Voluntary Conveyance of the Right to Receive a Water Supply from the United States Bureau of Reclamation

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TABLE OF CONTENTS

Introduction ....................................................... 776

I. Redistribution of Bureau of Reclamation Water Supplies ... 785
   A. Allocation of Water to Irrigation .......................... 788
   B. Allocation of Water to Municipal and Industrial Use .... 789
      1. General Considerations ............................... 789
      2. Municipal and Industrial Use Outside of Project Boundaries ........................................ 795
   C. Allocation of Project Water for Preservation of Fish and Wildlife ........................................... 798
   D. Secretary of the Interior's Discretion in Distributing Water from Individual Projects ...................... 802
      1. Lack of Specificity in Plans Developed Before Project Authorization ..................................... 802
      2. Administrative Discretion in Establishing Project Boundaries ........................................... 807
      3. Statutory Obligation of Beneficiaries to Repay Project Costs ............................................. 812
         a. Separable Costs ...................................... 813
         b. Interest ............................................. 814
         c. Ability to Pay ...................................... 814
         d. Power Credits ...................................... 815
         e. Repayment Schedule ................................ 815
         f. Payment for Water Used to Conserve Fish and Wildlife ................................................. 817
      4. Administrative Obligation to Respect Priorities of State Law in Picking Project Customers .............. 818

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II. Defining Project Rights: A Basis for Voluntary Conveyances .............................................. 821

A. Sources of Definition of Project Rights .......... 821
   1. Provisions of Federal Law that Define Project Rights ............................................ 822
   2. Incorporation of State Law Regarding Proprietary Interests in Water Supply ............. 824
   3. Rights Defined by Adjudicatory Proceeding ............................................. 826

B. Bureau of Reclamation’s Proprietary Interests in Project Water ........................................ 828
   1. Ownership of Project Facilities ........................................................................ 828
   2. Ownership of Appropriative Permits .................................................................... 829
   3. Right to Recapture Project Return Flow ..................................................... 831

C. Irrigation District’s Project Right ..................... 834
   1. Conveyability of Irrigation District Project Rights Under Three Standard Contracts ...... 836
      a. Repayment Contracts ...................................................................................... 836
      b. Water Service Contracts ................................................................................ 837
      c. Warren Act Contracts ..................................................................................... 838
         (i). Section 1 Contracts ................................................................................... 838
         (ii). Section 2 Contracts .................................................................................. 839
      d. Contingency of Contractual Rights Upon Continued Payment .......................... 839
   2. Measuring a District’s Project Right .................................................................. 840
      a. Limitation to Beneficial Use ......................................................................... 840
      b. Nature of Project Rights During a Shortage .............................................. 844
   3. State Law Governing the District’s Conveyance ........................................ 845
   4. District’s Profit from Conveyance ................................................................. 845

D. Project Right of Actual Irrigator ........................... 846
   1. Measuring an Irrigator’s Project Right ......................................................... 847
      a. Absence of Contractual Privity Between Irrigator and Bureau of Reclamation .... 847
      b. Irrigator’s Beneficial Use ............................................................................ 848
      c. District’s Control over Member’s Conveyance of a Project Right ................. 848
   2. Reclamation Act’s Limitations on Irrigator’s Conveyance .................................... 851
      a. Project Right’s Appurtenance to the Land .............................................. 852
      b. Satisfaction of Repayment Obligation .................................................... 854
      c. Irrigator’s Profit from Conveyance of a Project Right ............................... 855
         (i). Regulation of Profit from Sale of Excess Land ........................................... 855
         (ii). Profit from Sale of Nonexcess Land .................................................... 856
(iii). Mandate of Beneficial Use .......................... 858
(iv). Effect of Conveyance on Repayment of
Federal Investment ........................................ 858

III. Examples of Conveyances of Project Rights ............... 859
A. Emergency Drought Act of 1977 .......................... 860
   1. Pricing of Supplies Distributed Through the
      Emergency Water Banks ..................................... 861
   2. Water Bank in Central Valley Project .................. 863
B. Utah Power & Light Company’s Contract for Water
   Supply from the Emery County Project ................. 868
   1. Nonfinancial Terms of the Conveyance .............. 868
   2. Repayment Terms ........................................... 869
      a. Emery Water Conservancy District’s
         Obligations ............................................. 870
      b. Utah Power & Light’s Obligations .................. 870
C. City of Casper’s Contract with Casper-Alcova
   Irrigation District for Supply from Kendrick Project,
   Wyoming .................................................. 870
   1. Nonfinancial Terms of Conveyance .................... 871
   2. Repayment Terms .......................................... 871
      a. Repayment of District’s Existing Deficits ....... 871
      b. Investment in Conservation .......................... 872
      c. Payment for Municipal Water Service .............. 872
      d. Payment for Operation and Maintenance .......... 873
      e. Period for Conveyance ................................ 873

IV. Recommendations for Rulemaking ........................ 873
Conclusion ................................................... 877
What do we want with this vast worthless area—this region of savages and wild beasts, of deserts of shifting sands and whirlwinds of dust, of cactus and prairie dogs? To what use could we ever hope to put these great deserts and those endless mountain ranges, impenetrable and covered to their base with eternal snow?\(^1\)

—Daniel Webster, 1852
United States Secretary of State

The Reclamation Act\(^2\) provided one answer to Webster’s question: namely, to make the desert bloom. The United States Bureau of Reclamation (the Bureau) has been instrumental in the economic development of the western states since 1902.\(^3\) It is now the nation's largest water utility, providing the lion's share of its water to irrigate almost ten million acres of farmland and a much smaller share for municipal and industrial (M&I) supplies for approximately twenty-one million people.\(^4\)

Throughout this century, the Bureau has built new storage and delivery projects in response to water demands that could not be satisfied by local financing. For the foreseeable future, federal budgetary constraints will make new projects scarce,\(^5\) even as the Sunbelt develops. The United States Department of the Interior has concluded: “New demands will increasingly have to be met with reallocation of supplies . . . . Competition and conflict in use in highly controlled river basins may bring strong pressure for change.”\(^6\)

This Article argues that the Bureau has the statutory authority to allow a partial reallocation of existing project supplies to M&I uses by approving irrigators’ voluntary conveyances of their contractual rights to receive project water.

The Bureau’s priorities, however, as stated in the Reclamation Act\(^7\) and embodied in administrative policies, are still an “expression of the development objectives and political relationships of a much earlier

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5. See infra notes 12-13 and accompanying text.
America.” Agriculture has always had first claim on the Bureau’s water supply; originally, Congress directed the Bureau to develop irrigation supplies and nothing else. Later amendments authorized M&I supply and hydroelectric generation only as secondary purposes; recreation, preservation of fish and wildlife, and improvement of water quality were designated as further subordinate purposes. Of the 30 million acre-feet that the Bureau delivers in a typical year, just under 2.7 million acre-feet go to M&I customers; an additional 1 million acre-feet are dedicated to other nonagricultural uses, including irrigation of urban and suburban lands, and protection of fish and wildlife.

Throughout the western states, dams have already been built at the most suitable sites, i.e. canyons with impervious soil. The sources of supply that could be developed most cheaply—rivers and streams with predictable and large flows—have already been fully allocated. Construction of new storage and diversion facilities would probably yield water costing many times the highest current market rate.

