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WATER USE AND THE PRIOR APPROPRIATION DOCTRINE

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I. INTRODUCTION

A. The general theme of this conference is efficiency in water use. Although I have no argument with the various definitions of economic efficiency, many of which will undoubtedly be discussed at this conference, for the economically ignorant, like myself, the following quote captures the essence of efficiency. "What we are seeking to do and must do in a civilized society is to adjust relations and order conduct in a world in which the goods of existence, the scope of free activity and the objects on which to exert free activity are limited, and the demands on those goods and those objects are infinite. To order the activities of men in their endeavors to satisfy their demands so as to enable satisfaction of as much of the whole scheme of demands with the least friction and waste has * * * been what law makers and tribunals and jurists have been striving for." Roscoe Pound, My Philosophy of Law (1941).

B. In a large sense the basic theme of the appropriation doctrine has been efficiency. A few examples are illustrative:

1. The acceptance of the appropriation doctrine by the Supreme Court of California in Irwin v.

Phillips, 5 Cal. 140 (1855), the first case to judicially apply the doctrine, occurred because the common law doctrine of riparian rights inhibited the use of water for the most important purpose of the day - the mining of gold.

2. Similarly, in rejecting completely the riparian doctrine in Coffin v. Left Hand Ditch Co., 6 Colo. 443 (1882), the Colorado Supreme Court said, "To apply the rule contended for [a watershed limitation] would prevent the useful and profitable cultivation of the productive soil, and sanction the waste of water upon the more sterile lands."
3. The concept of "beneficial use," so central to the appropriation doctrine, is essentially an efficiency principle.
4. The "duty of water" concept, which limits the quantity of water to which an irrigator is entitled is directed toward efficiency. In effect, the duty concept says that a reasonably efficient irrigator can make do with a particular quantity of water.

C. The foregoing is not meant to suggest that the appropriation doctrine is a perfect mechanism for the efficient allocation of water. Some economists

have been highly critical of the doctrine itself. See, e.g., Johnson, An Optimal State Water Law: Fixed Water Rights and Flexible Market Prices, 57 Va. L. Rev. 345 (1971); Gaffney, Economic Aspects of Water Resources Policy, 28 Am. J. Econ. and Sociology 131 (1969). Other writers have been critical of various rules which discourage efficient use of water, and have even attacked such concepts as beneficial use and duty of water as producing inefficient results in practice. See, e.g., Shupe, Waste in Western Water Law: A Blueprint for Change, 61 Ore L. Rev. 483 (1982); Pring and Tomb, License to Waste: Legal Barriers to Conservation and Efficient Use of Water in the West, 25 Rocky Mountain Mineral Law Institute 25-1 (1979). Nevertheless, the fundamental movement in the appropriation doctrine has been in the direction of efficiency as Dean Pound might have defined that term, that is, "to enable satisfaction of as much of the whole scheme of demands with the least friction and waste."

D. A great deal has already been written about efficiency and the appropriation doctrine. Much of it is good, but some of seem beside the point. I believe that two common reasons are responsible:

1. Ignoring or failing to comprehend the

physical realities of the water resource and water use.

2. Ignoring the present state of the law. We no longer write on a clean slate. It is quite possible that one might design a more efficient system of allocation if starting anew. But rights have vested and expectations have developed on the current state of the law.

1. I will give one example. Several writers have suggested that many, if not most, of the legal impediments to the transfer of water rights can be removed by simply defining the right in terms of consumption. That is, the license or permit should specify a consumptive entitlement which could be transferred freely. In addition to ignoring a number of potential third party effects not internalized by defining water rights in terms of consumption, this suggestion ignores the fact that overwhelming majority of water rights are not presently defined in terms of consumption. The cost of determining the consumption of all existing rights would be enormously expensive. Further, it would be wasteful because many of the rights would never be transferred. Little would be gained

by defining new rights in terms of consumption because new rights are unlikely to be a candidate for transfer. Thus, I find that the suggestion contributes little to efforts to improve transferability.

E. It is my thesis that a realistic understanding of the resource and the law is an essential foundation for any discussion of efficiency. Thus, what I shall try to do is outline the physical attributes of the resource and the legal principles of the appropriation doctrine which must be considered in any discussion of efficiency.

1. Laws, of course, can be changed. However, "vested rights" and considerations of fairness, which are really one and the same, to say nothing of political realities, impose some limitations.
2. A minor thesis, if I have one, is that most of the major rules of the appropriation doctrine make sense (even economic sense) if considered in light of the circumstances which existed at their adoption.

