

Two Lectures

on

Water Law

HYDROLOGY SHORT COURSE

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## INTRODUCTION TO WATER LAW IN THE U. S.

### Lecture I

A guest lecturer can only make assumptions about the discussion that has preceded him. He comes to a forum of this nature at his peril--the peril that he may be repeating some of what has been said already and the peril that he won't say enough about what engineers, and geologists, and others, think is most important about water law.

Right now water is an important and also a popular topic of discussion. But it has long been an economic good, and also a determining factor in the development of regions and nations.

As the point of beginning in discussing water law we must ask several questions. We are interested in the regulatory function of law, the origin of law, the role of law in decision making and in management of water and in planning for the future. Perhaps one question could be framed to state the general theme of these lectures: Who makes what decisions, and through what public or private methods, about what uses of what amounts of water for what purposes?

You already know that law and public management, as well as the economic market place, have something to do with the answers.

You also know that answers as well as the problems (and this is true of all natural resources problems) must be viewed from at least three different, and also overlapping, approaches:

1. There must be an examination of physical, geographical, geological, and other problems plus the technological changes that these problems continue to engender. The amount and location of water supply, soil conditions, climate, topography, etc., all have to be taken into account in any discussion of such a technological development as irrigation, whether we are talking about ancient or modern practices. This is well understood by all of you.

2. Secondly, we must identify, if possible, the social, economic, political, ethical and group drives and demands of people for water resources. These encompass individual, community and regional goals and expectations that provoke frictions and that require different solutions, or decisions, over a variety of problems. This approach also recognizes that modern man cannot ignore his link with nature. Yet more and more, man identifies his future with expanding technology. His relationship with nature has been greatly changed. Human values and institutions, including legal institutions, have been and are being altered drastically. Some of these we view with fear and others we welcome. And these changes are not mere differences in degree; they characterize the technological revolution and make it unlike any other in man's history.

The earth's surface, with its renewable and nonrenewable resources, is constantly being changed by man's hopes as well as by his actions. Science and technology have allowed man to avoid much of the seeming caprice of nature; they have also affected man's response to nature. One of the consequences of science, which to most of us means only appreciating the "laws of physical nature," is the achievement of greater stability in the relationship between

man and his environment, This is accomplished largely because of man's willingness to subject himself increasingly to the predictability of science. But one of the major consequences is more and more social, economical and political organization. Some people dislike this without trying to understand it.

Certainly this indicates the need for more understanding of the relationships among science, technology, economics, politics, law and government, which brings us to the third intellectual vantage point.

3. Society is composed of individuals who act through institutions. There are many kinds of institutions and we have inherited most of ours from an earlier period. Some we value for their permanence and stability, like the institution of property; some, like human slavery, we have discarded. But we are constantly examining the functional worth of every institution in every age. Obviously institutions have a large role in resources development and allocation. This is particularly true about water which is indispensable to life.

What institutions of government, of public and private finance, or of management, or of education or research are primarily concerned with water resource matters? These institutions are related to law, or perhaps are creatures of law, as for example the public corporation conservancy district. By law I mean positive law: the constitutions of the State and Federal governments, the enactments of the legislatures and Congress, the decisions of the courts and administrative agencies. I am not talking about transcendental appeals to humanity, or an ideal, or an illusion of "Justice."

All institutional arrangements play a role in resources development and the maximization of human values. Institutions often lag behind technology, and they are influenced or modified by science and technology. The sum total of the interaction of institutions makes up the culture of a people. And within the culture there are, of course, various and complex decision-making procedures. Here I also include decision-making by default which is what has happened in large areas when engineers alone for many years were trying to manage community growth problems. Many cities today are monuments to the decision-making by default among groups that could have prevented parts of this community and others, for example, from becoming ugly replicas of Middle Western towns.

We know that man, through his institutions, is doing more than reacting to his environment; he is responding to his concept of his environment; to his view of his surroundings. Thus the whole of a culture is found in response plus interpretation, appraisal, hopes, dreams and plans, if you wish. Some of these interpretations and plans take the form of law, or legislation or administrative regulations.

Water law and policy and administration in many parts of the country reflect the dominant elements of a culture, or parts of that culture, that is changing rapidly, or even disappearing. To be more specific, much U. S. water law reflects an agricultural society and methods of farming that no longer exist; modern society is making urgent demands for larger urban and industrial uses. Our technological society is a water-wasting, recreation-demanding society that is still operating, as it were, with the old institutional hand pumps, some of them serviceable and some not.

The term "institution" as used in this context refers to man-made devices for managing or alleviating social problems, or for recognizing human needs and for resolving human frictions. Institutions are made by man, Yet they shape his values and expectations. The role of law in all this process is obvious to you. Why do we, in the Anglo-Saxon common law countries, value the principle of "due process"? Because we have lived in a society that values due process and has erected institutions upon it. I do not have to take you back through the Mosaic law or the Twelve Tables of Rome to trace all of the implications of due process in criminal law, constitutional law--or even water law. However, I insist that you see that law cannot be analogized to a mechanical slot machine into which one puts some facts and a few dogmas and then extracts some neat, decisive conclusion wrapped in plastic. At rare moments law may be the residue of mankind's best moral judgments, or "right reason," as has been said, or it may at other times be the formalized and institutionalized result of irrational urges to power such as in Nazi Germany. But at all times it is related to human beings. The law I am talking about is the result of human choice. Choices are made through the political process. But political and legal problems are not the same though society must pay attention to both. Law is also filled with many truths, because truth is complex and has its scientifically verifiable or empirical, side; its conventional or traditional side and another side that logicians like best--all because truth that I am talking about is a construct of the human mind.

The truth about water law and policy should flourish somewhere near the confluence of the technical and humane disciplines. But law, including water law, may present a restraints on intellectual conclusions that represent a particular piece of truth for the engineer, or social scientists or public administrator. These conclusions may lead them straight into policy making with their particular facet of truth becoming the fulcrum for decision.

But we know that policy-making and decision-making in a free society often turn out to be a patchwork of half-truths and partial responses and compromises involving many needs and many points of view.

Water law is perhaps one of the best examples of the profundity of Mr. Justice Holmes' statement that "The life of the law has not been logic, it has been experience." So I will assume that you understand that the law we are discussing is made by and for man and is not some a priori construct existing outside society but to which man was born to conform.

The institutional approach we are exploring in this lecture also requires us to keep in mind that law, except in rare intervals of history (some of them bloody, like the French Revolution), is not written on a Tabula Rosa. The second law of thermodynamics seems to have some application to society though the "steady state" often becomes, in principle, social inertia. Change is not always acceptable. We must accept the conditions and facts that are given in present society. Thus with respect to water law and policy in our society we must recognize the following:

1. The existing cost-price system, the mechanism of a relatively free market--for water or any other economic good.

2. The present controls, restrictions, practices, etc., imposed by the community, i.e., through government. These may be found in areas of public and private investment, in public regulation, or in the management of land titles and uses.
3. The difficulties in changing present institutional methods by altering choices, or the perception and values of people.
4. The alternative institutional developments available and the research and knowledge necessary to uncover the dimensions and desirability of each, and still other new ones.
5. The limits of speedy or effective action and the decision-making process in a pluralistic democratic society.

### General Background of Water Law

Recent popular awareness of the importance, or even the existence, of water law (perhaps because you have read of the decision of the Supreme Court of the U.S. in Arizona v. California) should not mislead you. The subject is a very old one. It is not a body of law in the United States that has developed solely out of the friction among the states or with the U. S. over the Colorado River or other interstate streams. However, irrigation disputes over rivers of the West have produced the irrigation law that you probably think of at once when you are introduced to the subject. There is good reason for this. The history of mankind and irrigation are closely linked.

"A river ran out of Eden to water the Garden," the poet of Genesis tells us, and some think that is the way irrigation began. And in studying the hydraulic civilizations, as they have been called by one scholar, we find all manner of precise and punitive provisions in ancient irrigation law.

We can read man's history of flood and catastrophe in the rocks and sediments. The process still goes on. In this region it is the history of man and irrigation, and because in many other parts of the world the common people and their animals still drink water from public canals, it is also the history of municipal supply, stock watering, pollution control, public health and Malthusian corollaries. For those who are interested, there is the delightful record of Herodotus of about 2500 years ago reporting on the water law of Assyria, Egypt, Persia. There are also good translations of the Code of Hammurabi, of some 700 years before Herodotus.

The Romans, who had great engineering skills, in addition to their precise language with its abstract nouns that made a common law possible, distilled the best of the water law that had come down to them. The Institutes of Justinian leave one with the impression that the water law of the late Roman Empire was well settled. This is an illusion of course, but no more of an illusion than the one prevalent in some parts of the United States today where riparian doctrine, or the prior appropriation doctrine, is considered either the alpha or the omega of water law development.

Under Roman law running water, like the air and the sea, was public, things common to all and the property of none. This general principle came to us through the civil law of the Continent. It is still a good statement of

principle but the question today is how to apply it. That of course is the continuing question of our technological age, as it was apparently in the ancient civilizations.

A German scholar has written recently that:

'Water rights have been the subject of state concern ever since the earliest appearance of any form of state organization. In the light of the most recent research it may not even be going too far to say that the organization of the state as known to us over the last six thousand years had its origins in water rights.'

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In order to water the lands lying away from the river as well as those directly adjacent to it, a system of irrigation canals was necessary. All this was only possible if a leading group of planners of homines fabri, drew up plans and made and executed decisions. These men would have built dams for the community as a defense against floods and would have constructed canals for the periodical fluctuations of the river and would have taken them into consideration. But all this was again only possible with a permanent staff of engineers, scribes, astronomers and mathematicians working together in a framework of established authority and order which could have been nothing other than the beginnings of state organization. (Note: In this connection the Chinese word 'tschin,' which has the two meanings of 'to rule' and 'to regulate water.')"

F. J. Berber, RIVERS IN INTERNATIONAL LAW  
(Oceana Publications Inc. 1959)

The practice of irrigation and the growth of culture are not accidental developments in man's history. Nor is the relationship between a low death rate and the existence of a pure water supply.

In the United States, and in the new nations around the world, we are still concerned with other dimensions of irrigation law. For example, large-scale use of ground water for irrigation raises new problems. Cheap power and the centrifugal pump and sprinkler irrigation equipment plus more knowledge of soil chemistry and soil potential have changed irrigation policy and practices in many areas. However, as you have already learned, irrigation law is not the only important facet of water law.

Water law, both public and private law, has many aspects beyond the concern for irrigation. These include navigation, flood control, hydroelectric power, pollution abatement, watershed protection and erosion control, fish and wildlife conservation, recreational uses and municipal-industrial uses. Some conflicts and problems of law arise out of single purpose use of a supply; others stem from multipurpose uses, as, for example, where a river is used for navigation, power and irrigation.

## FEDERAL LAW -- BACKGROUND

The U. S. Constitution contains no express provision covering water resources. But Federal responsibility flows from several specific provisions of the Constitution. The power of Congress to exercise their responsibilities has been upheld by the courts for 150 years. These powers have been found under the Commerce Clause and later under the Property, Defense and General Welfare Clauses and Treaty Making powers of the President. Other Federal responsibility is found in the clauses of the Constitution giving the Supreme Court original jurisdiction in disputes between states and in the power of Congress to approve interstate compacts.

From these constitutional provisions and the provisions giving the Supreme Court original jurisdiction in suits between states and providing for congressional approval of interstate compacts come the powers of the central government over flood control, pollution control, wildlife protection, recreation, watershed erosion control, and the reservation of certain water rights to Indians, multiple purpose development and river basin and regional planning.

Although very large policy-making, and enforcing, powers thus reside in Congress under these provisions, other areas of local and state water law are equally important. For example, city supply problems are generally local law matters. So are most of the problems arising over competitive uses for industry and mining. Irrigation, particularly from interstate streams, is a regional problem as is pollution abatement, the enforcement of conservation and re-use practices. The problems of ground water withdrawal, use and management to date are almost entirely local in nature whether the supply is being withdrawn under some "mining" theory or under a formula of safe yield.

