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TRANSBOUNDARY GROUNDWATER LAW:
FOCUS ON THE U.S.-MEXICO BOUNDARY

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GROUNDWATER: ALLOCATION, DEVELOPMENT AND POLLUTION

Natural Resources Law Short Course

Natural Resources Law Center
University of Colorado School of Law
Boulder, June 6-9, 1983
I. Anticipating the Future
   A. The population in the border region is projected to double by the year 2000.
   B. What suggestions can we make to improve the security of water supply and thereby the investment of users of transboundary aquifers?
   C. How can we assure that each nation will receive a fair share of transboundary waters?
   C. How can we avoid what Professor Clark calls "education by disaster"?

II. Legal Context
   A. National Practice
      1. Law and institutions for the management and equitable distribution of groundwater have been slow to develop.
      2. In particular the law has not understood well the relationships between groundwater and surface waters.
      3. Trends are now changing and more attention is being paid to groundwater regulation.
         a. Change due to growing felt need to manage and protect groundwater resources.
      4. As populations increase and economic
development advances, the need to regulate the use of groundwaters increases.

5. With new policies affecting groundwater, there must be established adequate administrative machinery.

6. The challenge is for lawyers, working with other disciplines, to fashion legal regimes and management machinery to prudently manage national as well as transboundary groundwater resources.

B. International Practice

1. Even less fully developed than national practice is international practice concerning aquifers divided by political boundaries.

2. Caponera and Alheritiere conclude, after surveying international treaty practice, that references to groundwater are scant and too limited in scope to propose them in terms of customary law.

   a. They were unable to find any decisions of international courts specifically on the question of groundwater.
3. Groundwater, like surface water, knows no political boundaries, and there are many large aquifers shared by several countries.

4. There are in fact some international treaties which refer specifically to groundwater, for example:

   a. Minute 242 under the 1944 treaty between the United States and Mexico restricts groundwater pumping on one segment of the boundary.

   b. 1925 Agreement between Egypt and Italy on the Ramba Well.

   c. 1927 Convention and Protocol between the USSR and Turkey regarding the use of frontier waters.

   d. 1947 treaty of peace between the Allies and Italy which outlines guarantees between Italy and Yugoslavia concerning springs in the Commune of Gorizia.

   e. 1958 Agreement between Yugoslavia and Bulgaria.

5. However, even in these treaties, groundwater is usually only a sec-
III. The Economic Context

A. Common Law Theory

1. Under the common law theory, each owner's right to the water itself, or the right to use the water, is insecure because other pumpers may take possession at any time.

2. The individual surface owner feels encouraged to exploit the groundwater as quickly as possible, so it will not be captured by others.

3. This leads to great insecurity for all existing users of waters from an aquifer.

4. The common law rule of absolute ownership increases tenure insecurity by countenancing the right to pump all of the water needed, without restraint or liability to other overlying owners for adverse effects of pumping.

B. Economic Consequences

1. There is an economic incentive for overinvestment and for depletion, rather than for conservation.
2. Both economic waste and resource waste are likely, due to insecurity arising from inadequate institutional controls.

3. Increased use by one pumper can lead to increased marginal costs of second pumper.

IV. Political Context

A. Political resistance to closer controls on groundwater is great even within the boundaries of one nation, and greater at the international level.

B. At the international level, one can expect intense opposition from some affected interest groups.

C. Given the sovereign sensitivities of nation states, comprehensive international management is not likely to be successful.

D. More modest proposals which intrude on national sovereignty as little as possible and retain national supervision and enforcement as much as possible have the greatest likelihood of acceptance, and even that will not be easy.

V. Goals to be Sought by Transboundary Water Institutions

A. Security in right to reasonable water
supply;

B. Flexibility;

C. Conflict avoidance;

D. Orderly development;

E. Rational utilization of the resource.

VI. Possible Options

A. Option 1, Do Nothing

1. Continue to follow the English Common Law doctrine allowing each country to use and exploit its groundwater resources without regard for its neighbor. This would lead to:

   a. neither of the water users having security in that resource;

   b. uneconomic development by encouraging over rapid development;

   c. increased marginal cost to all exploiters of the resource;

   d. encouragement of the depletion of the resource.

B. Option 2, International Litigation

1. Better for the two nations to reach agreement on binational basis rather than require litigation before the International Court of Justice or a tribunal of arbitration.
2. The courts, too, undoubtedly would prefer that the parties settle the matter between themselves rather than resorting to litigation.

   a. The court in *Colorado v. Kansas* (320 U.S. 383 (1943)) elaborated on the point by saying that "mutual accommodation and agreement should, if possible, be the medium of settlement, instead of the invocation of our adjudicatory power." (Id. at 392.)

3. In the event a groundwater question between Mexico and the United States were referred to litigation, the court undoubtedly would conclude that a nation does not have absolute territorial sovereignty, that it cannot act in disregard of its neighbor.


   b. The much quoted International
Trail Smelter Case (Trail Smelter Arbitral Decision, 35 AM. J. INTL. L. 684, 714 (1941)) held "no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another."

4. An international tribunal undoubtedly would reject the international law equivalent of the common law doctrine, absolute territorial sovereignty.

C. Option 3, Alternative Institutional Approaches

1. Equitable Apportionment Under an International Commission

   a. Responsibility to identify and declare "designated international groundwater areas" having "reasonably ascertainable boundaries;"

   b. Authority to apportion the waters of the aquifer and close the area to withdrawals, beyond the allowable as determined by the physical criteria of the aquifer.

2. Case-by-Case Apportionment
a. Individual agreements would be negotiated for each groundwater area as problems arose, using a variety of engineering and legal measures including the negotiated apportionment of the waters of the aquifer.

