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Alternatives to Appropriation Law

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In recent years many water laws throughout the world have been subjected to review and reconsideration. The continued suitability of current law is questioned and a search is made for a new and modern form of water law. Older systems of self-generating rights—"private waters" and riparian rights —are to be discarded; "concessions" bring ugly memories of exploitation; and "prior appropriation" to many means some sort of Wild West rip-off of the public domain. In the search for a new system something called "administrative allocation of water" is frequently advocated, although what is meant is not always clear. In the course of a long career of teaching and writing about water law, and of acting as a consultant to several states and developing countries, I have been exposed to many variations on this theme. Most of them are prefaced by a rejection of prior appropriation; it is made clear that this is not what is wanted.

As a resident of the American West I have lived with prior appropriation a long time. I used to think that prior appropriation was an American invention, and I have done my share of repeating the familiar tale of how the '49ers protected their gold claims and water ditches with Colt and Winchester, how courts adopted these "customs" as American common law, and how the farmers that came after them adapted the miners' law to agriculture. But today I read in a compilation of the world's water laws that the protection of vested rights and a preference for the eldest rights is the most common of all systems of distribution of water, and many of these go back to antiquity and can in no sense be said to be derived from American law.[1] Thus it is natural to wonder why this prejudice against prior appropriation exists, why it is so often rejected by those who seek the best. Since it is so widely used there must be some good to it. As I look about and see the development that has taken place in the western states and review their history of transition from

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1. L. TECLAFF, ABSTRACTION AND USE OF WATER: A COMPARISON OF LEGAL REGIMES 81, U.N. Doc. No. ST/ECA/154 (1972).

gold rush to irrigated agriculture to great modern centers of commerce, I cannot help but think that we must have done something right.

What, then, are the objections to the spread of this common and proven system? Generally, they fall into two classes. The first type is founded on observed facts. Sometimes an example of waste is cited: excessive water use in Idaho or duplicating ditches in California. Sometimes dry streambeds in Arizona are pointed to as proving that instream uses, ecological balances, and environmental values cannot be protected under prior appropriation. The mistake in these cases is the assumption that because these examples of defects can be found the defects are inherent in the system. Most of these distortions and dislocations seem historical remnants of a pioneer system that need not be repeated today or minor aberrations that could be corrected by small adjustment of the system or tighter administration of the law.

The second class of objections is based on theory. Three recurrent reactions are voiced:

1. A dislike of the "property system"; appropriators seize valuable interests in the public domain and enrich themselves at the expense of the public.

2. A mistrust of the "market system"; a fear that under prior appropriation, water rights will become "frozen in the pioneer patterns," unsuitable for modern times and problems, and not subject to reallocation to new uses and needs.

3. A dislike of the "priority system"; in a shortage an "all-or-nothing" rule gives one of two essentially similarly situated water users all of his water while his neighbor gets none.

To a large extent these objections are based on lack of understanding—a failure to appreciate the flexibility and variety of operational methods available under controlled appropriation laws.

I. CONTROL OF INITIATION OF USES

Those who object to prior appropriation as a crude pioneer system are simply not up with the times. In the early days of western prior appropriation the pioneers did help themselves to water as they would "take berries from a bush or a rabbit from

the plain."[2] The water was given away, but then so was the land. Even so the pioneer was hard put to survive, and as he broke the land to the plow and dug his ditches his "sweat equity" generally dispelled the charge of unearned increment. Today the water might be sold, but tradition is against it, and most governments are still willing to let water increase the wealth of their citizens rather than have it increase the balance in the state coffers.

The states did place some demands on the water users. The earliest limit on the appropriation of water was the legal concept of "beneficial use." Most of the pioneer uses met this test: water was used to mine the gold and silver from the hills, to dispell the myth of the "Great American Desert" by irrigated agriculture, to provide water for cities, railroads, and all forms of industry. By 1890 the need for more controls was seen by the people of Wyoming, who adopted the first permit system. A person who desires water must apply to a state official, who may deny the permit if there is no unappropriated water in the source or if the proposed appropriation will be contrary to the public interest. This statute became the model for most of the West, and today fifteen states have similar laws.[3] In 1910 the New Mexico court first gave the public interest concept some real content. The court was faced with two conflicting applications for the same water, and the first applicant to file demanded that he receive the permit. The court, however, said that the purpose of the statute was to secure the greatest possible benefit from the public waters for the public, and told the state water authorities to choose the better of the two projects, not merely the first proposal.[4] This is the legal expression of what the economist calls the efficiency principle, the notion that we should get the maximum net benefits from the use of our resources.

The power to control the initiation of water uses was seldom exercised, and few conflicts over unappropriated water occurred. Most beneficial uses were also found to be in the

2. Lasky, *From Prior Appropriation to Economic Distribution of Water by the State Via Irrigation Administration*, 1 ROCKY MTN. L. REV. 161 (1929).

