In Search of An Integrating Principle for Interstate Water Law: Regulation versus the Market Place

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In Search of An Integrating Principle For Interstate Water Law: Regulation versus the Market Place

The development of interstate groundwater law is at a beginning stage, and two legal theories are competing for the favor of the courts in settling interstate water disputes. The two approaches are commerce clause analysis, on the one hand, and equitable apportionment on the other. The United States Supreme Court has recently reaffirmed that the doctrine of equitable apportionment "governs" disputes regarding interstate streams¹ and almost simultaneously held, in another case, that the commerce clause governs interstate groundwaters.²

The allocation of interstate surface flows is not new, and is well settled in a long line of cases developed over the better part of a century. The allocation of interstate groundwaters is new, and the development of its legal doctrine is in a pioneering stage. In this development with two contending theories, one might say that one theory, that of the commerce clause, is a market approach, and that the other is something of a regulatory concept. It is regulatory in that it regulates or limits the market by allocating shares to states or regions which, in turn, allows the states or regions to plan for the future based upon these allocations. A tension exists between the idea of the efficiency of the free market in distributing goods and services versus the need to protect some values through regulation and planning; in the two concepts the ideas of efficiency versus equity are contending once again. Often the pure market place must be tempered by some regulation, because the market place may not protect factors or equities whose dollar value is difficult to ascertain but which are important nonetheless. Anti-trust legislation guards against monopolistic tendencies. Zoning ordinances inject considerations of light, space, and population density into land use decisions; environmental laws restrain pollution of water and air by industry; and consumer protection laws regulate the market in order to ensure that manufacturers comply with quality and safety standards.

This article will suggest that a market place concept may not be the best approach for interstate water allocation. Rather, it will suggest that

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the regulatory approach, using the device of equitable apportionment, may be best in order to protect the balance within the federal union of states and to ensure the stability necessary for state and regional water planning. In addition, in view of the apparent fragmentation of interstate water law, with one law for interstate surface waters, and one for interstate groundwaters, this paper will propose a possible approach leading to an integrated interstate water law. It will suggest that the law of surface and groundwaters can be successfully unified into an effective law of interstate water allocation which will also protect balance within the federation.

The Tale of Three Cases and Two Theories

To understand the interplay of the theories of equitable apportionment and the commerce clause, it helps to look at three important cases involving water issues, two decided by the Supreme Court of the United States, and one by the federal district court of New Mexico. In July 1982, the Supreme Court decided *Sporhase v. Nebraska*\(^3\) which dealt with the transfer of groundwater across a state line from Nebraska to Colorado. In December 1982, the Supreme Court decided *Colorado v. New Mexico*,\(^4\) which dealt with a dispute over an interstate stream, the Vermejo River, which flows from Colorado into New Mexico. In January 1983, a federal district court decided *El Paso v. Reynolds*\(^5\) which deals with the transfer across the state line from New Mexico to Texas of groundwater which is interconnected to an interstate stream.

The first groundwater case, *Sporhase*, said the commerce clause of the U.S. Constitution applied to groundwater, so that Nebraska could not forbid the export of groundwater across a state line into another state. The *Vermejo* case declared that the doctrine of equitable apportionment "governs" disputes over interstate streams, whereby waters of the stream are divided so each state is allocated a fair share of the stream.

The Court is at a crossroads. Its interstate water law is at odds with its interstate commerce law. This disparate treatment of interstate waters not only defies the laws of hydrology, but also raises the question of what principle should govern, the forces of the market place or the ideas of planning and regulation.

Policy Similarities and Differences of Equitable Apportionment and the Commerce Clause

Both the commerce clause and the doctrine of equitable apportionment are concepts for maintaining the critical inner balance of the federal union.

\(^3\) *Id.*
Equitable apportionment is a doctrine which the courts have fashioned to maintain the balance between states by "dividing the pie" of an interstate stream between the states that share it. Thus, the doctrine assures each state of a fair share and prevents any state, simply because it is upstream, bigger, more economically advanced, or more aggressive, from taking more than its share of the river. Under equitable apportionment, the court is called upon to settle disputes between states "in such a way as will recognize the equal rights of both and at the same time establish justice between them." In *Nebraska v. Wyoming*, the court added that equitable apportionment demands "the delicate adjustment" of the interests of the states.

The commerce clause protects the national union from being economically fragmented and thus weakened by individual states imposing burdensome measures, such as taxes or tariffs or bans on goods, which would impede commerce. Equitable apportionment, on the other hand, recognizes the "delicate adjustment" of the "interests of quasi-sovereigns" and "equal rights of both" while attempting to establish justice between them. In the delicate balance of federalism, the commerce clause protects the national economy from being "balkanized," but in interstate water disputes the Court recognizes the interests of individual states and uses the doctrine of equitable apportionment to protect and accommodate the separate interests of individual states.