3. Comprehensive Management by International Commission

a. A third variation of the management option would be to give the commission the complete spectrum of administrative powers from investigation and planning to rule making and enforcement.

b. This, perhaps would be the ideal approach, but the least likely to be accepted.

VII. Equitable Apportionment Under the Auspices of an International Institution

A. General Considerations

1. There must be conjunctive management of surface and groundwater in areas where supplies are interrelated.

2. Legal rights should take into account the hydrologic fact that
water is a fugitive resource.

3. Decisions on spacing of wells and rate of drawdown need to be carried out according to a reasoned development scheme.

4. Controls must be placed on drilling in areas where present and future uses may be endangered.

5. The management effort must include and be related to all water quality matters.

6. Underground water resources divided by international boundaries may be equitably apportioned and in that apportioning shared groundwater may be treated in the same manner as shared surface water.

7. Allocation of shared groundwater should not be determined by national legal regimes acting unilaterally.

8. Groundwater resources hydrologically not interconnected with surface flows and not situated physically astride the boundary should be excluded.
MEMORANDUM OPINION

This case raises the question of the constitutionality of New Mexico's prohibition of the out-of-state export of ground water referred to by the parties as "the New Mexico ground water embargo." Trial of the factual issues has been held at which the parties introduced the testimony of witnesses and numerous exhibits. In addition, a supplementary hearing was held at which the parties presented evidence in light of the decision of the Supreme Court in Sporhase v. Nebraska, ___ U.S. ___, 102 S.Ct. 3456 (1982).
The Rio Grande River has its source in Colorado, flows through New Mexico, and forms the international boundary between Texas and Mexico before discharging into the Gulf of Mexico. Elephant Butte Reservoir sits astride the Rio Grande in New Mexico, approximately 100 miles north of the Texas border, and impounds water for the use of irrigators within the Rio Grande Project (hereinafter "the Project"), a federal reclamation project that services approximately 159,000 acres of land in New Mexico and Texas. Two large aquifers known as the Hueco and Mesilla Bolsons underlie portions of southern New Mexico, western Texas and the Republic of Mexico. The Lower Rio Grande Underground Water Basin consists of that part of the Mesilla Bolson in New Mexico declared by the New Mexico State Engineer, thereby giving him regulatory jurisdiction over the acquisition of waters within the basin. The Hueco Underground Water Basin comprises that part of the Hueco Bolson in New Mexico similarly declared by the New Mexico State Engineer.  

1The State Engineer can declare underground waters to be public waters, thereby bringing them under his control and supervision, if he finds that they have reasonably ascertainable boundaries. § 72-12-1 N.M.Stat.Ann. (1978).
Plaintiff City of El Paso, with a population of approximately 450,000, is located on the Rio Grande in western Texas bordering the State of New Mexico. The individually named plaintiffs are residents of El Paso. The New Mexico State Engineer, the New Mexico Attorney General and the District Attorney for Dona Ana County, New Mexico, are the state officials responsible for enforcing New Mexico laws regulating surface and ground waters. N.M. Stat. Ann. § 72-12-21 (1978).

Three parties have been granted leave to intervene as defendants. Defendant-Intervenor Elephant Butte Irrigation District (EBID) is an irrigation district incorporated and organized under New Mexico law to cooperate with the United States in the administration and distribution of irrigation water to member users within its boundaries pursuant to federal reclamation law. Specifically, the EBID has the responsibility of delivering water from the Rio Grande Project to the New Mexico recipients of the Project water. Defendant-Intervenor City of Las Cruces, New Mexico, is located on the Rio Grande River in southern New Mexico and is the second largest water user of the Lower Rio Grande Basin. Defendant-Intervenor Stahmann Farms, Inc., is a New Mexico corporation conducting farming operations within the EBID. It utilizes surface water from the Rio Grande Project and ground water from the Lower Rio Grande Basin for its crop production.
Water in the Southwest is a scarce natural resource. The availability of water, therefore, is critical to the economic development of both the municipal and agricultural communities in southern New Mexico and El Paso. El Paso now obtains its water supply from the surface waters of the Rio Grande and wells in the Hueco and Mesilla Bolsons in Texas. These sources of supply will be insufficient to meet the city's future needs, and it must arrange alternative water supplies to support its growing population and stimulate economic growth. The city has concluded that the most appropriate water sources are the Hueco and Mesilla Bolsons in New Mexico just across the state line. Accordingly, El Paso filed with the New Mexico State Engineer, pursuant to §72-12-3 N.M.Stat.Ann. (1978), 326 applications for permits to appropriate up to 296,000 acre-feet of water annually from the Lower Rio Grande and Hueco Basins. The State Engineer denied all 326 applications on the ground that Article XVI, §§ 2 and 3 of the New Mexico Constitution precludes utilization of New Mexico ground water outside the borders of the state.

El Paso also owns a tract of land which straddles the New Mexico-Texas border and, as a New Mexico landowner, it can obtain a permit to appropriate ground water from its New Mexico land for domestic use pursuant to § 72-12-1
N.M.Stat. Ann. (1978). The city is prepared to use this water on its adjoining land in Texas. In addition, plaintiff Wolf has contracted to purchase New Mexico ground water for use on neighboring land he owns in Texas. Finally, plaintiffs contracted to purchase two thousand gallons of water from a New Mexico company that produces water from the Lea County Underground Basin in eastern New Mexico. Unlike the other sources from which plaintiffs propose to export water to El Paso, the Lea County Basin is not hydrologically connected to the Rio Grande. (The parties dispute whether this contract was revoked, but in view of the court's disposition of the merits it is irrelevant.)

