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### **SUMMARY OF THE RIO GRANDE COMPACT**

There are many types of interstate compacts. One type is a compact that requires that a certain quantity of water be delivered each year at the state line. The best example of this kind of compact is the Colorado River Compact of 1922. That Compact requires that the Upper Basin States deliver 7.5 MAF at Lee Ferry in Arizona on an annual basis. The second type is the compact that calculates all of the water within a basin and divides that water among the States on a percentage basis. A good example is the Upper Colorado River Basin Compact of 1948. The third type regulates depletions of water between gages on a river system. In other words, if X-CFS passes the gage at an upstream point, then Y-CFS must pass the gage downstream. If that quantity of water does not pass the lower gage, then there is a breach of the compact. The Rio Grande Compact is a depletion measurement compact.

To be clear as to the history of the Rio Grande Compact, an interim Compact of 1929 was agreed to among the parties to preserve the status quo of water use and to serve as a guideline for the Compact of 1938. As observed by Raymond A. Hill, in his significant article in the *Natural Resource Journal* published in 1974, “many of the provisions in the 1929 Compact were incorporated verbatim or substantially so in the Rio Grande Compact of 1938.” Raymond Hill, *Development of the Rio Grande Compact of 1938*, 14 Nat. Resources J. 163, 167. The idea was to preserve the status quo of water use until a Compact could be agreed to among the States. Throughout this summary, when we use the word “Compact,” we are referring to the Rio Grande Compact of 1938, not the early compact of 1929. Finally, virtually all of the reservoirs on the Rio Grande and the Chama were constructed after 1929, and therefore, are subject to the strictures of the Rio Grande Compact.

Article I of the Compact lists the parties to the compact as Texas, Colorado, New Mexico and the United States. It also provides definitions of all of the terms used within the Rio Grande Compact.

Article II lists all of the gaging stations using automatic water recorders to effectively evaluate compliance with the Compact by the individual States and the United States.

Article III first describes the obligation of Colorado to deliver water to New Mexico. Tables 1 and 2 attached to this document include examples of the circumstances when Colorado will be obligated to release water to New Mexico and when New Mexico will be obligated release water from project storage to Texas.

The Compact anticipates that 790,000 acre-feet will be available each year at Elephant Butte for use by Texas and New Mexico farmers. The original delivery points for delivery to Texas were at San Acacia and San Marcial. The measurements from these gages proved ineffective. Therefore, a 1948 Resolution by the Rio Grande Compact Commission abandoned

those gages and replaced them with the Elephant Butte Effective Index Supply. It is important to understand that the Rio Grande Compact does not apportion water among New Mexico and Texas farmers below the delivery point. Rather, this is done by contracts between the irrigation Districts and with the United States Bureau of Reclamation in the Rio Grande Project. The ratio of irrigated land has yielded 57% for New Mexico farmers and 43% for Texas farmers. It is also important to note that the Compact states that “Nothing in this compact shall be construed as affecting the obligations of the United States to...Indian Tribes or as impairing the rights of the Indian Tribes.” *See* Rio Grande Compact, Article XVI. Finally, the Compact delivery schedules do not apply to imported San Juan / Chama water. This is set out in articles IX and X of the Rio Grande Compact. Nor do they apply to water that is being delivered to Mexico. *See* Article XVI.

This summary focuses on the obligations of the Compact between New Mexico and Texas and addresses the following topics:

- 1) Did the drafters of the Compact from New Mexico gamble on high flows on the Rio Grande or did they assume that the flows would, on average, be in the low range?
- 2) What limitations on storage by New Mexico were required by Texas to ensure that they received their 790,000 acre-feet a year for the lower basin farmers in New Mexico and Texas?
  - A) The 200,000 acre-feet limitation on storage debits for New Mexico.
  - B) The 600,000 acre-feet limitation on project storage. (Table 1)
  - C) The limitation that there must be 400,000 acre-feet of water in Elephant Butte for New Mexico to store water in El Vado Reservoir (Table 2.)