If there is a dispute between two states over interstate rivers and interdependent groundwaters, it is settled by allocating to each a fair share—equitable apportionment. Then that state can plan, allocate, and use its water resources in a rational manner for the future, as well as the present. Without the knowledge of how much water it is entitled to, a state loses the ability to prudently manage water resources over time. Equitable apportionment requires consideration of "future uses," waste and conservation, and "long-range planning." Thus, equitable apportionment

8. 325 U.S. 589, 618 (1945). In *Vermejo I* the Supreme Court said the doctrine of equitable apportionment is a "flexible doctrine which calls for ... consideration of many factors" to secure a just and equitable allocation." *Vermejo I*, at 183.
13. That fair share can be as little as zero. In *Colorado v. New Mexico*, ___U.S.____; 104 S. Ct. 2433, 2441 (1984) [hereinafter cited as *Vermejo II*], the Court, after considering the equities, rejected "the notion that the mere fact that the Vermejo originates in Colorado automatically entitles Colorado to a share of the river's waters." *Vermejo II*, at 2442.
15. *Id.* at 185.
16. *Vermejo II* at 2441.
in its consideration of economic development, water planning, efficient use, conservation, and the preservation of balance between states, is regulatory in nature. The commerce clause is, in contrast, based on the free trading concepts of the market. Both concepts serve as limitations on what a state can do within its own borders within the context of the federal union. Equitable apportionment limits what a state can do in regard to transboundary water resources flowing through its territory; ordinarily, it cannot take all of the flow of a river, for example, just because it flows in that state. Also, under the commerce clause, a state is limited in what it can do within its boundaries. A state may not enact tariffs, taxes, or regulations which would impede the flow of articles in commerce between the states of the federation.  

However, in spite of similar policy goals of limiting the sovereignty of individual states, there is the potential for a basic conflict between the commerce clause and equitable apportionment. Although both doctrines are ways of limiting the unbridled power of individual states, their conceptual goals are located at opposite poles of the federal design. Equitable apportionment recognizes and respects the territorial integrity and quasi-sovereignty of individual states, but limits that quasi-sovereignty so as to accommodate the competing needs of other states or quasi-sovereigns. It seeks balance between states. Equitable apportionment respects state lines, but limits what can be done within them. Commerce clause analysis tends to erase state lines.

Commerce clause analysis favors those states with the greatest economic power and, in the case of water, it is a single-edged sword which protects the state wanting to take water from another. Equitable apportionment, on the other hand, is a double-edged sword which protects both states and allocates to each an equitable share of interstate water resources.

Contemporary Climate of Opinion and the Commerce Clause

One certainty is that in the current climate of opinion, in which commerce clause analysis seems to be in the ascendency, every premise of apportionment will be challenged and scrutinized closely. The commerce clause analysis threatens to sweep over the basic assumptions of equitable apportionment and either greatly modify the doctrine or eliminate it com-
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This is because apportionment in its most basic expression recognizes land and water as essential to the territorial integrity of each state and, in so doing, honors the quasi-sovereignty of the individual state. This, in turn, is grounded in the importance of balance and equity between member states in the federation. While equitable apportionment stands as a bulwark to the integrity of individual states, in so doing it also stands as an obstacle to the free market forces of deregulation which have contemporary momentum in the land. On the other hand, the forces of deregulation would have a largely unrestrained market determine policy and allocate resources in the name of efficiency.

Commerce clause analysis might mean that the unrestrained big fish will eat the small fish in a largely unregulated environment. But it might be argued in our context that even though the viability of states as constituent communities might be undermined, greater efficiency would result for the nation as a whole. This climate of opinion is reflected in other contexts, and is seen in the popularity of the deregulation of activities varying from transportation, as in the case of buses and airlines; communications, as in the dismantling of AT&T; and even in the televising of college football. The theory is, let the market determine for the greater good of all through greater efficiency.

However, in the context of interstate water resources the principle of “let the market determine” may threaten the territorial integrity of individual states and, therefore, the balance of those states within the federal union, thus weakening one of the foundation stones of federalism. The market theory would, in its simplest terms, largely allow states to determine unilaterally their own share of water resources, based on how advanced they are economically.