II. THE WATER RESOURCE AND WATER USE

A. The Water Resource

1. Western stream are highly variable, both from season to season and from year to year. As one (eastern) court so aptly put it: "According to nature water does not flow in any stream by averages, but flows by extremes." Sturtevant v. Ford, 280 Mass 303, 182 NE 560, 564 (1932).
   a. Regulation (storage) moderates this phenomenon but does not eliminate it.
2. Streams are a "flow" resource. That is, water is provided in a flow which must be captured and used now or it is lost (to the ocean or a downstream state, which is even worse).
   a. Again, storage moderates but does not eliminate this phenomenon.
3. Streams are a highly interrelated resource. Unlike land, it is difficult to package streams into relatively discrete bundles of rights so that each owner knows where his "property" begins and ends. Withdrawal and use of water at one point one a stream has a direct effect on its use at other points.
4. Information about the resource is often less than complete. In the early years of the

doctrine this was particularly so. To extensive hydrologic data is available. Nevertheless, there are frequently gaps in information. Some examples:

1. The Colorado River Compact was adopted on the assumption that the long-term average flow of the Colorado River was 16.5 million acre-feet it now appears that the figure is only 13.5 million acre-feet. See, Kneese and Bonem, "Hypothetical Shocks to Water Allocation Institutions in the Colorado Basin," New Courses for the Colorado River 89-91 (Eds. Weatherford and Brown 1986).

2. Return flows, particularly from irrigated agriculture, are important in determining third party effects (injury to other appropriators) in the transfer of water rights, yet little actual study of return flows has been made. The general assumption seems to be that any water not consumed in the growing of plants (evapotranspiration) returns to the stream, but the validity of the assumption has generally not been tested.

3. Similarly, stream conveyance losses can be important in calculating third

party effects in the transfer of water rights, but information on such losses in not available for most streams.

B. Water Use

1. Most uses of water are not entirely consumptive. That is, in most cases some or all of the water withdrawn returns to the system from which it is withdrawn and is available for reuse. This is particularly true of irrigation uses, in which return flows of 50% are frequently assumed. This phenomenon exacerbates the interrelated nature of the resource; one person's return flow is another person's supply.
2. The use of water involves large capital expenditures for storage, diversion, and transportation facilities.

III. A BRIEF HISTORY OF THE APPROPRIATION DOCTRINE

A. Origin

1. "Appropriate *** 2. To take possession of or make use of exclusively for oneself, often without permission." The American Heritage Dictionary (1971). This definition accurately describes the appropriation doctrine in its

initial stage during the California gold rush. Title to the land on which the gold rush occurred and to the gold which was mined was in the United States. Until 1866, the miners took the gold, and the water they needed to mine it, "without permission." At this stage the doctrine was one of possession; the right was created by taking possession of the stream or a portion of its flow. See Wiel, Water Rights in the Western United States § 476 (3rd ed. 1911).

2. Consequences:

   a. Temporal priority became the rule of allocation. This is, of course, a basic principle of possessory rights; the first person to take possession has the better right.

      (1) Priority provides a mechanism for adjusting demand to a supply which is highly variable.

   b. b. Water rights were freed from the land. Unlike the riparian doctrine, in which water rights are an incident of land ownership, appropriative rights became independent property rights created by taking possession of the water. Water use was no longer

restricted to riparian lands.

c. As independent property rights, water rights became transferable interests; that is, the place of use and purpose of use could be changed. See Wiel, supra, § 496.

(1) Some states have enacted statutes restricting changes in use. However, these restrictions are really quite limited in number and scope. See Gould, Conversion of Agricultural Water Rights to Industrial Use, 27 Rocky Mountain Mineral Law Institute, 1791, 1803-1816 (1982).

3. The allocation scheme of the doctrine at this point is quite simple; streams are divided up by disposing of their flows in appropriated shares.

a. Physical realities complicate this seemingly simple allocation scheme somewhat. Many western streams are "losing" streams; consequently, the quantity of water available for diversion is greater at higher elevations than at lower ones. Thus, at any point of time a such a stream is capable of satisfying a

greater or lesser number of shares depending on where diversions occur. In fact, Wiel doubted the capacity of the appropriation doctrine to adequately resolve this problem, which he called "the battle of the levels." Wiel, Fifty Years of Water Law, 50 Harv. L. Rev. 252 (1936).