Despite the stability of the water supply, the water demands of cities and industry will increase in the near future. The Sunbelt, which includes most of the states in the Bureau’s jurisdiction, will continue to grow in population at a relatively rapid rate. New businesses and industries with new demands for water normally accompany such popula-

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9. Reclamation Act of 1902, § 1, 32 Stat. 388, 388; see infra text accompanying notes 59-64.
10. See infra notes 65-142 and accompanying text.
11. 1984 Summary Statistics, supra note 4, at 75 table 12.
12. “There are few Western streams whose dependable flows are not fully appropriated, mostly for [irrigation].” Trelease, Changes and Transfers of Water Rights, 13 Min. L. Inst. 507, 508 (1967); see also United States v. Gerlach Live Stock Co., 339 U.S. 725, 750 n.19 (1950) (noting that Idaho’s Boise River and many Colorado waterways, including the South Platte River, have been overappropriated).
13. For example, water developed by a future storage project in California’s Sacramento River Basin could cost $175 to $245 per acre-foot, stated in 1981 dollars. This estimate does not include the cost of distribution. By comparison, in 1980 the Bureau of Reclamation charged $3 per acre-foot (not including distribution costs) for water delivered from storage facilities in the Sacramento Valley to farmers there; the State Water Project charged $21 to $26 per acre-foot for irrigation water delivered to the southern San Joaquin Valley. State Water Resources Control Bd. & Dept. of Water Resources, State of Cal., DWR/SWRCB Bulletin No. 4, Policies and Goals for California Water Management: The Next Twenty Years 40 table 1 (1982).
14. See infra text accompanying notes 56-57 & note 16.
15. The United States Bureau of the Census predicts that the population of the states within the Bureau’s jurisdiction will be 92,096,000 in the year 2000, up 41% from the 1980 total of 65,295,000. This contrasts with a 9.2% projected rate of growth during the same period for the remainder of the nation. Statistics derived from Bureau of the Census, U.S. Dept. of Commerce, Statistical Abstract of the United States 1985, at 15 table 14 (1984).
tion increases. This growth will pressure the Bureau to allow partial reallocation of project supply from agricultural to M&I use.

As a general rule, water consumption yields far more profit in industry than in irrigation.

Indications are that the value of water for industrial use could be 10-100 times that of agricultural use. The disparity in value between agricultural and energy rights, for example, permits energy developers to offer sufficiently high prices for existing rights so that current holders may sell them if developers were to need more water. Thus, the high relative value of water to industry will also contribute to the pressure on the Bureau to approve voluntary conveyances of project rights.

While water is becoming more valuable to western industry, its relative value to many irrigators is decreasing. The current recession in agriculture means that many western farms persistently generate less income than necessary to meet debt and family expenses. A temporary assignment of a project right, to facilitate continued operation, would not necessarily halt agricultural production because the assignor might retain

16. U.S. GEN. ACCOUNTING OFFICE, WATER SUPPLY SHOULD NOT BE AN OBSTACLE TO MEETING ENERGY DEVELOPMENT GOALS 13 (1980). For example, "[e]nough coal could be mined with 200 acre-feet of water to supply all of the electric needs for all the people in Wyoming. In contrast, the 200 acre-feet would irrigate less than 100 acres of alfalfa, which could feed enough cattle to produce beef for about 175 people annually." Id. at 28.

17. The author has coined the phrase "project right," which is not contained in the Reclamation Act or in the contracts for delivery of water from the Bureau's projects, to facilitate discussion of the legality of customer-initiated redistribution of project supplies. The term is used as shorthand for the various interests that nonfederal contractors for agricultural water (usually irrigation districts) and their beneficiaries (actual farmers) hold in the overall supply available from a given federal project.

Project rights are created by contracts and are defined partly by contractual provisions and partly by the Reclamation Act and state law. See infra notes 260-489 and accompanying text. These rights have the character of property rights: absent a contractor's default in repayment, the Bureau cannot take back a project right without due process of law, including appropriate compensation.

The phrase "project right" is not used as a synonym for "water right." Since the first western settlements, the term "water right" has described the exclusive right to use water appropriated according to state law from any natural waterway and put to beneficial use. In a typical Bureau project, the United States holds the associated water right, insofar as the Bureau has complied with state law in gaining such a right (by filing the appropriate application for regulatory or judicial approval) and insofar as the Bureau has built and operates the storage and diversion facilities. The water right is not held in the name of the contractors and ultimate users, who are not physically responsible for the operation of the federal facilities. Each irrigation district contracting with the Bureau and each farmer receiving water from the district holds a "project right," which can be visualized as carved out of the Bureau's water right for the project.

18. See generally ECONOMIC RESEARCH SERV., U.S. DEP'T OF AGRICULTURE, AGRICULTURE INFORMATION BULLETIN NO. 500, FINANCIAL CHARACTERISTICS OF U.S. FARMS, JANUARY 1, 1986 (1986) (report based on the 1985 Farm Costs and Returns Survey). The Agriculture Department uses several different measures of financial health. One is "net cash income for the farming operation" (NCOI), which is the "amount of funds generated by the farm business that can be used to pay back principal, expand the farm business, or pay for
some project right or have other water sources (including groundwater) sufficient for irrigation of reduced acreage or less thirsty crops. Furthermore, in some regions, farmers may consider temporary retirement of some acreage to lessen the side-effects of irrigation, such as toxic runoff, which may build up in the soil.19

Permanent conveyance of a project right to an M&I customer could dramatically increase an irrigator’s gain upon the sale of his or her land. A recession in American agriculture could prompt numerous sales of land and project rights.20 The Congressional Office of Technology Assessment has predicted that nearly half of the nation’s farms will go out of business by the turn of the century.21 Many retiring irrigators will sell family consumption or other obligations.” Id. at 4-5. Depending on the area, 30% to 60% of Western farms (not by acreage) have a negative NCOI. Id. at 34 app. II at 47 table 16.

Another measure of financial health is debt-to-asset ratio. Where a farm has forty cents or more of debt for each dollar of assets, the operation is highly leveraged, likely to have problems with cash flow, and particularly vulnerable to market slumps. Id. at 5. Again, depending on the region, 15% to 33% of farms are highly leveraged. Id. at 34 app. II at 61-64 table 22. The above-cited survey estimates the financial health of all farms in a given region, not just the Bureau’s customers. Id. It is possible that federal contractors are in better shape than their neighbors, whose water is supplied without the subsidy. See infra text accompanying notes 216-25.

19. For example, until recently, a federally managed drain collected runoff from 42,000 acres of irrigated farmland in the San Luis Unit of California’s Central Valley Project (CVP). This drain ultimately emptied into Kesterson Reservoir, part of a wildlife refuge. The Secretary of the Interior ordered the drain closed in June 1986, when selenium in the runoff was recognized to have caused severe deformities in waterfowl that nested in the refuge. Lack of drainage (resulting from absence of disposal) may substantially reduce the productivity and value of the irrigated lands. One proposed solution (involving reverse osmosis) would cost $53 to $160 per acre-foot: The high end is well beyond the farmers’ ability to pay. Speech by Russell Stenzel, Project Engineer, Bechtel National, Inc., to Section on Water, Commonwealth Club (July 24, 1986) (minutes on file with author). Another solution would be a sale of project rights to the State Water Project, which has long sought to obtain some CVP water. R. Wahl, Federal Water Pricing, Agricultural Land Values, and Kesterson Reservoir (1985) (preliminary draft, Office of Policy Analysis, U.S. Dep’t of the Interior) (on file with author).

20. Many factors cause structural change in agriculture, including the rate of adoption of new plant varieties and harvesting technologies, economies of scale, and the ability to obtain credit or take advantage of tax and direct governmental subsidies. See OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, TECHNOLOGY, PUBLIC POLICY, AND THE CHANGING STRUCTURE OF AMERICAN AGRICULTURE 91-118 (1986).