It may be that inscrutable economic forces of the marketplace, under the commerce clause, will lead to greater efficiency and production of greater wealth. It may be that efficiency would dictate that individual states should become regional sacrifice areas to provide the water to fuel the further economic development of the more economically advanced. It may be that individual states should be able to unilaterally determine their share of the use of water resources based on their stage of economic development. However, if there is merit to the idea of the founding fathers that it is desirable to maintain balance between member states, if there is merit to the idea that diversity contributes to a strong economy, and if there is value in the suggestion that viable constituent parts contribute to a stronger federation, then perhaps it is appropriate to design a doctrine of interstate water allocation which, while limiting the territorial sovereignty of individual states, recognizes the territorial integrity of member states and equitably balances their competing needs in the case of interstate water resources.
Thomas Jefferson spoke of the "beautiful equilibrium"\(^2\) of the federal union. His words still carry modern relevance. "The enlightened statesmen... will endeavor to preserve the weight and influence of every part [of the Union] as too much given to any member of it would destroy the general equilibrium."\(^2\) Perhaps, then, it becomes appropriate to ask questions like: why should a state more advanced economically be permitted to take water away from a less economically developed state simply because that state’s time of economic development is yet to come? Should not equity provide for the future uses of states developing at a slower pace? Perhaps it is relevant to suggest that no state should be able to determine unilaterally its share of transboundary waters because of either superior economic or geographic position.

The fundamental question is not what legal doctrines should apply per se, but rather what policies should be followed in order to use the resources wisely and fairly and, at the same time, protect the equilibrium of the federation. Thus the question perhaps is best put—what legal doctrine best promotes these policies? The law of interstate streams may be better than the law of interstate commerce. Equitable apportionment, although not perfect, may be better than the commerce clause for a number of reasons. Equitable apportionment avoids unilateral allocations due to factors such as superior geographic or economic position which would be encouraged by the commerce clause approach. In addition, it:

1) provides fairness. It normally requires sharing,\(^2\) and the share must be equitable, based on a range of considerations including economic development and alternative sources;

2) assures stability. Long range planning and husbandry of the resource are possible because each party has a secure share.\(^2\)\(^3\) This security avoids "tragedies of the commons" which result from races to the bottom of the aquifer in a "he who gets there firstest gets the mostest" competition;\(^2\)\(^4\)

3) strengthens federalism. A sharing of the water resource is better

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20. Id.
21. Id.
22. The word normally is used because the balancing of equities may give a zero share to one state as in the case of Vermejo II, at 2433.
23. In New Mexico, for example, DuMars points to "the possibility of competition from unrestricted out-of-state demand" placing great stress on "long-range planning and management," and may make the task "formidable, if not impossible." DuMars, New Mexico Water Law: An Overview and Discussion of Current Issues, 22 NAT. RES. J. 1045, 1058, 1062 (1982).
federalism and better for the parties. By requiring sharing, the balance between member states is strengthened and the integrity of the individual members of the federation is protected.

Under the Constitution, a state has a right to continue to exist. The Constitution protects the territorial integrity of the states. But in many arid states, these constitutional protections may be of little solace and the territorial land base may be of limited utility without the appurtenant water to make it productive.

This brings us quite clearly to the underlying foundation of equitable apportionment—that is, land and water are part of the territorial base of a state. Land and water are necessaries for the existence of a state. In a phrase, land and water are not just articles of commerce, they are basic to the viability of the state itself. Equitable apportionment recognizes this fact, and provides a mechanism for dealing with these resources when they become extraterritorial in extent, i.e., when they extend across a political boundary, by requiring sharing in an equitable way, by prohibiting unilateral allocations or actions which would have significant, adverse transboundary impacts.

**Water as Essential to the Preservation of Societies**

Water has been treated as essential to the territorial integrity of a state for a number of reasons including: its nonsubstitutability, its importance for life itself, and the central role it plays in economic and social development which form the fabric of the very concept of community. Water is not only essential for biological life, but it is also essential for

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25. Wechsler, *supra* note 9, at 185. One writer states it even more strongly: "[p]rinciples of federalism do not tolerate 'ghost states'... Rather, a state has a duty to its citizens to continue to exercise the powers reserved to it under the tenth amendment—it cannot constitutionally go out of business." DuMars, *Evaluating Congressional Limits on a State's Severance Tax Equity Interest in Its Natural Resources: An Essential Responsibility for the Supreme Court*, 22 NAT. RES. J. 673, 680 (1982).

26. Other materials often cannot be substituted for water at all, or at most to a limited extent. For example, if a state does not have petroleum resources, other energy sources such as the sun, or wood, may serve as substitutes. If copper is in short supply, aluminum or silicon can be substituted for electrical conduction. In contrast, there is little or no substitute for water for many of its uses. A state can survive without gold or petroleum, but it cannot survive without water. *See* Bonem & Brown, *Some Remarks on the Role of Markets in Managing Western Water*, presented to the Select Committee on Water Marketing of the Montana Legislature (July 14, 1984).

