North Dakota Law Review

Volume 51 | Number 2 Article 16

1974

Book Reviews

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BOOK REVIEWS

DAMMING THE WEST. By Richard L. Berkman and W. Kip Viscusi. New York: Grossman Publishers, 1971. Pp. 240. $2.50 paperback.

The co-authors in the Preface to the book explained that the report was written to provide a constructive, new perspective on the goals and operation of the Bureau of Reclamation. The material for the book was collected by a Nader Study Group made up of college students and postgraduates. It was difficult to imagine how a group of students with almost a totally eastern metropolitan background could understand the importance and philosophy of water development in the western states. Such a group could not reasonably be expected to make an objective and substantive analysis within the time and effort expended. The tone, nature and questionable objectivity of the entire report is reflected in the first sentence of Chapter 1: "Who gives a damn about the Bureau of Reclamation?"

The group's interest in results seems to be only to distort factual findings to support negative conclusions concerning the effectiveness of the Reclamation program. They excerpt fragmented quotations from many sources to support their contentions but never do they question or attempt to analyze the reasoning behind these sources to determine their authority and substance.

Throughout the book it is obvious that the Task Force worried itself about the environmental consequences of Reclamation develpment. However, the group did not comprehend or refused to accept the fact that man's efforts to provide a water supply has meant a vastly improved circumstantial environment, rather than the naturally hostile land which the first explorers and settlers found as they pushed westward to the Rocky Mountains and beyond. Nor does the task force mention a well-known fact among knowledgeable sportsmen that some of the best "fishing holes" in the west are Reclamation reservoirs.

The Task Force seems preoccupied with finding substance to such absurd allegations as that crops produced on Reclamation irrigated lands should all be considered surplus or that every job on, or created by an irrigated farm, is costing someone elsewhere a job. To

accept such comments at the face value placed upon them by the Nader Task Force would close the door on virtually every agricultural area in the West where water truly is life.

The Task Force is critical of the Congress for succumbing to what it terms a "pork barrel" approach to water development. Yet it failed to recognize that as much detailed and careful planning goes into every Reclamation project during the processes of authorization and construction as in any other natural resources program in the Government. The review process permits agencies with related interests to examine Reclamation proposals in great detail. All comments follow project feasibility reports through the Office of Management and Budget to the Congressioanl committees.[1]

The emphasis for many years as far as irrigation is concerned has been not to bring new lands under cultivation but to provide a supplemental water supply for lands with insufficient water for stable production and to supply presently producing dryfarm lands with irrigation water to permit hem to diversify—to get away from a one-crop economy. In most cases, this actually means a reduction in price supported crops.

However, irrigation is only one facet of a multipurpose program, the total objective of which is to assist in achieving the economic, social and environmental goals of the arid West. The Bureau of Reclamation is also devoting more time and attention to municipal and industrial water supplies. Presently nearly 15,000,000 people are supplied with water for domestic use from Reclamation facilities. The same is true of recreation and fish and wildlife benefits which Congress has recognized to be of increasing importance in recent years. The Bureau is presently conducting a far reaching program of research including a significant effort in atmospheric water resource. This research program will make Bureau of Reclamation facilities even more important for control and storage purposes by adding snowfall in the mountains and precipitation elsewhere as a resource in times of drought. Yet this program and the program of the Water Resources Council to develop and update national water policies are caustically criticized by the Nader Task Force in its apparent lack of understanding and seeming determination to support preconceived conclusions.

Chapter 1 of the book is largely introductory, historical in terms of Reclamation's physical accomplishments, and explanatory in outlining the thrust of the following chapters in the book. The first half of Chapter 1 is reasonably accurate. From that point forward a series of half-truths, distortions, misrepresentations and/or total

1. For a solid analysis of the Bureau of Reclamation and its procedures, see W. WARNE, THE BUREAU OF RECLAMATION (1973).

falsehoods follow throughout the remainder of the book. An example of the misleading statements is the following:

Allegation: "Why does the Bureau use one of the lowest discount rates in Government and give an unjustified bias to its benefit-cost ratio?"[2]

Fact: The Bureau of Reclamation has no discretion in the discount rate it uses. It is established by the Water Resources Council with approval by the President and is fixed for uniform use by all Federal water resource development agencies.

Many examples of Task Force allegations, as contrasted to the facts, can be found in each of the remaining seven chapters.[3] For the sake of brevity only a few examples of misrepresentation are provided. Additional allegations in each of the chapters refuted by facts can be furnished upon request.[4]

A. CHAPTER 2 - IRRIGATION—TOO MUCH OF A GOOD THING

Allegation: The Task Force contends that "Perhaps as many as 180,000 farm workers have been driven from their jobs as a result of BuRec's shortsighted policies."[5]

Fact: The Task Force either overlooked or chose to disregard some important factors other than irrigation development which are causing displacement of farmers and farm workers. We live in an era marked by technological change. Mechanization, changing cultural practices, high capital requirements, marketing and transportation conditions, and other technical and socioeconomic considerations have resulted in a substantial increase in average farm size for all types of farming operations and a substantial decline in the number of farms.

In 1944, one farm worker supplied farm products to meet the needs of 13 people, but by 1969, farm efficiency had increased to such an extent that one farm worker supplied the needs of 45 people. As a result, total United States farm employment has declined by over five million since 1957.[6] Any displacement of farm workers

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2. R. BERKMAN & W. VISCUSI, DAMMING THE WEST, 8 (1971). [Hereinafter cited as DAMMING.].

