landowners rent land to producers throughout the district. EBID does not allow renters to order irrigation water without consent from landowners. In order to keep track of water orders and billing, EBID has established a renter's agreement. When signed by the landowner, this agreement gives EBID information about number of assessed acres and the renter. The renter agreement states that landowners must:

- Pay their water assessments to EBID. Even if the landowner has arranged for the renter to pay the water assessments, the landowner is still responsible. If the assessments are not paid, EBID will withhold water delivery.
- Not hold EBID responsible for any damages arising out of the agreement.
- Not hold EBID responsible for mediating disputes with renters arising from separate agreements.

- Understand that renters are allowed to order all project water available to their assessed land.
- Sign the renter's agreement. Any oral communications to EBID will not be authorized.

Landowners should fill out the renter's agreement, which asks for the landowners and renters' EBID account numbers, names, phone numbers and number of acres to be rented. Landowners have the option to receive copies of all renters' statements. After the agreement has been signed by the landowner and returned to EBID, the renters can order water.

Ordering and Scheduling Water

Irrigators decide when they need to order water for their fields. To order water, irrigators call the EBID dispatcher located closest to their land (table 2).

Table 2. Dispatch locations and phone numbers for water orders.

Dispatch Location	Phone Number	Fax Number
Las Cruces	524-8003	526-8391
Hatch	267-4807	526-8391
Anthony	882-2135	526-8391
El Paso	533-3858	526-8391

Dispatchers are on-call Monday through Friday from 6 a.m. to 10 p.m. Emergency calls after 10 p.m. will be received by an answering service. Dispatchers require the following information to place water orders: name; EBID account number, if the caller is the renter, then the dispatcher will need the renter account number first and the owner's account number so that orders can be placed correctly; acreage; crop type; ready date (appendix C); and contact information.

The dispatcher will locate the parcel of land for the water ordered and give the order to the appropriate ditch rider. Ditch riders pick up orders Monday through Friday by 8 a.m. Water orders placed after 8 a.m. are typically picked up the following day.

Ditch riders will tally irrigated water land acreage orders by four crop categories: alfalfa, cotton, orchard and vegetable. They total up their unit orders and place a water order with the water master for 10 percent of the water acreage land. For example, a day's order might consist of:

Cotton	300 acres
Orchard	1,500 acres
Vegetables	500 acres
Alfalfa	1,000 acres
Total	3,300 acres

The ditch rider's order would be for 330 cubic feet per second (cfs) of water. The water master tallies up all units within the 90,640 acres of project water, which includes three areas or 12 units. The northern area covers Arrey and Rincon (Units 1A and 1B), the central area includes Leasburg to Las Cruces (Units 2A, 2B, 3A and 3B) and the southern area consists of the east and westside canal area (Units 4A, 4B, 5A, 5B, 5C, and 6A). The El Paso County Irrigation District takes over at Unit 6B (fig. 4).

Each unit uses three ditch riders who cover an average of 8,000 acres. They are on call 24 hours a day during the irrigation season. The water master turns his daily tally into the EBID Hydrology Department, which verifies water availability in the reservoir and places the order with the Bureau of Reclamation. Once the Hydrology Department has placed the water order, water will be immediately released. This whole process takes a total of two hours.

Once water is released from Elephant Butte Dam by the Bureau of Reclamation, the Hydrology Department releases water at

various diversion points along the canal system and notifies the water master of the times and amounts of the water releases. The water master then contacts the ditch riders who receive the water. Ditch riders typically notify irrigators four to six hours prior to delivery. Appendix B contains additional information concerning the ordering and scheduling of farm tract use.

A number of factors can cause delivery delays and are beyond the ditch rider's control: system limitations, water demands build-up time, carriage and turnout location.