## STATE LAW -- BACKGROUND

One writer has summarized the foundations of U. S. water law as follows:

"Private rights to the use of the water of streams are generally recognized as the creatures of state law, and each state is free to choose the form that law shall take. The state's law of private water rights cannot be a self-contained unit, sealed off at the state lines, at which point the law of the adjoining state takes over. Two factors prevent this. First, water itself crosses the state lines or forms state boundaries, and what is done in one state will have repercussions in its neighbor. Secondly, the federated nature of American government will not permit such isolation, since the states are only partly sovereign. The Constitution gives the national government interest in water and powers to implement them, powers in some respects superior to those of the states, and the Constitution will not permit the states to act autonomously where extraterritorial effects of such action may harm a sister state.

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The state powers to legislate in the field of water rights arise from the general sovereignty and imperium reserved to the states in the Tenth Amendment. The power to create property rights and the police power to regulate them, stemming from this reserved sovereignty,

are the sources drawn upon in state regulation of private water rights. State water allocation laws have traditionally been directed to assigning water to individuals as property, in the form of rights to divert or store water and apply it to beneficial use to further the economic gain of the individuals."

[Frank J. Trelease, Federal Limitations on State Water Law, 10 Buffalo Law Rev. 399 (1960-610)]

## I

### RIPARIAN AND APPROPRIATIVE RIGHTS

Surface water law doctrine in the U. S. is generally divided into two grand categories: riparian doctrine and prior appropriation doctrine. The physical and doctrinal separation is found along the 98th to 100th meridian which divides the humid from the semiarid regions of the country. The tier of states in this division area, from North Dakota to Texas, lies astride the 20-inch rainfall line. The area to the east, until very recent times, was exclusively riparian territory; west of the line prior appropriation is the dominant doctrine in all 17 states and in 8 of them it is the exclusive doctrine with respect to surface waters. Riparian rights in the other Western states are of secondary importance or are largely a matter of history. It was over the question of possible dormant riparian rights on Federal lands that the cry of federal encroachment was raised in the Pelton dam decision in 1955, in Oregon.

In what essentials do the riparian and appropriation doctrines differ? What are riparian rights? What are appropriative rights?

#### Riparian Rights

Riparian rights are usufructuary because no one "owns" the corpus of a flowing stream. These rights consist of the legally protected interest to have water pass by or through one's land. They are rights in land that cannot exist apart from the land ownership. They depend on location, i.e., next to, or abutting, or "riparian to," a stream or body of water. The right is a right to use rather than an actual use. The right exists in suspension, so to speak; it exists without being exercised.

The doctrine of riparian rights is generally the law of all of the thirty-one Midwestern and Eastern States, (Alaska and Hawaii must be mentioned separately.)

One geographer has made the following comparison of riparian and appropriative rights:

"Clearly, then, the doctrine of riparian rights as adopted by the humid sections of Western Europe and Eastern United States was primarily aimed at maintaining the unrestricted flow of water in surface streams, an item of great significance where rivers were used for navigation. Every riparian owner was entitled to the 'free and uninterrupted flow of water, undiminished in quantity and unpolluted in quality.' The so-called 'natural use' of water

implied that a person could take water for household and such domestic uses as were necessary for the sustenance of the family, but he could not divert water for 'artificial' or 'extraordinary' uses which included water for irrigation, industrial, and recreational purposes. Floating logs or turning the wheels of a mill were non-consumptive uses and not contrary to the spirit of the law. In contrast, under the doctrine of prior appropriation the right to divert water from a stream for beneficial purposes was a recognized practice based on the 'first in time, first in rights' principle. This rule became firmly entrenched in the arid section of our country where irrigation was absolutely essential to any permanent agriculture."

[Edward Hamming, "Water Legislation," Economic Geography, pp. 43-44]

Other Midwestern and Eastern States in the humid region have passed legislation, much of it since 1950, which generally does the following:

1. Invokes the states' sovereign police power to improve public control measures which will affect riparian rights;
2. Relates water resources to overall community planning and land use.
3. Recognizes a number of new and legitimate uses of water not recognized at common law and, in some states, fixes priorities and preferences as to their standing as "higher or lower uses."

The great virtue alleged to inhere in riparian doctrine is flexibility, i.e., no specific uses need be mentioned and no exact quantities discussed. This advantage is often compared with the certainty and rigidity of the appropriation system. This is largely an illusory comparison.

#### Appropriative Rights

Prior appropriation doctrine arose historically because of the absence of land ownership rights and is not dependent on land ownership. Under this doctrine water rights and rights in land remain separate. The California gold miners who helped develop the doctrine were, as you will recall, trespassers on the public domain. Prior appropriation is a variant of the law of capture. Those uses that were prior in time came to have superior legal consideration. Such rights cannot exist without being exercised.

There are 8 states that recognize appropriative rights only in surface waters: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. In the other 9 Western states a combination of appropriation and riparian doctrine makes the law more complicated and unwieldy.

It should be made clear in this lecture that both doctrines have been modified by time, by circumstance and through critical reappraisal although all of the changes have not been improvements. For example, in recent times Mississippi and Iowa made changes in their water allocation laws on the assumption that Eastern and Western water law problems were becoming essentially similar. This assumption has since been shown to be unfounded. An official of a resources foundation recently commented as follows:

"In the early 1950's many Eastern states took a great interest in the Western appropriation doctrine. It seemed for a while that a number of the states would enact legislation to establish a modified appropriation doctrine. Later this interest shifted to the possibility of granting water use permits for a specified period of years. This latter interest eventually resulted in the development of a model law for consideration by state legislatures. Underlying the interest in the appropriation doctrine and the permit system was the assumption that the water situation in the East was becoming essentially the same as the problem that had long confronted the West, namely a quantitative shortage of supplies to serve all potential uses.

. . . . .

"No doubt modification in the riparian doctrine will be desirable in the years ahead as competitive for available supplies increases. However, with waste disposal and recreation destined to make ever larger demands upon our water resources an important question arises as to how these uses will be integrated into the system of water allocation law. Efforts to regulate pollution are being intensified. Yet, it appears that we are a long way from a water allocation framework that weighs all potential uses--including waste disposal and recreation--in a fully satisfactory manner. The way to this goal is not self-evident."

[Irving K. Fox, Trends in River Basin Development, Reprint Number 37, November 1962, Resources For The Future, Inc.]

Changes in the law have been made by legislatures and by the courts. The nature of these changes and the prospects for more change, especially as they relate to ground water, will be emphasized later.

## II

### SURFACE-GROUND WATER DICHOTOMY

A second grand scheme of categorization in water law separates surface water from ground water. For example, in California a doctrine of "correlative rights" applies as to ground water which preserves an analogy to riparian rights. In Arizona a concept of "reasonable use" as to percolating ground water is developing even though no riparian rights are recognized in surface waters or in subsurface streams.

In Texas appropriation does not apply to ground waters at all although it does apply to surface waters above the flood level while at the same time riparian rights doctrine applies to normal flows. These doctrines when applied to the determination of property rights, and to management and control, often lead in different directions. Part of this is due of course to the unscientific nature of the classification. However, these categories were developed pragmatically and are embedded in the law and are protected by constitutions and institutional arrangements that I have already mentioned. Fortunately, the trend is to recognize the hydrolic cycle in legal doctrine and thus provide for the interrelationships that exist between supplies above and below the ground.

Under Eastern or Western water law doctrine, the major problems of water continue to be: allocation, distribution and encouragement of the most productive uses.

These problems can be approached from two extreme viewpoints: On the one hand complete public control can be adopted, and on the other hand laissez faire supply and demand and some iron law of the market place can be postulated. Of course, neither extreme exists and in fact in the field of water resources there is probably more public control than in any other field of economic activity except nuclear energy development and yet there is also great freedom for the price system to aid in determining allocations among competing uses of water.

There are many reasons why public control, and Federal and State participation, in resources management are desirable and why more centralized decision-making is inevitable. There are also reasons why public ownership of certain kinds of water supplies is necessary, as, for example, for recreational uses. The same may be said about community supplies. Today we know that over 70% of all cities over 5,000 have publicly-owned municipal water supply systems. A summary of recent ground water uses shows:

"Ground Water as the Only Source of water supply increased 52 per cent in 781 communities with populations of 25,000 or more between 1960 and 1962. The Public Health Service makes a summary of municipal water facilities every two years, and bases its review on areas with a population of 25,000 or more. The increase in exclusive ground water use shown in the 1962 report is attributed in part to the inclusion of 75 newly listed communities using ground water only, and also to a switch in practice by other communities. During the same period that ground water enjoyed a 52 percent increase, the net gain in number of surface water facilities was about 6 per cent."

[WATER Newsletter, Vol. 6, #4, Feb. 20, 1964]

I will now try to show you how the different doctrines are applied to surface and ground water.

So far you have seen that in the early period of water law in this country the problem was largely and almost exclusively one of acquisition of new rights. This was true of land rights as well. But today we are concerned more with management and wise use. We are less anxious to know who "owns" a water right than we are about how it is used; how does the community manage it. Thus the modern problems are those of allocation, distribution, use, conservation, re-use, etc. This becomes highly important in the management of ground waters.

The two state water law doctrines already described, i.e., riparian rights and prior appropriation, have been discussed mainly in the context of surface waters although there was a suggestion that we would emphasize ground water legislation.

We learned the riparian rights were interests in land, that they prevailed in the humid region of the Midwest and East and that appropriative rights were dominant in the semiarid West. In 8 states, including New Mexico, we saw that riparian rights were not recognized at all; only appropriative rights to surface waters are recognized. Arizona and Colorado, to the west and the north,

are exclusively appropriation states with respect to surface waters. Yet these two states make a departure from that doctrine with respect to certain classes of ground waters.

The states following riparian doctrine with respect to surface waters, that is the Eastern and Midwestern states, in general follow an analogous doctrine with respect to ground water. It is often called the rule of "absolute ownership." It actually allows the landowner to make unlimited withdrawals from his own land. This is the first general rule of ground water law in the states like New York, New Jersey, Wisconsin, Georgia and Connecticut.

In the West, as I have indicated, there are contrasting ground water doctrines. New Mexico applies appropriation, doctrine exclusively to surface and ground waters. Idaho and Utah do also, although both states when through a long travail in reaching that conclusion with respect to percolating ground waters. We will mention the ground water law of California, Texas, Washington and Montana and Arizona a little later.

We have seen that water law doctrine grew out of necessity in the West and out of custom and pragmatic approach. The first water law that was developed allocated the most accessible supplies, viz. the visible flows of streams. As time went on and these supplies were diverted and used and claims for more appropriative rights became harder to sustain, and because a technological revolution had made it possible to pump ground water in large quantities, ground water became an important source of supply.

Generally ground water was not an important source of supply until 25 or 30 years ago, and the legislation we shall review is largely the product of a more recent period, or since World War II. California, Texas, Arizona and New Mexico are the heaviest users of ground water in the West, and only New Mexico, which ranks fourth, has any real controls over withdrawals.

Again using the division of regions of the country--the humid and semiarid --to show the broad cleavage in the law suggested earlier, let us review the law of the Midwest and East and then the West.

#### Eastern and Midwestern Riparian States

We have already learned that riparian rights to surface waters are generally recognized in this humid region. With the exception of legislation passed in the 1950's in Mississippi and Iowa, there has been no recent interest in appropriative rights in the humid regions although earlier there was such an interest based on some wrong, and now reconsidered, assumptions about the similarity of water problems in different areas of the country.

The reasoning which shaped surface water rights, i.e., riparian rights, as interests in real property which exist apart from their actual use, also supports the doctrine that the landowner's rights in his property include the water found in the ground beneath his land. Thus the landowner is permitted to dig a well on his own land and make withdrawals even to the point of dewatering the aquifer and drying up his neighbor's well, and he is not liable for damage unless his acts have been malicious. Damnum absque injuria, as we say in the law; there can be no harm without legal injury. This is the established doctrine under the common law we received from England and adopted

in large areas of the United States, and it was also the civil law of the Continent which has its roots in Roman law.