3. The following are the number of examples in each chapter which could be discussed in detail:

Chapter 2—11
Chapter 3—25
Chapter 4—16
Chapter 5—5
Chapter 6—26
Chapter 7—7
Chapter 8—10

4. Contact Mr. Merle W. McMorrow, Chief of Design Branch, Bureau of Reclamation, Box 1017, Bismarck, North Dakota 58501.

5. DAMMING, *supra* note 2, at 23.

6. U.S. Bureau of the Census, STATISTICAL ABSTRACT OF THE UNITED STATES: 1973 (94th ed.) at 248.

by Reclamation activities is minor by comparison, even if the exaggerated estimates of the Task Force are accepted. Irrigation has contributed to farm efficiency in a manner similar to mechanization, new seed varieties, fertilizers, herbicides, pesticides, and other forms of agricultural progress. This process of agricultural production and economic change has been a great plus to the American consumer.

If a broader and realistic view had been taken by the Task Force, it would have discovered that the Reclamation program is actually an effective tool for reducing unemployment. Impact studies have revealed that Reclamation projects generate a substantial amount of employment both regionally and throughout the Nation as a whole.

B. CHAPTER 3 - IGNORING ENVIRONMENTAL IMPACTS

Allegation: "Even incomplete environmental discussions (impact statements called for by the National Environmental Policy Act) come too late to affect determination of project design or project feasibility. By waiting until the feasibility studies are underway before performing its comprehensive environmental studies, BuRec undercuts its critics by pretending that these projects are too far along to stop."[7]

Fact: Environmental studies have been a part of Bureau of Reclamation project investigations for many years. Environmental Impact Statements have been required only since passage of the National Environmental Policy Act enacted on January 1, 1970. The agencies charged with responsibility for the administration of this Act are still revising and issuing procedural instructions for the preparation and use of such statements. Nevertheless, since January 1, 1970, the Bureau of Reclamation has prepared detailed impact statements on total projects and on individual phases of projects, proceeding on a priority basis. Some of these statements have brought compliments from the Council on Environmental Quality and others.

The Bureau of Reclamation also has a complete staff of professional ecologists, headed by an Assistant to the Commissioner, who are responsible for monitoring environmental and ecological matters within the Bureau and determining that the Bureau acts within the terms and spirit of the National Environmental Policy Act. A major goal of this Act is "to create and maintain conditions under which man and nature can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations of Americans."[8] This has been an objective of the Bureau of Reclamation since passage of the original Reclamation Act of 1902

7. DAMMING, *supra* note 2, at 74.
8. 42 U.S.C. 4331 (1970).

which put the Federal Government in partnership with the people of the arid west in making it habitable and economically able to support the 53 million people who reside there.

C. CHAPTER 7 - HIDDEN SUBSIDIES

Allegation: "That Western farmers served by BuRec water pay $35-135 less per acre than the full cost of supplying the water and that with an annual subsidy of $35 to $135 per acre, each landowner can rake in from $347 to $1,133 per acre over 50 years."[9]

Fact: While the Task Force calls it a direct subsidy, it is never realized by the farmer as direct income. Project costs are allocated to the irrigation function on the basis of total benefits including those which accrue indirectly to business and industries as well as directly to the water users and, therefore, are not totally associated with the irrigated land. Reimbursement by water users is based n their ability to repay from the productivity of their land. If water users were to repay the full irrigation allocation, they in effect would be subsidizing the indirect beneficiaries. This hard fact is recognized by conservancy districts which are organized in several states under state law with a taxing power to collect from all local residents as beneficiaries of a project. The conservancy district, in turn, contracts with the Government to repay the construction costs.[10]

D. CHAPTER 8 - PLAN AND PROPOSALS

This chapter contains an attack on the activities of the President's Water Resources Council related to development of new project evaluation principles, standards, and procedures.[11] The relevancy of this chapter in a report analyzing the Bureau of Reclamation is doubtful as the Bureau was not influential in the development of the new standards. The report does, however, try to give the impression that new standards are necessary because of defects in the Bureau's current evaluation methods and that the Bureau is quite pleased with the proposed new standards which the Nader report castigates with great vigor and misunderstanding.

The Bureau of Reclamation is constantly seeking to update pro-

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9. DAMMING, *supra* note 2, at 137.
10. *See e.g.*, N.D. CENT. CODE, ch. 61-24, *as amended*, (Supp. 1973).
11. DAMMING, *supra* note 2, at 199-211. Preliminary procedures were set out in WATER RESOURCES COUNCIL, PROCEDURES FOR EVALUATION OF WATER AND RELATED LAND RESOURCE PROJECTS, 92d Cong., 1st Sess. (1971) and in 36 Fed. Reg. 24144 (1971). Finalized procedures were set out in 38 Fed. Reg. 24777 (1973). Based on several years of effort by the Water Resources Council, these principles and standards became effective October 2, 1973.

Id. at 24788. The principles were established for planning the use of water and related land resources to achieve the objectives of national economic development and environmental quality and include a public information system of accounts. This account system is designed to display the beneficial and adverse effects of proposed plans on the objectives and on regional development and social well-being, thereby providing a readily discernible basis for comparing alternative plans. *Id.* at 24833.

cedures and standards. During 1971, the Bureau established five "in-house" task forces to review and make recommendations on improving planning procedures. A draft of the recommendations was received by Commissioner Armstrong in December 1971. Numerous improvements are envisioned. These reports are an example of a continuing activity within the Bureau to make its programs relevant to today's values.

