never be capable of leaving Russia. One can understand why the Russia Miss Stalin confronts, the Russia which she claims that her father always loved, was an abstract mystical entity; privilege and wealth have always separated her from social reality. The most characteristic Soviet experience is to stand in a queue for bread; this does not seem to be a thought that Miss Stalin has ever had. It would be too prosaic for her.

There remains one aspect of her book which is of real value. She does reveal in how impossible a position we put the children of major figures. They lead private and not public lives, but their private lives are distorted by the way in which they are exposed to the public gaze. Of Stalin's children one became a drunkard and one has now written memoirs; but one became a hero. Yakov, the son of Stalin's first marriage, who was largely disowned by his father seems to have been, and not only from this account, a straightforwardly moral and finally heroic figure who defied the Germans in his prison camp and was murdered by them. Miss Stalin when speaking on the power of Truth and Goodness to survive falls victim to her own rhetoric; on her half-brother's simple nobility of character she sounds more truthful than at any other point in her unattractive book.

Alasdair MacIntyre†


This work now consists of three volumes, with more promised; there are eleven contributors plus an editor-in-chief. It thus adds another title to a slowly growing list of multi-volume, multiple-author treatises such as the American Law of Property and the American Law of Mining. The idea behind the genre is that a number of writers, each expert in the branch of the subject with which he deals, can produce a more comprehensive, better-thought-out treatment of a subject than could a single author. The idea has merit, for the growth in the complexity of the law has rendered many subjects beyond the capacity of a single author to master and to explicate, especially if he is expected

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to deal with the related learning of such other disciplines as economics, political science, statistics, or psychiatry.

Water law is a subject that lends itself to the multiple-author approach. A comprehensive text on the subject should treat administrative law (both state and federal), local government law, constitutional law, federal jurisdiction, international law, state and local tax law, tort law, property law, condemnation law—as well as such traditional water law questions as riparian rights, appropriation, the permit system, transfer and termination of water rights, pollution, and so on. The legal analysis of these topics should be informed by some knowledge of ground water geology, hydrology, welfare economics, history, and politics. Few men, even in a lifetime, can learn it all, much less set out this learning in a comprehensive and comprehensible textbook.

There are, however, grave risks in the team approach to a legal treatise. There must be an editor-in-chief who plans the work so that the subject is fully covered, without omission or overlap. But even a good plan won’t produce a good book unless the editor-in-chief can cajole or coerce the authors to abide by the plan. Since law professors—and other legal experts—are not accustomed to team discipline, the editor-in-chief faces a formidable challenge.

The editor of this book, Professor Robert E. Clark, of the University of Arizona Law School, did not overcome these obstacles and thus produced a book sorely lacking the unity and coherence that characterizes the better works of solitary authors. I do not know whether the trouble stems from the plan itself or from its execution by the contributors. In either event, the ultimate responsibility rests with the editor, for only he can impose order on the product.

To be blunt, this work is not a treatise at all; it is a collection of individual papers, of varying quality, dealing with assorted problems of water law. Taken as a whole, the three volumes are repetitious, inconsistent, and episodic. Most of the authors apparently did not see the writings of their colleagues, and the editor provided little coordination between chapters. Cross-referencing between chapters is minimal, and the content of one chapter seems to have had little influence on the scope and thinking of other chapters. There is, moreover, little apparent logic in the arrangement of the chapters, suggesting to the cynic that they appear in the order in which they were turned in. Since I am reviewing a book more appropriately entitled “Selected Essays on Water Law,” my job seems to be that of reporting on the several essays as isolated pieces of work, just as they appear in the collection.