3. Alaska, Arizona, California, Kansas, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

4. Young & Norton v. Hinderlider, 15 N.M. 666, 110 P. 1045 (1910).

public interest, and although private initiative could be theoretically controlled by permits, in practice few were denied. However, there were some examples. An Oregon appropriation was denied when it was found that it could interfere with the state's plan for development of its lands and waters.[5] A limitation was placed on the height of a Wyoming dam to preserve the canyon for a future railroad link between two areas of the state.[6] In Utah the Bureau of Reclamation and the state government were cooperating on a plan for a large multipurpose project that would bring irrigation, municipal, and electric power benefits to three counties. An entrepreneur filed an application for a smaller project that would have seriously interfered with this development. Although he had filed first, the state authorities, backed by the courts, subordinated the small project to the large multipurpose project.[7]

These cases laid the groundwork for modern water planning. Today in many states an inventory has been taken of water resources and the alternative possibilities for their use. The goals of the state are carefully spelled out, policies are adopted to bring them to fruition, and the permit process is the mechanism for effectuating the plan. Strong efforts are being made in this direction in Wyoming, Alaska, the West Coast States, and others. A proposed private use that does not accord with the state plan will be denied, or brought into line by conditions attached to its permit. This technique is spreading eastward; the permit feature of western prior appropriation law is the one which has been most accepted in the Eastern States. Several of them, including Florida, Kentucky, Delaware, Mississippi, and New Jersey, now have very similar planning and permit processes.

II. THE DURATION OF THE WATER RIGHT

The major objective of any water law must be to achieve, or at least promote, the efficient allocation of water resources. Economic efficiency is the reference: that combination of labor, capital, and resources which will produce the greatest net benefits. Social and environmental factors will be worked into the adjustment of costs and benefits. State plans, programs, and

5. Cookinham v. Lewis, 58 Ore. 484, 114 P. 88 (1911).
6. Big Horn Power Co. v. State, 23 Wyo. 271, 148 P. 1110 (1915).
7. Tanner v. Bacon, 103 Utah 494, 136 P.2d 957 (1943).

policies may determine the optima to be sought, and state projects and agencies may play a large part in reaching them. Yet it is clear that in most countries a very large contribution toward optimum use of water for irrigation and industry will come from private sources. The water law system must foster and encourage water use and provide a climate conducive to investment in water-using enterprises. A person will put his capital and labor into such an enterprise if he has sufficient assurance that he will receive a fair return on his investment for a period long enough to make the venture worthwhile. This is the minimum the state must offer if it is to enlist the efforts of the private sector. The use of water by people and firms can be guided and controlled, but it cannot be forced. The state may screen the uses and weed out the undesirable ones to insure that state policies and plans are furthered, and it may impose conditions and limits to prevent undesirable practices and side effects, but it must give security to investments and opportunities for profit. With these assurances long term ventures and stable endeavors will be undertaken. Without them much will be lost, for if risks are great only those requiring little capital and promising quick returns will be taken, and cheap construction and short cuts can be expected.

In a dynamic society efficiency also requires change, if maximum benefits are to be continually obtained. New and better uses will arise that promise more than is being produced by existing, perhaps outmoded, uses. Demands will increase as population and industrialization expand, and if they can not be economically satisfied from unused supplies, changes in use must take place. The resulting shifts from present uses to new uses must meet the same test applied to an original use. Each must be another step towards maximization of the benefits from the resource. The economist, using the "Pareto criterion," tells us that a change will reach or approach a new optimum if it will make at least one person better off and if it makes no person worse off. A change that merely shifts wealth from one person to another does not increase economic welfare, and even if a new use will create greater wealth, the criterion requires the gainer to pay the loser. The person who is better off should receive the net gain from the change, not someone else's wealth as well.

The problem for the lawyer, then, is to draft a law, a system of water rights, that will promote this goal of efficiency by providing both security and flexibility of water rights. Some people see these two *desiderata* as opposites, and if too much of one is given, the other is thought to suffer. Yet they can be reconciled, and water rights can be made both secure and flexible.

A prime element of security is the tenure of the right. Prior appropriation rights are held "in perpetuity," although in view of the possibilities of loss through forfeiture or condemnation they might better be described as "of indefinite duration." The ideal water right should last as long as it is contemplated that the water use will last. Rights for cities, irrigation, and other purposes of a continuing nature should last indefinitely; there is no substantial reason to think that a need will arise in 10 or 50 years to take water from the inhabitants of a city and give it over to another use. If irrigation water furnishes a major component of the value of land, the titles to the land and the water should run concurrently. On the other hand, there is little utility in leaving a mining company with a water right after the mine has been exhausted.