A section of the Nader report seeks to belittle by personal attack the abilities and qualifications of the Water Resources Council task force members that drew up the proposed principles and standards. The task force was composed in the main of capable, dedicated, career personnel who performed a sincere, imaginative, and constructive service. The Nader Task Force presents ten objections to the principles proposed by the Water Resources Council task force. Very briefly, the ten objections and a response to each is presented below:

Allegation: "Principles erroneously exclude equity considerations from the National Economic Development Account (NED)."[12]

Fact: Distribution of project effects is vital to determining the economic desirability of projects. Obtaining the most equitable distribution of project effects may not result in the most economically efficient project from a national point of view. Equity in this sense is not a question of economic efficiency but a social problem. Therefore, equity is properly treated in the social well-being account rather than the National Economic Development Account.

Allegation: "The National Economic Development Account excludes most environmental considerations" and "dollar values are not provided for environmental impacts." "The Water Resources Council apparently does not consider these impacts significant enough to include in the National Economic Development Account."[13]

Fact: First, the Water Resources Council task force stated very clearly that all four objectives were to be equally considered in evaluating water resources. Environmental impacts on income are to be a part of the benefits and costs of the National Economic Development Account. However, there are environmental impacts that do not affect anyone's income, yet they are worthy of consideration. Because of these effects, a separate environmental account was included.

Allegation: "Benefits will be double-counted horizontally in the sense that the same benefits will be considered in more than one account."[14]

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12. DAMMING, *supra* note 2, at 201.
13. *Id.*
14. *Id.* at 202.

Fact: This is essentially true but is not contradictory as it is basic to the multi-objective approach. Benefits are contributions toward accomplishment of objectives and certain effects may make a contribution to more than one objective. Therefore, the same effect, be it beneficial or adverse, might be considered in more than one account. However, the principles very clearly state that the multi-objectives are not mutually exclusive with respect to benefits and costs. Thus the accounts are not intended to be added to arrive at a grand total of benefits or costs.

Allegation: "The National Economic Development Account overstates the economic efficiency benefits. By counting the value to users of increased output, the value of output created by external economies, and the value of output using unemployed or underemployed resources, the Water Resources Council guaranteed the vertical double-counting of such economic effects and made possible the counting of the same economic effects three times, for example, counting both the value of increased crop production and the value of increased farm income."[15]

Fact: The three items listed are not the same economic effect. These effects would occur to three different groups. A careful reading of the standards and an understanding of the measurement techniques to be used would show this to be true. Only the value of increased farm income is included in the National Economic Development Account.

Allegation: "The Water Resources Council task force managed to find six different ways to count the same regional impact."[16]

Fact: As in the previous allegation, the Nader Task Force has taken the components of the objective to be one and the same. Again, a careful reading of the standards would show the difference intended by the Water Resources Development task force.

Allegation: "The principles document specifies no method of reconciling crucial tradeoffs among policy goals. . . . Failure to specify methods for handling such conflicts will promote Bureau of Reclamation planners' continued disregard for environmental impacts."[17]

Fact: The multi-objective planning approach requires the presentation of alternative plans that have been prepared and evaluated in the context of their contributions to the multi-objectives. Reclamation will recommend one of the alternatives, but all alternatives will be presented to the Congress; therefore, the tradeoffs made by Reclamation can be evaluated. In the final analylsis, weighing of the tradeoffs will be made in Congress, not by Reclamation planners.

15. *Id.*
16. *Id.* at 203.
17. *Id.*

Allegation: "The principles require planners to specify project effects on only those income and racial groups defined as being relevant to evaluation of a plan. Thus, the Bureau of Reclamation can omit from its economic analysis a project's unfavorable distributional effects by failing to define adversely affected groups as relevant."[18]

Fact: The principles are quoting from the listing of social well-being benefits. It states that "These benefits include: (a) Increased real income of persons or groups defined as being relelvant to evaluation of a plan."[19] Obviously, a considerably misleading interpretation has been read into this statement.

Allegation: "There is no justification for a regional development account. To say that one region should get a project rather than some other region—on other than economic grounds which include equity considerations—is equivalent to saying that it is more deserving to live in Colorado than Louisiana."[20]

Fact: This is simply an opinion that is obviously not shared by all people. Ample proof is the regional commissions established by Congress for the economic development of certain regions such as the Appalachian Region, the Ozarks Region, and others. The expenditures of Federal funds in these regions may not represent the most economically efficient use of those funds, but there are other overriding objectives.

Allegation: "Water Resources Council's statement concerning the discount rate is vague. What working principle does the Water Resources Council intend to use in setting the discount rate?"[21]

Fact: Here again, a careful reading of the standards by the Nader Task Force should have eliminated this objection. There is considerably more discussion on the discount rate in the standards. It is clear that the Water Resources Council task force feels that the social rate of time preference is appropriate for determining a discount rate since many of the values associated with environmental and social objectives are not reflected in market transactions. The Water Resources Council in consideration of the above factors will determine and promulgate the discount rate.[22]

Allegation: "The principles 'give no way to determine net pro-

18. *Id.*

19. WATER RESOURCES COUNCIL, *supra* note 11, at II-13. Essentially the same language is retained in the finalized procedures. 38 Fed. Reg. 24783 (1973).

20. DAMMING, *supra* note 2 at 203.

21. *Id.* at 204.

22. WATER RESOURCES COUNCIL, *supra* note 11, at IV-7 to 8. It should be noted that the finalized procedures indicate simply that "discount rate will be established in accordance with the concept that the decisions are related to the cost of Federal borrowing." 38 Fed. Reg. 24784, 24822 (1973).

ject benefits. Benefit-cost analysis becomes useless as a project evaluation tool'."[23]

Fact: This objection brings us full circle. We now have the Nader Task Force objecting to the proposed procedures because they do not provide for the very tool that they were so critical of when discussing existing procedures.

In conclusion, I attempted to be objective in my analysis of the book. However, since I am an employee of the Bureau of Reclamation, the misconceptions contained in the book are much more obvious to me than they would be to the non-employee.