Most of the better essays are found in Volume Two, a circumstance
I do not attribute to any organizing principle. Professor Sax of the Michigan Law School has in Chapter 8 of this volume made a valuable contribution to a difficult and diffuse subject, the law of reclamation. Reclamation is not easy to write about because the law is largely found in widely scattered, ambiguous, and inconsistent statutes, in Bureau of Reclamation contracts and practices, and in opinions of the Solicitor of the Interior Department, rather than in case law. Sax brings order to this jumble, beginning sensibly with a brief history of reclamation and working his way through the big and little problems of initiating, authorizing, financing, and constructing a project, the acquisition of water rights for the project, the delivery of water to the farmers, the farmers' water rights and their repayment obligations, and the 160-acre limitation. In the whole and in each section, the writing is a model of organization and clarity. Only occasionally does the author stumble over a rough place, as in his discussion of conservationists' standing to oppose dam-licensing by the FPC, and even here the relevant cases are cited. Elsewhere Sax discusses the public notice requirement for commencing a project but fails to talk about another prerequisite of commencement, confirmation proceedings on the contract between the Bureau and the irrigation district. Such lapses are few and are more than compensated for by the overall excellence of the chapter. For example, Section 116.1 explores the unfamiliar question whether the Secretary of the Interior can transform reserved land of the United States (reserved, say, for forest purposes) into a reclamation project. Not an earthshaking question, perhaps, but the discussion is a model of careful, thoughtful, and thorough scholarship, in which a mess of statutory materials is sorted out, the issues set forth, and persuasive conclusions presented—on a point, so far as I know, not previously discussed in print.

Professor Sax has opinions without being opinionated and his views permeate his essay. I have no difficulty with the proposition that a treatise (and a fortiori a collection of essays) is an appropriate place for a legal scholar to set forth his notions on policy. Occasionally, however, Professor Sax embraces a policy position without clearly stating either the position or his reasons for supporting it. His discussion of the 160-acre limitation suffers from this fault. Section 5 of the original Reclamation Act of 1902 limits the sale of project water to parcels of

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1. 2 WATERS AND WATER RIGHTS § 113.3 (R.E. Clark ed. 1967) [hereinafter cited as WATER RIGHTS].
2. Id. § 114.
160-acres or less. Owners of more land may retain this excess land but can get no project water for it, or (as the rules developed) can grant the Bureau power of sale over the excess lands and thereby receive project water until a sale is consummated. Professor Sax is a great believer in the 160-acre limitation, and he enveighs against its evasion with a fervor reminiscent of an earlier prophet, Paul Taylor, whose first jeremiad appeared in the pages of this journal over ten years ago.3

Just why Sax is so devoted to the policy is harder to discover. A simple and perhaps acceptable explanation is that Congress enacted it, and therefore administrators should enforce it. But Sax never says this, and such a rationale might cause him some embarrassment, inasmuch as he seems to lack the same warm regard for Section 8 of the 1902 Act, which directs the Secretary of Interior to “proceed in conformity with ... [state] laws” which relate “to the control, appropriation, use, or distribution of water used in irrigation.”4 It is more likely the case that Professor Sax approves the 160-acre limitation because he thinks it is a good thing for society. Just why it is a good thing he does not make clear. He says the original purpose was to prevent land monopoly and speculation—which may be, but are not necessarily, related phenomena. Perhaps Sax embraces the Jeffersonian ideal of a democratic society based on the sturdy, independent yeoman tilling the (irrigated) earth. The evidence rather supports the latter explanation, for Sax contends that no project water should be delivered to any farm unless it is owner-occupied and owner-operated.5

Ironically, experience indicates that in some instances at least a rule of owner occupation would do little to promote the policy of the 160-acre limitation. For example, in attempting to sell excess lands of the DiGiorgio Company in the Central Valley of California, the Bureau first adopted a regulation forbidding sale to any person whose purchase of the DiGiorgio lands would cause his total holdings of land irrigated by reclamation water, anywhere in the country, to exceed 160 acres. Buyers could not be found, and consequently DiGiorgio went on operating its 4700 acres. Later, the regulations were modified to allow owners of 160 acres in other projects to buy and obtain water for another 160 acres in the district where the DiGiorgio land lies, and after five years of effort and further removal of restrictions on buyers, the Bureau has been able to sell about three-quarters of the land.6 If

5. 2 WATER RIGHTS § 121.
the bidding was cool when farmers in other reclamation districts were excluded from the market, it is not likely to get warmer when they and other purchasers are told that they must occupy and operate the new property in order to bid on it.