21. The number of small, part-time, and moderate farms (where the categories reflect amounts of gross sales, not land sizes) will decline from 2.1 million in 1982 to a projected total of 1.1 million in 2000, while the number of large and very large farms will increase from approximately 122,000 to 175,000. Id.

These predictions include all farms in the United States, not just those in the Bureau’s service area. The Office of Technology Assessment did not predict change in demand for irrigation supply in the Bureau’s service area.

According to the most recent National Water Assessment, water withdrawal for western irrigation will decline from 173.6 million acre-feet per year in 1985 to 159.3 million acre-feet per year in the year 2000. 1 U.S. WATER RESOURCES COUNCIL, THE NATION’S WATER RESOURCES: 1975-2000, at 36-37 (1978) (estimate derived for Regions 9 through 18, which include some areas outside the Bureau’s jurisdiction). At the same time, overall consumption of agricultural products will increase by 25%. Id.
their water supplies for continued use in irrigation; many others may sever from their land the rights to receive water supplies and permanently convey those rights to M&I customers, who can pay premiums proportionate to the greater profits in nonagricultural water uses.

Another factor that may increase the amount of water available for voluntary conveyances is the Reclamation Reform Act's requirement that each district contracting for project supply develop a water-conservation plan, including definite goals, procedures, and timetables for the implementation of "economically feasible measures." This legal mandate may result in a substantial decrease in the demand and need for project water in irrigation districts. Thus, surplus water would be available for voluntary assignment to willing buyers or lessees.

Whatever the source of freed-up project water, voluntary conveyances of project rights will occur widely only if the interested parties receive assurances of the legality of such transactions. The Reclamation Act does not expressly authorize the conveyance of a project right from an original contractor to a second customer. On the other hand, the Reclamation Act does not prohibit such a conveyance. The Bureau has considerable discretion in determining how to balance the competing demands for its water supplies and in approving conveyances between will-

23. Id. § 390jj(a)-(c); see Acreage Limitation: Rules and Regulations; Final Rule, 43 C.F.R. § 426.19 (1985). Neither the statutory nor the regulatory provision, however, expressly establishes a deadline for the adoption of such a plan.
24. On the basis of the Bureau's own field studies, the United States General Accounting Office concluded that irrigation efficiency (the amount of water actually consumed by crops versus the amount of water applied for irrigation) on project farms was only 44%, but could be improved to 60% or more. This inefficiency results from the irrigators' choice not to incur the costs of conservation, their inaccurate estimates of crops' water needs, the uncertainty as to whether conservation would lessen their project rights, and the districts' rigid delivery schedules. U.S. COMPTROLLER GEN., BETTER FEDERAL COORDINATION NEEDED TO PROMOTE MORE EFFICIENT FARM IRRIGATION 6-9 (1976).

If farmers irrigate more frugally, water that in the past has been lost to unrecoverable groundwater pockets or to the growth of weeds will be available for productive use, either on farms or elsewhere. For example, in 1975, the gross diversion for irrigation in the United States and the Caribbean (almost all of which occurs in the western states) totalled 177.8 million acre-feet (MAF). Of that amount, crops consumed 73.5 MAF (41% of gross diversions). Weeds, evaporation, and percolation into irrecoverable groundwater pockets consumed 23.3 MAF. However, 81 MAF (46% of gross diversions) returned eventually to the natural waterways. U.S. DEP'T OF THE INTERIOR, U.S. DEP'T OF AGRIC. & U.S. ENVTL. PROTECTION AGENCY, IRRIGATION WATER USE AND MANAGEMENT 23 (1979).

On the other hand, conservation programs would also reduce the amount of water that percolates downhill onto neighbors' fields; the conserving farmer may not have the legal right to convey that portion of the conserved supply. For further discussion, see infra text accompanying notes 292-93.

The Reclamation Reform Act's mandate to the irrigation districts (and to their members) to conserve project water could constitute an effective incentive for conservation, particularly if combined with administrative permission to sell or lease project rights. For further discussion of the elasticity of demand for the Bureau's irrigation supply, see infra note 58.
ing parties, even those making different uses of the project rights. The legality of an irrigator's voluntary conveyance of a project right to an M&I customer—more specifically, the Bureau's authority to approve it, even absent congressional reform of the Reclamation Act—may be inferred from the following.

First, purchases and leases of water rights have been common in western irrigation since the mid-1800's, and no provision in the Reclamation Act prohibits this practice. Members of Congress were aware of the conveyability of water rights at the time of the statute's enactment in 1902: Sections 7 and 8 of the Act authorize the Bureau to buy or condemn any proprietary interests necessary for the completion of the projects, including water rights.

Second, since the start of the reclamation program, project rights have been voluntarily assigned, generally between retiring and entering irrigators. Congress has not forbidden this practice in any of its numer-

25. See infra notes 65-122 and accompanying text.
28. Section 8 of the 1902 Reclamation Act provides that nothing in the Act shall interfere with a "vested [water] right" acquired under state law. § 8, 43 U.S.C. § 383. This section has been interpreted, in part, to require the Bureau to respect state law when proceeding under the authority of § 7 of the Reclamation Act to obtain water rights already held by nonfederal parties. See, e.g., Ivanhoe Irrigation Dist. v. McCracken, 357 U.S. 275, 291 (1958) ("If the [water] rights held by the United States are insufficient, then it must acquire those necessary to carry on the project, paying just compensation therefor . . . ." (citation omitted)). For Congressional debate about such voluntary or forced conveyances of water rights to federal ownership, see 35 Cong. Rec. 6679-80, 6688-92, 6694-95 (1902).
29. See, e.g., Laws and Regulations Relating to the Reclamation of Arid Lands by the United States, 45 Pub. Lands Dec. 385, 405 (1916) ("[W]here the contract purchaser sells his interest under the contract to another and transfers in writing his credit for payments made by him . . . , the new contract purchaser is the successor in interest of the original contract purchaser and succeeds to the benefits of any payments made by the original contractor on his water-right application.").

For example, prior to the construction of the Central Valley Project, the Bureau obtained from the State of California some inchoate water rights. More precisely, the State assigned to the United States certain filings (and the associated priorities) before the State Water Board for unappropriated waters. The Bureau also purchased water rights vested in private parties and public corporations. United States v. Gerlach Live Stock Co., 339 U.S. 725, 741 n.15 (1950).
ous amendments to the Reclamation Act. On the contrary, in a 1910 amendment, for example, Congress expressly authorized the assignment of homestead entries and their accompanying project rights.

Finally, a policy prohibiting or impeding voluntary conveyances of project rights could undermine a general purpose of the Reclamation Act: namely, to build the economy of the western states by complementing the water supplies available from nonfederal sources. Conveyances allow original contractors to correct for changed circumstances once they can no longer make comparatively profitable use of their project rights.

Regardless of how rights were originally granted, efficiency is penalized or discouraged if the law or rules of holding rights prevent free trading of the rights. Thus, in the case of allocation of a project's water allotments, efficiency could have been achieved only if the original rights were so nicely calculated that equimarginal value in use prevailed to begin with and that no forces have operated since the original allocation to change these values in use.

A project right will be conveyed voluntarily only when the selling price substantially exceeds the value created by its continued use in irrigation.

credits heretofore paid on water-right application No. ___ for the above-described land, together with all interests possessed by me under said application. [Signature], Assignor. [Signature], Witness.” The conveyance must be recorded in the county where the lands are situated and in the records of the project manager, who forwards the contract to the Auditor of the Treasury Department for the Interior Department. Id. at 408-09.

30. A judicial determination that Congress ratified the agency's practice may, however, depend upon evidence that Congress (or the relevant committee) had actual knowledge of that practice. See, e.g., United States v. Beebe, 180 U.S. 343, 354 (1901); United States v. Georgia-Pacific Co., 421 F.2d 92, 102 n.28 (9th Cir. 1970).