The Bureau of Reclamation is not averse to and, in fact, welcomes constructive criticism which will help carry out the responsibilities entrusted to this Bureau by the Administration and Congress. However, to anyone familiar with the water needs and problems in supplying those needs in the arid western United States, the Nader report titled "Damming the West" is not criticism but a farcical exercise in high school polemics.

MERLE W. MCMORROW*

SHOULD TREES HAVE STANDING? By Christopher D. Stone. Los Altos: William Kaufmann, Inc., 1974. Pp. 103 $3.00 (paperback).

Two recent law review articles have focused on possible new bases for environmental law. Both authors choose trees to represent the natural objects to focus on. They are Professor Stone's, *Should Trees Have Standing?*[1] and Professor Tribe's, *Ways Not To Think About Plastic Trees: New Foundations for Environmental Law.*[2] The occasion for this review is the publication of Professor Stone's article in book form. His article was written to impress the United States Supreme Court during the course of deciding *Sierra Club v. Morton*,[3] the dispute over the proposed Walt Disney Ski Resort development in the Mineral King Valley in California. Professor Stone's arguments did not carry the day, but his views were adopted by Justice Douglas and perhaps by Justices Brennan and Blackmun. The book reproduces the justices' opinions as well as Professor Stone's article and includes a foreward by biologist Gar-

23. DAMMING, *supra* note 2, at 204.

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1. Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972).

2. Tribe, *Ways Not To Think About Plastic Trees: New Foundations for Environmental Law*, 83 YALE L.J. 1315 (1974).

3. 405 U.S. 727 (1972).

rett Hardin. Hardin suggests that the majority in *Sierra Club* never reached a decision on Professor Stone's argument since it was not raised. I have doubts about this conclusion and certainly would not bet on its adoption by more members of the present court even though neither Justice Powell nor Justice Rehnquist participated in the decision. A more recent standing decision in the environmental area[4] does little to advance the cause of Professor Stone's approach, although the case does make it clear that the *Sierra Club* decision did not impose a substantive deterrent to environmental litigation.

What then is Professor Stone's argument for a standing base in environmental litigation? The thesis is that natural objects such as trees should be recognized to possess legal rights, and that they should be able to protect these rights through duly appointed legal representatives or guradians. Professor Stone first points out that at one time it was unthinkable that children, women, and slaves should have legal rights yet that has come about. Furthermore, he indicates that corporations, children and others always have to have someone else speak for them, so that is not a new concept. Since we have progressed so far, why not progress further and recognize legal rights in trees and natural objects. Professor Stone recognizes that there are problems with the further progression and discusses them. Who would represent or speak for the trees? What actually would be represented in a given case, a group of trees, a forest, an entire valley, a watershed, or what?

The most important point Professor Stone has to deal with after developing this thesis is what practical difference it makes whether we recognize his basis for standing or a more traditional expansion of standing, for example, recognizing the Sierra Club as a private attorney general to enforce environmental laws? The theoretical focus is clearly different. If the Sierra Club serves as a private attorney general, it speaks for people and represents rights of people. It would not necessarily represent the trees as trees. But how can rights be tree oriented, non-people oriented? Can humans think that way? How might conclusions differ under the two approaches? Professor Stone divides his analysis into three parts looking at what it means generally to possess legal rights. He says if someone or something possesses legal rights (1) this person or thing can institute legal proceedings; (2) injury to the complainant must be considered by the tribunal in granting relief; and (3) the relief given must be to the complainant's benefit. How would these three differ with a tree orientation rather than a people orientation? Professor Stone's arguments are fairly extensive and this discussion will note only certain of them. First, the tree-oriented guardian

standing concept would allow trees, and other natural objects more continuous representation than the present *ad hoc* involvement response to separate proceedings as they arise and would not call for as much reliance on individual grants of standing such as those under the water pollution or clear air laws. Second, one of the elements of damages would be the injury to the natural objects. In the case of streams, for example, the measure would not just be the injury to the riparian owners on the stream bank. One of the stream-oriented measures of such injury would be the cost of correcting the injury. Or if a natural object had to be destroyed, the cost of recreating it elsewhere. Third, a trust fund could be created from the damages collected, to facilitate environmental repair and enhancement.

One of the principal problems in developing rights of the sort that would be represented in the foregoing procedure is that carried to its extreme it would mean the preservation of the status quo; no tree could ever be cut, no blade of grass ever trampled, no sod ever turned, and so on. Clearly Professor Stone does not intend this; he recognizes the problem and comes to grips with it. He notes that even as to people there is a *damnum absque injuria* concept. That serves as a starting point.

One element of natural object rights would be procedural safeguards and Professor Stone focuses on them. But there should be something behind the procedure for measuring protection. For example to say that a student may not be dismissed except by due process of law is saying very little if he can be dismissed everytime due process is followed and his only hope is that in following due process it will be decided for whatever reason that he should not be dismissed. To speak of student rights has much greater value if there are some circumstances under which the student cannot be dismissed at all and the procedure is used to help determine whether those circumstances or some others exist. Professor Stone does suggest some absolute rights for natural objects of this sort.