The civil law and particularly the law of the Spanish empire was carried to the New World. The doctrine of Pueblo water rights was part of this body of law. This doctrine has nothing to do with Indian water rights. It refers to the Spanish and Mexican colonization laws, the Laws of the Indies, under which a newly founded community was assured a continuing supply for future inhabitants from a flowing stream. The New Mexico Supreme Court has applied the doctrine to surface flows. Many years ago the Supreme Court of California extended the doctrine to ground waters in a decision affecting the water supply of Los Angeles. A recent New Mexico case was an unsuccessful attempt to apply this doctrine to ground waters.

In the area of private law the common law of England and the civil law of the Continent were and continue to be the same on this general rule, viz. that the landowner has the right to withdraw water from his land subject only to community sanctions against intentional or malicious conduct, as for example the intentional drying up of another's well or the pumping of water from one's land in order to flood one's neighbor. This is generally the law of ground water in the humid regions of the United States. It is also the law of Texas as we shall see, subject only to some regulatory provisions not relevant here and the general admonition in favor of conservation.

This rule of the common law allowing unlimited withdrawals of ground water might provide a satisfactory rule in a laissez-faire era in a rural society where not only wells but privies and garbage dumps were located some distance from each other. The limitations of common law doctrine under modern conditions are obvious in both the humid and semiarid regions. Aquifer pollution may be one difficulty to control; but there may also be large overdrafts on certain rechargeable basins as, for example, in Roswell, New Mexico; and still other problems in areas where, like Lea County, New Mexico, the water is being mined under a rational plan which pays attention to geological and hydrological facts and is not concerned with land ownership as such.

Subject only to the police power of the state to regulate in the interest of health and community welfare, the general ground water doctrine of unlimited withdrawals prevails in the humid states. Regulation of ground water in most of these states is minimal or nonexistent. This has been true of surface and ground waters. The common law doctrine in some of these states has been modified to permit only "reasonable uses" of water. Some efforts have been made in recent years to correlate through legislation and planning, law and administration, the uses of surface and ground waters. In facing the problems the states have had these alternatives: maintain the status quo; modify existing rules and statutes; or enact an entirely new system of law. A majority of the Eastern states have done nothing. Some like Mississippi, and those following the Model Water Use Act, have modified the law but only as to unused rights, leaving existing rights relatively untouched. This is an effort to avoid constitutional law problems. Some of these states have also avoided any attempt to cover ground waters.

The Iowa legislation of 1957 takes the boldest course and covers surface and ground waters and puts a general limitation on the life of a permit for water use at ten years. The Model Water Use Act had suggested 50 years.

### Western States

In the Western States (exclusive of Alaska and Hawaii) ground water has had a peculiar and diverse development. In addition to the so-called common law doctrine allowing the landowner to make unlimited withdrawals, as I have pointed out is the law of Texas and the humid regions, there are three more ground water doctrines. Two of them are variations on the common law theme and the other doctrine is, of course, prior appropriation.

As you will see in a few moments, some states that apply appropriation doctrine exclusively with respect to surface waters still recognize the landowner's right to withdraw ground water under certain conditions. This is the case, for example, in Arizona, Colorado and Montana. This means that two different bodies of law are often applied to surface and ground water in one jurisdiction.

To repeat, the four doctrines applicable to ground waters are:

1. Prior appropriation

Remember that under this rule the actual beneficial use of the water is the important test and not the source of supply under one's land. This is the law generally in the West.

2. Unlimited withdrawals, or the common law rule

Here ownership of the overlying land is the test. [c/l ownership-- up to heavens, etc.]

3. Reasonable use

This is a weak limitation on the common law withdrawal rule. This is the rule in Arizona.

4. Correlative rights doctrine

This is the law in California and it is also a limitation on the common law rule. This rule is often confused with the reasonable use rule. However, under the correlative rights doctrine the right to withdraw ground water is apportioned among overlying landowners. The size of the land surface and the use of the water are related to the amount of each overlying landowner is entitled to withdraw. Under "reasonable use" the owner may withdraw except unreasonably. Over 50 years ago this doctrine was rejected in Texas in the decision that followed an Ohio case and chose the common law rule of unlimited withdrawals.

New Mexico ground water legislation is often cited as an example of the advantages there are in public control methods. The legislation is far from a perfect example but it does show what can be done and it also indicates the direction other states have taken, or have failed to take.

As we have seen, the early law, which was surface water law, e.g., in New Mexico and Arizona was based on actual use and there was little concern for any paper rights unless these had been obtained in a court adjudication. This was the state of affairs in New Mexico until 1907 when the Territorial legislature enacted the so-called Water Code. These laws provided for public control methods and for a permit system, an administrative agency. Actually the office of Territorial Engineer was established in 1905. But after 1907 a permit was required in order to appropriate surface supplies and this permit ripened into a license and a qualified property right. This remains the essence of the law today.

The permit systems of several states derived from Elwood Mead's Wyoming administrative-type control statute of 1889 or 1890. Colorado, Montana and California did not follow this system and this may have something to do with the undesirable state of their law today. The Wyoming statute and the others that were inspired by it were the result of the recognition that the courts were not equipped to administer water rights, or to make technical studies, or to supervise ditch bosses; and also it was recognized that water rights had to be conditioned upon changing community needs because water rights like other property rights are not absolute.

This in general was the coverage of the New Mexico law until 1927 when the first comprehensive ground water legislation was passed.

In 1927 a community decision was made to control artesian wells in the Roswell basin. This decision saved the economy of the region. I do not mean to imply that Roswell's problems are all solved. There continues to be an overdraft in the basin and also encroaching salt water intrusion. However, the area offers an example to other states of what can be done to avoid permanent disaster. ([This is the background of the New Mexico legislation:

Artesian wells were drilled in the Roswell area as early as 1891. By 1900 there were 153 wells in the region. After the Reclamation Act of 1902 there were larger scale developments. Then after World War I when auto engines became available for cheap power, there were artesian wells put down all over the basin. Pressures went down. Pumping costs went up. By 1925 there were mortgage foreclosures by the thousands on good farm land. In fact, virtually the whole valley was in receivership. At this time not a dime could be borrowed on the lands. The mortgages said no funds would be lent until there were controls on drilling. At this time the community leaders drafted the 1927 legislation. This is an example of education by calamity that I hope can be avoided in other states].)

To date there are 19 or 20 legally declared basins in New Mexico. Some are rechargeable areas; others are mined areas. Technical regulations made by the State Engineer under legislative authorization have been upheld. In *Spencer v. Bliss*, the New Mexico Supreme Court said:

"The administration of the public waters of the state, especially the underground waters, is a task requiring expert scientific knowledge of hydrology of the highest order. The administration of surface waters alone, where the trained and experienced engineer may see and observe what he does, or should do, and what the agency he is doing, is beset by difficulties enough. But when the administration is turned to underground waters the engineer's troubles are multiplied by a hundred-fold."

You are not to understand this comment as a claim that the New Mexico statute is a model of perfection, or that it is as good as it should be. Indeed, I think a much better statute can be prepared in other states, including Arizona, based on the experience of 30 years.

In summarizing this experience we may say that the trend toward more public control has been through three methods: (1) application of the appropriation doctrine, (2) the declaration of ground water basins as provided by statute, and (3) the declaration in 1953 by the legislature that all ground waters of the state are public.

This experience should now be compared with that of some other states.

Texas

Long ago, as already pointed out, Texas chose the common law rule with respect to ground waters and has been trying to live with it ever since, although now a Texas Water Commission permits some controls. This is difficult in a state that extends into both the semiarid and humid regions and uses large quantities of ground water and also pumps water along the sea coast where salt water intrusion is a constant threat. The general law of ground water in Texas has been modified only enough to allow for water districts (Underground Water Conservation Districts) and to make studies and to keep records and perhaps prepare for the day of reckoning which in some areas of the state is not far away. For example, in the High Plains District around Lubbock these are the figures on the water level decline published in March of this year:

	<u>Five-Year Period</u> 1959-1964	<u>One-Year Period</u> 1963-1964
Average Decline Per Well	10.34	2.49
Average Decline Per Year Per Well	2.07	2.49

Here are also some figures on new wells drilled over the past two years within the High Plains Underground Water Conservation District:

<u>Total Wells Drilled</u>		<u>11-Year Total</u>
<u>1962</u>	<u>1963</u>	
1,338	1,746	20,487

This area is mining its supply as is done in Lea County, New Mexico.

Recently in the Lubbock area it was held by a U. S. District Court that a farmer-taxpayer who was mining his ground water supply could claim his expenses as an income tax allowance. This case was argued before the Fifth Circuit Court of Appeals on June 4th, this year and the decision will be very important. The depletion allowance is claimed under the Internal Revenue Code, Section 116. There a taxpayer must meet three requirements:

1. He must derive income in some manner from the extraction of a mineral and must look to that income for a return of his capital.

2. The mineral must be exhaustible; it must not be undergoing natural replacement in significant quantities.
3. The taxpayer must prove a capital investment in the mineral in place.

### Colorado

Colorado, to the North, where the "Colorado doctrine," i.e., pure appropriation, was developed follows that doctrine with respect to all surface waters and all tributary ground water. But in a recent decision the Colorado Supreme Court has held that ground water nontributary to a stream system is the property of the landowner. The case was more complicated than I have made it appear but that was the result and it adds to the existing management problems in Colorado.

### Montana

Montana was without any substantial ground water legislation until the period from 1959-1963 when some effort was made to establish controls at least in the form of drilling permits. However, the courts have indicated that the rule of the common law applies to percolating ground waters even though Montana is also a pure appropriation state like Colorado, Arizona and New Mexico with respect to surface waters.

### California

With Texas in competition, California is the heaviest user of ground waters. Yet California has no adequate controls or administrative structure. As you have already learned, California developed the "correlative rights" doctrine with respect to ground waters and is the only state to follow it.

A California lawyer, addressing engineers recently, said the following:

"In California today anybody is permitted to sink a well and pump water. No license or permit is required. A man can drill a well and pump the water for use on his overlying land.

\* \* \* \*

"The present law contains no protection against over-pumping and abuse of a ground water basin. Only after the damage has been done do the parties come into court and seek relief. By then it is frequently too late, and considering the number of years involved in any ground water adjudication proceeding, one can only conclude that the laws in this field are antiquated, clumsy and inadequate.

"Yet every attempt so far to improve these laws has failed. Here, then, is one function of the underground in which attorneys, engineers and geologists have a common interest."

[James H. Krieger, "The Law of the Underground,"  
Civil Engineering, p. 52 (March 1964)]

Arizona

Another immediate and dramatic contrast is Arizona which has a peculiar system of law as it applies to ground water. The doctrine of appropriation applies exclusively to surface waters and to waters in subterranean streams that can be proved to exist, but not to percolating ground waters. The rule of reasonable use is applied. This law was established by the Arizona Supreme Court in 1953. In the first opinion of the court the judges divided 3-2 in favor of prior appropriation, then on rehearing after a judge had been replaced the court divided 3-2 in favor of the reasonable use rule largely because an old decision in Arizona had indicated that the common law applied to ground waters. Arizona to this day does not have a satisfactory ground water statute. The Arizona law should be compared with the law in Kansas where a similar problem of precedent was faced.

Kansas passed a 1945 water statute that was upheld in 1962 as applied to ground waters. The Kansas Supreme Court also had to consider the nature of proprietary rights in percolating waters as the Arizona Court did in Bristor v. Cheatham. In upholding the statute and applying appropriation doctrine the Kansas Court said:

"From that evidence emerges the salient and clear factual conclusion that these ground waters are percolating and hence migratory and fugitive . . . . Thus, we are dealing with a right to use the underground waters as they pass through the owner's soil.

\* \* \* \* \*

"The constitution of Kansas contains no provision relating to the dedication, control, application or administration of either surface or underground waters, and the common law has been fundamental in this jurisdiction in determining rights of riparian and overlying owners.

\* \* \* \* \*

"Prior to 1945 this court adopted and applied the English or common law rule that percolating ground water 'belongs' to the owner of the land in which it is found.