32. Anderson, Windfall Gains from Transfer of Water Allotments Within the Colorado-Big Thompson Project, 43 LAND ECON. 266, 269 (1967).

33. The party currently holding the right would not voluntarily convey the right unless the resulting profit would exceed the sum of future benefits from holding the right, plus engineering and legal costs incurred in executing the conveyance. Furthermore, because an irrigator may convey only the right to use that amount of water that was actually consumed in irrigation, see infra text accompanying notes 292-93, the benefits accruing to a potential assignee may need to be significantly greater than those of the assignor.

If a rancher has a water right for the irrigation of streamside land, and 50% of his diversion returns to the stream, an oil company seeking to purchase water has to
Although the Reclamation Act can be interpreted to permit voluntary conveyances of project rights, the Bureau lacks a written policy establishing standards and procedures for reviewing a customer's proposal for such a conveyance. Project contracts commonly include a provision forbidding the assignment of any interest in the project supply without the Bureau's prior approval. The Bureau's regional offices have approved isolated conveyances on a case-by-case basis.

want it twice as much as the rancher. It has to be able to produce twice as much in the way of benefits in order to make the transfer economical.

Trelease, supra note 12, at 528-29.

34. Bureau of Reclamation officials informed a meeting of the Western Governors Association on February 20, 1986 that the Bureau had developed a draft policy statement designed to "make it easier for farmers in the arid west to sell water they get from the government." Government Plans to Relax Restrictions on Water Sales, Spokane Chron., March 24, 1986, at A8. The Bureau subsequently decided not to publish a "comprehensive policy statement on voluntary exchanges," but instead provided the Bureau's field officials with "informal guidance regarding the review of exchange proposals and assistance to potential parties to the transaction." Letter from Ken Maxey, Staff Assistant, Office of Assistant Secretary—Water and Science, U.S. Dep't of the Interior to the author (October 3, 1986) (on file with author). The Bureau also is working with the Western Governors' Association Task Force on Water Efficiency to further clarify the Bureau's approach to voluntary conveyance. Id.

35. This provision is "common to all contracts, ... required by law and [is] therefore not subject to negotiation." BUREAU OF RECLAMATION, U.S. DEP'T OF THE INTERIOR, RECLAMATION REPAYMENT CONTRACTS: A COMPILATION TOGETHER WITH EXPLANATORY NOTES ON BASIC FEATURES OF SEVERAL TYPES OF CONTRACTS MOST FREQUENTLY ENTERED INTO, reprinted in S. Doc. No. 92, 88th Cong., 2d Sess. 7 (1964) [hereinafter RECLAMATION REPAYMENT CONTRACTS]. No section of the Reclamation Act expressly requires this contractual provision; on the other hand, the statutory mandate that no water be delivered for irrigation except pursuant to an irrigation contract may necessarily imply this limitation on contractual assignments. See infra notes 209-10 and accompanying text.

An example of this limitation is § 53 of the Repayment Contract Between the United States of America and the A & B Irrigation District, which states: "The provisions of this contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this contract, or any part thereof, or any interest therein, shall be valid until approved by the Secretary." Repayment Contract Between the United States of America and the A & B Irrigation District § 53 (Feb. 9, 1962) (Bureau of Reclamation, U.S. Dep't of the Interior, Contract No. 14-06-100-2368), reprinted in RECLAMATION REPAYMENT CONTRACTS, supra, at 43; see also, Contract Between the United States and Stockton-East Water District Providing for Project Water Service § 10 (December 19, 1983) (Bureau of Reclamation, U.S. Dep't of the Interior, Contract No. 4-07-20-W0329) (stating that water furnished pursuant to the contract could not be sold or exchanged outside the service area without prior written consent of the Secretary of the Interior or his or her representative).

36. For example, the Missouri Basin Region has no specific procedure for reviewing the type of proposal you are studying. Each proposal would be reviewed on a case-by-case basis considering Reclamation law and policy and the specific law(s) which might apply. Our Commissioner's Office has considered the potential of issuing a policy on market transfers of water, but no policy has been issued yet.

Letter from B. E. Martin, Regional Director, Bureau of Reclamation, Missouri Basin to the author (March 13, 1986) (on file with author).

Similarly, in the Pacific Northwest Region:

At present [there is no] written policy that covers proposed water exchanges.

. . . We have approved a number of transfers from one user to another. They range from temporary (one season) transfers for similar uses, as from one irrigation
The Bureau does have written policies governing repayment. At a minimum, the Bureau’s approval of a voluntary conveyance depends upon the assignee’s binding commitment to repay an appropriate share of project costs. In practice, however, the Bureau’s approval of a voluntary conveyance depends upon something more than the buyer’s or lessee’s willingness to make a repayment commitment. As a consultant to the National Water Commission reported after interviews with Bureau of Reclamation officials:

There is one open-ended standard that could cause trouble for transfers. From time to time, [Bureau] officials stated that such transfers would have to be consistent with [Bureau] policies and national goals. They were never specified, and in fact at one point in the conversation, officials stated that there was no coherent set of national goals regarding land use policies, farm sizes, population dispersal, etc. Nevertheless, it is possible for [the Bureau] to reject a transfer although the [originally contracting] District desires it and repayment obligations are secured.

This Article concludes that the Bureau has the statutory authority to allow a relatively free market in the sale or rental of project rights. It also advocates that the Bureau adopt a rule that (1) sets forth the administrative standards for determining whether a proposed conveyance will be approved and (2) explains the generic terms and conditions applicable to such a conveyance.

Section I of this Article analyzes the extent of the Bureau’s discretion to allow M&I and other nonirrigation customers to receive a share greater than the current thirteen percent of the systemwide project supply. The statutory restraints discussed in this Section apply to reallocation of project supply by any means, not just through the establishment of a market for voluntary conveyances of project rights.

The remainder of the Article focuses on the procedure and substance of voluntary conveyances of project rights. Section II, after distinguishing the different interests a federal water contract creates, examines the Bureau’s reservations of certain rights: to lessen deliveries in droughts or other emergencies; not to deliver water upon the contractor’s financial default; to reclaim return flow from irrigation; and to recapture some of the original contractor’s profit from a voluntary conveyance. It also discusses the relationship between the contracting irrigation district and the actual irrigator—more particularly, the local, state, and federal

37. See infra notes 209-35 and accompanying text.
39. See supra text accompanying note 11.
laws that provide the district with some measure of control over an individual's conveyance of a project right and that govern the district's decision to convey its own contractual interest in project supply.

Section III consists of three case studies of completed conveyances. Subsection A describes the Bureau's limited success in promoting emergency conveyances among California irrigators during the 1976-77 drought. This case study illustrates the desirability of adopting a rule in advance of demand for conveyances to lessen the uncertainty and cost of planning. Subsections B and C describe conveyances that have worked to the benefit of the Bureau, the sellers (both water districts), and the buyers (Utah Power & Light, in one case, and the City of Casper, Wyoming, in the other).

Finally, Section IV recommends that the Bureau prepare a rule establishing the procedure, terms, and conditions for voluntary conveyances to minimize the uncertainty and transaction costs in planning and execution. This recommendation may minimize the disruption in agricultural communities that could result from such conveyances to nonirrigation uses.