What is behind all of this? Is it simply another gimmick to help the Sierra Club preserve a wilderness area for its members to hike and camp in, or is it something more? In a separate section, Professor Stone focuses on this aspect in what he labels "the psychic and socio-psychic aspects."[5] This, too, is the main thrust of Professor Tribe's article, to focus on a non-homocentric argument as the basis for environmental law. To date American laws have focused on protecting trees and rivers because of what is in it for man, because protection of these things may be neces-

4. United States v. SCRAP, 412 U.S. 669 (1973).
5. C. STONE, SHOULD TREES HAVE STANDING 42-54 (1974).

sary for man's survival. Both Professor Tribe and Professor Stone strive to get away from this homocentric view. Professor Stone appears to fare better. Whereas Professor Tribe claims to have made an argument for protecting trees that is not reducible to homocentric terms,[6] Professor Stone seems to recognize that this really cannot be done. All articulated arguments can be reduced to a homocentric base and in the final analysis, if a person is really motivated by an ethical concern for trees and other natural objects only that person can know. Chances are he will never convince anyone else through argument. That trees should be entitled to protection as trees can no more be proved by reasoning than can the existence of God. When Professor Tribe presents his ethical argument, the retort is that those who believe in an environmental ethic do so for the self-denial ego trip. They feel "good" in protecting trees and rivers. It gives them great pleasure to protect these defenseless objects and so on. It is necessary, if you will, to the health of their psyche. The ethical formulation is reducible to homocentric terms and fairly sophisticated psychological ones at that, grossly oversimplified in my statement of them.

Professor Hardin in his forward to Professor Stone's book does well to refer to Aldo Leopold. Perhaps in retorspect, in the examination of one human being's life we can come to a conclusion as to to what that person believed in. If his views were homocentric, something will have come along to trip him up. If he had the ethical notion beyond homocentric bounds his life will illustrate it. Can we not conclude about Aldo Leopold that his life measures up? In passing, I want to note one passage from Leopold's *A Sand County Almanac* wherein he states a variety of bases for viewing "nature":

> [1] That land is a community is the basic concept of ecology, but [2] that land is to be loved and respected is an extension of ethics. [3] That land yields a cultural harvest is a fact long known, but latterly often forgotten.[7]

In the final analysis, every lawyer should read both articles. The authors are probing this area of the law we call environmental law but do not fully understand. We understand neither its full scope nor what is behind it.

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6. Tribe, *supra* note 2, at 1347.
7. A. LEOPOLD, A SAND COUNTY ALMANAC XIX (Sierra Club/Ballantine ed. 1971).

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ENVIRONMENTAL RIGHTS & REMEDIES (Two Volumes). By Victor Yannacone, Jr., Bernard S. Cohen and Steven B. Davison. San Francisco: The Lawyers Cooperative Publishing Company, 1971 and 1972. Pp. 1359 with index. $59.50.

The future is going to find the general practitioner involved more than ever before with matters falling within the area of environmental law. One's initial response might be that environmental law problems are beyond the sphere of general practice and that such problems are better reserved for specialists in environmental law. Far-reaching, well-publicized environmental legislation coupled with a new awareness of individual rights on the part of the public insures initially, at least, that the general practitioners will be advising clients on environmental law matters.

The authors of this two-volume treatise state the intention and purpose of their work as follows:

> This treatise is, of course, a compromise. It represents an edited combination of law and science sufficient to enable the concerned general practitioner to advise clients of their rights and remedies in matters of environmental concern. It is not meant to be a compilation of existing legislation and proposed legislation, since that is the function of the loose-leaf current legal news services. It is not meant to take the place of reading the advance sheets. It does, however, indicate the leading cases and positions and acceptable methods of trial and negotiation strategy at he time of publication. The supplements will continue to update the material while seeking to assist the practitioner who must enter the field from the beginning.[1]

The authors have done an excellent job in organizing and presenting the material in a fashion which makes the treatise a useful tool for the practitioner. The treatise not only serves as a primer on environmental law, but it also covers the field in sufficient depth to be useful in meeting specific problems.

Most legal theories, remedies and significant cases presented by the authors are prefaced with an historical sketch so that the reader becomes familiar with the background of the particular theory, remedy or case which he may find useful to present. The practical experience of the authors is shared through the recitation of numerous suggestions pertaining to trial and discovery tactics. Excerpts of affidavits, petitions, complaints, answers, interrogatories and model legislation with comments appear throughout the treatise. This serves to illustrate the authors' suggestions and comments and to present,

1. 1 V. YANNACONE, JR., B. COHEN & S. DAVISON, ENVIRONMENTAL RIGHTS & REMEDIES 145 (1972).

in a real manner, the applicability of the law discussed in the treatise. The excerpts also tend to illustrate the complex nature of the scientific subject matter and the need to be thoroughly familiar with it. The importance of being thoroughly familiar with scien tific aspects of the case is reiterated many times throughout the treatise.

The treatise begins with some general observations and recommendations pertaining to the current state of environmental degradation. The mobilization of business, industry and government is urged to meet the problem with positive action. It is also pointed out that there is a need for interdisciplinary cooperation between law and science. The basis of environmental rights is proclaimed, in part, as follows:

> Environmental Law is a mixture of the new and the old. Affirming the timeless principles of equity jurisprudence and relying on the unenumerated rights retained by the people of the United States under the Ninth Amendment of the Constitution and protected under the equal protection and due process clauses of the Fifth Amendment and the due process, equal protection and rights, privileges and immunities clauses of the Fourteenth Amendment of the Constitution, the law is new in applying these established principles and traditional legal procedures directly to the environment crises threatened by runaway technology.[2]

The authors devote three chapters to the Trust Doctrine, the Ninth Amendment, nuisance and other common law remedies, these being the legal doctrines and remedies useful in the prosecution of environmental suits.