- **System limits.** There are times when irrigator's water demands can exceed canal system limits. For example, the Leasburg Canal, a 13-mile earthen ditch, holds 700 cfs of water. The Rincon Canal holds 250 cfs. If demand exceeds the system limits, water delivery may not be as quick as irrigators would like. Typically, EBID delivers water within three days of an order.
- **Water demand.** During peak seasons, when the amount of water acreage on order is high, the waiting period may be longer than expected. EBID tries to accommodate irrigators, but if demand in one particular unit is high, the wait for water may be extended.
- **Build-up time.** EBID delivers water by gravity flow. In order for water to flow along the canal system, it must build up at certain points before being released. This build-up takes time and delays delivery.
- **Carriage losses.** When ordering water from the Bureau of Reclamation, it is necessary to estimate the percentage of seepage (deep percolation or water loss through the earthen canal system) and evaporation. This added percentage of water included in the EBID order to

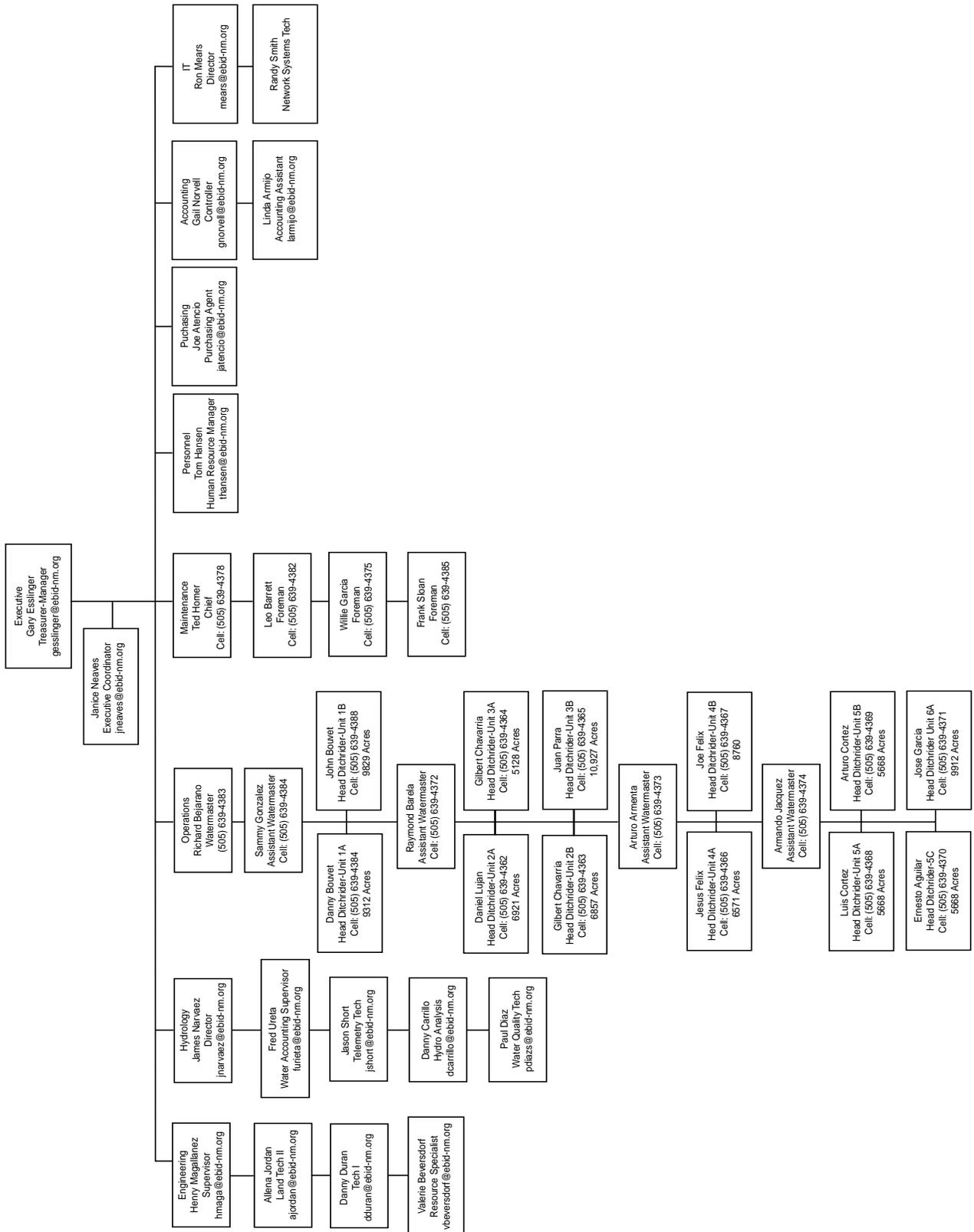


Figure 4. Elephant Butte Irrigation District organizational chart.

the Bureau of Reclamation is called the carriage loss. EBID and NMSU have analyzed the percentage of seepage and evaporation from the canal system, so the Hydrology Department can make better water order estimates. Estimates of carriage losses may be low or high. If there is a deficit, water delivery to an irrigator may be delayed. EBID tries not to allow any spillage within the canal system, which may result in longer waits for water if carriage losses are higher than expected. Presently, EBID uses a carriage rate of 14 percent.

- **Turnout location.** Water delivery also can be delayed by turnout location. If a landowner is located at the end of the canal system, it may take additional time for water delivery.

Small Tract Irrigators

Land Classification

Landowners with 2 acres of land or less are considered small tract irrigators and are charged a flat annual rate based on the amount of acreage owned. Small tract irrigators receive water on a set schedule determined at the beginning of the irrigation season.

Assessments

The flat rate charge is predetermined by the EBID board at the beginning of the irrigation season. Five different fee rates are used, based on the amount of acreage owned (table 3).