\* \* \* \* \*

"Much of the language in the cases pertaining to absolute ownership is obiter dicta and completely unnecessary to the respective decisions. Moreover, ownership as a concept is often vague and denotes only certain rights of use against certain persons with respect to certain physical phenomena. Thus the use of the term 'ownership' as applied to percolating water has never meant that the overlying owner had a property or proprietary interest in the corpus of the water itself. This necessarily follows from the physical characteristics of percolating water. It is migratory in nature and is a part of the land only so long as it is in it. There is a right of use as it passes, but there is no ownership in the absolute sense. It belongs to the overlying owner in a limited sense, that is, he has

the unqualified right to capture and control it in the quantity desired and with an immunity from liability to his neighbors for doing so.

\* \* \* \* \*

"Hence, the true nature of the law of percolating water rights under the English or common law rule as applied in the Soden case [City of Emporia v. Soden, 25 Kan. 588, 37 Am. Rep. 265, 1881], and unreversed as of June 28, 1945, was that an owner had no legal right to complain of the diminishment of the subterranean water underlying his land through pumpage of wells by irrigators, municipalities and other water users in the area . . .

"The unsuitability of such a rule to modern day conditions was self-evident . . . .

\* \* \* \* \*

"The privilege of using water is unquestionably an element of the value of the land. To take away that right might be tantamount in a semiarid country to confiscation of property. But the Act is not compulsory in its provisions. It does not compel or require a surface owner to obtain a permit in order to make use of the underlying water. Neither does it require that a permit be obtained for the installation of a well or pump or other works by means of which water can be diverted from its source to its place of use. However, such an owner, by electing not to come under the protection of the Act, is subject to the hazard of injunction in the event his usage impairs rights recognized and protected under the Act. To that extent, the plaintiff may presently drill wells to capture and divert underlying water and apply it to beneficial use with waste, subject, however, to the preferential use rights of a vested roght user or the appropriation right of one who applies water from the same source to beneficial use (82a-712, 82a-716, 82a-717a).

"\* \* \* We hold that it was within the competency of the legislature to define the 'vested rights' of common law water users, or to establish a rule as to when and under what conditions and to what extent a vested right should be deemed to be created in such a water user . . . . The right of the plaintiff to ground water underlying his land is to the usufruct of the water and not to the water itself. Legislation limiting the right to its use is in itself no more objectionable than legislation forbidding the use of property for certain purposes (Euclid Ohio v. Ambler Realty Co., 272 U.S. 365, 47 S.Ct. 114, 71 L.Ed. 303, 54 A.L.R. 1016....)." .

Thus the Kansas law favors public regulations as well as the recognition of scientific knowledge. Arizona and some other states could learn from this experience in Kansas.

AREAS OF RESPONSIBILITY UNDER FEDERAL AND STATE LAW

Lecture II

In the earlier lecture we learned something about the background of law as an institution and as an instrument of policy and decision-making, in the area of water law, and we referred to some of its limitations. We outlined briefly the constitutional origins of federal power over water resources and we outlined the two views of water rights prevailing in the United States, i.e., the riparian rights of the Eastern states and the dominant appropriation doctrine of the West. Our main focus was on water rights as an area of private property law. We observed that there were certain advantages and disadvantages in both doctrines of water rights in the area of private decision-making, or the area governed largely by the market. We saw that private decision-making is heavily influenced by public decision-making because of the nature of the role of government, federal and state, in water resources policy. We learned also that both the certainty aspects and the transferability features of water rights in the realm of private property laws were questioned under both riparian and appropriation doctrines. Appropriation doctrine appears to provide more certainty although it involves greater rigidity. Riparian doctrine seems to allow more flexibility but in fact often offers uncertainty and limitations on transfers because the right is limited to riparian lands. We also saw the various doctrines applied to ground water.

One dimension revealed in our discussion is the divergence between state systems of water law. Another is the relationship between the Federal government and the states. As we pursue this second area of discussion we shall see why there cannot always be a precise balance spelled out in statutes between Federal and state authority in every area of water resources because of the nature of our system of federalism which combines dual sovereignty principles and local and central government control and practices. In talking about a river basin or a whole drainage area where a number of states are involved, this should be remembered.

An effort to define precisely the area of power between federal and state governments over water rights, and particularly those involving irrigation uses, is found in the legislation introduced in Congress since 1956 as a direct result of the Pelton Dam case in June 1955. The bill in the last Congress was S.1275.

In the Pelton Dam case (Federal Power Commission v. State of Oregon, 349 U. S. 435, 75 S.C. 832) the Federal Power Commission issued a license, over the protests of the State of Oregon, to the Portland General Electric Co. to build a dam on the Deschutes River in Oregon. The site was located where at one end the dam would rest on Indian land. Title to the land on the other side was reserved to the United States for power purposes. The Power Commission granted the license. The State of Oregon objected that it had the sole power to control the use of the stream which is nonnavigable and located entirely in Oregon. The State also contended that the dam would impair the river's capacity to hold anadromous fish and would reduce the usefulness of an upstream fish hatchery. The State of Oregon's Hydroelectric and Fish Commission had previously denied a request for a state permit to the same applicant and apparently for the reasons just stated.

The FPC had examined the measures to protect the fish in the stream and ordered improvements that cost the applicant a substantial sum in capital investments. The licensee also was required to build small regulating dams below the main one. The case was appealed to the Ninth Circuit court which set aside the license. One judge dissented.

The Court of Appeals discussed primarily the question of whether the United States had relinquished control of all water rights in nonnavigable Western streams, a question never finally answered although often discussed by the courts.

The Supreme Court held that the FPC could license a private hydroelectric power project on a nonnavigable river in Oregon without regard to the law of that state. The court held that because one end of the dam would be on Indian lands and the other on reserved lands, as distinguished from the public domain, the State of Oregon could not use its regulatory control over fish to bar the project.

Senator Barrett of Wyoming introduced the first federal-state water rights bill in 1956. Succeeding bills, and there have been many, have all had as a goal the limiting of federal water rights, either by express language or by the method of purported "clarification". The recent S. 1275 obviously intends to cover the Pelton Dam situation in paragraph (1):

"The withdrawal or reservation of surveyed or unsurveyed public lands, heretofore or hereafter made, shall not affect any right to the use of water acquired pursuant to State law either before or after the establishment of such withdrawal or reservation."

Although the emphasis in the proposed legislation is on "water rights" in the context of Western irrigation principles, it must be remembered that the Pelton Dam case actually involved a license for a power structure and also raised questions about anadromous fish. Obviously something more than "water rights" were involved. In the case an agency of the federal government, the FPC, created by the Federal Power Act of 1920, had its authority questioned by the State of Oregon. The adequacy of provisions for fish conservation, the exact character of reserved lands and Indian lands, as distinguished from public lands generally, raised further questions.

Soon after the decision another area in the federal-state struggle was exposed. In Nevada v. U.S. in 1958, the so-called Hawthorne case, it was held that the U.S. did not have to comply with the law of Nevada in order to withdraw ground water from below a Naval Ammunition depot reservation. In the Hawthorne case the U.S. District Court held that in maintaining a national defense reservation--a valid federal purpose under the War Power and Property Clauses of the Constitution--the United States had the right to withdraw ground water located under reserved land without complying with Nevada state law. This decision was affirmed on other grounds by Court of Appeals.

These two recent decisions typify in a specific area of law the conflicts in federal and state power which are an inherent part of the dynamic system of federalism. The decisions also reveal areas of doctrine in which surface and ground water have been treated separately--as if each were a part of a different hydrologic cycle.

The United States has large and grave responsibilities in the field of water resources even though there is no express provision in the Constitution covering the subject. The Treaty Power, the War Power, the General Welfare Clause, the Commerce Clause, and the Power to Dispose of Public Property have long been applied in water resources matters. For many years before the Pelton Dam decision careful students of water law were saying that the question of ownership of unappropriated waters on federal lands was not entirely settled. Yet we hear contrary statements.

I must remind you that the early use of water in California was largely by nonresident trespassers on land that belonged, by war and purchase, to all of the people of the United States. Mountains were moved to get the gold out of them. Of course since those days we have been less inclined to call these miners trespassers as Colonel Mason did in 1849 and President Lincoln and the courts did. In our best pragmatic, as well as sentimental, tradition we first made the miners into squatters, or quasi-trespassers, and then we proceeded to recognize some of their claims. More recently on television almost all have become heroes in the building of the nation.

During this period the Western doctrine of prior appropriation evolved. This doctrine was a simple variant of the law of capture, the principle of first use, first right, and it developed on the vast tracts of semiarid land owned by the federal government. Meanwhile, in the Eastern or humid states, there were no comparably large areas of federal ownership with scant supplies of moisture. In those states the common law and real property law shaped and protected the rights of riparian owners. These rights continued to be subject to some changes by the state legislatures in the form of the Mill Acts and through the exercise of the state's police power. The evolutionary development in the West began with the California miners, the Mormon pioneers in Utah in 1847 and the earlier settlers along the Middle Rio Grande who had built the first community acequia or ditch near Espanola, New Mexico, in 1598.

Water law grew up as a pragmatic patchwork of custom, lower federal and state court decisions, state, territorial and federal legislation and a United States policy that some have called surrender. An important and often overlooked feature of this early development is that the claims and disputes were almost entirely between individuals. Water law as a part of private real property law gave almost full attention to claims made vis a vis individuals even across state lines. The doctrine of equitable apportionment, which is a doctrine of public law between states, had not yet been devised. There were few explicit public law aspects of water law until after 1889 when Elwood Mead, the State Engineer in Wyoming, prepared the first public control statute that was soon followed in various forms in nearly every Western state. Throughout this period the full reach of federal authority remained obscure even after *United States v. Rio Grande Dam & Irrigation Co.* was decided in 1899 and in which the Supreme Court said:

"Although this power of changing the common law rule as to streams within its dominion undoubtedly belongs to each State, yet two limitations must be recognized: First, that in the absence of specific authority from Congress a State cannot by its legislation destroy a right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far at least as may be necessary for the beneficial uses of the government property."

During this early period divergent theories developed with respect to the disposition of waters on federal lands and in the Territories, as these lands became parts of new states. Disputes had been settled in California in the lower courts long before a state supreme court decision in 1886 fixed the destiny of California water law. The so-called California doctrine recognizes both riparian and appropriative rights. Appropriative rights on the public domain had been recognized in 1866 when Congress advanced the trespassers' appropriative claims by recognizing the priority previously accepted by custom.

Another view of the transition to statehood produced the Colorado doctrine under which no proprietary interests are recognized and no riparian rights exist. This is the law of Arizona and seven other states. Prior appropriation rights are acquired through state law. By this view prior appropriation became the accepted uniform rule. The new state determined its own system of water law and no consent from the federal government was needed.

But even though Congress gave the states the power to establish the procedures for acquiring water rights and to determine what the nature of these rights should be, opinions differ as to whether title to the waters in non-navigable Western streams became vested in the states. A careful student of water law wrote over twenty years ago explaining that:

"Various states by constitutional or statutory provision have dedicated all waters within their boundaries to the public or to the state, subject to existing rights of use; and the view taken generally by public officials of these western jurisdictions has been that the ownership of waters even on the public domain has vested in each state since its creation. On the other hand, with the growth during the present century of federal interest in the development and use of water, for purposes other than navigation, the view has been taken by officials concerned with the development of federal water supply projects that the United States has never surrendered its ownership of unappropriated waters on the public domain, but has voluntarily complied with State laws concerning the appropriation of waters as a matter of comity."

The question of the interest of the states was raised in *Nebraska v. Wyoming*, 325 U.S. 589 (1945). This was a suit to adjudicate the waters of the North Platte.

Colorado, Nebraska and Wyoming were original parties. The U.S. intervened in the case on the grounds (1) that neither Wyoming nor Nebraska was willing to defend the appropriations made by the United States in Wyoming for use in Nebraska; (2) that the United States was the owner of all unappropriated water in the North Platte River, irrespective of any appropriation made or to be made by it under the law of any state; (3) that the title of the United States to such water was involved and, therefore, Wyoming could not stand in judgment for it; and (4) that the United States was entitled to have apportioned to it, free from the sovereign control of any state, the water already appropriated by it and all of the remaining unappropriated water of the river, if any.

"All three states, Nebraska, Colorado and Wyoming, objected to the motion for leave to intervene, each denying the title of the United States to the unappropriated waters of the stream. The Court allowed the intervention without prejudice to any of the substantive questions of law raised by the motion.