B. Beneficial use

1. Beneficial use quickly replaced possession (diversion) as the basis of the water right. See Wiel, supra § 478. Beneficial use remains the linchpin of the doctrine today. E.g., "Beneficial use shall be the basis, measure and limit of the use of water." Ariz. Rev. Stat. § 45-131. Virtually identical pronouncements are made in the statutes of a number of other states.

2. Consequences. A number of consequences flow from the shift from possession to beneficial use as the basis of the appropriative right. However, two seem of particular importance with regard to efficiency.

a. The parameters of the right are measured by the beneficial use to which the water is put rather than by diversion.

Although the right remains transferable, the initial specific use, becomes the basis, measure, and limit of the right. As Wiel put it, there has been a change from a possessory system to a specific purpose system. Supra § 476. Some early courts carried this to the extreme of limiting the right by the idiosyncratic habits of the initial appropriator. See Trelease and Gould, Cases and Materials on Water Law, p. 95 (4th Ed. 1986). Supra, § 476.

(1) The rule which states that a transfer of a water right cannot injure other (junior) appropriators is a manifestation of this change. The rule greatly complicates transfers, and Professor Joseph Sax has suggested that the rule is not sound. Sax draws an analogy to the lack of legal protection accorded a restaurant owner whose business is destroyed when a theatre across the street is converted into a warehouse. Sax, Water Law Cases and Commentary 207 (1965). Once again, the rule seems justified by physical realities. The restaurant

owner is, or should be, aware that the way in which his neighbors use their property might affect his business and can make an assessment of the risk this poses at the time he decides to enter the restaurant business. The junior appropriator, on the other hand, frequently cannot ascertain what portion of the flow in a stream is natural and what portion represents return flow from upstream users; thus, he cannot cannot assess the risk which a transfer by an upstream user poses. The rule protects him against this risk and, thereby, encourage full development of the resource at an early stage, which may be considered desirable because of the "flow" nature of the resource.

b. A basis was laid for the termination of wasteful uses.

(1) Some economists have suggested that the prohibition against waste is unnecessary, arguing that the market will eliminate waste if water rights

are freely salable. See. e. g., Milliman, Water Law and Private Decisionmaking: A Critique, 2 J. Law & Econ. 41, 50-51 (1959). However, it does not seem unreasonable if the state, in giving away water rights for the first time, asks that one not make too big a pig of himself. As to the elimination of waste after allocation, an argument can be made that, because of the complex nature of the water resource, information and transactions costs may frequently prevent a market solution.

3. It should be noted that, while the parameters of the right are now measured by beneficial use, typically the permit, license, or certificate which the appropriator receives provides no direct information on several of the more important parameters, such as consumption and return flows. Again, physical realities account for this. Consumption and return flows are difficulty and expensive to

calculate even today. Typically, they only become relevant if a change is proposed so it may have seemed more sensible to determine them when relevant.

C. Public Ownership and administrative control of water

1. Beginning with the Colorado Constitution in 1876, all western states have adopted constitutional or statutory provisions stating that the waters of the state belong to the "state," the "public" or the "people."

2. These provisions have generally been construed as investing the state with "sovereign" ownership, not "proprietary" ownership. See Wiel, supra § 172. Most recently, the United States Supreme Court referred to state ownership of water as a fiction "'expressive in legal shorthand of the importance to its people that a State have power to preserve and regulate the exploitation of an important resource.'" Sporhase v. Nebraska ex rel Douglas, 458 U.S. 941, 102 S.Ct. 3456, 73 L.Ed.2d 1254 (1982), quoting from Hughes v. Oklahoma, 441 U.S. 322, 99 S.Ct. 1727, 60 L.Ed.2d 250 (1979).

a. Moses Lasky, writing in 1929 argued that

the intent of the pioneers was to make the state the owner in a "proprietary" sense, but that the courts, infused with common law notions of individual property rights, construed such provisions to indicate sovereign ownership. His pithy statement regarding the rejection of state ownership and administration of water in Colorado bears repeating: "Unfortunately, however, there were lawyers in Colorado and apparently very able ones." Lasky, From Prior Appropriation to Economic Distribution of Water by the State - Via Irrigation Administration, 1 Rocky Mountain Law Review 161 (1929).

3. Whatever their meaning, these provisions became the basis for the administrative control of water rights, beginning with Wyoming in 1890. At the urgings of Elwood Mead, the Wyoming Constitution and implementing legislation adopted in that year created a comprehensive system for the administrative regulation of water right that was later emulated, with varying degrees of modification, by all western states except Colorado. See 1 Clark, Water and Water

Rights, pp 105-107 (1967) for a discussion of the role played by Mead in the creation of the Wyoming scheme.