Water right landowners can decide if they want to use their scheduled irrigations. The assessment fee remains the same either way.

Table 3. Fee structure for small tract users.

Small Tract Tax Rate by Acreage	Amount Per Acre
.01 – 1.00	\$121.50
1.01 – 1.25	\$143.00
1.26 – 1.50	\$164.50
1.51 - 1.75	\$186.50
1.76 – 1.99	\$209.00

Administration fee is included in the assessment.

Ordering and Scheduling Water

Small tract irrigators typically are allowed nine or 10 irrigations every three weeks during the irrigation season, depending on water availability. Irrigators receive a schedule through the mail prior to the first irrigation. During a full allotment year (3 acre-feet), small tract irrigators are encouraged to use 3 to 4 inches⁵ of water, during each irrigation weekend. During drought years, small tract irrigator weekends could be reduced.

During a small tract irrigator weekend, users are allowed to take delivery of water only once during the 48-hour weekend, a typical irrigation weekend starts at midnight on Friday and ends at midnight on Sunday.

Users should not close their turnouts or reduce the irrigation water flow to other small tract irrigators along the same ditch. Once the turnout is closed down, the district will lock the turnout until the next scheduled irrigation. Because water moves by gravity flow, small tract irrigators in the northern portion of the canal system should irrigate within the first 24 hours, allowing users in the central and southern areas to receive a sufficient flow of water. Appendix B contains additional information concerning ordering and scheduling for small tract use.

⁵ To calculate the amount of water small tract irrigators receive each irrigation, take the amount of water (i.e. a full allocation irrigation season gives them 3 acre-feet of water or 36 inches) and divide this by the number of actual irrigated weekends.

EBID requires the following of small tract irrigators:

- Assessments must be paid before the irrigation season starts.
- Personally owned irrigation ditches must be cleaned of debris and weeds. Waterways and banks (in their entirety) should be clearly visible with the naked eye.
- They may not have previously irrigated. At times, ditch riders may schedule a small tract irrigator to water with a farm tract irrigator who uses the same ditch.
- EBID may shut down and lock ditch headgates, when there is an excessive amount of flooding or spillage. The headgates will not be opened until the problem is solved.