A New Mexico statute which, with minor exceptions, expressly prohibits the transport of ground water from New Mexico for use in another state\(^2\) is an absolute

\(^2\)In pertinent part the statute reads:

No person shall withdraw water from any underground source in New Mexico for use in any other state by drilling a well in New Mexico and transporting the water outside the state or by drilling a well outside the boundaries of New Mexico and pumping water from under lands lying within the boundaries of New Mexico; provided that nothing in this act prohibits the transportation of water by tank truck from an underground source in New Mexico to any other state where the water is used for exploration and drilling for oil or gas . . . . The amount of water withdrawn from any one well for such exportation shall never exceed three acre-feet.

barrier to plaintiffs' use of ground water drawn from wells in New Mexico. Plaintiffs here seek both a declaration that New Mexico's ground water embargo is unconstitutional, whether it derives from the state constitution or N.M.Stat.Ann. § 72-12-19 (1978), and an injunction against its enforcement. As grounds therefor plaintiffs contend that the embargo violates the Commerce Clause of Article I of the United States Constitution.

JURISDICTIONAL ISSUES

Before addressing the merits it is necessary to dispose of several jurisdictional arguments raised by the defendants and intervenors. Defendants maintain that the court cannot rule on the constitutionality of the embargo because of a jurisdictional flaw. At different stages in these proceedings they have articulated their argument in terms of standing, justiciable controversy, the Eleventh Amendment and indispensable parties.

As a foundation for the argument, defendants claim that it is the Rio Grande Compact, not § 72-12-19, which is the true obstacle to El Paso's export of New Mexico's ground water. Thus, a decision on the constitutionality of the statute without adjudication of the Compact issue would be advisory only and would not settle the controversy. By defendants' concession, the argument depends on the validity of three factual assertions: (1) all of the waters in which El Paso has asserted an interest are Rio Grande waters; (2) the Rio Grande Compact apportions the
surface waters of the Rio Grande between the states of New Mexico and Texas and controls the use of hydrologically related ground water; and (3) any taking of ground water is ultimately fully reflected in the flow of the river.

From this defendants then conclude that any withdrawal of ground water hydrologically connected with the Rio Grande will effect a reapportionment of the river between Texas and New Mexico, while the Compact can be amended properly only by agreement of the parties thereto or in an original action in the Supreme Court. The Compact, thus, would bar plaintiffs' asserted interests in the ground water in the Lower Rio Grande and Hueco Basins, forever preventing those interests from materializing and depriving plaintiffs of standing to challenge the constitutionality of the embargo statute. As a corollary, because the State Engineer could not recognize a water right that would undermine the Compact appropriation, he would not have occasion to enforce § 72-12-19, and the Ex Parte Young, 209 U.S. 123 (1908), exception to the Eleventh Amendment is inapplicable.

Having advanced the proposition that the court must address the Rio Grande Compact, defendants then point out that the parties to the Compact — the United States and the states of Colorado, New Mexico and Texas — are indispensable to its construction. Of course, the United States cannot be joined without its consent, and the Eleventh
Amendment bars joinder of the states. If the court declines to construe the Compact in the absence of the signatories, defendants insist that the entire action must be dismissed because, coming full circle, it is really the Compact that bars the export of the water El Paso seeks. Therefore, a decision on the constitutionality of the statute would be academic.

Defendants' jurisdictional argument suffers from many defects aside from its sheer complexity. First, as discussed below, the Rio Grande Compact does not apportion the surface waters of the Rio Grande below Elephant Butte between New Mexico and Texas. Second, even assuming the Compact protects surface water rights within the Rio Grande Project from impairment through pumping of hydrologically connected ground water, pumping can still be permitted. The State Engineer need only condition ground water permits to require offsets of the effects on the river through return flows or retirement of prior surface and/or ground water rights. Over 10,000 acres of land outside the Project are currently irrigated with Mesilla Bolson ground water; the retirement of these water rights would not alter the distribution of the water within the Project. The State Engineer can deal with these issues of impairment of Project rights and any required offsets in the state administrative well permit proceedings. § 72-12-3 N.M. Stat. Ann. (1978).
Finally, under Federal Rule of Civil Procedure 19 the Compact signatories are not indispensable parties. Not being parties to this action, they are not bound by the judgment herein. Although both defendants and intervenors urge dismissal under Rule 19, neither have demonstrated that plaintiffs have an adequate alternative remedy. In fact, if this action is dismissed for lack of indispensable parties, plaintiffs will be unable to challenge the constitutionality of New Mexico's ground water embargo by any other proceeding.

Intervenors make two additional jurisdictional arguments. They first assert that El Paso's attempt to appropriate the public waters of New Mexico is an action against the state itself which is barred by the Eleventh Amendment. The Supreme Court, in Sporhase v. Nebraska, expressly held that a state's espoused ownership of water is a legal fiction. 102 S.Ct. at 3462. Furthermore, plaintiffs seek only prospective relief as permitted under Ex Parte Young, 209 U.S. 123 (1908) and Quern v. Jordan, 440 U.S. 332 (1979).

Intervenors once again raise the argument that the United States, Texas and New Mexico are indispensable parties, since any ground water El Paso takes from the Lower Rio Grande or Hueco Basins will affect surface flows apportioned among Texas, New Mexico and Mexico. The court has ruled on this argument before. Memorandum Opinion at 2 (July 8, 1981). Plaintiffs do not here ask
for water or water rights; the decision in this case will not result in an appropriation of New Mexico ground water by El Paso. The sole issue in this suit is the validity of New Mexico's ban on the export of ground water.

THE RIO GRANDE COMPACT

As discussed above, defendants have consistently maintained that the paramount obstacle to El Paso's export of New Mexico ground water is the Rio Grande Compact of 1938, 53 Stat. 785 (1939), because any ground water pumping by El Paso would take surface water apportioned to New Mexico under the Compact. Intervenors contend that the embargo statute merely implements the apportionment incorporated in the Compact and therefore cannot be deemed in contravention of the Commerce Clause.