Rights that last as long as the enterprise will give security of tenure to the water user. But how are flexibility and change to be accommodated if rights are perpetual or for long terms? As an analogy, consider the laws applied to another valuable resource: land. The state has exactly the same interests in seeing that the highest and best use of land is made and that those uses can change when needs change. Almost universally rights to land are as secure a form of property as there is, and land titles run "to him and his heirs forever." Yet land use is flexible, and a shift from a low productive use to a higher productive use is accomplished by the simple process of a sale of the land. A farm on the outskirts of a city may have a higher productive use as an industrial site or as a residential area. In either case the industrialist or the developer can afford to pay the farmer more than the land is worth as a farm, and the one with the best use can afford the most. Both buyer and seller profit. In this respect water resources are not too different from land resources.

This is not to say that unrestricted powers of sale are recommended. Legal mechanisms can be found that will permit economic forces to operate within a framework of government control. The government will generally favor a change in use that moves water to higher productivity. The government may disapprove of a change, however, and should be able to block a transfer of the water right that would interfere with the rights of third persons, result in a disfavored water use, or harm the public interest. Procedures that permit affected private persons to raise objections and the government to approve or disapprove can take the form of government confirmation of a sale or of cancelling the old right and issuing a new permit for the new use. On the other hand, the government may wish to force transfers that advance the public interest when private action does not produce the desired change. Again, consider the case of land. If the government needs the land, it takes it by expropriation or condemnation; if a favored enterprise needs it, the government gives those powers to it. Fair compensation is paid if the total value is taken and should similarly be paid if the value given by water is taken.

The desirability of this mechanism for change is not seen by all water lawyers. In fact, it seems quite popular nowadays to recommend that water rights should last only for fixed, fairly short periods.[8] The advantage is thought to be the attainment of flexibility, since at the end of the term the state has the power to reassign the water to new and better uses. There are disadvantages, however, to such a system, some of which accrue to the state in departures from optimum use and some of which impose unnecessary harm upon the water user. Most investments take many years to amortize, and the term must be a long one if capital is to be attracted. Repairs and replacements may be foregone by the water user towards the end of a fixed period. Flexibility is surrendered during the life of the right, and if an application for a new use does not coincide with the expiration of an old permit, the new user may have to wait a fairly long time before water becomes available. If to meet this the right is subject to condemnation or expropriation during its life, the usual compensation offered is the unamortized

8. F. MALONEY, R. AUSNESS & J. MORRIS, A MODEL WATER CODE (1972).

portion of the investment. But the holder of the right will in many cases lose an asset more valuable than his sunk costs, that is, the going concern value of his enterprise—the continuing opportunity to make a profit—which is presumably a contribution to the economy.

It may be wise to remember that we are speaking of laws that affect people and that laws should be tested by thinking through their application to practical facts. The theoretical proposition is that water use should be flexible and that water should move from less productive to higher and better uses. The fact is that almost everywhere in the world irrigation of agricultural crops produces less wealth per unit of water than does almost any other use—hydroelectric power, food processing, raw material processing, mining, manufacturing, and domestic and commercial consumption within municipalities. So in practical operation a change to greater beneficial use will mean that water now used by farmers will be shifted to large enterprises or cities. There is nothing bad about this *per se,* in fact it is almost inevitable. However, it may need to be controlled. For example, in a country where food production has a high government priority the natural economic processes may have to be interrupted and such changes forbidden. This would force cities and industries to seek higher cost water not presently in use, and they might have to construct reservoirs or bring water long distances from places where use has not yet equalled supply.

But if these considerations do not apply and the change is desired, a change made by fiat, without payment or compensation, will impoverish the farmer and unnecessarily enrich the industrialist or city dweller. Inevitably the farmer is poorer than he was before; he can produce less on his dry land. The water he formerly used is now being used by a manufacturing or mining company, for which the water cost would be a small part of total operating costs and could be recouped in the price for the product. If the water has moved to municipal uses, it is now benefitting householders and owners of commercial establishments within the city, and the principle of requiring those who receive the benefits to pay for them can be realized by a simple adjustment of water rates. A very small addition to the water bill of everyone in the city would create a fund from which the payment could be made.

III. DISTRIBUTION IN TIMES OF SHORTAGE

Legal security given by tenure is only one-half the picture. So far it has been assumed that water was available to fulfill the right. But what if there is not enough to satisfy all rights? What physical security does the law provide—what guarantees that the holder of a right will get water? When there is a shortage of water, which water users get it? These questions go to the heart of the law. Indeed, shortages are what the law of water rights is all about. There is little need for water rights if there is plenty of water for all.

The word "shortage" needs to be defined. It is meaningless unless demand is considered as well as supply. On a variable stream there may be an annual shortage if the normal or average low flows cannot support existing uses, although much high water flows to the sea. There may be shortages induced by drought if a usually sufficient supply fails in some years. There may be a shortage although the stream is running full, if the full flow is needed for fisheries, navigation, or environmental concerns. There may be no shortage even though every drop is used if the stream is so controlled that annual and perennial flows are equated by storage and the smoothed-out supply is fully, but not excessively, allocated. Such a firm right to a firm supply puts the water user in the best of all worlds.