Small Tract Programs

Small tract irrigators frequently ask EBID how they can receive their water efficiently. The district has prepared the following alternative plans available to assist small tract irrigators. It is up to individual irrigators to decide what type of user they want to be. Irrigators are advised to study these options and decide if they would like to participate. For assistance, irrigators must contact the small tract coordinator at EBID or water specialist at NMSU's Cooperative Extension Service. Small tract irrigators do not have to make any changes in their irrigation organization or practices. However, they need to be aware of the options available to them.

Combinations

Groups of small tract irrigators are encouraged to combine their lands together or with a farm tract irrigator. A combination is two or more accounts that are grouped together to make

2 or more acres. Combining may help the flat rate irrigator, who normally waters under the preset weekend schedule gain flexibility.

Requirements for approved combinations are listed below:

- Applicants usually are small tract users, meaning they have less than 2 water-righted acres.
- Total water-righted acreage of the combination has to be in excess of 2 acres.
- Water delivery to the combined lands has to be off the same ditch.
- All accounts within the combination must be paid and up-to-date when combined. If any of the accounts become delinquent, they are all considered delinquent and no accounts will be allowed to water.
- A lead account must be established. One person from the group must be in charge of the combination. This applies when ordering and scheduling water. The lead account will be designated as the contact person between the combination members and EBID. The lead account must establish renter's agreements with the other combination account members in order to have the authority to order water for the other combination accounts.
- Orders for water must be placed simultaneously for all accounts in the combination. Members of a combination are not allowed to water individually. Combinations are treated as farm rate irrigators when ordering water. Combinations are not allowed to irrigate during the small tract weekend, unless water has been ordered. Combinations that irrigate

without placing an order will be penalized and terminated.

- Combinations are considered flat rate irrigators and will not be allowed to transfer or lease water outside the combination. Transfer of water within the combination is allowed.
- Combinations will receive the amount of water allotted to each water-righted acre, which is predetermined each irrigation season by the EBID board.

No requirements limit the number of users in a combination, as long as the total combined acreage is greater than 1.99 acres. The combination continues to be assessed at the small tract rate, but irrigators are allowed to order and schedule water as a farm rate irrigator. Any additional water ordered will be billed to the lead account. Billing is the responsibility of the lead account. This option allows small tract irrigations to order water at the farm rate. It gives them water when needed, accuracy in the amount of water received, less watering time and stronger flows and a ready date for delivery.

Combination users are not eligible to receive water on the small tract scheduled weekends (unless they specifically placed a water order) and are unable to sell any portions of unused water to other irrigators outside the combination.

Two types of combinations can be formed. The first is a flat-rate combination, where all accounts within the combo are small tract users. The second is a farm/flat combination, where a farm rate irrigator irrigates off the same ditch. Both types of combinations must meet all requirements listed previously before approval by the water master can be given. These requirements are necessary and will be enforced by EBID. Failure to comply with these requirements can result in termination

of your combination and reversion to flat rate status.

For additional information about forming a combination, contact EBID's small tract coordinator, water master or a unit ditch rider.

Ditch Associations

Many of EBID's irrigation systems were built in the early 1900s to provide water for farms. As population increased, many of these farms were subdivided into smaller parcels. Today, an irrigation headgate that originally delivered water to a 40-acre farm may be serving more than 40 separate landowners in a subdivision on the same acreage. In today's 40-acre subdivision, water users have the same amount of water as the farmer did. If all water users try to irrigate on the same day, there will not be enough water for everyone at the same time. Irrigators may need to manage their water to ensure that everyone gets their fair share when they need it. Small tract irrigators also may need to organize as a group in order to equitably share the responsibilities and costs of ditch maintenance and repairs. Chapter 73 of the New Mexico Statutes enables irrigators to form ditch associations. "The purpose of these statutes is to provide for the organization of artesian conservancy districts to conserve, where necessary, the waters in any artesian basin or basins within the state, the boundaries of which have been scientifically determined by investigations, and where such waters have been beneficially appropriated for private, public, domestic, commercial or irrigation purposes, or otherwise (§ Statute 73-1-1)."