Both facets of the Compact defense hinge entirely on the validity of two factual contentions: that the Compact (1) apportions the surface waters of the Rio Grande between New Mexico and Texas below Elephant Butte and (2) controls the use of hydrologically related ground water. In regard to the first contention, defendants argue that the words of the Compact as well as its history dictate the conclusion that the Compact effects an apportionment between New Mexico and Texas.
The words on which defendants rely are contained in the preamble and Article XI; the history follows.

In 1905 Congress authorized the construction of a dam on the Rio Grande to provide for the irrigation of lands in New Mexico and Texas as well as to enable the nation to meet forthcoming treaty obligations to Mexico. Act of Feb. 25, 1905, 33 Stat. 814. On recommendation of the Reclamation Service the dam was constructed at Elephant Butte, 100 miles north of the New Mexico-Texas border, and the Rio Grande Project was born. Irrigation districts were formed to operate and maintain the irrigation works in the two states: the Elephant Butte Irrigation District in New Mexico and the

3Preamble: "The state of Colorado, the state of New Mexico and the state of Texas, desiring to remove all causes of present and future controversy among these states and between citizens of one of these states and citizens of another state with respect to the use of the waters of the Rio Grande above Fort Quitman, Texas, and being moved by considerations of interstate comity, and for the purpose of effecting an equitable apportionment of such waters, have resolved to conclude a compact for the attainment of these purposes, . . . ."

Article XI: "New Mexico and Texas agree that upon the effective date of this compact [this section] all controversies between said states relative to the quantity or quality of the water of the Rio Grande are composed and settled; . . . ."


4Pursuant to its convention with Mexico concluded May 21, 1906 (34 Stat. 2953), the United States is obligated to deliver to Mexico 60,000 acre feet of water annually, in the bed of the Rio Grande above the city of Juarez, Mexico.
El Paso County Water Improvement District No. 1 in Texas. The two irrigation districts and the Reclamation Service entered into water contracts for the irrigation of approximately 66,650 acres of land in Texas and 88,350 acres in New Mexico. This ratio of irrigated lands—57% in New Mexico and 43% in Texas—has remained constant.

Increasing diversions of the Rio Grande in Colorado decreased the flow of the river above Elephant Butte in the 1920's, resulting in the appointment of a commission comprised of representatives from Colorado, New Mexico, Texas and the United States to apportion the waters of the river. The Rio Grande Compact of 1929, 46 Stat. 767 (1930), was the first product of this commission. An interim measure, it maintained the status quo on the river pending the negotiation of an ultimate compact and directed the state and federal commissioners to conclude an apportionment of the Rio Grande on the basis of the uses then existing in each state.

In 1938 the commission proceeded to apportion the waters of the river on the basis of detailed hydrologic information derived from extensive investigations of the river flow and use of the water which had been made by the Water Resources Committee. Under the resulting Rio
Grande Compact of 1938, Colorado is obligated to make its delivery of water at the Colorado-New Mexico state line. Article III. In contrast, New Mexico is obligated to make delivery not at the New Mexico-Texas state line but "into Elephant Butte Reservoir."5 Article IV. The Commission calculated that compliance by Colorado and New Mexico with the delivery schedules set forth in Articles III and IV would permit an average normal release from Elephant Butte Reservoir of 790,000 acre-feet per year, an amount sufficient to irrigate the Project lands in New Mexico and Texas and to honor the United States' obligation to Mexico.

On the basis of these undisputed historical facts defendants argue that the Rio Grande Compact of 1938 apportioned the waters of the Rio Grande between New Mexico and Texas below Elephant Butte. The significance of this argument becomes apparent only in light of the second contention defendants advance, which is that the Compact controls the use of ground water hydrologically connected to the apportioned surface water.

5 New Mexico's delivery obligation into Elephant Butte Reservoir is set forth in a complex schedule of deliveries that is based on the relationship between the amount of water in the Rio Grande above the principal agricultural areas in New Mexico and the inflow to Elephant Butte.
With the exception of the tankful of water plaintiffs contracted to purchase from Lea County, all the water which plaintiffs are prepared to export is hydrologically connected to the Rio Grande. Because the Rio Grande is a "losing stream" which feeds into the underlying, connected ground water, any withdrawal of ground water will eventually be reflected in depletion of the surface flow of the river.

The New Mexico State Engineer administers interrelated surface and ground waters as an integral unit. It is defendants' contention that to authorize any withdrawal of ground water connected to the Rio Grande without impairing prior vested surface water rights, particularly those of the irrigators in the EBID, the State Engineer would have to require the retirement of a comparable amount of existing surface use. Defendants predict that approval of all plaintiffs' applications would result in the complete demise of surface irrigation in the Rio Grande Project, both in New Mexico and Texas. Their particular objection, however, is to the retirement of any water rights within the EBID on the ground that this would be tantamount to a reapportionment of the Rio Grande in contravention of the Compact.

As stated at the outset, the success of defendants' Rio Grande Compact defense depends on the validity of
two factual assertions: that the Compact (1) apportions the surface water of the Rio Grande between New Mexico and Texas and (2) controls the use of ground water hydrologically connected to the River. This court is unable to accept either. Neither the history of the Compact negotiations, the ultimate terms of the Compact, nor the defendants' subsequent interpretation and actions support the conclusion that the parties to the agreement intended it to apportion either the surface water of the river or the related ground water below Elephant Butte between New Mexico and Texas.