But for the most part the real world is not so ideal. Some aquifers with steady recharge may present an opportunity to limit water rights and match demand to supply, but most streams are subject to very large annual fluctuations and to marked variation in yearly total flows. Some are sufficiently predictable to allow a dependable flow to be determined and split among a fixed group of water users, but this either wastes the excess high water if no rights are given to it or casts most of the burden of shortage on the users of high water.

In all cases, however, the physically available supply limits the water that can be withdrawn, and the state, if it is to avoid chaos, must limit the claims to it. Inevitably, this limit will have an element of temporal priority to it. When claims equal supply, no more can be granted. New demands for better uses must then be accommodated by some mechanism for flexibility, as discussed above. Such a limit can be easily fixed if the supply is fixed. When the source fluctuates and sometimes can fill all needs but sometimes can not, some

method of allocating or distributing the immediately available water must be devised.

There are at least five ways of doing this. One is to enforce strict temporal priority, as exemplified by American prior appropriation. Another is to apply equal sharing enforced by proportionate reduction, as among some riparian irrigators. A third is to follow a statutory list of preferences, giving priority according to a fixed ranking of the values of different uses. A fourth is to distribute the water as determined by administrative discretion based on various economic and social factors. A fifth is to put up the water for sale or auction, as practiced in some Moslem communities.

Since the criterion for the law is efficiency in obtaining maximum net benefits from water use, each of these must be evaluated against that standard before an intelligent choice can be made. Prima facie, each seems to have advantages and disadvantages. Temporal priority gives security, but it may sometimes seem to discriminate rather arbitrarily among people who are essentially similarly situated, and the earliest uses may not be the best ones. Sharing may be equitable among many farmers, but not if some have orchards or vineyards and others grow annual field crops; and a variable supply may be completely unsatisfactory for a factory or mine. Statutory lists may reflect prevailing notions of relative values, but they may embody obvious diseconomies or prevent the comparison of the relative merits of individual uses. Even if they do prefer the most efficient uses, they operate so that the rich get richer and the poor get poorer. Bidding on the water market would seem to insure that the water goes to those who can produce the most from it, but it can lead to speculation and gouging, and to enrichment of those who hold a monopoly on water rather than those who work with it.

This leaves administrative control, and a number of water lawyers have thought this to be the ideal. Their theory is to place all the water in the hands of a wise administrator; let him put it where it will do the most good, let him prorate, let him reduce the supply or suspend the rights of some so that others may receive the water.[9] I have serious reservations about this.

9. *Id.*; Clark, Guidelines for the Drafting of Water Codes, U.N. Water Resources Ser. No. 43 (1973).

We seldom give to a government official so much power over the lives and livelihood of people. This procedure may deter investment and development, since entrepreneurs hesitate to engage in enterprises when success or failure depends upon factors beyond their control. A rather ugly thought occurs — the human factor could be subjected to enormous temptations and tremendous pressures to play political favorites, yield to political coercion, and offer and receive bribes and graft. Even the most scrupulously honest administrators have complained of the personal strain such decisions cause, and have disclaimed the wisdom to make them with any assurance. And even if wisdom can be found, it must not only exist in higher echelons where policy is decided, but it must also be spread through all the regional subordinates and field men who must make the actual on-the-spot decisions in individual cases.

Those who advocate administrative distribution in case of shortage may urge that with this method the public interest, or the environment, can be protected. But it must be remembered that all of this has been taken care of in the initial allocation of rights. To understand the workings of administrative distribution, it must be very clearly kept in mind that all we are talking about is water already allocated to private use, that the state and its administrators have issued permits for its use, that every use is beneficial, and that all the uses can be made in times of water plenty. It must be remembered that all minimum flow requirements are met, that all other environmental factors are protected, and that the state water plan is observed or even furthered. The public interest stands neutral, and the only question is: Which people get to use the water?

If each system has its good and bad features, must we then choose the least of evils? I think not. It is possible to combine the best features of all of these and to eliminate the bad effects of each.

In the preferred solution, temporal priority is the starting point, but only that. It does give security; it does mean that the state, having granted water to *A*, will not later grant that same water to *B*. Temporal priority is not the grant of a special privilege. It is simply a necessary element of the description of the water right that marks its boundaries and distinguishes it from other rights. On a fluctuating source, it is the only way

that new rights can be limited to water that is available in nature and is not already committed to existing uses. These virtues can be combined with those of sharing, if that is desirable. This is frequently done all over the world, even in western America, where a project or distribution scheme serves a number of irrigators who share the distributor's appropriated water right. If that right cannot be supplied in full, the consumers take a proportionate reduction. Much the same thing can be done even though no works are needed and it is contemplated that individuals will provide their own means of diversion. If a reasonably dependable supply is available and total withdrawals are held to that limit, all of the permits, although requested at different times, could be given the same priority date or number. The plan would replace the project; the plan would receive the priority. This would avoid overcrowding by too many seeking shares and would settle the relationships between the irrigators as a group and other irrigators, industrial users, and municipalities.