Members of a ditch association should communicate with others living on or near the ditch, cooperate with each other and have a working knowledge of their delivery system. Ditch association benefits include:

- **Group participation.** Members have a formal process for making group decisions about the ditch.
- **Formal and legal documentation between users.** An organized ditch becomes part of a legal entity with a clear purpose that governs members' actions.
- **Efficient water deliveries.** Deliveries can be scheduled among members and enforced by the association. This helps to eliminate disputes among members.
- **Improved communication between the irrigation district (EBID) and users.** A ditch association can work more efficiently with the district as a united voice to resolve delivery problems.
- **Marketability.** Property owners have an additional selling point when potential buyers know that the ditch is organized and works efficiently. Bylaws from the association should be attached to the property deed.

If water right holders along a ditch are interested in formally forming an association, please contact the small tract coordinator at EBID or the Extension water specialist for assistance.

Neighborhood Ditch Organization

Some small tract irrigators may wish to informally establish a ditch association similar to that described above. A neighborhood ditch organization may meet the needs of small tract irrigators. Although it is less formal, it can still offer many of the same benefits as an association. If you are

interested in forming a neighborhood organization, please contact the small tract coordinator at EBID or the Extension water specialist for assistance.

Single Flat Rate

It is not necessary for water right landowners to participate in any of the plans mentioned above. Single flat rate users can still receive water during the scheduled weekends as long as they comply with all of the existing general regulations set forth for small tract users.

Conclusion

Water issues and water laws are complex. This circular has only briefly discussed a few key principles of water use and law that affect and determine how we use this limited resource.

**Appendix A:
Information Sources**

Cooperative Extension Service

Leeann DeMouche, water specialist
P. O. Box 30003, MSC 3AE
Las Cruces, NM 88003
E-mail: ldemouch@nmsu.edu
Tel: (505) 646-5254
Fax: (505) 646-8085

Craig Runyan, water resource director
P. O. Box 30003, MSC 3AE
Las Cruces, NM 88003
E-mail: crunyan@nmsu.edu
Tel: (505) 646-1131
Fax: (505) 646-8085

John M. White
County Extension agricultural agent
530 N. Church St.
Las Cruces, NM 88005
E-mail: whjohn@nmsu.edu
Tel: (505) 525-6649
Fax: (505) 525-6652

City of Las Cruces

Gene Paulk, water rights manager
P. O. Box 20000
Las Cruces, NM 88004
Tel: (505) 528-3527

Elephant Butte Irrigation District

530 S. Melendres
Las Cruces, NM 88005
Main office: (505) 561-6671
(See fig. 4 for additional phone numbers)
www.ebid-nm.org

**La Union Soil and
Water Conservation District**

2507 N. Telshor Blvd.
Las Cruces, NM 88011
Tel: (505) 522-7804
Fax: (505) 521-3905

**New Mexico Department
of Agriculture**

P. O. Box 30005
Las Cruces, NM 88003
Tel: (505) 646-3007
Fax: (505) 646-8120
<http://www.nmda.nmsu.edu/>

**Office of the State Engineers
Hydrographic Survey Bureau/
Legal Services Division**

M. Rasool Ahadi, adjudication supervisor
Mike Riley, adjudication program
coordinator
1680 Hickory Loop, Suite J
Las Cruces, NM 88004-0729
Tel: (505) 524-6330
Tel: (800) 928-3766
Legal Services Division, Santa Fe, NM
Fax: (505) 525-6032
<http://www.ose.state.nm.us>

**Natural Resources Conservation
Service–USDA**

Las Cruces Service Center
2507 North Telshor
Las Cruces, NM 88001
Tel: (505) 522-8775
Fax: (505) 521-3905
<http://www.nm.nrcs.usda.gov/>

**Appendix B:
Frequently Asked Questions**

1. Why am I charged for water if I do not use it?

You are not paying EBID for water but for the operation and maintenance of the delivery system. EBID faces fixed costs unrelated to actual water delivery. Your charge is an assessment/tax and not a water charge.