Defendants argue that it was impracticable to require delivery of Texas' equitable share of the water at the New Mexico-Texas state line because of the existence of Elephant Butte Reservoir 100 miles north of that line, which provided water for the entire Rio Grande Project spanning both states. They assert that the Compact negotiators availed themselves of the facilities at hand — the existing works of the Project — and relied on the United States Bureau of Reclamation as administrator of the Project to effectuate the apportionment between the states which is implicit in the Compact. Because the Compact itself nowhere enumerates the amount of Texas' equitable apportionment, defendants in turn rely on the initial contracts between the Reclamation
Service and the irrigation districts to define the amounts of water allegedly apportioned to each state. Defendants conclude that the division by the Project Administrator of the water stored in Elephant Butte Reservoir between the 88,650 irrigated acres in New Mexico and 66,350 acres in Texas, or 57% to New Mexico and 43% to Texas, defines the states' respective entitlements.

It is unnecessary to accept defendants' labyrinthian argument for full meaning to be given to the words and history of the Compact. The preamble states that the purpose of the Compact is to effect an equitable apportionment of the waters of the Rio Grande; that it did. Article XI states that the Compact composed and settled all controversies between New Mexico and Texas relative to the quality and quantity of the water of the Rio Grande; this it also did. However, it did not apportion any specified amount of water to Texas below Elephant Butte.

Defendants concede that the Compact does not literally apportion the Rio Grande between New Mexico and Texas and that no language in the Compact expressly assigns any amount of water to the state of Texas. Indeed, on its face the Compact simply apportions the water of the river first between Colorado and the downstream states; it then apportions the remaining water between the New Mexican appropriators above Elephant Butte and
the New Mexican, Texan and Mexican appropriators below Elephant Butte. While Colorado is required to make a scheduled delivery of water annually at the Colorado-New Mexico state line, New Mexico is not required to deliver anything at the New Mexico-Texas state line. New Mexico's only delivery obligation is set forth in Article IV of the Compact, which designates Elephant Butte Reservoir as the point of delivery.

The history of the Compact indicates that the real bargaining positions were taken by Colorado, the Middle Rio Grande Conservancy District water users represented by New Mexico 6 and the Rio Grande Project water users represented by Texas. Jenkins, Myra Ellen, The Rio Grande Compact of 1938 (to be published, 1982), pp. 51-6. Texas found itself in the position of protecting water rights of all the lands in the Project and, consequently, the users in the New Mexico section of the Project supported Texas' stance rather than New Mexico's. Id., p. 52. See also Hill, R., Development of the Rio Grande Compact of 1938, p. 17-18.

6The Middle Rio Grande Valley of New Mexico is the 160 mile stretch of the river between Cochiti Dam and Elephant Butte Reservoir. Water appropriators in this section of the river are organized into the Middle Rio Grande Conservancy District, a corporation and political subdivision of the state of New Mexico.
This alignment is also reflected in the statements of the views of the states of New Mexico and Texas delivered by their respective commissioners at the September 28, 1937 meeting of the Compact Commission.

Mr. McClure, the New Mexico Commissioner, presented the New Mexico position:

New Mexico is willing to negotiate with Colorado and Texas for a permanent compact to equitably distribute the waters of the Rio Grande among the states on the basis of the following minimum requirements for the State of New Mexico:

Second: New Mexico is willing to negotiate with the State of Texas as to the right to the use of water claimed by citizens of Texas under the Elephant Butte Project on the basis of fixing a definite amount of water to which said project is entitled. Provided, however, that upon the completion of the All-American Diversion Dam and canal, Mexico shall be limited strictly to treaty provision of 60,000 acre-feet per annum for use in the Republic of Mexico.

Mr. Clayton presented the Texas position:

Although the State of Texas feels that it should share in the benefits from new works for the augmentation of the water supply of the Rio Grande, it will not insist thereon, provided the States of Colorado and New Mexico will release and deliver at San Marcial a supply of water sufficient to assure the release annually from Elephant Butte Reservoir of 800,000 acre-feet of the same average quality as during the past ten years, or the equivalent of this quantity if the quality of the supply is altered by any developments upstream.

Prior to the filing of this lawsuit the State Engineer publicly enunciated the position he now repudiates. In 1956 he delivered a paper at the New Mexico College of Agricultural & Mechanical Arts wherein he stated, "The compact does not, in fact, apportion the waters between New Mexico and Texas, but rather between the water users in New Mexico above Elephant Butte on one hand and the water users in Texas and New Mexico below Elephant Butte on the other hand." The State Engineer never contradicted this statement until defendants began formulating their defense to El Paso's complaint in the case at bar.

The state of New Mexico also took the position that the Compact does not apportion the Rio Grande between New Mexico and Texas in a motion and brief submitted to the United States Supreme Court in Texas v. New Mexico, Original No. 9. In a Motion for Return to Rule the state of New Mexico made the categorical statement: "The Rio Grande Compact makes no apportionment of the use of such waters between the States of Texas and New Mexico." Motion for Return to Rule at 5. New Mexico told the Supreme Court that,

In view of the fact that there are in New Mexico over 85,000 acres of land below Elephant Butte which are watered from the Rio Grande, it cannot be said that the obligation imposed on New Mexico to make certain scheduled deliveries at San Marcial, 165 miles north of the New Mexico-Texas state line, is an apportionment of the waters of the Rio Grande between the states of Texas and New Mexico.

Brief in support of Return to Rule at 8.
Other statements of the same import are scattered throughout the Brief in Support of the Return to Rule.

Defendants claim that the Supreme Court rejected New Mexico's position in the Motion for Return to Rule and on two other occasions. Texas v. New Mexico, 343 U.S. 932 (1952); Texas v. New Mexico, 308 U.S. 510 (1939); Texas v. New Mexico, 352 U.S. 991 (1957). None of these rulings contain or constitute a decision as to the proper interpretation of the Rio Grande Compact.