Next is the problem of seeing that the water goes to the best uses. If the more productive and valuable users have junior water rights, economic efficiency can still be served by using the market, under the supervision of the administrator. We have spoken of transfers of water rights, but there is also need for sales of water as a commodity. The State of New Mexico gives a good example of how this can work. A statute permits the "leasing of the use of water" by an appropriator to any other person, with the approval of the state authorities.[10] In a water-short year, growers of beans who anticipate a high price may hold junior water rights that give them no supply, while potato growers who face a glutted market can draw water under their senior rights. The bean growers buy water from the potato farmers. Maximum efficiency is reached, since the high-value crop is produced, and both water users share the profits. An administrator could not do as well. If he were charged with distributing the water on the basis of economic efficiency, he would allocate the water to the bean grower, but that lucky farmer would get all his profit while the unfortunate potato grower would suffer a total loss. If the administrator attempted

10. N.M. COMP. LAWS, §§ 75-40-1 to -7 (1953).

to avoid this by a criterion of equity and gave half the water to each, the highest and best use would not be served and maximum production would not be reached.

Another example of how temporary transfers of rights or sales of water could be of great utility is that of the city which gambled on a junior water right and is faced with an unusual drought. If farmers hold the priority, I would assume that an administrator would say that the city has the better use and would cut off the farmers' supply. The city would get the water, but the farmer would be bankrupted. This is a social cost which must be reckoned, and the best way to account for it is to have the city pay for the farmers' lost crop. A country enacting a new law could improve on the New Mexico system by allowing only owners of permits to make purchases and by limiting quantities to enough to make up the shortage in the permitted supply. This would avoid the use of water by unauthorized persons or in unauthorized quantities. The administrator could also be given the power to force such temporary transfers and empower preferred users who are unable to make private arrangements to take temporary control of water rights at a fair compensation.

Up to now we have been dealing with shortages as if they were inevitable and uncontrollable. Both annual low flows and cyclic drought produce periods of plenty and periods of shortage, but in many areas storage of water can be used to equate the flow, to save high water for use in the low water period. Where storage is physically and economically available, the rule for dividing shortage is in practical fact a rule for determining who pays for the dam and reservoir. If an open-ended system of riparian sharing of a variable stream for irrigation eventually were to lead to too many and too small shares, all holders of rights might band together in some joint or communal organization to raise the dam. I think, however, that the costs of dislocation and the difficulties of organization would be great. If economic productivity is the criterion for determining who gets low flows, the burden of providing storage would be cast on those least able to afford it. But if temporal priority is the rule, the juniors who enter the field after the low water is all spoken for must pay. Is this fair? I think so, for reasons to be developed later. It certainly is desirable from the stand-

point of securing the main goal, the efficient use of water. The persons who will get the direct benefit of the storage must consider whether it is worth the price. A large estate—a communal group of farmers, an industry, a city, or a government multipurpose agency—which wants the water must calculate whether its benefits will exceed its costs.

From the standpoint of equity and justice it should be remembered that development takes place over time. The first users take cheap, easily available, always available water. There is no shortage. When more and more uses are made, shortages are created as demands increase to meet or exceed low flow supply. Additional risks are created and additional costs must be met. It seems not unfair for the government to place those risks and those costs on those who create them.

Justice is difficult to identify. One American writer has said that injustice is easier to spot, that human beings hold in common many notions of when they are being abused or treated unfairly.[11] One of those notions is that when a person has taken, used, become accustomed to, and made a livelihood from water, it becomes "his water," and that one who takes it from him has "stolen his water." I used to think that prior appropriation was an American invention, but now I am convinced it was simply the verbal identification of a very widespread human trait.

Teclaff, in his survey of 57 countries, tells us that seniority in use is the most common of all bases for distributing water among users.[12] In its most explicit form, prior appropriation exists not only in 19 American states, but also in four western provinces of Canada, Taiwan, China, Iran, Rhodesia, Zambia, and the Philippines. There are strong elements of it in several South American countries.[13] The 1963 British Water Resources Act creates a "protected right" indistinguishable from an appropriation, though enforced in an unusual roundabout manner.[14]

Protection based on temporal priority is to some degree implicit in many other laws. Before state controls came into

11. E. CAHN, THE SENSE OF INJUSTICE: AN ANTHROPORENTIC VIEW OF LAW (1949).
12. L. TECLAFF, *supra* note 1.
13. L. TECLAFF, *supra* note 1, at 82-83.
14. Water Resources Act of 1964, 42 U.S.C. § 1961 *et seq.* (1970).

being, customary water rights, held from time immemorial or for prescriptive periods, were everywhere protected. When state authority to use water was instituted, the notion that a state should not make successive grants of the same water to different people appeared in most such laws. Permits, licenses, or concessions—whatever they may be called—are not to be issued to the detriment of existing uses in most of the Spanish American countries, in several of the eastern United States, in Tanzania, and in Italy. Practically every new water code has given some sort of group preference to uses in existence when the code was adopted.