2. Why does it take longer at times to receive water?

There are several reasons for water delays: demand capacities, acreage ordered for irrigation, carriage, build-up time and location of turnout. See the Ordering and Scheduling section for additional information.

3. What if I ordered water and I can not take delivery of it?

Most ditch riders will try to accommodate irrigators by giving ordered water to someone else down the system. If they are unable to give ordered water to someone else, the water will continue down the canal system to Unit 6B where El Paso picks up its water.

4. What is the administrative charge and why do I need to pay it?

The \$10 administrative fee is a charge per contract not per account. A landowner may have one account at EBID with several contracts. This fee is not based on the amount of acreage owned but on the location of irrigated land.

5. How do I get a surface water right on my land?

A written request by the legal owner should be sent to EBID for reclassification. It should show proof of all the necessary criteria to qualify for a water right. At this time, there is a waiting period of 4 to 6 years for reclassification.

6. Why does the previous owner's name still appear on my account?

If a new owner recently purchased irrigated property, a copy of the recorded deed needs to be sent to EBID for correction. As with all charges, there will be some time before the account will change. This could be the reason some farmers do not get their statements on time or at all.

7. Why are my charges not consistent with water usage?

The ditch rider himself applies all charges to account for irrigations. The water records department at EBID does not put charges into accounts, unless they are metered. The time of year, number of irrigations and soil condition also can determine what the ditch rider will charge. The water master must approve corrections to charges; any charges should be contested no later than 30 days after receipt of statement.

8. Why do you need my name when I order water?

Dispatchers are supposed to get the first and last name and phone number of the person who calls in to order water. Ditch riders need to be able to contact the person ordering the water so that delivery can take place. Also, if water is being ordered by the renter, EBID needs to verify that a renter's agreement has been signed and agreed upon.

9. How can I as a flat rater get my voice heard?

Come to a board meeting. Talk to your board member for your district. Monthly meetings are held on the second Wednesday of every month. They are open to the public.

10. Why can't flat raters buy and sell water?

Within the EBID delivery system, the flat rater irrigators make up nearly 40 percent of EBID accounts, but they use only 3 percent of the irrigation water. To allow flat raters to buy and sell water, EBID would need to increase operations. With flat raters representing such a small amount of irrigated water, it is just too costly (fig. 4).

11. Why am I allowed to receive water just once every 3 weeks?

With flat raters representing such a small amount of irrigated water, it is not to the benefit of the delivery system to move small tract irrigator water at different times.



**Appendix C:
Glossary of Terms**

Acre—An acre of land represents 43,560 square feet or a square parcel of land 208 by 208 feet.

Acre-foot—325,851 gallons or enough water to cover an acre of land 1 foot deep. An average household uses between one-half and one acre-foot of water per year.

Adjudicate—To determine rights by a lawsuit in court.

Appropriative right—A right based on physical control of water.

Aquifer—A geologic formation that stores, transmits and yields significant quantities of water to wells and springs.

Assessment—To charge a person or property with a tax or other special payment (as in annual fees for irrigation water and its delivery).

Canal—Waterway with a great water carrying capacity of 125-plus cubic feet per second.

Check—Water control structure used in a channel or waterway to purposely restrict water flow to provide adequate pressure to push water through the turnout, which is responsible for the delivery of water to adjacent lands.

Conjunctive use—The planned use and storage of surface and groundwater supplies to improve water supply reliability.

Consumptive use—The amount of water that is consumed and lost to the stream system while applying water to a beneficial use.

Cubic foot of water—A cubic foot of water is the quantity of water contained in a 1-foot cube, which is 7.46 gallons.

Culvert—Conveyance structure that provides a means for the water to pass under a road or railroad. A culvert can be built out of corrugated metal pipe (CMP), precast concrete pipe, or free flow box culverts specifically made for the culvert.