I

REDISTRIBUTION OF BUREAU OF RECLAMATION WATER SUPPLIES

The Reclamation Act as amended establishes irrigation as the Bureau's top priority for water storage and delivery. Nonetheless, the Bureau has discretion to supply most of the water from a particular project to M&I customers, subject to two provisos. First, the statute specifically authorizing the project must not include contrary directives. Second, supplying such customers (whether original M&I contractors or assignees of project rights) must not disadvantage current irrigators or exclude farm owners who have expressed interest in obtaining project rights.

The Reclamation Act includes many provisions regarding water service to each customer class, but contains few and vague provisions regarding the overall distribution of project water between classes. The

40. See supra notes 9-10 and accompanying text.
41. See infra notes 65-98 and accompanying text.
42. 43 U.S.C. § 390b(d) (1982).
43. See infra notes 65-66, 99-105 and accompanying text. Congress has not enacted provisions specifically governing an irrigator's assignment of a project right to an M&I customer. It is therefore a matter of speculation as to how the Reclamation Act's provisions governing supply contracts should apply to the voluntary conveyance of contracts. This application of the Reclamation Act is the subject of Section II of this Article. See infra notes 260-489 and accompanying text.
Reclamation Project Act of 1939\textsuperscript{44} first authorized the Bureau to sign long-term contracts for water delivery to M&I customers.\textsuperscript{45} In that Act and its subsequent amendments, however, Congress did not specify a maximum percentage of project water available for M&I use, either region-by-region\textsuperscript{46} or systemwide.\textsuperscript{47}

Only thirteen percent of the systemwide supply is now delivered to M&I and other nonirrigation customers.\textsuperscript{48} The Bureau could increase that total through the approval of voluntary conveyances from irrigators or irrigation districts to nonirrigation customers. Any statutory limitation on the Bureau’s authority to sign original contracts with M&I customers, however, also applies to conveyances of existing rights. The agency’s discretion is thus constrained by the project-by-project requirement that delivery to M&I customers not interfere with the project’s efficiency for irrigation supply.\textsuperscript{49}

As long as private, local, and state water utilities stay in business and fulfill their contractual obligations, the Bureau will supply a minority of future M&I demands in western states. The Water Supply Act of 1958\textsuperscript{50} declares: “[I]t is the policy of the Congress to recognize the primary responsibilities of the States and local interests in developing water supplies for domestic, municipal, industrial, and other purposes . . . .”\textsuperscript{51} In the western states, M&I supply, from all sources, totals approximately twenty-eight million acre-feet per year,\textsuperscript{52} of which the Bureau’s share is approximately three million acre-feet.\textsuperscript{53} Nonetheless, this share already makes the Bureau the largest urban utility in the West.\textsuperscript{54}

\begin{itemize}
\item \textsuperscript{44} 43 U.S.C. §§ 375a, 387-389, 485-485k (1982) (original version at ch. 418, 53 Stat. 1187 (1939)).
\item \textsuperscript{45} 43 U.S.C. § 485h(c).
\item \textsuperscript{46} The Bureau has divided its operations into six regions: Pacific Northwest, Mid-Pacific, Upper Colorado, Lower Colorado, Southwest, and Missouri Basin.
\item \textsuperscript{47} Of all the generic provisions in the Reclamation Act (i.e., exclusive of the project authorizations contained in 43 U.S.C. §§ 591-620o (1982 & Supp. III 1985)), § 390b(b) may be unique in its specificity regarding the M&I share of project supply. 43 U.S.C. § 390b(b) (1982). It allows the Bureau to allocate up to 30% of the estimated project cost to “anticipated future demands” by M&I customers. This permissive provision does not govern cost allocation to existing M&I demand. Furthermore, cost allocation is not identical to supply (or benefit) allocation. \textit{See infra} text accompanying note 156.
\item \textsuperscript{48} \textit{See supra} text accompanying note 11.
\item \textsuperscript{49} \textit{See infra} text accompanying notes 65-66.
\item \textsuperscript{51} 43 U.S.C. § 390b(a) (emphasis added).
\item \textsuperscript{52} Estimate derived from U.S. WATER RESOURCES COUNCIL, \textit{supra} note 21, at 33, 35, 39 (charts showing withdrawals for domestic and commercial use, manufacturing, and energy production in Regions 9 through 18 for 1985).
\item \textsuperscript{53} This estimate is somewhat greater than actual demand in the Bureau’s service area because Regions 9 through 11, as defined by the Water Resources Council, encompass more area than the Bureau serves. \textit{See id.} at 5.
\item \textsuperscript{54} \textit{See supra} text accompanying note 11.
\item By comparison, the Metropolitan Water District, which is a wholesaler to districts throughout the Los Angeles basin, supplies only 1.3 million acre-feet per year. DEP’T OF
Although the region- or system-wide maximum the Bureau has legal authority to supply for M&I use is a matter for speculation, project-specific increases in the current M&I supply is of vital concern to the Bureau’s present and potential customers. “As populations, businesses, and industries expand across the West, the Bureau of Reclamation continues to place increasing emphasis on multipurpose water resource development to ensure that ample water will be readily available when and where it is needed.”

In western states, M&I water withdrawals in the year 2000 will be an estimated thirty million acre-feet, up almost two million acre-feet from the 1985 total. In addition to the supplies needed by increased populations and new industrial and commercial facilities, replacement of existing supplies of inadequate quality may create a new demand for the Bureau’s water.

Project water is generally much cheaper and more readily available than alternative supplies involving new construction. A market in project rights would be an effective means of supplying new demand with “old” water. The social and private costs of accommodating an in-
crease in water demand of approximately two million acre-feet per year could be substantially mitigated by the Bureau's adoption of a policy facilitating voluntary conveyances of project rights, subject to constraints that would ensure timely repayment and minimize the disruption of agricultural economies.

A. Allocation of Water to Irrigation

The Reclamation Act does not require the Bureau to dedicate to irrigation a specified minimum of the systemwide water supply. This flexibility is a departure from the original statute, which provided only for the construction of "irrigation works" by authorizing the Bureau to store and deliver water for irrigation and no other use.59 Prior to the Town Sites Act of 1906,60 the Bureau would have been required by law to disapprove an irrigator's proposal for the voluntary conveyance of a project right to an M&I consumer, just as it would have been required to disapprove a nonirrigation consumer's direct application for water supply.

The 1902 Reclamation Act constituted a massive federal program to encourage homesteader settlement and irrigation of publicly owned desert.61 As constitutional authority for the original act, the congressional sponsors generally invoked the property clause of the United States Constitution, which states: "The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or

would result partly from increased efficiency in irrigation and partly from the retirement of currently irrigated land where continued irrigation is not profitable enough to justify payment of the higher water price.

For additional studies evaluating the elasticity of demand for irrigation water, see Moore, Economics of Water Demand in Commercialized Agriculture, 54 AM. WATER WORKS A. J. 913, 915 (1962) (showing a decrease in water demand of 1.58% for every 1% increase in price, starting at $25 per acre-foot); C. Moore & T. Hedges, Economics of On-Farm Irrigation Water Availability and Costs, and Related Farm Adjustments 20 (University of California Giannini Foundation Research Report No. 261, 1963) (showing a decrease in demand of 0.65% for every 1% price increase); J. Bain, R. Caves & J. Margolis, Northern California's Water Industry 176 (1966) (reaching an almost identical result); Heady, Madsen, Nicol & Hargrove, National and Interregional Models of Water Demand, Land Use, and Agricultural Policies, 9 WATER RESOURCES RES. 777, 788-89 (1973) (showing a 0.37% demand decrease for every 1% increase in price between $7 and $30 per acre-foot); and C. Shumway, G. King, H. Carter & G. Dean, Regional Resource Use for Agricultural Production in California, 1961-65 and 1980, at 78-87 (University of California Giannini Foundation Monograph No. 25, 1970) (showing a 1% demand decrease for every 1% price increase at $8.50 per acre-foot in 1965 dollars and a 2.03% demand decrease for every 1% price increase at $17 per acre-foot).