Some evidence indicates a subliminal recognition of priority even where the law is specifically to the contrary. The natural flow theory of 19th century English riparianism has been said to have been a protection of mill owners, a law designed to keep the wheels of the Industrial Revolution turning.[15] The reasonable use theory of American riparian law is applied to require several types of adjustments which enable several riparian uses to coexist, but a recent study of the cases shows that when two uses are truly incompatible the American courts almost invariably hold that a new use is unreasonable if it takes the water supply of an existing user.[16] Empirical studies show the existence of a sort of "practical priority" in some American states, where riparians with theoretical rights to share in a stream voluntarily refrain from taking water after their neighbors have first captured the available supply. Even under modern statutes that subject the allocation and distribution of water to administrative discretion, the administrators in Great Britain, Kenya, and Mexico have eased their burden by issuing permits that authorize the withdrawal of water only when there is a surplus over the needs of existing users.

IV. EXAMPLES

I realize that, when I state my personal precepts for a desirable form of water rights, I take issue with a number of colleagues. In many personal conversations and exchanges of correspondence we have debated the merits of long term versus

15. Beuscher, *Appropriation Water Law Elements in Riparian Doctrine States*, 10 BUFFALO L. REV. 448 (1961).

16. RESTATEMENT (SECOND) OF TORTS, § 850B(h)(i), Notes at 115-18 (Tent. Draft No. 17, 1971).

short term water rights, voluntary transfers versus governmental shifts of water use, and priority versus administrative distribution of shortages. I seldom lose these debates, of course, but I seldom seem to win them either. Too often our arguments do not meet head on because my propositions seem hard to state and the full implications of prior appropriation seem difficult to understand, and my opponents assume that I advocate some kind of "robber baron" speculation in the national patrimony. It is not difficult to show that administrative control offers advantages over such a system. It seems very difficult to explain how a system of controlled rights—secure but transferable and limited to quantities available in the source and not previously committed to other uses—can incorporate each advantage claimed for discretionary administration.

Perhaps the propositions here set forth can be clarified by illustration. Two very new examples may be compared: one represents the ultimate in discretionary control of water use by officials, the other is based on the principles I have recommended.

Last year the President of the Philippines created a new National Water Resources Council and empowered it to issue rules and regulations for the exploitation and optimum utilization of water resources.[17] The superseded Irrigation Law of 1912 was modeled on an early form of American prior appropriation, implemented by a permit system. A number of contributing factors had made administration of the law ineffective, and permit procedures were overwhelmed by a flood of applications resulting from a new government program. The Council quickly adopted interim rules designed to expedite the processing of applications for water rights, and those rules make a fundamental departure from the nature of existing rights. The permits under the rules will not definitely fix the quantity of water allowed, the priority of the right, or the duration of the right. Each will be subject to these conditions:

> The Council may, after due notice and hearing, reduce at any time the quantity of water or adopt a system of apportionment, distribution or rotation thereof when the facts and circumstances

17. *See* Trelease, Current Developments in Philippine Water Law—Suggested Interim Groundwater Regulation (1975) (prepared for MIA-UNDP/FAO Ground-water Development Project).

> in any situation would warrant the same in the interests of legal appropriators.
> The Council may, after due notice and hearing, revoke the permit in favor of projects for greater beneficial use or for a multipurpose use.[18]

As explained by the Council's staff, these conditions were written into the permit for five reasons:

1. *Wasteful uses:* Some water users are wasteful, some can get along with less water, and, as water demand increases and technology progresses, all water users may be required to initiate more economical methods or facilities.

2. *Reduction of use:* Irrigated lands are frequently subjected to changes in land use. If a water right exists to serve an area of land and part of the land is sold for residential use, or if the water is concentrated on one part while another is more or less permanently devoted to a purpose such as storage or a barnyard, the right should be reduced in quantity or terminated in part.

3. *Sharing during drought:* In time of drought, it is inequitable that the entire burden of shortage fall on some farmers, while others, essentially similarly situated, get a full supply. "We wish to abolish priority" was the statement made.

4. *Incorporation into projects:* It is expected that many small irrigated plots will later be served by large multipurpose projects.

5. *Flexibility of use:* To "keep up with progress" under developing conditions and to permit "greater beneficial use" it will be necessary to shift water from one enterprise to new and different ones that will contribute more to the Philippine economy and development, and to permit multipurpose uses of greater public benefit.

Each of these reasons has a sound basis in fact, and each problem or need described exists. Each condition described can be corrected and each aim accomplished by administrative action under the terms of the permit. These conditions will protect the paramount interests of the state, preserve every right

18. Philippine National Water Resources Council, Interim Rules Governing Application for Water Permit, Dec. 17, 1974.

of the state, and subordinate private uses of water to state control at every stage.