### **Did the drafters of the Compact from New Mexico gamble on high flows on the Rio Grande or did they presume that the flows would be in the low range?**

Article IV of the Compact contains a table that describes how much water must arrive at the San Marcial Gage, based upon the amount of water passing upstream at the Otowi Gage. This provision of the Compact excludes from the measurements flows during the months of July, August and September. This table clearly allows the highest percentage of water to be consumed in the middle valley of New Mexico when the flows at Otowi are the lowest. And, conversely, it allows Texas to receive a higher amount of flows when the quantity of water passing the Otowi gage is the highest. For example, when the flow at Otowi is 200,000 acre-feet, New Mexico need only deliver 65,000 acre-feet at San Marcial. This means that New Mexico has a right to consume around 70% of the water that passes the gage at Otowi. In contrast, if the flow at Otowi is 2,000,000 acre-feet, New Mexico only gets to consume less than 10%.

This table in Article IV yields some unusual results for New Mexico. This table reflects that in a dry year where the flows passing at Otowi are small, New Mexico has the right to consume the lion’s share of that water. However, in a high flow year, New Mexico must pass virtually all of that water to Texas. This creates the paradoxical result as follows: In a high flow

year, with water running bank to bank, New Mexico's consumptive use will be the same—even though the water is diverted through MRGCD ditches, the amount consumed should be the same. However, there will be a tendency to divert more water to fields in that wet year and there will be more evaporation through plants in the Middle Rio Grande Valley. Given that the Compact will assess debits to New Mexico when the amount on the table is not delivered at Elephant Butte and given the fact there may be more consumption in the Middle Rio Grande Valley in a high flow year, then New Mexico is more likely to run up a debit in a high flow year than in a low flow year. Thus, a heavy snowpack and high flows may not be the best scenario to hope for.

**What limitations on storage in New Mexico did Texas require to ensure that they receive their annual amount of 790,000 acre-feet each year for the Texas and New Mexico farmers?**

As noted above, the Compact drafters understood that if water could not be stored upstream in Colorado and New Mexico, then that excess water would simply pass downstream and could not be applied to beneficial use. On the other hand, if the water were stored upstream, using the upstream reservoirs as regulatory reservoirs to holdover water, this could avoid the waste. However, Texas did not want unlimited rights to store water upstream. Therefore, they developed a system of debits and credits whereby Colorado and New Mexico could be given credit for water that they stored, but, if they under-delivered, then they could be charged with a debit. The following system was developed to address this issue.

- 1) First, the Compact limits the size of accrued debits of Colorado and New Mexico to 100,000 acre-feet for Colorado and 200,000 acre-feet for New Mexico. The Compact also requires that New Mexico and Colorado each has to retain in storage (meaning not used for some other purpose) an amount of water equal to the amount of their accrued debits. This was an insurance policy for Texas to ensure delivery of the debited water was possible.
- 2) Texas can demand that if there is less than 600,000 acre-feet of water (23% of capacity) stored in Elephant Butte, Colorado and New Mexico must release the stored water to Elephant Butte, but only up to the amounts of their accrued debits. (Table 1 illustrates when water must be released under this 600,000 acre-foot condition). This requirement applies only to Reservoirs constructed after 1929 and contains strict time limits for this to happen. A State without accrued debits cannot be required to release water from storage under this provision.
- 3) If there is less than 400,000 acre-feet of water in Elephant Butte (about 15% of capacity), then neither Colorado nor New Mexico can increase the amount of water stored in their upstream reservoirs, including El Vado.
- 4) If New Mexico or Colorado have accrued credits based upon their past history of deliveries, then either State can deliver this credit water to Texas but only if Texas agrees to accept this credit water. (Table 2 illustrates when water can be relinquished to Texas to allow storage in upstream reservoirs.)

This Summary does not include limitations on water quality or other requirements under the Rio Grande Compact, including wiping out debits if Elephant Butte were to spill, what would

constitute a hypothetical spill, or other details contained in the regulations of the Rio Grande Compact Commission. Rather, its sole goal is to make clear the major constraints under the Rio Grande Compact imposed upon water users within the Middle Rio Grande Valley.