"Thus, in the case, the question of ownership was squarely raised. The United States argued:

"(a) That the title of the United States antedated the creation of the states and has not been divested at any time. By acquisitions from other countries, the United States acquired all the western lands and all the waters thereon whether navigable or nonnavigable. That although the states on admission to the Union acquired title to navigable waters (see *infra*, p. 47), they have never been granted title to the nonnavigable waters of the country.

"(b) That Congress, in enacting the desert land legislation, (43 U.S.C. § 321), did not convey the title to the waters on the public domain to the states, but simply permitted the appropriation of such waters by private persons upon compliance with state laws. This was equally true of the Acts of 1866 and 1870.

"(c) That Congress, in directing the Secretary of the Interior to proceed in conformity with state water laws in carrying out the provisions of the Federal Reclamation Act (32 Stats. 390, 43 U.S.C. § 383), did not intend to subject the nonnavigable waters of the public domain to state control nor to recognize any interest of the states therein, but simply adopted the laws of each state as the federal law in its jurisdiction.

"(d) That the title to the unappropriated nonnavigable waters on the public domain therefore remains in the United States, free from the sovereign control of any state.

"The three states argued to the contrary:

"(a) That Congress by the Acts of 1866, 1870 and 1877 permanently and irrevocably dedicated the nonnavigable waters on the public domain to the use of the public under the appropriation laws of the states. The Supreme Court in the California-Oregon Power Co. case (*supra*, at p. 39), had declared that following 1877, if not before, all nonnavigable waters then a part of the public domain became publici juris.

"(b) That to hold that the United States owns such unappropriated waters would be to discriminate against states in which the appropriation doctrine obtains. A grant of riparian land in a riparian state divests the federal government of all title to the waters. Consequences should not be less favorable to the water users because a state has preferred the appropriation to the riparian system.

"(c) That the admission of states to the Union under constitutions declaring the waters to be the property of the public or of the state, constituted an agreement between Congress and the states as to such ownership. The Enabling Act for Colorado and Wyoming provided that the states be admitted to the Union upon the adoption of a state constitution. Both Colorado and Wyoming were admitted and their constitutions were ratified by Congress, with provisions therein declaring the waters of the state to be the property of the public or of the state.

"(d) That if the United States originally obtained any title to waters on public domain, it was a title to be held in trust; and the authority of the United States is limited to the control of navigation and to the reclamation of public lands. Colorado argued that water in its natural state was not subject to ownership and that the most the United States could ever acquire by cession was a right to hold the waters in trust for the people.

"The Supreme Court neatly avoided an answer to the ownership question in the following language, taken from *Nebraska v. Wyoming*, 325 U.S. 589, 65 S.Ct. 1332, 89 L.Ed. 1815 (1944).

" 'Claim of United States to Unappropriated Water. The United States claims that it owns all the unappropriated water in the river. It argues, that it owned the then unappropriated water at the time it acquired water rights by appropriation for the North Platte Project and the Kendrick Project. Its basic rights are therefore said to derive not from appropriations but from its underlying ownership which entitles it to an apportionment in this suit free from state control. The argument is that the United States acquired the original ownership of all rights in the water as well as the lands in the North Platte basin by cessions from France, Spain and Mexico in 1803, 1819, and 1848, and by agreement with Texas in 1850. It says it still owns those rights in water to whatever extent it has not disposed of them. An extensive review of federal water legislation applicable to the Platte River basin is made beginning with the Act of July 26, 1866, 14 Stat. 251, the Act of July 9, 1870, 16 Stat. 217 and including the Desert Land Law (Act of March 3, 1877, 19 Stat. 377, 43 U.S.C.A. § 321 et seq.) and the Reclamation Act of June 17, 1902, 32 Stat. 388. But we do not stop to determine what rights to unappropriated water of the river the United States may have. For the water rights on which the North Platte Project and the Kendrick Project rest have been obtained in compliance with state law. Whether they might have been obtained by federal reservation is not important. . . ."

All of this is part of the background of the Pelton Dam and Hawthorne cases. You can see that several questions remain unanswered today.

Arizona v. California in 1963 raised more questions. These questions are inevitable under our federal system. In the past within this dual sovereignty system there have been two methods for dividing waters of interstate streams: the compact device provided for in the Constitution and the doctrine of equitable apportionment as a result of litigation under the original jurisdiction of the Supreme Court. Arizona v. California has added a third method: interstate allocation by Congress.

The court said:

We agree with the Master that apportionment of the Lower Basin waters of the Colorado River is not controlled by the doctrine of equitable apportionment or by the Colorado River Compact. It is true that the Court has used the doctrine of equitable apportionment to decide river controversies between states. But in those cases Congress has not made any statutory apportionment. In this case, we have decided that Congress has provided its own method of allocating among the Lower Basin States the main stream water to which they are entitled under the Compact. (my emphasis).

To some this new method is "startling doctrine." In any case Arizona v. California upheld the power of Congress under the Boulder Canyon Act to make a division of Colorado River waters. The decision also has many implications for state law. For example, the problem of managing shortages in one state raises several questions which will involve federal power and state law. The decision makes it clear that the Project Act authorized the Secretary of Interior to contract for delivery of water. This power includes the power to choose with whom contracts are made and on what terms they are made and contracts need not therefore be governed by state law. The decision in Arizona v. California says that the Project Act protects only rights in existence when the Act was passed (sec. 18) and of course the Act also refers to the Reclamation Act of 1902, sec. 8 of which reads:

" . . . Nothing in this act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested right acquired thereunder."

Section 5 of the same law provides that: "No right to the use of water for land in private ownership shall be sold for a tract exceeding 160 acres to any one landowner . . . ."

In 1958 the U. S. Supreme Court had the final word about the application of these provisions in a case that arose over the Central Valley project in California.

In Ivanhoe Irrigation District v. McCracken, it was held that section 8 of the Reclamation Act of 1902, which required the Secretary to proceed in conformity with state law, did not empower a state to force the Secretary to deliver water beyond the federally imposed 160-acre limitation:

"As we read § 8, it merely requires the United States to comply with state law when, in the construction and operation of a reclamation project, it becomes necessary for it to acquire water rights or vested interests therein. But the acquisition of water rights must not be confused with the operation of federal projects."

A conflict had arisen between private landowners on the one hand and the agencies of the State and Federal government on the other. The landowners contended that contracts containing the 160-acre limitation were invalid and the California Supreme Court affirmed several lower court decisions holding that such provisions were invalid. The U. S. Supreme Court reversed, holding that federal law was involved and the enactment of Congress containing the 160-acre limitation was constitutional and applicable in the contracts to a federal reclamation project.

Small farmers in California have long been aggrieved over the inconsistent rulings of the Department of the Interior affecting the Imperial and Coachella Valleys of California. In 1933, just before Franklin Roosevelt took office, it was said the 160-acre limit did not apply to the Imperial Valley, and in 1945 the Solicitor for the Interior Department held that it did apply to the Coachella Valley.

On December 31, 1964, the Solicitor for the Department of Interior filed a long and fully documented opinion holding that the 160-acre water right limitation does apply in Imperial valley. Provisions are now being made for the disposal of excess land holdings which violate the law.

After the decision in Arizona v. California the two Arizona Senators introduced the Central Arizona Project bill. Later the Secretary of the Interior had a task force prepare the Pacific Southwest Water Plan which was incorporated into S 1658 by Senator Moss in the last Congress. At the opening of the present Congress similar legislation takes a regional view and also refers to "aquifers" and ground water problems. Obviously there are large implications, when this bill becomes law, for ground water management. Yet we all know that Arizona has no adequate law in this field. Moreover, the Secretary of Interior will be given authority under the new act "to require as a condition precedent to each contract that there be in effect measures adequate, in his judgment, to control expansion of irrigation from aquifers affected by irrigation in the contract service area." The tension between local and national policies is obvious here,

Now you might ask: But why this state-federal conflict when the same problems remain or multiply - - problems of allocation, conservation of supply, management, and the most productive use of available supply?

Some think that the conflict is temporary and will disappear because we shall desalt sea water and use other brackish supplies, and that the age of cheap nuclear power is just around the corner and water from the Pacific will be transported overland, or from the Yukon as proposed in the Parsons engineering report. But what shall we do in the meantime, or if these dreams are slow to materialize?

Of course we shall have to rely on the same supplies, more productive uses and the benefits of technology. We shall also have to rely on law and public management methods, some of which are still undeveloped and misunderstood.

We shall require more cooperation between local government units, as for example conservancy districts, irrigation districts, city and county governments, etc.; between the different states, and with the federal government. We must also relate surface and ground water management. In this cooperation we shall rely on the following sources of law:

1. The law of the individual states and of the local government units charged with water resources responsibilities;
2. Laws of the United States enacted pursuant to constitutional powers and construed by the courts;
3. Compacts between the states which also provide for large regional development. The proposed Pacific-Southwest Water Plan is such a means,
4. Equitable utilization principles worked out in litigation under the original jurisdiction of the U. S. Supreme Court. The Great Lakes litigation is an example. (Michigan v. Illinois).

Obviously all of these areas of law comprise too much for discussion here. But some features of them can be glimpsed.

### 1. State and Local Law

I have made some references to Arizona law; you can take the law of your own state for comparisons and study if you wish. You can do this at your own convenience.

### 2. U. S. Law

The specific constitutional powers of the U. S. in the field of water resources have been outlined. Under these powers Congress has charged different agencies of the Federal government with certain tasks. These I will summarize by referring to the responsibilities of each agency.

#### Army Corps of Engineers (Navigation, Flood Control and Power)

As already explained, the Commerce Clause was not invoked in the very early history of the United States on behalf of water resources management or use. The improvement of waterways was undertaken in the early period by the states and by private companies. For example, the Erie Canal, constructed between 1817 and 1825, was built by the State of New York. However, even before *Gibbons v. Ogden* in 1824 laid down the general outlines of the Commerce Clause as applied to navigation, the Congress had appropriated funds for surveys on the Ohio and Mississippi rivers. Later approval was given by Congress for removal of obstructions from the same rivers. Legislation also authorized improving roads, canals and rivers. Grants of land were made to the State to aid waterway and river development. The Swamp Acts of 1849 and 1850 granted unsold and overflowed lands to several states subject to their disposal by the state legislatures. Proceeds from their sale were to be applied to drainage, reclamation and flood control projects. This assistance produced no substantial improvement and more federal interest was encouraged. Expanding Congressional interest covered rivers and harbors and deltas. This area of development was aimed at protecting navigation and the Corps of Engineers became almost exclusively responsible for this program. The Army Engineers have retained that position ever since 1824 as the federal government devoted increasing attention to navigation improvements under Rivers and Harbors legislation.

Flood control responsibility by the federal government is of fairly recent date. Flood problems along the Mississippi had long been recognized by Congress but early legislation covered only investigations and studies of various methods of control, especially of levee construction on which a national commission of engineers authorized by Congress reported in 1875 on local inefficiency:

"In fine, then, the experience of one hundred and fifty years has utterly failed to create judicious laws or effective organization in the several States themselves, and no systematic cooperation has ever been attempted between them. The latter is no less important than the former, for the river has no respect for State boundaries. . . ."

The Mississippi River Commission was formed in 1879 as a result of these events and these studies. It was given responsibility for improving navigation

and to "prevent destructive floods," among other duties. But until 1890 Congress appropriated no money for purposes other than navigation improvement and in fact prohibited the use of funds for levee construction, reclamation or the prevention of overflow damage. From 1890 to 1917 appropriations for broader navigation purposes were made. But flood control remained a minor and incidental purpose. Major floods produced a change in attitude after 1915. Legislation followed which provided for flood control, the principal law being the Act of 1928, after the disastrous Mississippi River Flood of 1927. However, not until 1936, after two more major floods, was there an integrated approach to levee and reservoir construction. The Flood Control Act of 1936 declared flood control to be within the constitutional goals of national welfare; that floods

" . . . constitute a menace to national welfare; that it is the sense of Congress that flood control on navigable waters or their tributaries is a proper activity of the Federal Government in cooperation with States, their political subdivisions, and localities thereof; that investigations and improvements of rivers and other waterways, including watersheds thereof, for flood control purposes are in the interest of the general welfare. . . ."