61. See, e.g., 35 CONG. REC. 6752 (1902) (statement of Rep. Jones) ("The main purpose of this bill is to reclaim worthless property of the Government and make it valuable.").
other Property belonging to the United States . . . ."\textsuperscript{62}

In pursuance of that power, Congress passed the Reclamation Act to make marketable and habitable large areas of desertland within the public domain, which lands are valueless and uninhabitable unless reclaimed by irrigation, and the irrigation whereof is impracticable except upon expenditure of large sums of money in the construction of a system of reservoirs and distributing canals.\textsuperscript{63}

Some early cases interpreted this constitutional foundation as a restriction on the Bureau's capacity to deliver project water, even for irrigation, to nonpublic lands.\textsuperscript{64}

\section*{B. Allocation of Water to Municipal and Industrial Use}
\subsection*{1. General Considerations}

The current version of the Reclamation Act explicitly authorizes the Bureau to sign original contracts for M&I supply and therefore implicitly authorizes the Bureau to approve voluntary conveyances from irrigators to M&I customers, provided several conditions relating to project operation are satisfied.

Under the Reclamation Project Act of 1939,\textsuperscript{65} the Secretary of the

\textsuperscript{62} U.S. Const. art. IV, § 3.

\textsuperscript{63} United States v. Hanson, 167 F. 881, 883 (9th Cir. 1909).

\textsuperscript{64} See, e.g., Griffiths v. Cole, 264 F. 369, 374 (S.D. Idaho 1919) ("Whatever may be its maximum power under the Constitution, . . . by the Reclamation Act Congress has chosen to confer authority upon the Secretary of the Interior only to undertake projects the primary or predominant purpose of which is to reclaim public lands." (citation omitted)).

\textsuperscript{65} 43 U.S.C. §§ 375a, 387-389, 485-485k (1982) (original version at ch. 418, 53 Stat. 1187 (1939)). Under 43 U.S.C. § 485h(c), the Secretary of Interior is authorized to enter into contracts for "municipal water supply or miscellaneous purposes." This provision includes industrial use within its ambit. See, e.g., Environmental Defense Fund v. Morton, 420 F. Supp. 1037 (D. Mont. 1976) (regarding the delivery of water from the Bureau's Yellowtail and Boysen Reservoirs in Wyoming for use in energy development), modified on other grounds sub. nom. Environmental Defense Fund v. Andrus, 596 F. 2d 848 (9th Cir. 1979). In that case, the court stated:

In many instances, industrial water use would qualify both as a "municipal" and "miscellaneous" water use. Municipal and industrial uses are closely associated with each other and are sometimes grouped into a single use designated as "M&I" use. Congress has also made express declarations that municipal use includes industrial use . . .

420 F. Supp. 1042. The district court then cited as an example the authorization by Congress of the Washita Project's water allocation to "municipal water supply, including domestic,
Interior may sign an original (or approve an assigned) contract for water delivery to M&I customers only after determining that the contract "will not impair the efficiency of the project for irrigation purposes." The "only relevant factors" for this determination are "those which relate to the irrigation efficiency of the project . . . . The Secretary is not concerned with the adequacy of the water supply for the irrigation of all lands in a river basin or the State . . . ." This determination regarding project efficiency is not a "NEPA-type balancing of all factors related to the use of water."

In *Environmental Defense Fund v. Morton,* the plaintiffs, including irrigators and related water associations downstream from the Boysen and Yellowtail Reservoirs, sued to halt the Bureau's execution of option contracts for supply to industries developing energy resources. The plaintiffs objected to the reduction in the Yellowstone River's flow, although apparently none of the plaintiffs had signed contracts for delivery of project water and repayment of project costs.

The district court rejected the plaintiffs' contention that, before approving the option contracts, the Secretary of Interior should have considered:

the benefits of deferring industrial water use, whether industrial water use is in the public interest, whether preservation of the Big Horn River [a tributary of the Yellowstone] is a preferable course of action, what alternative choices are available to satisfy the future demands for energy, the environmental effect of industrial water use, the economic effect of industrial water use on the companies desiring to make such use and on their consumers, and harm likely to flow from the decision.

The court maintained that the Reclamation Project Act is "unambiguous" in identifying a "sole consideration" for the Secretary in this context: "whether industrial water use will impair the efficiency of the project for irrigation purposes" within the project river basin.
The district court also rejected as "specious" plaintiffs' argument that the Secretary had failed to determine that "there exist potentially irrigable lands in the basin which could be developed were the reclamation water not diverted to industry, but which will instead be adversely affected if not undevelopable in its absence." The court found that the Secretary had made an analysis of irrigation needs and concluded that industrial water use would not impair the irrigation efficiency of the project. Despite expert disagreement, "the legal test is simply whether the Secretary considered the relevant factors. He did, and the administrative record shows that he did."  

Despite the limited scope of the determination of impact on the project's efficiency for irrigation purposes, the Secretary does not have "unfettered discretion" in deciding whether to approve an M&I contract. The Secretary's judgment is subject to judicial review under the Administrative Procedure Act (APA). In granting summary judgment against the plaintiffs, the district court in Morton applied three tests from the APA, as elaborated by the United States Supreme Court in Citizens to Preserve Overton Park, Inc. v. Volpe.

The district court first determined that the Secretary's approval of the option contracts was within the scope of his statutory authority. The court next determined that the approval was not arbitrary, capricious, or an abuse of discretion, insofar as the Secretary did consider the one factor, i.e., impairment of project efficiency for irrigation, specified in the Reclamation Act. Finally, the court found that the administrative action was explained and justified in a record, including "thorough studies, reports, [and] evaluations," a detailed memorandum from the Bureau Commissioner, and a review by the Assistant Secretary for Water and Power Development, all of which preceded the execution of the option contracts.

73. Id.
74. Id. This holding was affirmed on appeal, in Environmental Defense Fund v. Andrus, 596 F.2d 848, 850 (9th Cir. 1979).
76. 5 U.S.C. §§ 701-706 (1982). Under 5 U.S.C. § 706(2), the reviewing court may "hold unlawful and set aside agency action, findings, and conclusions found to be—(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; . . . (C) in excess of statutory jurisdiction, authority, or limitations . . . ; [or] (D) without observance of procedure required by law . . . ."
77. 401 U.S. 402, 413-16 (1971).
79. Id. at 1044-45.
80. Id. at 1045-46.
The Water Supply Act of 1958 establishes a "separate and distinct" procedure which the Secretary of the Interior may follow to determine whether to approve an M&I contract. Under the Water Supply Act, the Secretary must apply for and receive congressional approval for the "modification of a reservoir project authorized, surveyed, planned, or constructed [before July 3, 1958]," if the project as originally approved included provision for M&I supply and if the proposed modification would involve "major structural or operational changes."

No reported case has given shape and substance to this concept of "major" modification. Furthermore, absent a congressionally approved administrative plan for substantial alterations to a facility, and provided that the original authorization included M&I supply as a project purpose, the Secretary may apparently rely on the alternative procedure established by the Reclamation Project Act and not seek congressional approval for a major allocation of project water to M&I customers. The Water Supply Act states: "The provisions of this subsection insofar as they relate to the Bureau of Reclamation and the Secretary of the Interior shall be alternative to and not a substitute for the provisions of the Reclamation Project Act of 1939 relating to the same subject."