27. Thales of Miletus, one of the seven wise men of ancient Greece, declared "water is the basis and original stuff from which everything comes and to which everything returns." Cited by B. CHAUHAN, *SETTLEMENT OF WATER LAW DISPUTES IN INTERNATIONAL DRAINAGE BASINS* 32 (1981). Water functions as the basis for all life. Chauhan makes the point "not only that life started in water but rather water is life itself and is essential for earthly life, as living cells live in water and water is flowing through us all the time, entering as food and drink and as such participating in virtually every process that occurs in plant and animal organisms." *Id.*
the social existence of communities, be they remote villages or constituent states of a national federation. "The story of man can be narrated in terms of his struggle for water and his use of it."\textsuperscript{28}

The early civilizations arose in the valleys of the great rivers, such as the Nile in Egypt, the Tigris-Euphrates of Mesopotamia, the Indus of India, the Hwang Ho of China. Europe's history throughout the centuries has been tied to the Rhine, the Danube, and the Seine.\textsuperscript{29} Caponera points out that "[r]ivers have always been the center and heart of all civilizations."\textsuperscript{30} Man's success or failure has depended on his relationship to water. Chauhan observes that: "water has throughout history been the major determinant of the fate of any culture and the use of water by man is a part and parcel of his culture and, as such, is woven into his social and economic way of living."\textsuperscript{31} He adds that water is important "in the economic development of the States" which, in turn "affects the social development."\textsuperscript{32} The great civilizations of the Nile, the Euphrates, the Indus, and the Hwang Ho, blessed with water "blossomed with progress and prosperity, but crumbled into deserts and deteriorated when their water systems deteriorated or failed."\textsuperscript{33}

In sum, water is not only essential for biological survival, but a necessary prerequisite for the development and maintenance of the economy and social structure which make a society possible. Water is not just a commodity; it is a central imperative for the survival, maintenance, and continuity of living communities, including states of a federal union. For analysis under the commerce clause to perceive water as merely an article of commerce ignores to some extent the history of the "man-water relationship." It does not take cognizance of the fundamental importance of water for the economic existence of states from which water is taken. Perhaps more precisely, commerce clause analysis is one-sided in its approach. It provides protection to the taking state, but does not provide adequate protection to the state from which the water is taken. There are at least two sides to be considered: water for the growth of the taking state, and water for the maintenance and growth of the state from which water is taken. In short, commerce clause analysis does not assure the less economically powerful state an equitable share. It does not protect balance between states within the federal concept.

The court in the \textit{El Paso} case observed that nearly "every aspect of the public welfare has economic overtones"\textsuperscript{34} but nonetheless did not

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\textsuperscript{28} Id. at 27.
\textsuperscript{29} Id.
\textsuperscript{31} Chauhan, supra note 27, at 49.
\textsuperscript{32} Id. at 50.
\textsuperscript{33} Id. at 45.
\end{flushright}
allow the state from which water is taken to keep water for the health of its economy. Therefore, the court did not recognize the central role of water in the maintenance of communities through their inextricably related economies in both the taking state and the state from which water is taken. The viability of individual states may be threatened if the major limits on what water may be taken from a state or region are those of geography and economics. Given technological change, these limits of geography and hydrology may be less inhibiting. Without legal protections, constituent member states and regions may be somewhat naked before the winds of superior economic power.35 Land and water are essential to the integrity of the state. They are essential for the physical survival of a state’s inhabitants, and the economic survival of the state itself. Thus, in turn, they are essential for the maintenance of the constituent parts of the federation. Land and water are essential for both life itself and the viability of the societal components of the federation. This viability may be threatened if individual states are vulnerable to the unrestrained demands of states with superior economic power.

Incongruities: A Tale of Two States and Three Maps

In addition to the question of balance within the federation, there is the question of the apparent conflict between interstate surface water law and interstate groundwater law. Perhaps to illustrate the incongruities of the current interstate water law, it might be helpful to look at different scenarios suggested by the Sporhase case itself. Scenario 1 is a rather oversimplified version of the actual Sporhase case, and Scenarios 2 and 3 are hypothetical situations in which the physical details are varied slightly so as to illustrate a different result, depending on whether the commerce clause or equitable apportionment cases are cited.

Scenario 1: Sporhase v. Nebraska

Joy Sporhase has a farm which straddles the Colorado-Nebraska boundary. He drills a well on his farm in Nebraska and transports part of that water across the boundary to Colorado for irrigating that part of his farm which lies in Colorado. Nebraska has a law forbidding the export of Nebraska groundwater unless certain conditions are satisfied, such as the requirement that the receiving state also allows the export of its groundwater. Colorado does not. Nebraska attempts to enforce its “non-export” statute. The Court says Nebraska cannot constitutionally restrict the export of its groundwater because such a restriction would be a burden on interstate commerce and, thereby, violates the commerce clause.