In 1944 Congress provided that the words "flood control" as used in the 1936 law shall include "channel, and major drainage improvements." During this period the Supreme Court removed doubts about the power of Congress under the Commerce Clause to legislate on the subject of flood control. In 1940 the New River decision expressly included flood protection within the Commerce Clause. Thereafter a number of decisions developed the theme that there was no constitutional barrier to Congressional power to "treat the watersheds as a key to flood control on navigable streams and their tributaries."

Under the 1936 legislation flood control and allied responsibilities are under the Department of the Army. This law also provides that the Department of Agriculture is responsible for investigations of watersheds and soil erosion control except within reclamation projects under the Department of the Interior.

In 1879, the same year that the Mississippi River Commission was required to consider the related problems of navigation and flood control, Congress authorized the Secretary of the Army to lease water power to a private company "if the same can be done consistently within the interests of the Government of the United States." This authorization for the development of power at Moline, Illinois, to serve the Rock Island military arsenal, marks the beginning of power and multiple purpose projects in United States history.

In 1884 Congress for the first time authorized the construction of a private power development on a navigable stream. Thereafter there were many similar statutes enacted until passage of the General Dam Act in 1906. The later Act in 1910 repeated the same provisions of the 1906 law and added special features. This period, then, from the beginning of 1879 to 1920 is characterized by intermittent attention to government development and use of power on a project-by-project basis. The Federal Water Power Act of 1920 created the Federal Power Commission and in 1930 the Federal Power Commission was made an independent agency composed of five members. In 1935 the 1920 law was made Part I of the Federal Power Act which now contains provisions covering

regulation, licensing and administrative procedures encompassing electric utilities engaged in interstate commerce. Federal power development remains the responsibility primarily of the Army Engineers under the Secretary and the Bureau of Reclamation under the Secretary of the Interior.

#### Department of the Interior

Responsibility for water resources activities is divided generally along the lines of various uses as, for example as we have seen above, in the case of navigation and flood control the Army Engineers have primary responsibility.

The Bureau of Reclamation is in charge of irrigation programs and is also authorized to provide power, navigation and flood control and to furnish water for municipal and other miscellaneous purposes. It shares with the Department of Agriculture responsibility for programs under the Water Conservation and Utilization Act.

The Bureau of Indian Affairs administers Indian lands and programs covering irrigation, water supply and power.

The Fish and Wildlife Service has primary responsibility for protecting fish and wildlife including planning for their protection in the construction of federal and nonfederal dams and reservoirs.

The Bonneville, Southeastern and Southwestern Power Administrations have charge of programs for the transmission and sale of power from federal dams.

#### Department of Agriculture

Watershed protection measures to aid flood control are the main responsibility of the department. Under the Water Facilities Act and the later watershed protection legislation the department has responsibility for small structures and facilities supplying domestic, stock and irrigation water.

#### The Federal Power Commission

The Federal Power Commission has broad powers to investigate uses of water from power projects. But it has concerned itself primarily with power and the development of water power facilities. Development must be in the public interest and other water uses must be protected. Any project must be adapted to maximum development of a given waterway for the use and benefit of commerce, the improvement of power facilities and other beneficial public uses including recreation. Licenses are issued after examination of all conditions and the Act places special emphasis on the protection of navigation.

#### Department of Health, Education and Welfare

Water pollution control measures are not under the jurisdiction of the Secretary. Before 1961 the Surgeon General was required to administer such programs through the Public Health Service. The Secretary is granted large powers over education, research and other areas conducive to pollution abatement programs.

### Agencies for Land Management

The Soil Conservation Service, Forest Service, the Bureau of Land Management, and the National Park Service have responsibility for the conservation and protection of federal lands and are clearly related to water resource development.

### Tennessee Valley Authority

The Authority has responsibility for basin-wide development and not merely one or two purposes in the use of water. Moreover, it has a statutory guide as to which water uses are to be preferred in case of dispute.

Although supplying water for domestic, municipal, stock-watering and industrial purposes is largely a local matter, Congress has made federal assistance available in legislation providing for development of federal and non-federal resources.

### 3. Interstate Compacts

The compact device is allowed by the U. S. Constitution, Art. I, Sec. 10, cl. 2: "No state shall, without the consent of Congress . . ., enter into any agreement or compact with another state. . . ."

This has been construed to mean an affirmative authorization for states to reach agreements with the approval of Congress. Such compacts are not, of course, confined to boundaries or water resources. New Mexico is presently a party to seven interstate water compacts. Some of you know about those affecting the waters of the Rio Grande and the Pecos. Since 1948 when the Upper Colorado Compact was negotiated, New Mexico has been a party to it. New Mexico signed the Colorado Compact with the other 6 states and the United States in 1922. It was over the meaning of that compact, among other things, that the suit in *Arizona v. California* was brought.

*Arizona v. California* is important for several reasons beyond the questions of water supply for the Southwest. First, the decision establishes congressional legislation as a device for the apportionment of an interstate stream. This possibility had been foreshadowed by many prior cases interpreting the ever-expanding power of Congress to control navigation. But this decision, without elaborate discussion of the constitutional issue, explicitly recognized this power for the first time. Moreover, the opinion's reference to the "general welfare" power suggests that this congressional power will, if the occasion requires, also be held to extend to nonnavigable streams or, at the very least, to the nonnavigable tributaries of navigable streams. Second, the opinion holds that the Secretary of the Interior has the power to allocate water within a state through contracts, without regard to the state's water allocation laws and under very broad standards established by federal law.

The U. S. Supreme Court relied on the Ivanhoe decision and held in *Arizona v. California* that the provisions of the Reclamation law did not require the Secretary to follow state law in his scheme of allocation. And § 18 of the Project Act which provides that the Act shall not interfere with such "rights as the States now have" either "to the waters" or to "enact such laws . . . with respect to the appropriation of waters" was also held not to require the

Secretary to follow state law. This is because the states' powers are always subject to the superior power of the federal government to control navigable waters "for purposes of flood control, navigation, power generation, and other objects" and are subsidiary to the power of Congress "to promote the general welfare through projects for reclamation, irrigation, or other internal improvements."

Of course, federal control is not necessarily a panacea. Aside from conflict between federal agencies, which was one of the chief difficulties in the Missouri Valley, the federal government might not manage water from a regional perspective. A regional perspective implies a regional unit of administration with development and allocation powers, whether it be created by compact with the federal government as a participant or by the federal government alone. Even a federally created agency can provide for state participation. [Here Delaware Compact as example.]

[Here some asides on weakness of compact device: e.g., Rio Grande, no administrative powers, Elephant Butte Dist. as part of Texas, etc. Need for interstate agency such as under Delaware Compact or Wabash Compact.]

4. Litigation under U.S. Supreme Court's Original Jurisdiction

Art. III, sec. 2, cl. 2.

Kansas v. Colorado

Wyoming v. Colorado

Nebraska v. Wyoming

Arizona v. California

Final effort to find some way to make equitable division or utilization of water (equitable apportionment doctrine).

If there is one simple moral in this long and complicated story, it is that law suits don't make any more water.

END

From McDougal and Haber, PROPERTY, WEALTH, LAND. p. 1014

Under the "natural flow" version of riparian rights each proprietor is said to have the right to have the body of water maintained in its natural condition without diminution in quality or quantity. *Robertson v. Arnold* 182 Ga. 665, 186 S. E. 806, 106 A. L. R. 681 (1936). According to the "reasonable use" or "correlative rights" version, on the other hand, each owner may make extensive use of the stream, so long as such use is "reasonable". In determining what is reasonable, consideration is given to "the subject matter of the use; the occasion and manner of its application; the object, extent, necessity, and duration of the use; the nature and size of the stream; the kind of business to which it is subservient; the importance and necessity claimed by one party, and the extent of the injury to the other party; the state of improvement of the country in regard to mills and machinery, and the use of water as a propelling power; the general and established uses of the country in similar cases; and all the other varying circumstances of each particular case, bearing upon the question of the fitness and propriety of the use of the water under consideration." *Red River Roller Mills v. Wright*, 30 Minn. 249, 253, 15 N.W. 167 (1883). See 4 Restatement of Torts (1939) Ch. 41, Topic 3. The ultimate question of reasonableness is usually left to the jury except in cases involving equitable relief. While there thus seems to be a considerable difference between the "natural flow" and "reasonable use" versions of riparian rights, in actual practice the difference is not very great. Since a literal enforcement of the "natural flow" doctrine would have rendered all streams totally useless, the exception was immediately established that a proprietor could make an unlimited use of water for "natural" or domestic purposes such as drinking, cooking and watering cattle. Soon non-domestic purposes such as irrigation, water power and manufacturing were also permitted so long as they did not cause "any interruption or interference with the rights of the lower riparian owner." *Pennsylvania R. R. v. Muller*, 172 Pa. St. 34, 3 Atl. 780 (1886). It is obvious that under this question-begging definition, most uses allowed under the "reasonable use" version of riparian rights can also be permitted under "natural flow" criteria. Thus, both versions of riparian rights give the courts practically unlimited powers to supervise and ration the rivers and raise the question we have asked above with respect to the groundwater and diffused surface water cases of whether courts are the most efficient agencies with appropriate staffs to perform this task.

Government which in many federal enactments has subjected its use of water to state law. This does not mean, however, that excess diversions by individuals will be prohibited through the decree where the total diversion for the state does not exceed the amount of water allotted to it; the details of stream administration within a state are left to the states. An exception is that the court has ordered the installation of additional measuring devices and allowed the inspection of measuring devices within one state by the other state.

Despite this development of doctrine the Court, realizing the complexity of the issues and its own inexperience, has commonly been reluctant to grant relief. Thus, the Court has demanded overwhelming proof, or refused relief on the theory that the evidence of actual harm was insufficient. But in the most recent case, Nebraska v. Wyoming, supra, the Court though regretting that the problem has not been solved in some other way, plunged ahead and tackled the complexities with the aid of a special master. Mr. Justice Robert's dissent expressed the hands-off attitude which has sometimes prevailed in the past.

Judicial administration of interstate streams illustrates, of course, most dramatically the inadequacy of this technique for solving water problems. The proceedings are exceedingly costly and drawn out. The impossibility of foreseeing in the decree all eventualities that the future will hold frequently means that the decree has to be reopened time and again. The Court's reluctance to adjudicate the right to future diversions of water not yet used, on the theory that it will not render advisory opinions makes development plans uncertain. The need remains for some form of expert integrated, continuous day-to-day administration of interstate streams, which the courts are obviously not equipped to supply.

From McDougal & Haber, PROPERTY, WEALTH, LAND. p. 1063.

CALIFORNIA AND COLORADO DOCTRINES

VII

Two different theories account for the wavering position of the courts. One of these has been called the California doctrine, and the other is known as the Colorado doctrine. The first of these ascribes the authority to the Federal Government; the second to the state.

"More fully the California doctrine may be stated as follows: That when the United States by cession from the ceding nations became the owner of the lands now comprising the priority States it became as well the owner in a strict proprietary sense of the right to use the waters flowing over these lands; that while it was such proprietary owner, statehood or State sovereignty was conferred upon what are now the priority States; that sovereignty is different from ownership, and the conferment of the former upon a State passed only political powers and not property; that in consequence, although the Federal Government is no longer sovereign in respect to the waters within the priority Commonwealths, the United States still has its original property right to use the water just as it continued to own the public lands themselves; that by the Federal Constitution (Art. IV, sec. 3, cl. 2), Congress alone may dispose of Federal property, and therefore of this usufructuary right of the United States, and accordingly no State has a right by virtue of its statehood or sovereignty to determine what system of water rights shall prevail therein or who may be the owner of such rights or how they may be acquired or for what purpose; that no one has acquired or can acquire any usufructuary right in the waters except by and with the consent of the Federal Government; that the Act of 1866 and the desert Act of 1877 . . . , the principal Federal statutes purporting to create priority rights to the use of water in other than the United States, are really grants of property rights in the use of water to unnamed grantees, to take effect upon performance by them of the physical acts (appropriation) required by the laws of the different priority States; that where there are in a priority State rival claimants to water from the same stream, one claiming as a prior appropriator and the other merely as a patentee of the United States to riparian land, both are United States grantees of the right to water, but the prior appropriator prevails to the extent of his appropriation over the subsequent patentee because of being the earlier grantee; that on the other hand where the patent to the riparian land is prior to the appropriation the grant of the land carries with it a right to riparian use of water, and accordingly to the extent of such riparian use the prior patentee prevails over the subsequent appropriator; that to the extent the United States at the time of admitting a priority State into the Union had not granted away its property rights in the use of the waters in the form of grants of riparian lands to patentees or of appropriations by appropriators, or has not done so since, the United States is still the owner thereof with full power of disposition."