My complaint with Sax's work on the acreage limitation question is that he leaves at large the justification for the rule, giving the reader no basis for judging the validity of his conclusions, much less affording the reader an opportunity to form his own views. If Sax's argument is that the nation that farms together stays together, I am a little skeptical of its validity in the latter half of the 20th century. Even if it were true that the family farm makes for a better society, I doubt that the 160-acre limitation is a sufficiently powerful weapon to stop the movement toward large, corporate farms operated by hired labor and owned by absentee capitalists. If a 640-acre farm in the Central Valley of California will have a net revenue of $19,500, but a 160-acre farm a net revenue of only $2,750,7 inexorable economic pressure will in time foreclose on the old family homestead.

The real problem, as I see it, is what Sax usually calls speculation, what I would call subsidy, and what Congressmen call pork barrel. Under the reclamation program, water is sold to farmers at prices far below actual cost. The subsidy is openly granted through interest-free loans for periods of fifty years and up, and through maintenance work (such as channelization) performed without charge to the beneficiaries. It is covertly given, many people think, by overcharging hydroelectric power customers and by assigning large portions of the costs of projects to non-reimbursable items such as navigation, flood control and recreation, where the benefits do not justify the write-off. If the 160-acre limitation has a contemporary raison d'etre, it is the spreading of these subsidies over a larger group by dividing the land into smaller parcels. While the policy may keep the rich from getting richer, it can hardly be characterized as an act for the relief of the poor, when one realizes, for example, that one of the 160-acre parcels offered for sale upon the breakup of the DiGiorgio estate was priced at $294,5008—a price fixed upon a valuation of the land without project water. The new owner would, of course, get the cheap water and his sales price would presumably increase to reflect the subsidy. Rather than trying to

8. Hudnall, supra note 6, at 24. The cheapest parcel on the block at the first sale was a 40 acre parcel priced at $64,300. At this sale, only one parcel in fact sold, a 67-acre lot which went for $108,000. See also Rummel, supra note 7, at 48.
spread the subsidy among a larger number of quite prosperous farmers at the expense of farming efficiency, I would suggest that we face the fact that the 160-acre limitation doesn’t really work, and consider abolishing it and pricing water at its real cost.

It may be that subliminal notions of policy also lead Professor Sax to the extreme propositions of Section 117.1. In the general context of acquisition of water rights for reclamation projects, he has occasion to discuss the reservation doctrine, the roots of which go back to Winters v. United States in 1908, but the flowering of which occurred in 1963 in Arizona v. California. In brief, the reservation doctrine holds that when the United States withdraws land from the public domain so that it is no longer open to entry under one or another of the land grant acts, there may be reserved from any stream within or bounding the reserved land sufficient water to accomplish the purposes of the reservation. In appropriation states, at least, the water right thus reserved has a priority dating from the time of the withdrawal. The right is thus superior to all subsequently initiated state-created water rights (even if the federal right has never been exercised), although it is inferior to state-created rights arising before the withdrawal. There is a good deal of uncertainty about the doctrine: (1) does every withdrawal reserve some water or must an intent to reserve water be manifest? (2) how much water is reserved by a withdrawal and by what criteria is the quantity determined?

Professor Sax sees little difficulty in these questions. Specifically, he sees “just a small step” from present doctrine to the proposition that withdrawal of a damsite reserves enough water to fill the reservoir. I see two serious objections to this view. First, Winters v. United States and Arizona v. California hold that the creation of Indian reservations pursuant to treaty or statute was intended to reserve sufficient water to enable the Indians to accomplish the purposes thereof, namely, the cultivation of the land. It does not follow that the reservation of power sites under different statutes was intended to reserve enough water to fill the reservoir, whenever (if ever) a dam should be built. Certainly the two most important statutes of general application to dam-building on reserved lands look to the preservation of state-created rights vesting prior to commencement of the federal project: Section 27 of the Federal Water Power Act, governing FPC licensing on reserved

11. 2 WATER RIGHTS § 117.1.
lands, provides for the protection of vested rights as does Section 813 of the Reclamation Act, applicable to all reclamation projects. Sax fails to deal with the differences between statutes creating Indian reservations and statutes relating to damsite withdrawals and reservoir construction.