**Table 1. REQUIRED RELEASE WHEN THERE IS LESS THAN 600,000 ACRE-FEET OF USABLE WATER IN STORAGE<sup>1</sup>**

ACCRUED STATUS		RESULT
NM	CO	
Credit	Credit	TX cannot require either state to release water. NM cannot require CO to release water.
Credit	Even	TX cannot require either state to release water. NM cannot require CO to release water.
Credit	Debit	TX cannot require NM to release water. TX and/or NM may require CO to release water up to the amount of CO's accrued debits.
Even	Credit	TX cannot require either state to release water. NM cannot require CO to release water.
Even	Even	TX cannot require either state to release water. NM cannot require CO to release water.
Even	Debit	TX cannot require NM to release water. TX and/or NM may require CO to release water, up to the amount of CO's accrued debits.
Debit	Credit	TX cannot require CO to release water. TX may require NM to release water, up to the amount of NM's accrued debits.
Debit	Even	TX cannot require CO to release water. TX may require NM to release water, up to the amount of NM's accrued debits.
Debit	Debit	TX may require CO and NM to release water in storage, up to the amount of their respective accrued debits, and in proportion to the total debit of each. NM may also require CO to release water.

<sup>1</sup> "Usable water" is all water, *exclusive of credit water*, which is in project storage and which is available for release in accordance with irrigation demands, including deliveries in Mexico. Art. I(l) (emphasis added). Thus, total amount of water in storage could exceed 600,000 acre-feet.

TX and NM may only demand release of water from storage reservoirs constructed after 1929. Art. VIII. Such releases "shall be made . . . at the greatest rate practicable under the conditions then prevailing, and in proportion to the total debit of each [state, CO and NM], and in amounts, limited by their accrued debits, sufficient to bring the quantity of *usable* water in project storage to 600,000 acre-feet by March first and to maintain this quantity in storage until April thirtieth . . . ." Art. VIII.

Demand to release water must be made in January. Art. VIII.

**Table 2. LIMITATION ON INCREASING STORAGE WHEN THERE IS LESS THAN 400,000 ACRE-FEET OF USABLE WATER IN STORAGE<sup>2</sup>**

ACCRUED STATUS		RESULTS
NM	CO	
Credit	Credit	CO and NM can increase storage by the amount of credits they relinquish if TX accepts the credits.
Credit	Even	NM can increase storage by the amount of credits NM relinquishes if TX accepts the credits. CO cannot increase the amount of water in storage.
Credit	Debit	NM can increase storage by the amount of credits NM relinquishes if TX accepts the credits. CO cannot increase the amount of water in storage.
Even	Credit	CO can increase storage by the amount of credits CO relinquishes if TX accepts the credits. NM cannot increase the amount of water in.
Even	Even	Neither CO nor NM can increase the amount of water in storage.
Even	Debit	Neither CO nor NM can increase the amount of water in storage.
Debit	Credit	CO can increase storage by the amount of credits CO relinquishes if TX accepts the credits. NM cannot increase the amount of water in storage.
Debit	Even	Neither CO nor NM can increase the amount of water in storage.
Debit	Debit	Neither CO nor NM can increase the amount of water in storage.

<sup>2</sup> Limitation on increasing storage applies only to reservoirs constructed after 1929. "Usable water" does not include credit water. Art. I(1). Thus, total amount of water in storage could exceed 400,000 acre-feet.

Limitation is subject to two provisions. First, "if the actual releases of usable water from the beginning of the calendar year . . . following actual spill, have aggregated more than an average of 790,000 acre-feet per annum, the time at which such minimum stage is reached shall be adjusted to compensate for the difference between the total actual release and releases at such average rate . . ." Art. VII. Thus, all credit water must be released and then some "usable water" must be released for this provision to operate.

Second, "Colorado or New Mexico, or both, may relinquish accrued credits at any time, and Texas may accept such relinquished water, and in such event the state, or states, so relinquishing shall be entitled to store water in the amount of the water so relinquished." Art. VII.