The Compact apportions the river by requiring New Mexico to make deliveries at Elephant Butte according to a quantified in-flow, out-flow schedule. This is the apportionment sought by New Mexico and Texas in the Compact negotiations. This is the apportionment that defines the respective rights of the two states and that Texas has a right to enforce. Texas v. New Mexico, 343 U.S. 932 (1952). Contrary to defendants' contention, a decision that the Compact does not apportion the river below Elephant Butte does not mean that New Mexico, having made its delivery, could undermine it by pumping down the surface flow of the river below the point of delivery. This opinion does not address that issue at all.

Defendant-Intervenors take a slightly different tack. Bowing to the plain meaning of the Compact, they concede that it does not apportion the waters of the river below Elephant Butte. Like the defendants, however,
intervenors also rely on the Project's division of the waters released from Elephant Butte to effect an apportionment not effected by the Compact. They contend that Texas is entitled only to that amount of water which is allocated to Texas lands by the Project Administrator.

Acceptance of intervenors' argument would require the further acceptance of a corollary not expressly enunciated by them, i.e., that the contracts between the Bureau of Reclamation and the farmers in the two irrigation districts effected an equitable apportionment of the waters of the river below Elephant Butte which is binding on the states of Texas and New Mexico. Although Congress can authorize the Secretary of the Interior to allocate interstate waters among states via contracts for water stored in federal reservoirs, the circumstances which led the Supreme Court to conclude that Congress had done just that in Arizona v. California, 373 U.S. 546 (1963) were vastly different from those at hand.

The court in Arizona v. California relied on the legislative history of the Boulder Canyon Project Act which clearly indicated that Congress intended the Secretary to allocate the waters of the Colorado River among the states of Arizona, California and Nevada through his contracts with water users in those states. 373 U.S. at 580. Congress not only enumerated the
amounts of the respective allocations to each state, it set standards for, and placed significant limitations on, the Secretary's power to distribute the waters. 373 U.S. at 584. The Court also found that the provisions of the Act provided the machinery by which the Secretary could accomplish the apportionment it had so plainly authorized. 373 U.S. at 579.

With the Boulder Canyon Project Act, Congress thus authorized the Secretary to effect an apportionment through contracts for reclamation water. The Secretary then proceeded to allocate the water in accordance with his congressional authorization. Intervenors do not argue that Congress intended, in the Act of 1905 authorizing the Rio Grande Project, to force an allocation of the Rio Grande upon Texas and New Mexico as a consequence of the Secretary's contracts with the farmers in the Project. There is, in fact, nothing in that act even remotely analogous to the provisions of the Boulder Canyon Project Act which led the Supreme Court to find congressional authorization of the Secretary's apportionment. There is simply no basis for the argument that the Secretary's contracts with the Project water users effected an equitable apportionment binding on Texas and New Mexico.

Were the court to find that the Rio Grande Compact apportions the river below Elephant Butte, the
Compact defense still would fail if that apportionment did not control the use of hydrologically connected ground water. There is a hydrological connection between the surface flow of the Rio Grande and the ground water in the Hueco and Mesilla Bolsons. But the Compact makes no mention of ground water. The United States Bureau of Reclamation, manager of the Rio Grande Project, has never counted ground water used by irrigators within the EBID as part of the Project's water supply.

Even more telling is the fact that, prior to the filing of this suit, defendants never took the position that the Compact apportioned hydrologically connected ground water. The State Engineer did not even declare the Lower Rio Grande and Hueco Underground Basins until after El Paso filed its complaint. Prior to that time, there was no conjunctive management of the ground water in these basins and the surface water of the Rio Grande. Between the signing of the Compact in 1938 and the filing of this suit, thousands of wells were drilled into the Mesilla Bolson and up to 185,000 acre-feet of water per year were withdrawn, including the entire water supply for the City of Las Cruces. Yet no one ever claimed before now that these wells violated the Compact.

This is not to say that the State Engineer cannot or should not conjunctively manage the surface
and ground water in the Lower Rio Grande system. If he does, however, he must apply it evenhandedly to both New Mexico and out-of-state appropriators.

If defendants' interpretation of the Compact were correct, interstate export of Hueco and Lower Rio Grande Underground Basin water could still be permitted without effecting a reapportionment if pumping could be offset without retiring EBID surface water rights. The success of defendants' Compact defense finally rests on their assertion that El Paso's proposed pumping can only be offset by requiring the retirement of Rio Grande Project surface water rights in New Mexico, which would alter the 57%-43% distribution of Project water between New Mexico and Texas. In addition to the possibility of retiring the ground water rights appurtenant to the 10,000 acres of non-Project lands in New Mexico mentioned earlier in this opinion, El Paso has suggested a number of alternative offsetting measures. Defendants have not shown that El Paso can offset the effects of its pumping only by retiring surface water rights of EBID irrigators. Issues of impairment of prior water rights — surface or ground, within the Project or without — and measures for offsetting impairments should be addressed in administrative hearings on plaintiffs' permit applications, not by an absolute embargo on the interstate export of ground water.

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THE COMMERCE CLAUSE

At the January, 1982, trial of this case defendants and intervenors contended that the Commerce Clause did not render the embargo unconstitutional for three reasons: (1) water was not an article of commerce and, therefore, commerce clause analysis was inapplicable; (2) Congress had authorized the western states to impose otherwise impermissible burdens on commerce in ground water; and (3) New Mexico's exercise of plenary authority over its internal waters was a traditional governmental function beyond the reach of the Commerce Clause.

The Supreme Court's recent decision in Sporhase v. Nebraska has settled these issues. The Court ruled that water is an article of commerce and that Congress' long-standing deference to state water law did not demonstrate an intent to permit discrimination against interstate commerce in ground water. Nor are federal constitutional constraints suspended merely because a state claims public ownership of internal ground waters. Although such a claim "may support a limited preference for its own citizens in the utilization of the resource," 102 S.Ct. at 3464, a state's asserted ownership of public waters within the state is only a legal fiction. 102 S.Ct. at 3462.