Second, whatever merit there may be in the legal theory supporting the reservation doctrine in general, there are strong policy considerations that argue against extending the doctrine to the right to fill a federal reservoir and thereby displace existing uses in favor of new uses generated by the project. For example, if Professor Sax's theory were applied to Hoover Dam, and if the damsite had been reserved before irrigation commenced on the Colorado River, the entire water supply of the Imperial Valley's 500,000 acres of prime, cultivated land would be available for redistribution to new users. The consequences to the old users are serious enough: destruction of capital values, disruption of existing economies, and drastic frustration of expectations. Sax's reliance on *Berman v. Parker* to rebut the accusation of unjustified injury to private expectations is misplaced: in *Berman v. Parker*, the property owners got paid; under the reservation doctrine they will not.

But in addition to the havoc that would be inflicted on prior users by the extension of the reservation doctrine to damsite withdrawals, there is the fact that capital investment in water resource development will be deterred. The magnitude of the potential effects of such an extension, both in deterring investment and in upsetting expectations, can be seen in *Arizona v. California*, 378 U.S. 546 (1965). There five Indian Reservations in the Lower Colorado River Basin were awarded one million acre-feet of water per year, or about 15 per cent of the Lower Basin supply. Of this million about 200,000 acre-feet had been put to use at the time of trial, although some of the withdrawals dated back to 1865, and the rights they reserved thus had first priority on the lower river. See Master's Report, *Arizona v. California* 127, 350-52 (1960). If the full one million acre-feet is put to use on the reservations, Los Angeles is likely to receive no water from the Colorado River, although it has spent $500 million on an aqueduct to import 1.3 million acre-feet per year. If, on the other hand, *Arizona v. California* had been decided before the construction of the aqueduct, the city would assuredly never have built it; as a result, 500,000 acre-feet of water would have been withdrawn from use until Congress appropriated funds to enable the Indians to use it. This might well have been a long time, since there aren't very many Indians on the reservations, and on at least one there are none at all.

The enormous impact of the reservation doctrine, even if it be confined to Indian reservations and a few other federal establishments, will be more fully understood when it is realized that *Arizona v. California* adjudicated only a fraction of the reservations in the Lower Basin—those lying on the mainstream. Yet, to be determined are the water rights of the numerous reservations on tributaries, one of which—the Navajo—claims 16 million acres. Since the standard adopted in *Arizona v. California* for measuring Indian rights is the amount of water required to irrigate all irrigable acreage, the collision between Indian rights and state-created rights now in use will be jarring, to say the least.

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court, all further private and public investment in water projects will stop on all streams on which federal damsite withdrawals have been made. All investment, that is, except investment by the Federal Government itself. And this is what I meant by suggesting that subliminal notions of policy have influenced Professor Sax's legal analysis. It may be true that the Federal Government is the appropriate institution to develop our water resources. But we should decide that question by examining it, not by extending the reservation doctrine.

Another good essay in Volume Two is Chapter 7, in which Professor Morreale of Rutgers discusses federal powers over water and the interaction between the states and the Federal Government in regard to water development programs. The first half of the chapter is a revision of Mrs. Morreale's definitive article on the navigation power and the no-compensation rule. The revision gains through condensation without loss of clarity or analytical detail.

The second half of the chapter is less successful. Here she deals with other constitutional powers of the Federal Government bearing on water rights and water development. This discussion is devoted principally to the property clause of Article IV, which grants Congress power "to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States." The exercise of the property power has played an important part in the development of the water law of the West, where the United States was the original proprietor of most of the land by virtue of its acquisition through purchase or conquest. The chapter concludes with an examination of various legislative proposals for the adjustment of the relations between the two levels of government.

Professor Morreale's treatment of the property power is competent but less probing than it might be. A formidable challenge, not fully met, is to fit together the Acts of 1866, 1870, and 1877, California Oregon Power Co. v. Beaver Portland Cement Co. and FPC v. Oregon. At root is the structural question of the source of the law governing water rights in the Western states. We know from the California Oregon case that the three acts cited gave great latitude to the operation of state law; we also know from FPC v. Oregon (as well as

from *Arizona v. California*\(^{22}\) that there are limits to the operation of state law. Professor Morreale would have been more sensitive to these intricacies had she discovered *United States v. Hunter*,\(^{23}\) decided by a federal district court in 1964 (and reversed by the Ninth Circuit in 1967 after the chapter was in print\(^{24}\)). Some attention to the *Hunter* case and somewhat closer attention to the *Worswick* case\(^ {25}\) would have shifted her emphasis in Section 102.4(C) backward from the Desert Land Act of 1877 to the Act of 1866, which in California, at least, is the critical legislation.