Contrast the new water law recommended for Swaziland.[19] The Swaziland permit is a "protected right," following British terminology, and each permit bears the date on which the application therefor was filed. The law provides:

> Every water right shall be protected from derogation by the exercise of any permit bearing a later date and shall entitle the holder to abstract the whole amount of water specified in the permit before any water is distributed to the holder of a permit bearing a later date.

The permit lasts as long as water is needed:

> Every permit shall state the period of its duration, as determined by the Board in accordance with the following provisions: (a) any permit for [domestic] use, for urban and public water supply, for the irrigation of land and for other purposes of a continuing nature shall be of indefinite duration, and valid until revoked, varied or cancelled in accordance with § 23 [with compensation except in cases of three year nonuse or violation of law]; (b) any permit for industrial purposes shall lapse with the termination of the use of the water for such purposes or with the abandonment of the mine, plant or other facility for which it was used.

These provisions give the Swaziland water user the security denied to his Philippine counterpart. Yet every objective of the Philippine Government can be accomplished under the Swazi law. In Swaziland, as in the Philippines, physical waste can be found. Irrigators use large quantities of water, inefficient means of diversion, and wasteful practices. Cheap water is used instead of expensive equipment or labor. But a Swazi permit will be issued subject to:

> Such terms, conditions, restrictions and limitations as [the Board] deems necessary for the protection of others and the public interest including (a) any limitation whereby the quantity of water permitted to be extracted is restricted to that amount which may be beneficially and economically used and efficiently applied.

If future conditions require the state to impose an increase in efficiency, the permit is also subject to:

> Any requirement for the abstraction and use of the quantity al-

19. Trelease, A Proposed National Water Resources Order for Swaziland, U.N. Doc. No. OTC/SWA/73/002 (1975).

> lowed by the permit to be made pursuant to the regulations or orders of the Board governing efficient water management.

These same conditions in the permit could be used to take care of the second case that bothers the Philippine Council, in which the amount of irrigated land is decreased and less water is therefore needed. Since the beneficial use is decreased the amount of water needed for the remainder of the land would decrease. Further, the Swazi law states that:

> The Board may cancel or vary any permit if the holder thereof voluntarily fails or neglects, without sufficient cause, to apply all or any part of the water to the use for which the permit was issued for a period of three successive years.

Thus, if the decrease in use were temporary, the decrease in water delivery would be temporary, but, if the decrease were permanent, a part of the water right would cease to exist.

In the third situation, the Philippine Council reserves the right to apportion and rotate a short supply among irrigators. The practical problem arises from the fact that the government, seeking to improve rice yields by prolonging the growing season with irrigation, has distributed a large number of pumps to individual farmers in order to enable them to use whatever water is available. Each farmer will have to apply for a permit, and it is felt that minor differences in the time of filing should not be the deciding factor in determining who gets the water. In Swaziland as well, projects are being studied that call for irrigation of small plots of new land by the Swazi people. On some of them the water is quite accessible and may be taken by individual works that may be initiated at different times; on others the government will construct large works and deliver the water to the farmers. In either type of settlement, equality and sharing among the irrigators is thought desirable. The law therefore states:

> If a government irrigation project or scheme or an irrigation project or scheme initiated by an organization or group of water users is to be effectuated by permits issued to individual water users, the government, industry, department or agency, or the organization or group, may apply to the Board for an order setting aside or reserving a specified quantity of water for the irrigation of all irrigable lands to be served by the project or scheme, and the Board may issue such order and thereafter all permits issued for the irrigation of such land shall bear the date of the application for such order.

> All permits bearing the same date shall entitle the holders thereof to a prorata share of the source of water insufficient to supply all such rights in full.

The fourth concern of the Philippine Council is that of the small farm which is swallowed up by a large project. It is contemplated that the land will continue to be irrigated, and what is actually involved is the substitution of the project's right for the old individual right. This would be done without compensation. The farmer's facilities would be rendered useless, however, and he would bear a double burden if he must pay for his own works and a full share of project costs as well. Contrast the Swazi solution:

> If as a result of variation or revocation the holder of the varied or revoked permit can be supplied with water by a government or private scheme or project, or a local authority, in favor of which the permit was revoked or varied, damages shall be limited to the unamortized portion of the investment in water works rendered useless or unnecessary.

Lastly, the Philippine permit was made revocable at the will of the Council so that it might keep up with progress and shift water to new enterprises that will contribute more to the country's development, or to government multipurpose projects. Such opportunities for water to move to higher and better uses will occur in Swaziland as well. If a new government scheme is planned, and it is found that an incompatible existing use must be ended or that the water must be acquired for the project, then:

> If the [government], a local authority, the Electricity Board, or any ministry, department or agency of the government constructing or operating a government scheme, project or water work, desires to acquire for its purposes any existing water right, servitude or land, it may . . . acquire such water rights, servitude or land, or such portion thereof as may be necessary, by expropriation and the Acquisition of Property Act shall . . . apply to such expropriation and the compensation . . . to be paid therefor.