"The Trust Doctrine is the principle which determines the dominion and responsibility over valuable natural resources as opposed to other resources which man can reproduce or which are capable of self-generation."[3] The application of the Trust Doctrine is discussed in detail and numerous examples of its application are given. The fact that lands covered by navigable waters cannot be granted is one of the examples given to illustrate the applicability and development of the Trust Doctrine. Application of the Trust Doctrine to private property is also discussed with current developments appearing in the current supplement to the first volume of the treatise. *Defenders of Florissant, Inc., v. Park Land Co.*[4] is presented asa case study. The case involves the action of a group of concerned citizens in saving the Florissant fossil beds located a short distance

2. *Id.* at 9.
3. *Id.* at 12.
4. No. C-1539 (D. Colo., July 9, 1969), No. 340-69 (10th Cir., July 10, 1969), No. 403-69 (10th Cir., July 29, 1969).

west of Colorado Springs, Colorado, from the bulldozer of a development company which owned the land upon which the fossil beds were located. In addition to a full discussion of the case and the problems faced by the plaintiffs, excerpts of the pleadings are presented to illustrate points discussed in the case study.[5]

The chapter on the Ninth Amendment of the United States Constitution begins with a legislative history of the Ninth Amendment flexibility in the application of the Ninth Amendment's protection of unenumerated rights to an environmental right is illustrated, in part, with the following statement:

> Specific textual reference in the Constitution to an environmental right is not a prerequisite to the bestowal of constitutional protection. *Griswold v. Connecticut*,[6] in which the Supreme Court held unconstitutional Connecticut laws prohibiting the use of contraceptives, illustrates the various processes by which the Supreme Court may find a constitutional basis for unenumerated rights. . . .[7]

Considerable attention is devoted to state courts' application of the Ninth Amendment to environmental matters. The reason is stated as follows:

> The Constitution contemplated that cases within the judicial cognizance of the United States not only might, but would arise in the state courts, in the exercise of their ordinary jurisdiction. The Constitution not only contemplated, but meant to provide for cases within the scope of the judicial power of the United States, which might yet arise before state tribunals.
>
> The interpretation of the United States Constitution by state courts should therefore be given equal weight with interpretations by the lower federal courts and interpretations of the Ninth Amendment by state courts.[8]

The most commonly applied common law remedy in environmental cases is nuisance.[9] The use of this remedy, however, presents certain problems, namely the necessity to distinguish among public, private and mixed nuisance. The distinctions are set forth in the treatise as is the importance of making such distinctions. Air polution as a nuisance is studied in depth, and the subject of smoke as a nuisance receives the primary emphasis. Likewise, noise as a nuisance receives considerable attention.

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5. *Id.* § 2.9, 2.11-.14.
6. 381 U.S. 479 (1965).
7. 1 V. YANNACONE, JR., B. COHEN & S. DAVISON, ENVIRONMENTAL RIGHTS & REMEDIES 67 (1972).
8. *Id.* at 71 (footnote omitted).
9. *Id.* at 77.

The common defenses of "necessity," "predecessor of an owner creating a continuing nuisance," "coming to a nuisance" and the fact that others are polluting are discussed. The authors cite law which meets these defenses. The problem of multiple sources of pollution and the resulting proof difficulties is dealt with extensively.

The National Environmental Policy Act of 1969 is thoroughly examined in the chapter devoted to environmental legislation. The practitioner is provided sufficient background on the legislative history of the Act to obtain a firm understanding of the Act's purposes.The burdens placed upon Federal agencies and the rights enuring to the private citizen under the Act should be extremely useful to the reader. The authors note that:

> [A] private citizen, under the National Environmental Policy Act of 1969, should have standing to challenge actions and decisions of federal agencies allegedly in violation of the National Environmental Policy Act of 1969, where the action or decision threatens to have adverse effects on the ecosystem in which he resides or on an ecosystem that he uses for recreation.[10]

Environmental impact statements required by section 102 of the National Environmental Policy Act of 1969 have received a great deal of publicity from the news media, especially when the adequacy of these "102 Statements" is disputed. Since the "102 Statement" is an analysis of the affect Federal agency action will have on the environment, it seems mandatory that the practitioner involved in environmental law have an understanding of the use and preparation of a "102 Statement." Specific sections of the treatise are devoted to these matters, and the material contained in those sections should provide the practitioner with sufficient knowledge to enable him to face the issues stemming from the filing and adequacy of the "102 Statement."

Other Federal legislation reviewed in the first volume of the treatise include the following: the Water Quality Improvement Act of 1970, Federal Pollution Control Act, Clean Air Act of 1963, Air Quality Act of 1967, Fish and Wildlife Coordination Act, Rivers and Harbors Act of 1899, Submerged Lands Act, Refuse Act of 1899, the Insecticide, Fungicide, and Rodenticide Act, Multiple Use-Sustained Yield Act and the Wilderness Act. Knowledge of the aforementioned legislation can be invaluable in advising clients on environmental matters.

A chapter on environmental litigation deals with such practicalities as setting fees, organizing the case and choosing a theory.

10. *Id.* at 172.

Since an environmental suit will generally require a number of expert witnesses, a daily transcript, and pre-trial hearings, the expense of litigation will usually be beyond the reach of the average person.[11] The authors point out that:

> There are three general divisions in any environmental file. The first is your client's scientific evidence. The second is the defendant's anticipated scientific evidence and rebuttal. And the third is the legal portion of the file. Without a thorough knowledge and careful preparation of your adversary's scientific case, or case on the merits, as well as your own case, an attorney is doomed to be surprised and probably embarrassed.[12]

With regard to choosing a theory the authors reiterate that, "The traditional actions . . . are negligence, nuisance and trespass. Creative environmental counsel have placed increasing reliance on the Trust Doctrine, the Ninth Amendment, and the Civil Rights Act as the basis of their suits."[13] It is also pointed out that the statutes aforementioned ought to be examined for a cause of action.