When Professor Morreale comes to an evaluation of the continued vitality of state law in water resource development,\(^ {20}\) her understandable distaste for the overreaching of the Western proponents of water rights settlement legislation\(^ {27}\) seems to have blinded her to some of the genuine concerns about state-federal relations. In discussing the effect of federal legislation on the power of states to exercise a measure of control over federally financed projects, she makes this bizarre statement:

"There is, of course, no dispute that these enactments do have language indicating some concern for state control over water resources. But quaere, how many of these provisions were merely "boiler plates" inserted to assure passage. Even if they were true policy preferences, they did no more than subject certain projects and certain administrative functions to state control."\(^ {28}\)

I should have supposed that even plain vanilla "boiler plate" has some purpose, and that "'boiler plates' inserted to assure passage" are more purposeful than mere boiler plate. As to the last sentence quoted, I don't know how the reader is to judge Professor Morreale's assertion, since the "enactments" and "provisions" in question are never specified.\(^ {29}\)

Statutory construction is hard enough when the text and the

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24. —F.2d — (9th Cir. 1967).
26. 2 WATER RIGHTS § 102.7.
27. See id. §§ 107 et seq.
28. Id. § 102.7, at 78.
29. The only specific reference given to identify "these enactments" and "these provisions" is *Hearings on the Water Rights Settlement Act, Before Subcommittee on Irrigation and Reclamation, Senate Comm. on Interior & Insular Affairs, 84th Cong., 2d Sess. 89* (1955). This is a statement by Senator Hruska of Nebraska, which cites no federal statutes at all, the only specific citation being to a provision of the Nebraska Constitution. Later in the text, Professor Morreale does identify at least some of the federal acts in question: Section 8 of the Reclamation Act of 1902, 43 U.S.C. § 383 (1964), Sections 9(b) and 27 of the Federal Water Power Act of 1920, 16 U.S.C. §§ 802(b), 821 (1964), and Section 18 of the
legislative history is before you; it is impossible when the statute to be construed is not even identified. Apparently, Professor Morreale has suspended her critical faculties in response to the equally uncritical contentions of the proponents of the water rights settlement bills.

There are three other chapters in Volume Two. Chapter 9, on interstate streams, is an excellent essay by Professor Corker of the University of Washington, reflecting both the author's extensive experience in interstate stream litigation and his superb legal scholarship. Chapter 11, by Professor Utton of New Mexico, deals successfully with the international law of streams, although it could have been improved by tying the treatment of the Mexican and Canadian water treaties closer to the earlier discussion of equitable apportionment and basin development. Also neglected was the opportunity to use the treaties to illustrate problems of drafting and interpretation, as might have been done with the Mexican Treaty in Section 152.2(C), which discusses the Colorado River salinity problem.

Chapter 10, on Indian water rights, is adequate but not up to the standards of the preceding four chapters. It also demonstrates the organizational weakness of the treatise, and the inability or unwilling-

Boulder Canyon Project Act of 1928, 43 U.S.C. § 617q (1964). In the two pages devoted to the interpretation of these statutes, she accepts uncritically the conclusions of others, making no effort at an independent analysis of her own. It is not enough to knock over the straw man "that federal legislation has . . . in the past worked a transfer of all federal interests in western water to the states." 2 WATER RIGHTS § 102.8, at 81. The question is, what is the proper accommodation between the two governments under statutes that seem to recognize the continued validity of state law.