Swaziland has large reserves of coal and is highly mineralized, and if a mining enterprise should in the future need a firm supply of water it could approach any one of a number of farmers who have high priority water rights and work out a transfer:

> The Board may authorize the use of all or part of the water to be abstracted pursuant to permit to be changed or transferred to a different use or place of use by the same or another person if a

> change or transfer is effected by a surrender of the permit and the issuance of a new permit or permits bearing the same date.
> In proceedings for obtaining approval of the Board for any change or transfer, . . . the Board shall approve and allow changes and transfers . . . only if it is satisfied that no injury will occur to the water rights of other persons, that the new use or place of use will be in the public interest and in conformity to or compatible with a water resources plan relating to the source or area, provided, that in appropriate cases the Board may inquire into the adequacy of the consideration paid to the person making the transfer and as to whether permitting the transfer will be to the best interests of such person.

The transaction would be the same as if the mining company needed the farmer's land. Since the company will in fact produce greater wealth than does the farmer, it will be able to afford to buy out the farmer's interest to give him a substitute in money that will replace the foregone income from farming. The state will control the transaction, protect its interest, and must agree that its goals and plans are furthered by the shift. The last proviso illustrates state retention of control over a social factor. If the transferor is a Swazi farmer, the transaction can be scrutinized to see that he was not overreached in the bargaining process and that he has other opportunities he can grasp, and has not merely sold his birthright for a mess of pottage.

To summarize, in both countries and under either form of law waste can be prevented, forfeiture imposed for nonuse, shortages prorated among similarly situated irrigators, large projects substituted for individual works, and water moved to higher and better uses. Under the interim rules of the Philippines this is accomplished by telling the water user that the initial quantity of water allotted to him may be reduced at any time for someone else's benefit, and that his entire water right may be taken from him at any time the government or someone else needs it. This is overkill—more than is necessary for the purpose. Though these same objectives are reached in Swaziland, there the water user, whether African farmer or mining executive, knows he will be allowed the quantity needed for efficient accomplishment of his use. He knows whether or not he must share and, if he must, with how many. He knows that if he needs a firm supply and the source is variable, he must arrange for storage. He knows that, if the government takes back its grant of water, it will compensate him for the loss.

The Philippine Water Council and its staff are men of good will, public servants seeking to advance the best interests of the government and to wring the last benefit from water use. But since the intent is to accomplish much of the development of the Philippines through the private sector—by individuals, cooperatives, and businesses engaged in food production and processing, raw material extraction and processing, manufacturing, and mining—the question may be asked whether such tenuous rights may not frighten away such water users and actually prove counterproductive in achieving the government's objective. When the present crisis is over the interim regulations are to be replaced with a permanent water code. At that point, the Philippine government might well consider whether its interests may be better served and more benefits obtained by giving greater assurance to those whose energies must be enlisted in the effort to develop the nation's water resources.

V. CONCLUSION

I might close with an anecdote. On a mission to Jamaica for the Food and Agriculture Organization I recommended provisions similar to those suggested for Swaziland.[20] My charge in the assignment to Jamaica was to draft a law which would give aid and encouragement to the developing Jamaican economy—based largely on irrigated sugar cane with a more recent overlay of tourism, mining, and manufacturing—and to protect the island's cities and tropical environment. In submitting various drafts I encountered some resistance to American language and quietly shifted from "prior appropriation" to the British "protected right," with which the Jamaicans felt more comfortable. During the process a counterproposal was made for an "administrative system" of permits covering the "expected constant yield," and for the rationing of water in times of shortage based on "the value of the particular uses" and "the national interest." The supposed simplicity of this, compared to my allegedly complicated recommendations, had a certain appeal, but eventually my proposal won out. It has since received cabinet approval, although it has not yet been adopted by the Parliament.

20. Trelease, A Proposed Water Resources Act for Jamaica, FAO Doc. No. AGL:SF/JAM/12 (1973).

During the discussion, the Jamaican codirector of the project probed into how operations would actually be conducted. He was quick to see the type of pressures that could be brought and the difficult decisions that would have to be made in determining the size of the "expected constant yield" and whether one more permit could be squeezed into it. He also saw the ease with which he could issue permits that prohibited interference with previously issued protected rights. And he was enchanted with the notion of handling shortages by priority coupled with temporary transfers of water, as in New Mexico.

"I see—under the other system I might have to choose between shutting down a new hotel or starving some cane farmers. But one or two farmers' quota would supply the hotel, and under your law I could just notify the hotel manager to start negotiations. Why, I might even act as broker and help them get together."

I believe that man caught a glimpse of what water law is all about.