In *Environmental Defense Fund v. Morton*, the district court rejected plaintiffs' claim that the Secretary of the Interior was obligated to obtain congressional approval, pursuant to the Water Supply Act, before executing the option contracts for M&I supply. The court noted that Congress, in the Water Supply Act, affirmed the continuing validity of the alternative procedure in the Reclamation Project Act whereby the Secre-

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81. 43 U.S.C. § 390b (1982). This act authorizes the Bureau to store and impound water "for present or anticipated future demand or need for municipal or industrial water." 43 U.S.C. § 390b(b).
82. 420 F. Supp. at 1044.
83. 43 U.S.C. § 390b(d). Counsel for Environmental Defense Fund's Denver Office, at the time of filing *Environmental Defense Fund v. Morton*, expressed doubt that the Water Supply Act was "intended to expand the allowable scope of industrial water marketing (as opposed to merely affording a repayment alternative to provisions already existing under the reclamation laws)." Pring, *supra* note 66, at 301.
84. *See*, e.g., *National Wildlife Fed’n v. Andrus*, 440 F. Supp. 1245 (D.D.C. 1977), which concerned the Bureau's addition of a powerplant to the Navajo Dam. The dam was originally authorized by Congress in 1956 as a "dam and reservoir only." Colorado River Storage Project Act, ch. 203, § 1, 70 Stat. 105, 105 (1956) (current version at 43 U.S.C. § 620 (Supp. III 1985)). The Bureau contended that its construction of the powerplant was not "fundamentally inconsistent with the original authorization in 1956." 440 F. Supp. at 1249. In enjoining further construction, the district court held, in part:

> Clearly the appropriate officials have some discretion to modify aspects of the various programs within the Colorado River Storage Project. But such modifications must occur within the statutory authority granted by Congress. Where Congress has been specific in its authorization or its lack thereof, the discretion of the officials is accordingly diminished.

*Id.* at 1250 (footnote omitted).
85. 43 U.S.C. § 390b(b).
86. 420 F. Supp. at 1044.
tary must determine whether proposed M&I contracts would impair the project’s efficiency for irrigation purposes.87

Both the Reclamation Project Act and the Water Supply Act embody the general presumption that irrigation supply is the primary purpose for any project operated by the Bureau. The procedures discussed above are designed to reconcile actual M&I supply with that presumption. For any particular project, the authorizing statute and its legislative history may provide additional guidance as to the minimum (and maximum) supply allocable to particular uses.88 The authorizing statute is particularly important in cases where Congress has made M&I supply the top priority.89

Like standard irrigation contracts,90 an M&I contract constitutes a proprietary interest in the project supply.91 A project right under the Reclamation Project Act guarantees continued delivery for the project life, provided the contractor makes all of the required payments to the Bureau and requests renewal at the expiration of the original term, and provided further that the supply is put to continuing beneficial use.92

87. Id.
88. Many statutory authorizations, however, do not provide such guidance; instead, they give the Secretary of the Interior considerable discretion to determine how best to balance project purposes. See, e.g., supra note 78 (regarding Boysen and Yellowtail Reservoirs) and § 6 of the Boulder Canyon Project Act, which states:

The dam and reservoir provided for by section 617 of this title shall be used: First, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights in pursuance of Article VIII of said Colorado River Compact; and third, for power. § 6, 43 U.S.C. § 617e (1982). As Interior Solicitor Margold concluded:

Nowhere in the [Boulder Canyon Project Act] is there any specific limitation upon the discretion of the Secretary in determining the use to which the All-American Canal shall be put other than the specific direction that the water carried therein shall be for the reclamation of public lands and other beneficial uses exclusively within the United States.

Contract with City of San Diego in Connection with All-American Canal, 54 Interior Dec. 414, 415 (1934).


90. See infra notes 336-69 and accompanying text.

91. The project right is derived from contract but has the nature of property insofar as it is kin to a "water right," which water codes and common law in western states uniformly define as property and generally as real property. See infra text accompanying notes 285-86.

92. Congress enacted this renewal provision, which effectively extends the M&I customer's project right into the indefinite future:

[T]he Secretary of the Interior shall, upon request of the other party to the long-term contract for municipal, domestic or industrial water supply hereafter entered into [pursuant to the Reclamation Project Act of 1939, 43 U.S.C. § 485h(c)] include pro-
In sum, Congress has diversified what began as the exclusive objective of the Reclamation Act, namely the development of homesteads in western desertlands. In delivering water to M&I customers, the Bureau is squarely within the revised congressional purpose. The broadened objectives of reclamation projects reflect a similar expansion in the perception of the power of Congress to authorize them. Recall that originally some federal courts questioned the power of Congress to provide water to areas that had never been federal lands. In *United States v. Gerlach Live Stock Co.*,\(^9\) the United States Supreme Court held that the constitutional foundations for the reclamation program include article I, section 8 of the Constitution, the general welfare clause.\(^9\) Compared to earlier cases limiting the Reclamation Act’s constitutional source to article IV, section 3, the property clause, this case reflects diversification (particularly in the 1939 amendment) of the uses to which project water can be put and the congressional recognition that taxpayers will assume some of the costs of the reclamation program, contrary to the stated intentions of the sponsors of the original Act.\(^9\) *Gerlach* is doctrinally grounded in *United States v.*
Butler,\(^{27}\) which held for the first time that in conferring the power to tax, article I:

delegates a power separate and distinct from those later enumerated [such as control over navigation], and one not restricted by them, and that Congress has a substantive power to tax and appropriate for the general welfare, limited only by the requirement that it shall be exercised for the common benefit as distinguished from some mere local purpose . . . . Thus the power of Congress to promote the general welfare through large-scale projects for reclamation, irrigation, or other internal improvement, is now as clear and ample as its power to accomplish the same results indirectly through resort to strained interpretation of the power over navigation.\(^{98}\)

This holding suffices, given the statutory latitude, to authorize the Secretary of the Interior to approve voluntary retirement of irrigation supply, and its rededication to M&I use, when the new use is consistent with the "general welfare."

2. Municipal and Industrial Use Outside of Project Boundaries

Although the Reclamation Project Act allows the Secretary of the Interior to approve M&I contracts that will not impair a project's irrigation "efficiency," this statutory permission may apply only to M&I use within project boundaries.\(^{99}\) The Bureau must satisfy more stringent conditions before supplying water to M&I customers outside of project boundaries or to M&I customers, regardless of residence, from a project authorized only for irrigation. The following interpretation of these conditions is somewhat speculative because it is based on a sixty-six-year-old amendment that remains largely unadjudicated.

The Miscellaneous Water Supply Act of 1920\(^{100}\) authorizes the Bureau to contract to supply water "for other purposes than irrigation."\(^{101}\) Under the Act, the water supply for nonirrigation may be provided only if each of three conditions is met: (a) the Secretary of the Interior has obtained the approval of the irrigators' associations;\(^{102}\) (b) the Secretary has made an advance showing that there is "no other practicable source

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of the original Reclamation Act did not need to address squarely the question (asked repeatedly by opponents) whether Congress had the constitutional authority to use easterners' taxes for this western program.