I wish that Professor Corker had found the space to take up some of the troubling implications of Hinderlider v. La Plata & Cherry Creek Ditch Co., 301 U.S. 92 (1938), wherein Mr. Justice Brandeis upheld the validity of an interstate compact against the claim of an appropriator that it infringed on his vested rights. Under state law, the appropriator had a call on the river whenever he desired water (subject to the claims of any prior appropriators); under the compact, the stream was rotated between the two states on a ten-day basis. Thus during the ten days the stream belonged to the other state, the appropriator was deprived of his right to use water. Mr. Justice Brandeis held that all state-created water rights are subject to the limitation of the equitable apportionment doctrine, according to which some of the water originating in one state may belong to another state. Brandeis further held that a compact was as appropriate an instrument for invoking the principle as an adjudication by the Court. But does it follow that local priorities may be upset, without just compensation, by an interstate compact? If in State One, A, B, and C have appropriative rights in that order of priority, could an interstate compact invoking the doctrine of equitable apportionment reorder the priorities C, B, and A? Could a compact make an equitable apportionment by giving all the water in the Blue River to State One and all of the water of the Green River to State Two, thus expropriating the water rights of users of the Green in State One?

The Mexican Water Treaty of 1944, 59 Stat. 1219, T.S. No. 994 (1944). The construction question arises over the phrase "from any and all sources" in Article 10 of the Treaty and the phrase "whatever their origin" in Article 11, both of which relate to the allocation of water to Mexico. Although the United States has managed to achieve a physical solution to the immediate problem of the quality of water delivered to Mexico, the long range prospects are not good, for full development of the river will increase its salinity at the border and physical solutions will not suffice.
ness of the editor to mold his material into an integrated whole. There is little excuse for a separate chapter on Indian water rights, for the subject is merely a branch (or perhaps the trunk) of the reservation doctrine. Yet Indian rights are treated in this chapter in isolation, without any reference whatever to the discussions of the reservation doctrine in two other chapters of the same volume. The reader who would like to read everything in the treatise bearing on federal reserved water rights has quite a chore ahead of him, for the index is virtually worthless and there is no cross-referencing to this chapter from other chapters, or vice versa. Perhaps an adequate index will be forthcoming when the treatise is complete; in the meantime the reader is left nearly helpless. The author of this essay, Mr. Edward Clyde, a prominent practitioner in Salt Lake City, must share some of the blame for the isolation of the chapter. Even if he did not see Professor Morreale's chapter, he could have cited her article on the navigation power, since it appeared in print four years before this volume was published.

As we depart Volume Two, the quality of the treatise drops precipitously, with one notable exception. In Chapter 6, the last chapter of Volume One, Professor Sato of the University of California at Berkeley undertook the burdensome task of analyzing the tax aspects of water development and use. He deals not only with federal income tax questions but also with local property taxation of water rights and irrigation works. The research on the latter questions was obviously difficult, for a large number of jurisdictions is involved and no unifying principle operates in the area. He nonetheless makes his chapter, while not a positive joy to read, a well-integrated, well-written, and, so far as I can tell, a well-thought-out piece of work.

The remaining essays in the collection range from mediocre to plain bad. In the middling class is Volume Three, by Burton J. Gindler, a Deputy Attorney General of California who specializes in water law. The entire volume is devoted to pollution and is unforgivably padded. The last 118 of its 527 pages reproduce verbatim the 1909 Canadian Treaty and the 1944 Mexican Water Treaty, which touch only incidentally on pollution, a couple of long federal statutes, and some executive orders, regulations, and other administrative publications which do relate to pollution—all without the slightest comment, note, or annotation. Publishers, editors, and authors who commit this sin should be condemned to spend eternity reading their own filler over and over. The padding aside, there is nothing terribly wrong about the volume, but nothing especially right either. Much of the
discussion of private remedies for water pollution is taken from the Restatement of Torts, but little is added to that work other than translating it into passable English. The treatment of the state and federal regulatory schemes is more original, and the author has had the good sense to discuss not only the stick in the federal program but also the carrot, which in my opinion is likely to have the greater effect.