Decree—An official document issued by the court defining the priority, amount, use and location of a water right.

Discharge—The volume of water passing a particular point in a unit of time. Units of discharge commonly used include cubic feet per second (cfs) or gallons per minute (gpm).

Ditch rider—A person responsible for opening, closing and adjusting the headgates on an irrigation canal or lateral.

Diversion—Removing water from its natural course or location, or controlling water in its natural course or location, by means of a ditch, canal, flume, reservoir, bypass, pipeline, conduit, well, pump or other structure or device.

Drain—A manmade drainage structure that carries irrigation seepage and tailwater to the river or a natural wash.

Evaporation—The physical process by which a liquid is transformed to the gaseous state; the loss of water to the atmosphere as a result of this process.

Flume—A device used to measure the flow of water in an open channel (canal or ditch). Consists of three main components: a converging inlet section, a straight throat section and a diverging outlet section.

Groundwater—Waters in groundwater basins (aquifers), underground streams and underground flow of a surface stream.

Headgate—A device used to control water diversions from a stream, canal or reservoir.

Headwater—Water turned onto the head (upper end) of a field for irrigation purposes.

Hydrologic cycle—Movement of water as it evaporates from rivers, lakes or oceans, returns to earth as precipitation, flows into a river and evaporates again.

Irrigation—The application of water to crops, lawns or gardens by artificial means to supplement natural precipitation. Water can be applied by flood, sprinkling or dripping.

Lateral—A ditch or pipeline that delivers irrigation water from a canal to one or more water users.

Litigate—To bring a dispute or claim before a court of law for decision or settlement.

Permit—An official document allowing the performance of a specified activity under set limitations. If all requirements are met, a water appropriation permit can mature into a license.

Ready date—The day irrigators make their request to the dispatcher for delivery of water.

Reasonable and beneficial use—A state constitutional requirement that all water resources must be put to beneficial use, preventing waste or unreasonable use or unreasonable method of use. Beneficial use is applying water to a useful purpose in an efficient and responsible manner without being wasteful. Beneficial uses include domestic, agricultural, industrial, municipal, recreational and minimal stream flows filed by the state.

Recharge—The addition of water to an aquifer by infiltration, either directly or indirectly. It may be recharged artificially when water is injected through wells or spread over permeable basins.

Reservoir—A pond, lake or basin, either natural or artificial, in which water is stored or controlled.

Return flow—Water that finds its way back to its source of supply.

Right—A claim or title to anything that is enforceable by law, such as a right to use water.

Runoff—Precipitation that flows to and in surface streams; renewable water.

State engineer—The person charged by state law with the supervision and administration of water and the enforcement of decreed priority and legislative enactments. The state engineer discharges the obligation of the state of New Mexico imposed by compact or judicial orders and

coordinates the work of the Interstate Stream Commission with other government departments. The state engineer has rule-making obligations and supervisory control over measurements, record keeping and distribution of the state's public waters.

Tailwater—Irrigation water that runs off the end of a field. The water user is responsible for the tailwater until it reaches a natural or manmade drainage.

Turnout—Gate structure, which allows the release of irrigation water from the canal, feeder and lateral to the adjacent lands or into another waterway. There are two major types of turnouts: farm turnout and lateral turnout.

Wasteway—Waterway used to release excess water from a canal, feeder or lateral into a drain, another canal, feeder or back into the river. The main purpose of a wasteway is for emergencies and/or high flows of water.

Water right—The right to use water for a given beneficial purpose with a specific use and priority.

Watershed—An area that, because of topographic slope, contributes water to a specified surface water drainage system, such as a stream or river.

Well permit—The granting of permission by the state engineer to allow the digging of a hole in search of groundwater to apply to a beneficial use.



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To find more resources for your home, family, or business, visit the College of Agriculture and Home Economics on the World Wide Web at www.cahe.nmsu.edu.

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