The Court's disposition of these aspects of defendants' Commerce Clause defense does not settle the
The constitutionality of the New Mexico water embargo. The Court in Sporhase recognized that, in the absence of federal regulation, the states are not precluded from regulating either their water resources or interstate commerce in water. The validity of state statutes affecting interstate commerce in water is determined by applying the standard set out in Pike v. Bruce Church, Inc., 397 U.S. 137, 142 (1970):

Where the statute regulates evenhandedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits. [Citation omitted.] If a legitimate local purpose is found, then the question becomes one of degree. And the extent of the burden that will be tolerated will of course depend on the nature of the local interest involved, and on whether it could be promoted as well with a lesser impact on interstate activities.

New Mexico's embargo bars the export of ground water absolutely; it is an explicit barrier to interstate commerce. Facially discriminatory, it is subject to the strictest scrutiny. Defendants must demonstrate that the embargo serves a legitimate local purpose, that it is narrowly tailored to that purpose and that there are no adequate non-discriminatory alternatives. Hughes v. Oklahoma, 441 U.S. 322, 336 (1979). The purpose defendants advance for New Mexico's overall system of ground water regulation is to conserve and preserve the state's internal water supply. They point to the state's
longstanding water management laws, institutions, policies and public expenditures as evidence that the purpose is genuine.

Water has always been a highly valued resource in New Mexico because of the state's aridity. Consequently, the use of water in New Mexico has long been subject to strict regulation and control under a comprehensive system of water rights laws and institutions. Chapter 72, N.M.Stat.Ann. (1978). In fact, New Mexico was a pioneer in ground water management. The state's declared ground waters are public waters, § 72-12-1 N.M.Stat.Ann. (1978), subject to appropriation for beneficial use, § 72-12-2 N.M.Stat.Ann. (1978). The State Engineer has the responsibility for measuring, appropriating and distributing the public waters of the state. § 72-2-1, N.M.Stat.Ann. (1978). In a declared underground basin, would-be appropriators must apply to the State Engineer for a permit. He may grant the permit only if he finds that there are unappropriated waters available and that existing water rights would be unimpaired. § 72-12-3 N.M.Stat.Ann. (1978). The State Engineer monitors withdrawals from non-rechargeable aquifers to ensure that they have a reasonable life. Mathers v. Texaco, Inc., 77 N.M. 239, 421 P.2d 771 (1966).
Taken as a whole, New Mexico's scheme of water regulation demonstrates a genuine effort to promote optimum utilization of its diminishing water resources. This effort "is unquestionably legitimate and highly important." 102 S.Ct. at 3463. While it may justify limited, non-discriminatory burdens on interstate commerce, it cannot support a total ban on interstate transportation of ground water.

In Sporhase the Supreme Court recognized the long-standing Commerce Clause distinction "between economic protectionism, on the one hand, and health and safety regulation, on the other." 102 S.Ct. at 3464. This distinction gives a state the power "to shelter its people from menances to their health or safety" but not "to retard, burden or constrict the flow of ... commerce for their economic advantage ...." H.P. Hood v. DuMond, 336 U.S. 525, 533 (1949). Thus, the Supreme Court held that a state may discriminate in favor of its citizens only to the extent that water is essential to human survival. Outside of fulfilling human survival needs, water is an economic resource. For purposes of constitutional analysis under the Commerce Clause, it is to be treated the same as other natural resources.

Constitutional restrictions on the ability of the states to burden the flow of interstate commerce in
natural resources lie at the heart of our national solidarity and prosperity. It was the anarchy and commercial warfare between the states which emerged after the Revolutionary War that led to the Constitutional Convention. Having experienced the rivalries and disruptions caused by economic barriers and retaliations, the necessity for centralized regulation of commerce among the states was obvious to the Founders. H. P. Hood v. DuMond, 336 U.S. at 533-534. The fifty states cannot operate as separate economic units. Our material success depends on the vigilant maintenance of the principle that our economic unit is the entire nation.

Defendants and intervenors do not maintain that the embargo's purpose is to promote the health and safety of New Mexico's citizens. They do not maintain that the state is now experiencing a shortage of water for health and safety needs or will do so in the near future. The estimated state-wide demand for water for public health and safety purposes by the year 2020 is only 220,000 acre-feet per year, while New Mexico's ultimate renewable supply is estimated to be 2.2 million acre-feet per year.

The State Engineer testified that the purpose of the embargo is "to make maximum beneficial use of water in New Mexico." Defendants believe this is a legitimate objective because the state's water supply is
insufficient to meet all projected requirements. Specifically, they predict that by or before the year 2020 there will be a state-wide consumptive use shortage of at least 626,000 acre-feet per year.

This predicted shortage is based on what defendants define as reasonable "public welfare" needs, including water requirements for municipalities, industry, irrigated agriculture, energy production, fish and wildlife, and recreation. Aside from the amount necessary for public health and safety, these are requirements for water related to economic activities. In essence, defendants recognize no limits on the future uses for which New Mexico should be able to preserve ground water. However, to extend the state's power to discriminate to all potential uses of water would remove ground water from Commerce Clause constraints. The policy of maximizing all "public welfare" uses of water in New Mexico, and the furthering of that policy by prohibiting interstate commerce in ground water, is tantamount to economic protectionism.

This is not, as defendants and intervenors claim, a double standard which restricts New Mexico to a water supply only sufficient to fulfill its human survival needs while allowing El Paso to blossom in unrestrained economic prosperity. It is simply the necessary application of the fundamental principle that our Constitution "was
framed upon the theory that the peoples of the several states must sink or swim together, and that in the long run prosperity and salvation are in union and not division."