The chief weakness of the pollution chapter is its failure to deal with the excellent economic studies of water pollution control, exemplified by the works of Allan V. Kneese. In order to understand why our waters have become so befouled the reader needs at least an introduction to the economic concept of externalities, the disparity between private costs and social costs. In my view the limits on legal solutions to water quality problems are likely to be set by economic forces; feasible legal solutions will depend on viable economic solutions. For this reason, the reader should be told about the modes of measuring social costs and the techniques for forcing firms to absorb these costs. Lastly, some thought should have been given to the soundness of our present approaches to pollution control, whereby quantitative standards of purity are set more or less arbitrarily, with enforcement left to such traditional legal means as injunctions and fines. The fact may be that some streams are more valuable for waste disposal than for other purposes. An economist would say that if those using the stream for waste disposal pay the cost of foregone alternative uses, pollution of the stream may be the proper allocation of the resource. Our present approach to pollution, while not positively forbidding this course of conduct, certainly does not encourage it. I think it likely that if we ignore economic forces, pollution control through legal sanctions may be just one more "noble experiment," doomed to the fate of the rest.

Turning back to Volume One, and excepting the contribution of Professor Sato, we find a hodgepodge of very limited utility. Chapter 1, by the editor, Professor Clark, is labelled "Plan and Scope of the Work," but would be more accurately styled "Random Thoughts on Water, Water Institutions, and Other More or Less Germane Topics," with emphasis on "Random." In the 55 pages that form this Chapter, I counted just eight references to other chapters of the work, and these were general in nature, the internal evidence suggesting that they were added after the chapter was in manuscript. In any event, no plan or scope of the work is revealed in this chapter, and most of what it says is incomplete, episodic, and covered elsewhere in the treatise at greater length and depth.
The purpose of Chapter 2 is similarly obscure. It affords an overview of what might be called the property law of water, overlapping with Chapter 1 in places and substantially identical in subject matter to Chapter 4, the co-author of which was again Professor Clark. Moreover, if the volumes promised for the future come along, they will presumably treat the riparian, appropriation, and statutory permit systems in depth and thus supersede both Chapters 2 and 4. The author of Chapter 2, Mr. Wells A. Hutchins, favors the black-letter approach, with the typical section a page or less in length. Thus Section 16.5, entitled “Transfer or loss of riparian rights,” contains nine lines of text, three sentences, and citations to four cases, the latest of which was decided in 1874. One might infer that transfer of riparian rights is a pretty simple matter and that private ordering will work nicely to reallocate water to higher uses. If the California experience is any guide, this is far from correct, and a full treatment of the problem and its possible solutions is in order.

Section 18.3 fails to meet even the generally low standards of this chapter. After referring to a thought-provoking exchange between an economist and a law professor regarding the legal and institutional obstacles to the transfer of appropriative rights, Mr. Hutchins declares:

Whatever may be the effect of water doctrinal restraints on free transfers of water rights in a given area, this fact stands out clearly: the Fifth Amendment was added to the United States Constitution at the beginning of our national history, and the Fourteenth Amendment was added in 1868; therefore, every subsequent statute, court decision, or acquired right of appropriation carried with it this fundamental constitutional inhibition regarding due process—an inhibition which applies to rights in land and other property as well as in water.

Period, end of section. This simply won’t do.

Chapter 3, by Professor Albert W. Stone of Montana Law School, deals primarily with boundaries, ownership of lake and river beds, accretion, reliction, and public access to water for recreation use. While these are problems of considerable interest, I question their relevance to a water law treatise. If the chapter had been well executed I suppose I would not carp about relevance. But again, it covers ground covered in Chapters 1, 2, 4, and 7. In addition, the organization is hard to fol-

32. 1 Water Rights § 18.3, at 83 n.85.
33. Id. § 18.3, at 83.
low and the writing obscure. The author seems overwhelmed by his material and as a result much of the discussion lacks focus.

Chapter 4, by Professor Clark and Mr. Clyde O. Martz, now Assistant Attorney General in charge of the Lands and Natural Resources Division, reflects, on the other hand, the opposite defect: instead of getting lost in their material, the authors slide along on top of it, scarcely ever reaching plow depth. The basis for much of the chapter is Volume Five of Powell on Real Property, which contains a brief, admirable treatment of classes of water and water rights (the subject matter of this chapter) and which did not need rewriting unless additions were to be made. An addition which might have been made but wasn't would have been a careful analysis of Keys v. Romley, a recent California case dealing with discharge of drainage water. The case is important and deserves critical attention, especially with respect to its impact on land development.