"The Colorado doctrine may be put in this way: That while prior to statehood of the priority States the United States had sovereign jurisdiction over the waters, and appropriation rights acquired during that time were derivable exclusively from the United States, yet the riparian system never was in force in the areas afterwards comprising the Colorado-doctrine States; that the conferment of State sovereignty vested in the State as an incident of such sovereignty over the waters of the exclusive power to dispose of appropriation rights to the use of water not inconsistent with the rights previously disposed of by the Federal Government and to prescribe the persons who could acquire them and the terms and purposes of the acquisition; that subsequent

to statehood an appropriator does not receive his water right as the grant of a pre-existing property right in and from the United States, but the right is conferred upon him by the sovereign power of the State."

The issue raised by these two theories is whether or not the United States still has its original property right to use the water in the streams of the public land states just as it continues to own the public lands themselves. The California doctrine would give an affirmative answer; the Colorado doctrine, negative.

It would seem that the Colorado doctrine that the conferring of State sovereignty vested in the state as an incident of such sovereignty over the waters the exclusive power to dispose of appropriation rights to the use of water not inconsistent with the rights previously disposed of by the federal government, would be the more useful of the two theories if the streams of the western states were confined within the borders of a single state. But when interstate streams are considered, the question of administration becomes acute, particularly if one proceeds upon the basis of exclusive state authority.

What is there to recommend the thesis that "sovereignty is different from ownership, and the conferment of the former upon a State passed only political powers and not property; that in consequence, although the Federal Government is no longer sovereign in respect to the waters within the priority Commonwealths, the United States still has its original property right to use the water just as it continued to own the public lands themselves," and that Congress alone may dispose of this federal property? On the other hand, what are the arguments in favor of the proposition that "the conferment of State sovereignty vested in the State as an incident of such sovereignty over the waters the exclusive power to dispose of appropriation rights to the use of water not inconsistent with the rights previously disposed of by the Federal Government?"

It is well settled that there is no property right in the corpus of the water, but merely a property right in the use of the water. This being the case, if we look to the several states as instruments to be used in getting things done for the inhabitants within their borders which those individuals cannot accomplish in their own capacity, the separate states might properly grant the right to use the water of intra-state streams. The interests of people who live beyond the border of the particular state concerned would not be affected in any manner by such a method of procedure, and the principle of home rule thus applied would buttress satisfactory conditions of local government. But the limits to the effective action of the several states is reached when the subject to be handled comes to be an interstate stream. Here the unit of politically organized society which must function if the things which the inhabitants of a certain area are unable to accomplish in their individual capacity, are to be accomplished at all, is an administrative agency larger than that of any one state. It may be a regional agency established by the cooperative efforts of several interested states under the Compact Clause of the federal constitution, or it may be an agency of the Federal Government.

Upon a theoretical basis, then, it may be said that the United States should be regarded as still holding its original property right to use the water within the priority states just as it continued to own the public lands themselves, with respect to interstate streams, if it be assumed that the federal government is the proper agency to administer water rights in such streams; and that the conferment of state sovereignty should be regarded as

having vested in each state as an incident of such sovereignty the exclusive power to dispose of appropriation rights not inconsistent with the rights previously disposed of by the federal government, with respect to intra-state streams.

However, if it be assumed that a regional commission created by the several states under the Compact Clause of the federal constitution is the proper agency to administer water rights in interstate streams, it is not necessary to regard the federal government as having held its original property right to use the water within the priority states just as it continued to own the public lands themselves. Through interstate compact satisfactory administrative control may be secured under the theory that the separate states have the exclusive power to dispose of appropriation rights not inconsistent with the rights previously disposed of by the federal government. This matter will be pursued further after a brief consideration of two cases showing the manner in which different courts have proceeded when confronted with somewhat similar issues.

These cases raised the question of the ownership of the beds of certain streams. There was no issue as to whether the federal or the state government is the source of the property right in the corpus of the water. Accordingly, the language of the decisions is of interest only to the extent that it suggests a method of approach.

From Olson, THE COLORADO RIVER COMPACT (1926) pp. 118-124.

WATER LAW

Surface Waters: Some Rules and Some Questions

In grappling with the problems of surface waters, generally the courts have applied three different technical doctrines, frequently modified: the common enemy rule, the civil law rule, and the reasonable use rule. Under the common enemy rule the possessor of land may deal with surface water as he pleases regardless of any harm which he may cause others. The civil law rule subjects each parcel of land to a servitude for the natural flow of surface water across it. The lower proprietor may not obstruct this flow from higher land and the upper owner may not do anything to increase this flow upon lower land. Under the reasonable use rule, the owner of land may interfere with surface waters even if harm results to his neighbors as long as such harm is not unreasonable. Where the reasonable use rule is not expressly adopted flexibility may be introduced by modifications of the common enemy and civil law rules, necessary because of the impossibility of their rigid application under conditions of modern land use. Thus in "common enemy" jurisdictions it has been stated that an owner may not discharge large quantities of water by artificial means except through "natural drainways." Some of the "common enemy" jurisdictions have also held that water in "natural drainways" cannot be obstructed. And in other "common enemy" jurisdictions the rule has been modified so as to allow obstruction and discharge only if the owner uses reasonable care to avoid causing unnecessary harm. Similarly the civil law rule has been modified so as to allow some alterations in the flow of surface water where necessary to the normal use and improvement of the land especially if the resultant discharge is through an existing "natural drainway." Moreover, many "civil law" jurisdictions have held and some have enacted statutes to the effect that the rule applies only to rural land and that with respect to urban reality the "common enemy" principle governs.

The student may wish to consider questions of the following order: What rational basis is there for choice between the civil law and common enemy rules? Can a principle which fails to take into consideration topography, the number and kinds of competing uses, climate, the needs of the community and changes in all these solve the problems of land drainage? In the application of the common enemy and civil law rules with their modifications, why should so much importance be placed on the notion of a "natural drainway?" Is harm any less if caused by water "naturally flowing" on the plaintiff's land than otherwise? In view of the obvious effects of any land habitation or use on the flow of surface waters does it make sense to speak of "natural drainways" and "natural flow" in settled communities? Does the more flexible reasonable use rule afford courts opportunity to secure individual and community interest? Or, is it subject to the same difficulties as in its application to ground-water problems? By what institutions could the individual and community interest be secured?

Statutory Solutions: Till recently states have done little beyond changing the rule from "common enemy" to the "civil law" rule or otherwise modifying the judicial doctrines. Sometimes they have required railroad companies to maintain suitable openings across and through rights of way and roadbeds and suitable ditches along side roadbeds. In addition some states have authorized the formation of drainage and flood control districts to undertake flood control, reclamation and improvement activities involving the acquisition of land for the construction of dams, dikes and levees and the taxation of property owners to pay for these improvements. But only in the last few years have the

states under the impact of the federal government recognized the interrelation of water use, flood control, land drainage and soil conservation, and enacted comprehensive legislation authorizing the formation of soil conservation districts to implement locally all the programs required to cope with the problems.

The constitutionality of the state programs seems clear. Comment, Legal Techniques for Promoting Soil Conservation (1941) 50 Yale L. J. 1056. In upholding statutes changing the "common enemy" rule to the "civil law" rule courts have not found it necessary to argue that the legislation did not really change the common law of the state. Instead objections that the statute deprived lower property owners of a "vested" easement to case water onto the land of upper owners have been met by the rationale that no easement exists by virtue of the common enemy rule, but merely an immunity from liability on the part of the lower owner, and that the state in creating a cause of action where none was before does not deprive any one of vested rights. See *Miller v. Litzerich*, 121 Tex. 248, 49 S.W. 2d 404 (1932); (1933) 85 A.L.R. 465. The railroad statutes have been upheld as a valid exercise of the police power against objections of retroactivity, impairment of contracts, and violation of the due process and equal protection clauses of the 14th Amendment. See *Chicago & A. R. Co. v. Tramberger*, 238 U.S. 67, 59 L.Ed. 1204, 35 S. Ct. 678 (1915); *Peterson v. Northern P. R. Co.*, 132 Minn. 265, 156 N.W. 121 (1916); contra; *Chicago & E. R. Co. v. Keith*, 67 Ohio St. 279, 65 N. E. 1020 (1902). The drainage and flood control district legislation has been upheld against a host of constitutional objections. (1931) 70 A.L.R. 1274; *Gray v. Reclamation District*, 174 Calif. 622, 163 Pa. 1024 (1917) (denying injunction against increased flooding of plaintiff's lands by waters thrown back by reclamation district). On the constitutionality of state or municipal road construction or other activity flooding peoples' lands and on when compensation is required, see (1940) 128 A.L.R. 1195.

One of the best statements of the interrelation of conservation practices and the other problems of a drainage basin is that by Cooke in Plain Talk about MVA (1947) 32 Iowa L. Rev. 371-374. With the practicalities of Mr. Cooke's discussion, contrast the judicial opinions which have met the interrelation of various types of problems only by stubbornly continuing the artificial classification of waters as "streams" or "water courses" and "diffused surface waters." See Hutchins, Selected Problems in the Law of Water Rights in the West (1942) 12-21; (1922) 16 A.L.R. 629, 636 (Surface Water theory of floods). See RESTATEMENT OF TORTS, Ch. 39 (1939); Review of above by McDougal and Runyon, 49 Yale L.J. 668 (1940); Wiel, Fifty Years of Water Law, 50 Harv. L. Rev. 252 (1936) Symposium, 32 Iowa L. Rev. 193 (1947).

APPROPRIATION WATER LAW ELEMENTS IN RIPARIAN DOCTRINE STATES

J. H. Beuscher\*

V

The field of water law contains more than its fair share of judicial over-generalizations. Water law discussions usually overemphasize these case law broadsides. These discussions often ignore or understress, (1) comparative analysis of actual case results; (2) the gloss of administrative case law being built up in day-to-day application of water laws by a state and local agencies and (3) the actual law-in-action at the user level. This is true of rules about diffused surface water and about groundwater. It is especially true of law which relates to the use of water in streams, lakes and ponds. This in part accounts for the common habit of dividing the states of the Union into two groups with states in each group supposedly applying a common body of uniform doctrine, i.e., those states which apply the riparian doctrine and those which enforce the appropriation doctrine.<sup>1</sup>

Over-generalization in the water law field based on judicial pronouncements not only tends to blur important distinctions between states which are members of the same group, it also magnifies differences when states in one group are compared with those in another. More important, over-generalization provides unstable footings upon which to erect changes in water laws,--changes which are being sparked by rapid population increases and sharp climbs in per capita water demand curves. Besides, proposals for legislative firming up of water laws in humid states are being met by objections from orthodox riparianists who insist that such proposals are but attempts to import an alien law of appropriation from the dissimilar setting of the arid west. A showing that some appropriation-like law is already with us in humid states tends, for what it is worth, to blunt this head-on charge.

These are all reasons for encouraging greater specificity in approaching the water laws of a given state and that is the purpose of this paper. The method is to throw against the screen of doctrinal riparianism some actual humid-state legislation and court and administrative adjudications to show that there is much which does not square with pristine riparianism; that some of this legislation and adjudication, as a matter of fact, smacks more of western appropriation principles than of riparianism. I make no claim to completeness. Drawing scattered illustrations largely from four states, Minnesota, Wisconsin, Indiana and Ohio, I hope for no more than to induce some readers to take a more specific and critical look at water laws in other humid states.

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1. Actually there is a third group of states, those in which both riparian and appropriation principles are consciously applied. These are the states which border the arid west on the east and the west--the Dakotas, Nebraska, Kansas, Texas, California, Oregon and Washington. The other western states are "appropriation" only. All states east of the Mississippi are treated as riparian.