Since issues in environmental litigation usually involve residents of a region and because the right of a private citizen to redress environmental wrongs is not clearly defined by statute, it is usually necessary to proceed in the form of a class action.[14] The background and history of class actions as well as procedure are discussed. Emphasis is placed on the issue surrounding the requirement that there be "questions of law or fact common to the class" under Rule 23 of the Federal Rules of Civil Procedure. The authors point out that the most common defenses in environmental litigation have been procedural, and this prompts some personal philosophy on the part of authors as they state:

> The interests of justice would be better served, and the environment better protected, and the particular interests of Business and Industry advanced, by defending the majority of environmental lawsuits on the merits.[15]

An important part of the chapter on environmental litigation is the forms for drafting complaints. The forms include comments to assist the practitioner in the field of environmental law.

A chapter of the treatise is devoted to administrative agencies. The authors point out that:

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11. *Id.* at 356.
12. *Id.* at 356-57.
13. *Id.* at 358 (footnotes omitted).
14. *Id.* at 362.
15. *Id.* at 378.

> There is certainly a danger that administrative agencies, no matter how well intentioned, will function as judge, jury and executioner, and counsel must raise this issue whenever agency action can cause serious, permanent or irreparable damage to the environment or a natural resource. This inherent conflict of interest in agency determinations affecting the environment is most evident in those agencies whose duty it is to regulate an industry whose operations have environmental consequences.[16]

Judicial review under the Administrative Procedure Act is examined. Presumptions of judicial review are illustrated with the appropriate case law citations. The judicial function in the review process is examined, and insight is given on the subject of restrictions on review of agency actions. The chapter serves as a good review of administrative law. Agency discretion as well as agencies' duties are discussed. It is pointed out that Congressional authorization to allow agency discretion has limitations. The judicial function arises when there is an abuse of discretion. Likewise, agency duties also have boundaries. It should be remembered, as the authors point out, that agency discretion must be exercised within the bounds of public convenience and necessity.

The authority and jurisiction of the Federal Power Commission are set forth in view of their broad authority over the nation's water resources and hydroelectric power development. The Commission's activities, by their very nature, generally have an impact on the environment. The authors point out that it is important to make an application for hearing before a license is issued if aggrieved parties are represented. The scope of the Federal Power Commission is discussed, and several important cases are studied in detail to illustrate such things as standing to sue, scope of judicial review and other matters important to practice before the Federal Power Commission. The case studies also illustrate principles useful in limiting agency action, thus making them more responsive to the public they are supposed to serve. The authors' commentary of the cases impresses upon the reader a lack of genuine concern for our natural resources in many instances. It is apparent, however, that litigation has forced the agencies to consider the environmental impact of their activities in more detail than in the past.

The treatise also examines certificates of public necessity and convenience with regard to natural gas pipelines. This portion of the treatise again cites important court decisions and methods of procedure for those persons unfavorably affected by the impact construction will have on the environment they enjoy and rely upon to pro-

16. *Id.* at 429.

vide them a quality way of life. Other items covered in the chapter on administrative agencies are the jurisdiction and authority of the Corps of Engineers, the issuance of permits by the Corps of Engineers, Federal Aid Highway Act, highway route selection methods, condemnee's action against the state and taxpayer's action against the state.

The second volume of the treatise resembles a practice manual in that it provides trial strategy suggestions, examples of interrogatories, witness examination, pleadings, case preparation suggestions and scientific information needed to prosecute specific types of environmental suits. The first chapter of the second volume deals with environmental toxicants. A number of detailed definitions are given in order to provide the reader with a basic knowledge of the scientific aspects involved with environmental toxicants. Metals and synthetic organic chemicals as well as metallic compounds are defined. Their effect on living organisms varies depending upon the species effected. The complexity of this area of environmental law is recognized when one considers the number of chemicals and compounds which are dispersed through industry and domestic waste.

A list of pesticides prepared by the United States Department of Agriculture's Research Service and reproduced in the treatise gives the common name, some trade names, the chemical name, the company who developed the pesticide, type of compound (chlorinated hydrocarbon, organophosphate carbamate, triazine, etc.), nature of compound, general usage, toxicity, persistence or residual period, hazards, compatibility with other compounds, tolerances, harvest intervals and formulations. This is one example of the referencematerial found in the treatise.

Ecological systems are studied to show the importance of energy flow and resulting material cycles. Illustrations of the hydrologic cycle and the nitrogen cycle appear in the treatise in order to present a better understanding of the textual matter on material cycles and to impress the reader with the importance and complexity of the subject. The relationship of energy flow and material cycles to environmental law practice is better understood when one realizes that:

> Man can use the enormous energy sources available to him to interfere in a massive way with the cycling of materials. In particular, by mining and drilling operations, elements are removed from more or less concentrated forms and dispersed, a process which clearly cannot persist indefinitely for any element. This process of dispersion represents a substantial disruption of the cycling process.[17]

17. 2 V. YANNACONE, JR., B. COHEN & S. DAVISON, ENVIRONMENTAL RIGHTS & REMEDIES 34 (1972).

The authors also point out that, "The exploitation of naturally occurring elements by man leads to pollution. Pollution may be defined as the breakdown of the natural cyclic processes so that materials accumulate where they shouldn't."[18]

A case study of *Yannacone v. Dennison*[19] is presented with the authors' comments on excerpts of the transcript. The case is a class action seeking equitable relief from the use of DDT for mosquito control. Following the case study, an outline on preparation for litigation involving environmental toxicants is presented.

The material on air pollution begins with the various types of air pollution: smoke, fumes, dust, mist, gas or vapors, and odors.[20] The source of each of the types of air pollution is discussed as well as the way they are dispersed into the atmosphere and eventually over geographical areas. The importance of including the existence of regional airsheds in pleadings in air pollution cases is pointed out. A description of the various atmospheric areas across the United States is set forth as a ready reference for the practitioner.