Nor does it mean that New Mexico cannot undertake reasonable water planning. The state can and should carry on its policy of furthering the maximum beneficial use of the water supply. The absence of an embargo statute will not create havoc in New Mexico's system of ground water regulation. It will not result in unrestricted out-of-state use or uncontrolled transfers of water. Interstate usage of water can be restricted and controlled to the same extent as intrastate usage. El Paso has stated repeatedly that, if the State Engineer approves its well permit applications, it will abide by all provisions of New Mexico water law.

Defendants insist that New Mexico's water laws have no extraterritorial effect, and, therefore, the State Engineer cannot control El Paso's use of exported water. In _Sporhase_ the Court held that a state could impose the same withdrawal and use restrictions on out-of-state users as it does on its own citizens. 102 S.Ct. at 3465. Under § 72-12-3 N.M. Stat. Ann. (1978) the State Engineer can condition any permit granted to El Paso to require that the city cooperate with New Mexico officials for the purpose of ensuring that all exported
water is put to beneficial use. City of Roswell v. Berry, 80 N.M. 110, 112 (1969). The State Engineer's ability to enforce New Mexico's water regulations lies in his power to suspend or revoke El Paso's permits to withdraw ground water. § 72-12-14 N.M. Stat. Ann. (1978). If the city does not comply with either the conditions of its permits or New Mexico's water laws, the State Engineer can terminate El Paso's pumping.

Defendants also raise the specter of the wholesale "drying up" of southern New Mexico if El Paso is permitted to export the water it seeks. New Mexico, however, already contemplates that its irrigated agriculture will gradually be cannabalized as market forces transfer water to municipal and industrial use. Thus defendants' only objection is to the retirement of agricultural water uses to accommodate non-New Mexican municipal and industrial uses. Under the Commerce Clause, New Mexico cannot practice such discrimination.

If the embargo's purpose were to conserve and preserve the water supply for the health of New Mexico's citizens and not the health of its economy, it still would be unconstitutional because it is not narrowly tailored to achieve that purpose. As stated before, there is no present or imminent shortage of water in New Mexico for health and safety needs. In fact, the State
Engineer testified that New Mexico is far from the time when water will be a limiting factor on the state's growth.

Assuming that such shortages were foreseeable and that New Mexico could constitutionally preserve its water to meet future shortages, the embargo is not a means to that end. The embargo only prevents the transfer of ground water out of the state; it places no restrictions on in-state use. Under New Mexico's ground water laws the State Engineer cannot deny an application for a ground water right if there is unappropriated water available and other rights will be unimpaired. § 72-12-3 N.M. Stat. Ann. (1978). The state's policy of "maximum beneficial use" envisions putting as much water to beneficial use as soon as possible. If New Mexico ever is faced with a shortage of water for health and safety purposes, the state's current water code, including the embargo, will not ensure that there is an adequate supply in reserve to meet the need.

In Sporhase the Supreme Court found Nebraska's reciprocity provision was not narrowly tailored to the conservation/preservation rationale because it prevented export when water was locally abundant and its most beneficial use was in another state. The Court suggested that an arid state could possibly overcome this defect.
if it suffers a water shortage as a whole and "the intrastate transfer of water from areas of abundance to areas of shortage is feasible regardless of distance." 102 S.Ct. at 3465.

Although the estimates vary widely, there is no question that the Hueco and Mesilla Bolsons contain millions of acre-feet of water, which far exceed local needs. At the present time the most economically productive use of this excess water is across the New Mexico-Texas state line. Municipal and industrial water uses are more economically productive than other uses. For example, they will support seventy times as many people as water applied to irrigated agriculture. El Paso is the economic hub of an interstate region which includes southern New Mexico; it is the major trade center and contains the area's principal employers. If El Paso were in New Mexico defendants probably would agree with plaintiffs that the most beneficial and economically productive use of the Hueco and Mesilla Bolson ground water is in El Paso for the simple reason that what is good for El Paso is good for the entire region, including southern New Mexico.

Defendants have attempted to show that this locally abundant ground water could be transported to other areas of New Mexico that are experiencing water
shortages. They point to examples of water transportation projects that now exist or are being planned. But none of these projects involve plans for the intrastate transfer of Hueco and Mesilla Bolson ground water. The state has not made any plans for the intrastate transportation of this water. Prior to this suit defendants assumed that this water would be used locally, and that still appears to be the prevailing belief.

Aside from the fact that there are no plans for intrastate transportation of Hueco and Mesilla Bolson ground water at the present, defendants have failed to show that such transportation is "feasible regardless of distance." 102 S.Ct. at 3465. The feasibility envisioned by the Supreme Court must include economic considerations because, from a purely engineering standpoint, it is now possible to transport water over enormous distances. Defendants presented evidence that at some uncertain future date it may be economically feasible to transport the Hueco and Mesilla Bolson water elsewhere in New Mexico, but possible, or even probable, future economic feasibility cannot satisfy the standard set in Sporhase. So drastic and burdensome a measure as a total ban on interstate commerce in ground water can only be justified if it is narrowly tailored to times and places of shortage.
The purpose of the embargo is to promote New Mexico's economic advantage. Even if the purpose were conservation and preservation, as defendants maintain, the embargo does not significantly advance the conservation and preservation of water. It certainly is not narrowly tailored to achieve that purpose and cannot survive strict scrutiny.

The court recognizes that the conservation and preservation of water is of the utmost importance to the citizens of New Mexico. Defendants' and intervenors' desire to retain the ground water in the Lower Rio Grande and Hueco Basins for the use of New Mexicans, therefore, is certainly understandable. Nevertheless, the New Mexico ground water embargo violates the Commerce Clause of the United States Constitution, and an Order will be entered herein enjoining the defendants from enforcing it.

[Signature]
Chief Judge