The reason for the selection of the four states named lies in the fact that I have been supervising research into their water laws.<sup>2</sup> We have looked not only at the judicial pronouncements of private and public water rights doctrine but also at state and local legislation and at the degree to which state and local agencies have been molding and shaping water rights.

Claimed Basic Differences Between Riparian and Appropriation Principles

The basic differences between riparian doctrine and appropriation principles, as usually stated, can be roughly summed up as follows:

	Riparian	Appropriation
<u>Source of the Water Right</u>	The water right is tied ownership of land contiguous to the water course. The water is, however, not owned; the landowner has "usufructuary" right only.	Contiguity of land to the water course is not a factor; rights are acquired by actual use. The first user acquires the best right; the second user, the second best, etc.
<u>Effect of Nonuse</u>	Rights to use water are not lost by abandonment or nonuse. A riparian who has not been using water may at any time commence a use even though this may require previous users to reduce their withdrawals. There is, however, the chance that established users may get rights by prescription.	Nonuse of an appropriation right may result in its loss by abandonment.
<u>Place of Use</u>	Many riparian state cases indicate that the water must be used on the riparian land itself; others permit use on nonriparian land as long as other riparians are not measurably harmed.	The appropriator may transport to, and use the water on, nonriparian land; in fact, use in another watershed is permitted.

(continued next page)

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2. This research has been carried out under a contract between the University of Wisconsin and the Economic Research Service, Farm Economics Division, U.S.D.A., with Mr. Harold H. Ellis of the Agricultural Research Service as the contracting officer's representative. Needless to say, the views expressed in this article are my own and do not necessarily represent those of the contracting parties or of Mr. Ellis.

Riparian

Riparians are thought of as correlative cosharers in a usufructuary right to make reasonable use of water; there is accordingly no fixed quantity of water assured to any riparian.

General  
Nature of the  
Water Right

Earlier case law emphasized more than current cases the natural flow requirement of a waterwheel economy, namely that after using water the riparian was to return it to the watercourse so the water would flow as it was "wont" to flow. Today concepts of public rights or public trust are more effective in preserving minimum flows in streams or levels in lakes.

Natural Flow

Appropriation

The appropriator once he has established his right by proof of earlier use is entitled to a specified quantity of water as against appropriators later in time. (Little attention is paid to the fact that many water users in the west actually depend for their water upon a contract with an irrigation district.)

There is no natural flow notion. The appropriators can take as much water as they are entitled to take even though it exhausts the watercourse. It is this aspect of assumed appropriation law which particularly arouses conservationists. Some western states, however, permit the states to file for and ultimately acquire a right to the unappropriated flow and thus preserve such flow, if desired.

September 30, 1958

From McDougal and Haber, PROPERTY, WEALTH, LAND. pp. 993-994

#### GROUNDWATER

Under the so-called English or Common Law rule of "percolating waters," as announced in *Acton v. Blundell*, individualism is permitted to reign rampant so long as no "malice", negligence or useless "waste" is shown. While some American jurisdictions still purport to follow this doctrine, the obvious impossibility of its unflinching application to a society that has more and more come to use groundwater supplies for industry, agriculture and large scale domestic needs has led to its modification in many localities. The resulting so-called American rule permits each landowner the "reasonable use" of water in such manner as not to harm the claims of neighboring owners to the common groundwater supply. As applied, this rule generally requires that water cannot be transported away from the land owned by the tapper of the supply to the injury of other overlying landowners, even though use away from the overlying land may be more beneficial to the community. Aside from this undesirable consequence, the "reasonable use" concept is totally ambiguous and unpredictable and provides no guide to prospective water users. To overcome this difficulty equalitarian rigidity has been introduced in the name of the "correlative rights" doctrine under which in a time of water shortage each landowner is said to have a share of the underlying water in proportion to the amount of land he owns as compared with the total area supplied by the common water source. This again provides little assurance to developers unfamiliar with the hydrologic data necessary to estimate long range water supply and takes no account of the relative values of different uses in the community. Moreover neither "reasonable use" nor "correlative rights" theories succeed in removing the basic drawbacks of judicial administration of groundwater distribution. The hydrologic data required for adequate information about supply, evaporation and movement of groundwater are difficult to obtain and the courts do not have adequate staffs to do the necessary fact gathering job. Consequently the parties must supply the experts at great expense. These too frequently can do no better than guess, for adequate information usually requires long term collection of data on the interdependences of water, weather and land-use in a particular locality. Moreover, the courts which have a long record of ignoring scientific development in this field and are certainly not expert agencies from an engineering perspective, gain little from listening to the opposing views of scientists hired by the parties. This is especially shown by cases where parties seek injunctions to prevent harms that have not yet occurred. The courts require the clearest kind of proof, which is frequently not forthcoming, and parties must wait for dubious remedies available after the harm has occurred. This judicial failure to achieve rational distribution of groundwater supply is of course not only harmful to the litigants but also to the community.

In some of the Western states, percolating water is subject to prior appropriation, a doctrine which does not by itself solve the basic difficulties. But to the extent that some of these states by statute empower a state engineer to supervise the obtaining of appropriation rights and their use from day to day in the light of the availability of water and a priority schedule of uses required by the community, a step in the right direction has been taken. The Committee on State Water Law of the National Resources Planning Board has recommended the general adoption of such statutes with respect to

groundwater as a solution for the Western states. With respect to large users of water such as cities and water supply companies similar state supervision of the tapping of new supplies has been provided in some of the Eastern states.

(b) The authoritative doctrines about underground waters distinguish between "percolating" waters, underground streams, underground waters directly feeding streams and underground waters that constitute the subflow of streams. Of these categories all except so-called "percolating" waters are generally treated just as surface streams. The "percolating" waters reserved for different treatment are defined as those which "ooze, seep or filter through the soil beneath the surface without a defined channel or in a course that is unknown or not discoverable." *Clinchfield Coal Corp. v. Compton*, 48 Va. 437, 139 S.E. 308 (1927). All underground waters are presumed to be percolating. To show an underground stream it is not sufficient that it could have been discovered by excavations or by scientifically trained geologists. Men of ordinary ability must be able to discover it from surface depressions, sinks extending in a line on either side of a spring of considerable volume, the disappearance and reappearance of a surface stream, and so forth. The result is a totally unscientific dichotomy in the law between different types of water despite the fact that they all constitute part of the hydrologic cycle which must be scientifically controlled as a whole in order to assure adequate supply. From a scientific point of view all of the underground waters usually involved in litigation, except for loss by transpiration and evaporation, move to maintain surface streams. Moreover, they generally result from precipitation and the absorption of surface waters including those flowing in streams. They constitute the subflow of streams sometimes in defined underground channels, sometimes in the form of diffused waters flowing in a general direction. In either case they are equally important to the maintenance of the flow of surface streams. In general such waters, just as streams, move in a given direction as a result of hydrostatic and geological forces. Under sufficient pressure they may rise above the saturated zone and become stream waters. All the physical characteristics of all underground waters, including those the courts frequently call "percolating," show the complete interdependence of not only all subterranean waters but also of underground and surface waters and make nonsense of the distinctions made by the courts. With increasing knowledge on the part of scientists, is there any reason why the archaic distinction between "percolating" and other waters should survive? Hutchins, *Selected Problems in the Law of Water Rights in the West* (1942) 24-26; Tolman and Stipp, *Analysis of Legal Concept of Subflow and Percolating Waters* (1942) 21 *Oreg. L. Rev.* 113; Wiel, *Law and Science their Cooperation in Groundwater Cases* (1940) 13 *So. Calif. L. Rev.* 377, *Need for Unified Law of Surface and Underground Water* (1929) 2 *So. Calif. L. Rev.* 358.

Meinzer, *Groundwater in the United States* (U.S. Dept. of Interior, 1939) summarizes groundwater conditions, including discharge from wells and springs, and methods of scientific investigation, noting literature relating to the subject. This study illustrates the scope of the problem, the importance of groundwater to the community and the kinds of investigations by trained scientists that are required. The student should ask himself to what extent this material points to the nature of the administrative solution required for the problem of assuring proper groundwater resource management. See also National Resources Planning Committee, *Deficiencies in Hydrologic Data* (1936).

## RIPARIAN RIGHTS THEORIES AND THEIR LEGAL CONSEQUENCES

Summary from 4 RESTATEMENTS OF TORTS 342 (1939)

There are two fundamentally different theories or views on the question of riparian rights: the Natural Flow or Natural Law Theory, and the Reasonable Use Theory.

I. NATURAL FLOW THEORY. The fundamental right of each riparian proprietor on a watercourse or lake is to have the body of water maintained in its natural state, not sensibly diminished in quantity or impaired in quality.

Each proprietor, however, is recognized as having a privilege to use the water to supply his natural wants, and also a privilege to make 'extraordinary' or artificial uses, so long, but only so long, as such uses do not sensibly or materially affect the natural quantity or quality of the water, and are made on or in connection with the use of the riparian land.

These limited privileges in each proprietor qualify the primary rights of the other proprietors to have the stream or lake maintained in the status quo of nature.

Thus, according to this theory, all proprietors have equal rights to have the water flow as it was wont to flow in the course of nature, qualified only by the equal privileges of each to make limited uses of the water.

### Legal consequences:

(1) An unprivileged use of water, which sensibly depletes the volume of water on another proprietor's land, violates that other's right to the natural condition of the water, and is actionable by him, even though it interferes with no use that he is making and causes him no harm whatsoever.

(2) The cause of action arises at the time the unprivileged use is made, and the period of prescription starts running from that time.

(3) If the unprivileged use is continuous, an injunction may issue to prevent the acquisition of a prescriptive right.

(4) The riparian privileges of use are not transferable apart from the land to nonriparians, or, if they are, such transfer at least does not pass privileges as against other proprietors.

Advantages of theory: relatively more definite and certain--each proprietor knows what uses that he can or cannot make of the water.

Disadvantages: nonutilitarian--prohibits many beneficial uses although those uses may cause no one any harm, and the water may otherwise run to waste.

II. REASONABLE USE THEORY: Fundamental right of each proprietor is merely to be free from an unreasonable interference with his use of the water.--Emphasis is placed upon full and beneficial use of the advantages of the stream or lake. Each proprietor has a privilege to make a beneficial use of the water for any purpose, provided only that such use does not unreasonably interfere with the beneficial use of others.

Reasonableness is a question of fact, which must be determined in each case from its peculiar facts and circumstances. It depends not only upon the utility of the use, but also upon the gravity of its consequences upon other proprietors.

Legal consequences:

(1) No primary right in anyone to have the mere natural integrity of the stream or lake maintained. The only right is to have it in such condition when the proprietor wishes to use the water that he can make a reasonable use of it.

(2) A use, whether for riparian or nonriparian purposes, is privileged so long as it is reasonable in respect to other proprietors.

(3) No cause of action against one making a use, at least until it causes harm; and even when harm is caused, no liability for making the use unless it is unreasonable in view of all the circumstances of the case.

(4) One proprietor's use of all the water, when others have no use for it, would be reasonable.

(5) Period of prescription does not start until a use becomes unreasonably harmful.

(6) Except where judicial opinion has crystallized, there are no categorical limitations on the purposes for which a use may be made.

(7) Riparian privileges of use include reasonable nonriparian privileges of use, and may to that extent be transferred apart from the land.

Advantages of theory: Entirely utilitarian and tends to promote fullest beneficial use of water resources.--No absolute or technical rights, and a cause of action arises only where the use causes substantial harm to, and unreasonable interference with, another's use.--Need not fear prescriptive right developing until that time.

Disadvantages: one cannot always be sure just what uses he can or cannot lawfully make; even though a use may, in its inception, be lawful, circumstances may change to such an extent that it will be unreasonable.

A few courts adopt one theory fully, a few the other; still others, not realizing there are two theories, or not fully grasping their differences, attempt to apply both theories, with illogical and weirdly inconsistent results at times.

No attempt to treat the Prior Application Theory, existent in some western states where the common law theory of riparian rights has not been adopted, because these states are progressively tending to establish new water codes and bring controversies about water rights before special administrative tribunals.

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