35. Without legal protection there might be the suggestion that some states might face the prospect of becoming “ghost states.” DuMars, supra note 18, at 680.
Figure 1

Sporhase v. Nebraska
1) Commerce clause applies.
2) Colorado can take all it wants, subject to some considerations such as conservation and public interest.

Scenario 2: Nebraska v. Colorado

Rather than putting the well in Nebraska, Joy Sporhase places the well in Colorado, and begins pumping. The drawdown causes a cone of depression in the aquifer around the well and eventually starts drawing water from Nebraska, thereby affecting the aquifer in Nebraska. Nebraska responds by invoking the original jurisdiction of the Supreme Court and cites the long line of cases which call for equitable apportionment when action in one state “reaches through the agency of natural laws into the territory of another state.” Nebraska adds that Sporhase’s pumping of water “would be a taking” from the adjacent territory of Nebraska and that “the controversy, therefore, rises above a mere question of local private right and involves a matter of state interest.”

Therefore, the dispute should be settled on the basis of “equality of rights” of the respective states. Under this scenario, using the reasoning of the Supreme Court in interstate surface water cases, it appears that equitable apportionment would apply and each state would be allocated a share of the uses of the aquifer.

Figure 2

Nebraska v. Colorado
1) Equitable apportionment applies.
2) Each state is allocated a share.

Scenario 3: Colorado v. Nebraska

Rather than a well, there is a spring on the Sporhase farm in Nebraska which feeds a stream that flows into Colorado. Under this scenario, Nebraska plans to put a small dam across the stream to divert all or part of the water for use in Nebraska.

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37. Id.
38. Id.
39. Id.
In this case, Colorado cites the equitable apportionment cases as in Scenario 2 because, even though the action is in Nebraska it has impact in Colorado by depriving Colorado of the "beneficial effects of a flowing stream." Therefore, Colorado invokes the original jurisdiction of the Supreme Court to determine the "relative rights of these states in the waters of this interstate stream." using the doctrine of equitable apportionment which governs such interstate water disputes.

These scenarios would be a possible thumbnail summary of interstate water law. One might use a number of adjectives to describe this situation, but it is doubtful if the list of adjectives would include words such as consistent, cohesive, unified, integrated, or rational.

Why is the law "governing" interstate groundwater so at odds with that governing interstate surface water? Is it because interstate surface waters are basically governed by the law of gravity; that is, because of being upstream, the upper riparian state had the geographical advantage and, therefore, the doctrine of equitable apportionment was marshalled to protect the lower riparian from the excesses of the upstream neighbor? Is it because the effects of surface water diversion are more obvious and the need for equitable apportionment or interstate compacts more readily perceived? Could the explanation be that groundwater development was later in time, or that the effects of withdrawals are out of sight and out of mind?

In the case of surface flows, can a state prevent an out-of-state user from coming into a state, buying surface waters, and transporting those waters for use out of state? An example of this might be the Galloway proposal of San Diego to buy surface water in Colorado and transport it to California via the Colorado River. On the other hand, would a state be unable to prevent an out-of-state user from coming into a state, buying...

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40. Id.
groundwater, and transporting it for use out of state via a pipeline? An example of this situation might be the *El Paso* case.\(^43\)

Why does the court, when dealing with interstate surface waters, speak of the need for caution in regard to the "relative rights of states"\(^44\) and "the interests of quasi-sovereigns,"\(^45\) but when dealing with groundwater speak of the freeflow of "articles in commerce"? Why did the Court "erase the stateline" in *Sporhase*,\(^46\) and reenforce it in *Vermejo*?\(^47\) These questions may, but probably do not, have answers; they do indicate some perplexing incongruities.

**Practical Uncertainties**

At first blush, the Court appears in fact to have provided a route for harmonizing the two doctrines of interstate water allocation. In the *Sporhase* case, the Supreme Court recognized that apportionment is one of the circumstances under which a "state may restrict water within its borders."\(^48\) As a result, it appears that the Supreme Court recognizes apportionment as an exception to the commerce clause;\(^49\) that under the commerce clause a state basically cannot restrict the use of water to use within its own borders except, for example, if the water is state-owned or has been allocated to that state under an apportionment. There could be, however, at least two different scenarios which would determine whether the apportionment exception will be meaningful in fact.

**The Undercutting of Apportionment or What the Left Hand Giveth the Right Hand Taketh Away**

The practical effect of the exception of apportionment under a compact may be largely illusory. Why should a state desiring groundwater from another state bother to negotiate for a share of the aquifer under an apportionment if it can take all it wants under the commerce clause? The Court has repeatedly said it wants the parties themselves to try to settle their interstate water disputes through negotiation before it will decide

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\(^{45}\) *Id*.


\(^{47}\) E. Clyde, Remarks at American Bar Assn. Section of Natural Resources Law (Jan. 8-9, 1985, San Diego, CA.).