4. The administrative regulation of water rights proceeded rapidly and by 1929 Lasky stated that the doctrine of prior appropriation had been replaced by a doctrine of "economic distribution of water by the state." Although Lasky's pronouncement that "today prior-appropriation is the law nowhere in the West" [Supra, p. 170.] seems a bit hyperbolic, it is certainly true that by 1929 prior appropriation was no longer solely a system of rights enforced only by private parties.

    a. However, while the appropriation system was no longer self-initiated and self-regulated, the property rights content of the doctrine remained. That is, the state now carved out and granted individuals property rights which had essentially the same content as previously.

5. Consequences:

    a. Rights were no longer created "without permission"; instead a permit or license from the state was required.

b. The state was no longer a mere "umpire", deciding disputes between private parties; pursuant to laws directing that the "public interest" or "public welfare" be considered, the state began to play an affirmative role in deciding how its water resources would be used.

(1) Colorado and Montana are exceptions to the above. Although the water courts in Colorado perform many of the same functions performed by administrative agencies in other states, the courts have no discretionary authority with regard to water use. A permit system is now used in Montana, but the agency administering it does not have general authority to consider the public interest in making allocation decisions.

6. A new chapter in state regulation of water rights appears to be developing. Partly because of the view that water rights are "vested property," most states have not had a significant discretionary role beyond initial allocation decisions. This may be changing.

a. California has preserved some discretion

in recent years through the use of a permit provision giving the Water Resources Control Board "continuing authority" to impose additional conditions to prevent waste and unreasonable use of water. California State Water Resources Control Board, Permit Term No. 12.

b. However, the duties imposed upon the state by the Mono Lake decision, National Audubon Society v. Superior Court of Alpine County, 33 Cal.3d 419, 189 Cal.Rptr. 346, 658 P.2d 709 (1983) may foretell even more significant changes. In that decision the court held that the state has "a duty of continuing supervision over the taking and use of appropriated water" in order to protect public trust values. Although water rights were not involved, several other western courts have recently invoke the public trust doctrine in cases involving water. See, Kootenai Alliance, Inc. v. Panhandle Yacht Club, 671 P.2d 1085 (Idaho 1983), Montana Coalition for Stream Access, Inc. v. Curran, 682 P.2d 163 (Mont. 1984) and Montana Coalition

for Stream Access, Inc. v. Hildreth, 684 P.2d 1088 (Mont. 1984).

c. While administrative approval is generally required before a change in use can be made in a water right, until recently the role of the agencies has largely been ministerial. However, statutes enacted by Wyoming in 1973, Wyo. Stat. §41-3-104(A), in California in 1985, § West's California Water Code § 1735, and in New Mexico in 1985, N.M. Sess. L 1985, Ch. 201, direct administrative agencies to consider certain "public" effects when approving transfer applications.

7. Again, the nature of the water resource explains the need for extensive state involvement in the administration of water rights.

   a. Normal judicial procedures proved ineffective in resolving disputes and enforcing rights on streams and rivers with hundreds, or thousands, of water rights.

   b. The discretionary authority given the state administrator (the authority or deny or condition permits) is not so

easily explained, but I believe it is justified.

(1) Because of the large capital costs frequently required for water use and the high information and transactions costs associated with transfers, it is best if water is initially allocated to its "best" use, or at least to the "better" use. Water administrators have frequently used their discretionary authority to achieve this, rejecting one application to use water in favor of a better one.

(2) More importantly, however, discretionary authority is a means of assuring that values not associated with appropriation (diversion and consumptive use), such as aesthetic values, recreational values, fish and wildlife values, and environmental values, receive consideration.

IV. THE WATER RIGHT

A. From the forgoing, an appropriative water right might be defined as follows:

1. A perpetual license from the state
2. which is "property"
3. entitling the holder to divert water from a designated source (stream, river, or lake)
4. at a specified point
5. at a specified rate
6. for a particular purpose
7. at a specified place
8. after the rights of all others holding a prior licenses to divert water from the source have been satisfied.

B. Changes may be made in the point of diversion, place of use, and purpose, but a change may not significantly alter the pattern and degree of use.

V. CONCLUSION

A. Much can undoubtedly be done to improve the efficiency with which water is used in the west. Nevertheless, discussions of the problem must begin with a clear understanding of the resource and an accurate assessment of the law.