Specific pollutants such as carbon monoxide, sulphur dioxides, hydrocarbons and smog are studied. The study of specific pollutants reveals the technicalities of interaction of chemicals in the atmosphere which creates harmful substances. It is pointed out that there are difficult problems in prosecuting an air pollution suit because of the difficulty in establishing the source of the pollutant and because different individuals are affected differently by pollutants. There also seems to be a time lapse between the establishing of particular levels of atmospheric pollution and the onset of symptoms in any given individual or group of individuals.

A discussion on trying the air pollution case points out the difficulties of establishing direct personal injury to an individual or group of individuals from the pollution created by a particular industrial complex. It is advised that a comparison be made of the quality of the air in a region outside the pall of the air pollution in question to establish the detrimental effects of the alleged pollution. A case study involving "state of the act" pollution control technology is presented. The case study includes an interrogatory which illustrates the techniques used in acquiring information needed to proceed with the trial of an air pollution case.

The chapter on radiation deals primarily with the procedures of the Atomic Energy Commission in issuing licenses for nuclear power plants. It is now established as a result of litigation that environmental impact statements must be prepared and distributed prior to

18. *Id.* at 35.
19. 55 Misc. 2d 468, 285 N.Y.S.2d 476 (1967).
20. 2 V. YANNACONE, JR., B. COHEN & S. DAVISON, ENVIRONMENTAL RIGHTS & REMEDIES 118 (1972).

taking action on license applications. Hearings before the Atomic Energy Commission and appeal of Commission decisions are studied. One of several important cases cited and reviewed is *Colorado Open Space Coordinating Council v. Seaborg*[21] which expanded judicial review of Federal agency action on matters involving the environment. Also covered are questions of tort liability in matters of nuclear accident and explosion which is of growing importance with expanded use of radioactive materials in industry.

A fitting introduction to the subject of noise pollution was presented with these words:

> Noise is one of the scourges of the modern world. It is an unwanted product of our technological civilization, and is becoming an increasingly dangerous and disturbing environmental pollutant. There is a growing public awareness and even some progress in the fight against air and water pollution, but a third jeopardy—*noise*—has only recently begun to gain attention.[22]

The material on noise pollution generally covers the physiological, psychological and behavioral effects upon man. The sources of noise are also discussed with particular attention directed to noise created by industry and construction, household appliances, traffic, and aircraft.

The existing legal remedies are both in the nature of private and public suits. These remedies are reviewed in a case study using the Washington National Airport case, *Virginians for Dulles v. Volpe*,[23] as the subject case. Again, the pleadings are reproduced to illustrate the manner of stating jurisdiction and causes of action.

Water pollution affects both surface water and ground water. Most of the publicity has been in regard to the pollution of lakes and rivers. The treatise, however, devotes a great deal of material to the subject of ground water hydrology, management and pollution. In regard to surface waters, the authors analyze the various kinds of pollution and the effects that it has on both man and wildlife. Proper water management is stressed in view of the ever-increasing use of water. Trial strategy for a water pollution case is set forth as well as a check list for water pollution litigation. The check list indicates the information necessary to make a decision in a water pollution case.

With regard to land use management the authors advise that:

> The general practitioner will probably just come into con-

21. 312 F. Supp. 1205 (D. Colo.) *aff'd* 415 F.2d 437 (10th Cir. 1969).
22. 2 V. YANNACONE, JR., B. COHEN & S. DAVISON, ENVIRONMENTAL RIGHTS & REMEDIES 374 (1972).
23. 344 F. Supp. 573 (D. Va. 1972).

> tact with environmental law in advising a client or citizens group on a pending application for a change of zone or for a building permit in the local community. For this reason, it is imperative that counsel begin to develop familiarity with the methods of environmental systems science. As a citizen, residing in a community, counsel should demand ecologically sophisticated, environmentally responsible, socially relevant and politically feasible land use legislation at the local level. He should insist that any land use regulation be based on a comprehensive plan establishing criteria permitting municipal government to choose among all feasible alternatives for community development.[24]

The jurisdiction and authority of the Department of Interior and Bureau of Land Management are reviewed in reference to decisions as to the use and disposition of land owned by the United States. A review of the jurisdiction of the National Park Service and the Department of Agriculture over national forests and parks reveals wide discretionary authority which can, if abused, irreparably affect public lands constituting our most cherished national treasures.

The purpose and scope of the Multiple Use-Sustained Yield Act of 1960 and the Wilderness Act are explained. The basic purposes of these Acts are to insure proper management and preservation of certain public lands. Attempts to challenge the use of public lands have been unsuccessful in the past, but currently interested citizens have been held to have standing to sue pursuant to the Administrative Procedure Act, and federal question jurisdiction is obtained when challenging use as contrary to the Multiple Use-Sustained Yield Act and the Wilderness Preservation Act.[25] Also discussed in the land management chapter are off-shore drilling, solid wastes and visual pollution. The subject of visual pollution will probably be another area within the realm of environmental law which develops further as commercialization of various areas continues to expand.

By necessity, a review of this treatise has had to take the form of a summary. The subjects refered to above do not begin to include all of the important areas set forth in the two-volume treatise nor does the depth and detail of the subjects mentioned begin to match that of the authors. But, hopefully, this review will project the scope of the treatise in the area of environmental law. It should also be noted that both volumes of the treatise are well supplemented with pocket parts which include new textual material as well as new developments.

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24. 2 V. YANNACONE, JR., B. COHEN & S. DAVISON, ENVIRONMENTAL RIGHTS & REMEDIES 558-59 (1972).
25. *Id.* at 576.

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