\(^{48}\) 458 U.S. 941, 956 (1982). Apportionment is achieved either by mutual agreement of the parties under a compact, such as the Rio Grande Compact of 1938, Pub. L. No. 96, 53 Stat. 785 (May 31, 1939); an equitable apportionment action before the U.S. Supreme Court, such as *Nebraska v.Wyoming*, 325 U.S. 589 (1945); or by Congress, such as the Boulder Canyon Project Act on the Colorado River, 43 U.S.C. §§617-617n (1983). The term "equitable apportionment" is used generically in this article for any of these methods of apportionment.

\(^{49}\) This statement is greatly simplified since there are many arguable issues yet to be settled, such as how explicit does the congressional language have to be in a compact.
the dispute through equitable apportionment. However, if the Court itself is going to use the commerce clause rather than equitable apportionment in groundwater cases, then there may be no incentive to negotiate compacts because the demanding state can obtain all it wants under the commerce clause rather than settling for a mere share.

Other Contradictions

Another contradiction might include the following example: In the case of transboundary aquifers (see map II), under equitable apportionment each state sharing the aquifer is allocated a fair share. This allocation prevents State B from unilaterally taking actions within its territory which will have significant detrimental impacts in State A. That is, State B cannot deprive State A of a fair share of the use of the waters of the aquifer. State B is not entitled to more than a fair share, even though its actions, i.e., the pumping and use of the water, occur within its own territory. However, under the commerce clause, why should State B be concerned or inhibited about withdrawals within its own territory which might impact detrimentally on State A if it can go directly into the territory of State A and take directly what water it wants? (See map IV infra)

A response might be that there are other limitations on State B, for example, State B would be limited by applicable laws of State A such as those on water quality, and non-impairment of existing water rights. But then would State B, if it chose to put its wells down within its own territory rather than in the territory of State A, be subject to the laws of impairment and water quality of State A within State B’s own territory? That is, would the laws of State A be given extra-territorial effect and be applied in State B? How would State A enforce its laws and supervise their administration on an ongoing basis in State B? It would perhaps be better to avoid these tortuous complexities through an equitable apportionment with a federal-state compact commission supervising the administration of each state’s allocation and the protection of water quality from activities which may have detrimental transboundary impacts.

50. The United States Supreme Court made the point clearly in a water quality case when it stated: “We cannot withhold the suggestion . . . that the grave problem of sewage disposal . . . is one more likely to be wisely solved by cooperative study and by conference and mutual concession on the part of the representatives of the States so vitally interested in it than by proceedings in any court however constituted.” New Jersey v. New York, 283 U.S. 336 (1930). The Court, in Colorado v. Kansas, further elaborated:

The reason for judicial caution in adjudicating the relative rights of States in such cases is that . . . they involve the interests of quasi sovereigns, . . . of interstate differences of a like nature, that such mutual accommodation and agreement should, if possible, be the medium of settlement instead of the invocation of our adjudicatory power.

320 U.S. 383 (1943) (emphasis added).

51. Negotiation has never been easy at best (Fischer, Management of Interstate Groundwater, 7 NAT. RESOURCES LAW 521 (1973)) and with the incentive perhaps removed by the Sporhase case, it may be impossible to negotiate a compact.
Toward an Integrated Doctrine of Interstate Water Law

The existing uncertainty and disarray of interstate water law demonstrates a need to harmonize the treatment of transboundary ground and surface waters under a consistent and unified doctrine. This integrating doctrine will have to accommodate the needs of the union and the needs of individual states. In selecting an approach to balance these competing needs, decisionmakers should choose one which:

1) would not grant absolute territorial sovereignty to individual states;
2) would not allow states to determine unilaterally the allocation of the use of interstate water resources;
3) would recognize the limited territorial sovereignty and needs of individual member states;
4) would recognize land and water as a part of the territorial base and, therefore, as essential to the territorial integrity of individual member states;
5) would require individual states to share fairly interstate surface and groundwaters; and
6) would recognize the need to manage conjunctively interstate surface and groundwaters which are hydrologically interrelated.

The established federal common law doctrine of equitable apportionment provides a conceptual tool for balancing the needs of the federation and the needs of the constituent states. It provides the basis for the development of a cohesive, integrated interstate water law for the use of surface and groundwaters.

An integrated interstate water law would be as follows:

1) Transboundary surface flows would be governed by the doctrine of equitable apportionment. Allocation could be by mutual agreement, decision of the Supreme Court, or congressional action.
2) The use of the waters of transboundary aquifers likewise would be governed by the doctrine of equitable apportionment.
3) Aquifers located totally within the territorial limits of one state, but interrelated to transboundary streams, could be exploited by that state only to the extent that existing obligations to deliver surface waters are not impaired.
4) Aquifers which are neither transboundary nor interrelated with transboundary surface flows would be subject to the jurisdiction and agreement of the state of which they form a part. Such an approach would provide a consistent conceptual structure for interstate water resources.