Though by no means the worst part of the work, Chapter 5, entitled "Water Economics: Relations to Law and Policy," arouses my sharpest disappointment. The author, Professor Ciriacy-Wantrup, a distinguished resources economist at the University of California, could have provided significant help to water lawyers. Water allocation problems that call for economic analysis are as plentiful as economic learning among lawyers and judges is scarce. The problems vary from the most general—how to design a new system for allocating water—to the most particular—how to decide a controversy between a subsequent upstream manufacturer who uses the stream for cooling his equipment and a prior downstream proprietor of an ice business that suffers because the water temperature has risen. As an example of the problems of designing a new allocation system, Iowa has by statute limited permits to a maximum period of 10 years, renewable as a matter of administrative discretion on standards not unduly caricatured as "the true, good, and beautiful." Will investment be deterred by this system? Nobody seems to know—or to care very much. An economist should at least make us aware of the problem, and he might

34. 64 Cal. 2d 396, 412 P.2d 529, 50 Cal. Rptr. 273 (1965).
35. IOWA CODE § 455A.20 (1962). The 1957 Iowa permit system, which radically overhauled the existing structure, is found in IOWA CODE §§ 455A.1 et seq. (1962). For an enlightening study of the operation of the statute, see N. Hines, A DECADE OF EXPERIENCE UNDER THE IOWA PERMIT SYSTEM (Agricultural Law Center, College of Law, Univ. of Iowa, Monograph No. 9, 1966).
36. In haec verba: "... will not be detrimental to the public interests." IOWA CODE § 455A.20 (1962). Actually, this is the standard for granting the initial permit, and I have assumed it will apply to renewals. If not, there is no standard for renewal at all.
37. The generally excellent study by Hines, supra note 35, ignores this question.
be able to provide some answers. Similarly (and perhaps understandably, since the decision was in 1915) the court held for the prior user in the case of the ice maker who found his river heated, ostensibly because the defendant's use was unreasonable, but in reality, I suspect, on the ground that plaintiff's ice business was there first. The result may be good economics (although the granting of an injunction raises serious questions); but if it is, the judges of that day did not know it, and most lawyers and judges would not know it today. Again, it is appalling to me that in 1967 a unanimous California Supreme Court would allow a municipal dam builder to destroy a quarter-of-a-million dollar business without one cent of compensation and without one word about economics or resource allocation in its opinion. The closest the court came to recognizing the resource allocation problem was in this language:

Is it "reasonable" then, that the riches of our streams, which we are charged with conserving in the great public interest, are to be dissipated in the amassing of mere sand and gravel which for aught that appears subserves no public policy? ... We are satisfied that in the instant case the use of such waters as an agent to expose or to carry and deposit sand, gravel and rock, is as a matter of law unreasonable. 

Summary judgment denying compensation.

Ideally, Professor Ciriacy-Wantrup would have reviewed the entire treatise and provided an economic analysis where relevant. But more modest than this, and extremely useful, would have been a chapter discussing selected problems from the economist's viewpoint, with suggestions to lawyers about how an economist's expertise could be put to use in solving water allocation problems. As the chapter stands, no references whatever are made to other chapters of the book, and no concrete problems are subjected to economic analysis.

Instead, after finally working one's way through the dense, well-nigh impenetrable prose of this chapter the brilliant shaft of light in the clearing carries this illumination: "But in spite of—or possibly because of—differences in basic orientation, positive economics and law have many complementary relations. To explore and to strengthen these relations will benefit both social science disciplines."
Book Reviews

Judged as a collection of essays, about half of the material in the three volumes is worthwhile. Judged as a treatise—"a methodical discussion or exposition of the principles of the subject"—the work is a failure, and a tragic failure at that. Three large opportunities were squandered: there was (and is) a need for an up-to-date, comprehensive, well-organized treatise on water law. There was (and is) a need to demonstrate the relevance and utility of economics to natural resource allocation by legal institutions. There was (and is) a need to show by example that a multi-volume treatise written by a team of experts can at once be more enlightening than, and just as coherent as, a single author work. It is a pity that not one of these opportunities was realized.

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