Pragmatically, this probably is not an important category, but if transboundary surface waters and transboundary groundwaters are to be treated consistently and "governed" by equitable apportionment under which each state is allocated its share of the use of the stream or aquifer, as the case may be, then it would be inconsistent if aquifers totally within the territorial limits of a state (those
Greater Simplicity and Certainty

In addition to the considerations of protecting balance within the federation and providing stability for water planning, there is the factor of simplicity. The use of the doctrine of equitable apportionment could simplify and harmonize interstate water law and avoid the contradictions inherent in using commerce clause analysis for groundwater. Groundwater and surface water would be treated consistently—rather than the use of surface flows being governed by equitable apportionment, and the use of groundwaters by the commerce clause. A unified law of interstate waters could avoid some of the complexities of trying to balance the public welfare needs of "arid states" and other states under Sporhase. Sporhase held that "water is an article of commerce" and therefore commerce clause analysis prevents a state from controlling "water within its borders." However, it immediately was compelled to suggest a confusing list of "certain circumstances" under which "each state may restrict water within its borders.". . . . The Court suggested, for example, that:

1) A state may "conserve and preserve for its own citizens this vital resource in times of severe shortage," but only for "the purpose of protecting the health of its citizens" not "the health of its economy."

2) A state may favor its own citizens in times of shortage if there are "some indicia that the water is publicly produced and owned."

3) A state may impose preservation and conservation restrictions if the state "as a whole suffers a water shortage."

4) A state might establish a "total ban on the exportation of water" if a state is "demonstrably arid."

aquifers which are neither transboundary nor tributary to transboundary streams) were governed by the commerce clause.

This would turn the logic of equitable apportionment on its head. It would mean the more completely an aquifer is located within the territory of a state, the less regulatory control that state would have over it. The farther an aquifer is from the political periphery, the less control the state within which it is located would have. The logic of equitable apportionment is just the opposite. As one progresses toward the boundary, a state has to limit its ability to act unilaterally in regard to water resources. It has to share transboundary water resources; it cannot take all, it can take only a share, but it does have a share.

Thus, equitable apportionment is rooted in the principle that water resources are part of the territorial base of a state. However, that concept of territorial sovereignty or integrity must be limited when that resource is transboundary. Neither State A nor State B can act unilaterally in the allocation of resources which they share in common because those resources are transboundary. Conversely, those aquifers which are not transboundary are completely within the territorial base of the state. They are, therefore, under the jurisdiction and control of the state within which they are located.

54. Id. at 956.
55. Id.
56. Id. at 957.
57. Id. at 958.
58. Id.
5) A state may exercise "a limited preference for its own citizens in utilization of the resources" if it is protecting the public welfare.\(^{59}\)

This in turn forced the court in the \textit{El Paso} case to struggle with considering when "a state may prefer its own citizens" even though "\textit{Sporhase} did not delineate the extent."\(^{60}\) The court valiantly grappled with the question of when a state may "limit water exports to protect the 'public welfare' of its citizens."\(^{61}\) Pursuant to \textit{Sporhase} the \textit{El Paso} court knew it had to avoid a definition of "public interest" which allowed protection of "merely" economic interests, even though it recognized "the health of the state's economy has a direct bearing on the public welfare of its citizens,"\(^{62}\) and nearly "every aspect of public welfare has economic overtones."\(^{63}\)

The court ended up concluding that economic interests are an inex- tricable part of public welfare of a state's citizens in that public welfare includes "health, safety, recreational, aesthetic, environmental, and economic interests."\(^{64}\) Therefore, if the state prefers its own citizens to protect their public welfare, it may do so even if this includes protecting economic interests so long as this is "only incidental"\(^{65}\) to the protection of the general public welfare, and if the court after trying "to accommodate the competing local and national interests" concludes that there are no "less burdensome alternatives available."\(^{66}\)

The \textit{El Paso} court also addressed the question of when may a state "favor its own citizens in times and places of shortage."\(^{67}\) Must it wait until the shortage actually exists, or may it prefer local usage while there is still water to conserve in anticipation of a shortage? The court concluded that the answers to these questions and others relating to when and whether a state can prefer its own citizens "cannot be evaluated in a vacuum" and have to be decided on a case by case basis.\(^{68}\) This kind of case by case evaluation is nothing new to the courts, but will lead to complexity and extended and frequent litigation which will be expensive both to the parties and to the courts.

Thus the courts following \textit{Sporhase} are faced with trying to make the free market concept of the commerce clause work while simultaneously considering the special circumstances of individual states. Equitable ap-

\[^{59}\text{Id. at 955.}\]
\[^{60}\text{El Paso v. Reynolds, 597 F. Supp. 694, 700 (D.N.M. 1984).}\]
\[^{61}\text{Id. at 698.}\]
\[^{62}\text{Id. at 700.}\]
\[^{63}\text{Id.}\]
\[^{64}\text{Id.}\]
\[^{65}\text{Id. at 701.}\]
\[^{66}\text{Id.}\]
\[^{67}\text{Id.}\]
\[^{68}\text{Id.}\]
portionment would be simpler to understand and easier to administer. In addition, by allocating to each state a definable share it would provide certainty with which the contending states can plan for growth, shortages, and the future. Under both the commerce clause and equitable apportionment, a consideration of a variety of factors is required. But in the case of water, under equitable apportionment there is a long established experience and a well structured concept which, if applied to subsurface as well as surface waters, would provide a consistent legal doctrine for interstate waters and would provide states with the assurance of a quantifiable share.

CONCLUSION

Sporhase was a pioneering, first attempt of the court to grapple with interstate groundwater disputes, but should not preclude further thinking and development of interstate groundwater law. This first step down the road of the commerce clause should not prevent the court from building on its already established practice and experience with interstate streams to construct an integrated law of interstate waters. In so doing, it can avoid the contradictions and inconsistencies of a fragmented approach which follows one legal doctrine for surface flows and another for subsurface waters—a duality which defies the laws of hydrology, not to mention the interests of good federalism and good planning. The Court should choose the already established path of interstate water allocation, and clearly declare that the federal common law doctrine of equitable apportionment “governs” the use of both interstate surface and groundwaters. This would serve four important goals. It would:

69. Vermejo I at 183. If the legislative approach were taken as an alternative, legislation might be something like the following example:

AN ACT TO REGULATE THE ALLOCATION OF INTERSTATE WATERS

The Congress hereby finds and declares that:
1. Each of the states has an interest in water resources occurring within its boundaries which is unique;
2. The use of interstate waters should be shared equitably;
3. No one state or region should be able to determine its share of transboundary groundwaters unilaterally, either because of superior geographic position, or economic position;
4. The share should be determined by mutual agreement, judicial decision, or congressional action based on equitable principles;
5. Stability for expectations should be assured so as to provide a secure climate for the long-term management and preservation of the resource;
6. It is in the national interest that there be a coherent and integrated law for interstate surface and groundwaters.

The allocation of interstate waters shall be as follows:
1. The use of interstate surface flows shall be governed by the federal common law doctrine of equitable apportionment. Each state’s share shall be determined by mutual agreement, decision of the Supreme Court, or congressional action.
2. The use of the waters of transboundary aquifers shall be governed by the federal common law
1. Protect the federation by requiring sharing;
2. Protect the integrity of individual members of the federation by assuring that they may retain an equitable share;
3. Provide stability of expectations necessary for state and regional water planning;
4. Provide a simplified and integrated interstate water law.

Given the two opposing concepts, it is difficult to categorically declare that one is in all ways absolutely superior to the other, but at the minimum it can be suggested that equitable apportionment is not a bad accommodation. It limits the excesses of territorial chauvinism by requiring sharing, while at the same time allowing state and regional planning and conservation for future growth and shortages.

doctrine of equitable apportionment. Each state's share shall be determined by mutual agreement, decision of the Supreme Court, or congressional action.

3. Aquifers located totally within the territorial limits of one state, but tributary to an interstate stream, can be exploited by that state only to the extent that existing compact or treaty obligations to deliver surface waters are not impaired.

4. Aquifers which are neither interstate nor tributary to interstate surface flows are subject to the jurisdiction and control of the state of which they form a part.

Nothing in this Act shall:
(a) Alter in any way the rights of any state under present and future interstate compacts, Supreme Court decrees or Acts of Congress;
(b) Preempt or modify any state or federal laws or interstate compact dealing with water quality;
(c) Affect the federal reserved water rights of any Indian tribe or other entity, or alter in any way any water rights or usage with relation to any congressionally authorized federal water project.
AN INTEGRATED INTERSTATE WATER LAW

I. The use of waters of a drainage basin normally must be apportioned between the coriparians. No one party may unilaterally determine its own share.

II. The use of the waters of the aquifer normally must be apportioned between the parties which overlie it; and no one party may unilaterally determine its own share. Neither state can take more than its equitable share. For example, State B cannot take the share of State A by pumping within its own territory.

III. State A may use the aquifer only to the extent that deliveries of surface waters under existing agreements governing surface waters are not impaired.
IV. State B may not take water from State A by pumping from a source in State A, except by mutual agreement.