97. 297 U.S. 1 (1936).
98. Gerlach, 339 U.S. at 738 (summarizing the holding in Butler, 297 U.S. 1) (footnote omitted).
99. For a discussion of the procedure used by the Secretary to design these boundaries, see infra notes 170-208 and accompanying text.
100. 43 U.S.C. § 521 (1982) (original version at ch. 86, 41 Stat. 451 (1920)).
101. Id.
of water supply for the [nonirrigation] purpose";\(^{103}\) and (c) the delivery will not be "detrimental to the water service for such irrigation project, nor to the rights of any prior appropriator."\(^{104}\) This last condition parallels the later Reclamation Project Act's requirement that M&I supply not impair the project's "efficiency . . . for irrigation purposes."\(^{105}\)

Congress has not expressly repealed the Miscellaneous Water Supply Act or subordinated it to later provisions governing M&I supply. Federal courts disfavor repeal by implication.\(^{106}\) Even where there is a positive repugnancy between the provisions of several laws, the older is repealed only pro tanto.\(^{107}\) According to noted water law expert, Robert Clark, "[w]hile the 1939 act clearly governs in-project supply, the 1920 act is still applicable to nonproject users."\(^{108}\)

*Environmental Defense Fund v. Morton*\(^{109}\) seems to be the only federal case adjudicating the reach of the Miscellaneous Water Supply Act in the context of a modern reclamation project. The district court there rejected the plaintiffs' claim that the option contracts for industrial water supply violated the 1920 act: "[That act] has no application to the issue of this lawsuit."\(^{110}\) The court's reasoning was summary and somewhat opaque. "Boysen and Yellowtail Projects were built as multi-purpose projects under the Flood Control Act of 1944, and the Bureau was authorized by the 1944 Act and the Reclamation Project Act of 1939 to enter into the subject contracts,"\(^{111}\) following an administrative determination that the contracts would not impair the project's "efficiency for irrigation purposes."\(^{112}\) In other words, industrial supply was included

\(^{103}\) 43 U.S.C. § 521.

\(^{104}\) Id.; see H.R. REP. NO. 279, 66th Cong., 1st Sess. 2 (1919) (quoting the Secretary of the Interior as stating that "[t]he amount of water required in such cases . . . is a very small fraction of what is needed for agricultural purposes, and in most cases could be spared without any material effect upon the water supply for the project"); see also id. (quoting the preceding session's chairman of the Committee on Irrigation of Public Lands as stating that there are occasions on nearly all of the reclamation projects "where a small quantity of water is very much needed for some domestic or other use not strictly within irrigation that might be made without any detriment whatever to the water users, and also be of great benefit to the community").

\(^{105}\) 43 U.S.C 485h(c) (1982). In a set of instructions to all field offices, dated June 9, 1920, the Bureau's Director stated that, if in compliance with these conditions, the water "supply may be temporary or permanent." 47 Pub. Lands Dec. at 405.

\(^{106}\) See, e.g., Morton v. Mancari, 417 U.S. 535, 551 (1974) ("[C]ourts are not at liberty to pick and choose among congressional enactments, and when two statutes are capable of coexistence, it is the duty of the courts, absent a clearly expressed congressional intention to the contrary, to regard each as effective.").


\(^{108}\) 2 WATER AND WATER RIGHTS, supra note 1, § 122.1, at 243.


\(^{110}\) Id. at 1043.

\(^{111}\) Id.

\(^{112}\) See supra text accompanying notes 65-74.
as a project purpose in both statutes. The court failed to address whether the industrial contracts involved use within the project boundaries.

The Miscellaneous Water Supply Act may still govern an M&I contract for water from projects that Congress authorized solely for irrigation supply. The procedure for expanding project uses expressly applies "in connection with . . . [a] contract to supply water from any project irrigation system for other purposes than irrigation." Similarly, the Act's subtitle, "Sale of Surplus Waters Generally," suggests that the Act governs water designated for irrigation but surplus to actual need or demand.

In *El Paso Water Improvement District No. 1 v. City of El Paso*, the district court applied the Miscellaneous Water Supply Act to enforce an M&I contract outside of the Rio Grande Project's boundaries. Although Congress authorized the project in 1905 only for irrigation, it appears that the single purpose of the project, and not the city's extra-project location, called the Act into play.

The Miscellaneous Water Supply Act of 1920 may also apply to de-

113. *See supra* note 65 (discussing purpose under the Reclamation Project Act). The court also quoted extensively from the legislative history:

To the extent that the several functions of water control and utilization are conflicting, preference should be given to those which make the greatest contribution to the well-being of the people and to the areas of greatest need. To the extent that the uses of water are competitive, the use of water for domestic, agricultural and industrial purposes should have preference.

420 F. Supp. at 1041 (quoting S. Doc. No. 191, 78th Cong., 2d Sess. 10 (1944)).

114. "It seems obvious that Congress did not intend to allow the agency, unilaterally, to convert existing [single-purpose] reservoirs to industrial use, in lieu of the previously authorized congressional purposes, without returning to Congress and explaining why the original purpose planning was no longer valid." *Pring, supra* note 66, at 302.


117. 133 F. Supp. at 920. The city of El Paso challenged the contract's validity in spite of the irrigation districts' approval of the contract and the Secretary's finding of nonimpairment of irrigation. The city's newly elected officials hoped to escape certain obligations assumed by the prior administration. Specifically, the contract provided that the city would acquire lands, not to exceed 2,000 acres in either of the two districts, within the Rio Grande Project and would receive an annual water supply commensurate with the supply an irrigator would have received. *Id.* at 919. The contract obligation the city hoped to avoid was its grant of a power of attorney to the districts for the purpose of reselling the fallow lands to project irrigators in the event that the city's project supply ever ended. *See id.* at 919 n.73.

One of the grounds on which the city challenged the project contract was an alleged violation of the statutory ban on the sale of project irrigation water to tracts exceeding 160 acres, discussed *infra* notes 468-70 and accompanying text. The city had acquired approximately 1,400 acres of farmland and received a water supply accordingly for a decade. The trial court held that the statutory provision applied only to privately owned tracts that were actually irrigated and not to tracts determined only to entitle an M&I customer to water supply. 133 F. Supp. at 919-20.

118. The Bureau has ruled that "the place of residence of the [M&I] applicant is immaterial" to a supply contract's validity under this Act. 47 Pub. Lands Dec. at 405.
livery to M&I customers located outside of project boundaries even if Congress authorized the project for both irrigation and M&I supplies.\(^{119}\) Under this theory, the Reclamation Project Act of 1939 governs only a contract to supply in-project M&I customers from a multipurpose project; thus, the 1920 Act fills the void as to other M&I customers of such a project.\(^{120}\) This interpretation seems persuasive at least where the extraproject customers would be supplied from the “project irrigation system.”\(^{121}\)

Unfortunately, “project irrigation system” is not defined. The term could mean “water storage capacity”; in that case, the 1920 Act would apply only where the M&I supply would be derived from the irrigation “share” of a reservoir. More literally, the term could refer to physical facilities, in which case the Miscellaneous Water Supply Act would govern any contract with out-of-project M&I customers whose water is stored in a dam, or delivered in a canal, that is also used for irrigation supply. Under this latter definition of “project irrigation system,” the Secretary is authorized to supply out-of-project M&I customers, without congressional approval, whenever the three specified conditions are met: the prior approval of the project irrigators associations, no practicable alternative source of water for the M&I customers,\(^ {122}\) and no detrimental impact on irrigation service.

C. Allocation of Project Water for Preservation of Fish and Wildlife

Project rights which irrigators are willing to convey may be dedicated not just to M&I supply but also to conservation of fish and wildlife resources.\(^ {123}\) For example, water (subject to the project right) could be

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119. 2 WATER AND WATER RIGHTS, supra note 1, § 122.1, at 243.
120. The Bureau’s ruling that the 1920 Act applied regardless of the M&I applicant’s residence does not contradict this conclusion. The ruling was issued 19 years before Congress, in the Reclamation Project Act of 1939, first authorized the Bureau to supply water both to irrigators and to M&I customers within the project boundaries. The ruling was not intended to apply to such a multipurpose project; it may still be valid in the context of a project authorized for irrigation only, either before or after passage of the Reclamation Project Act in 1939.
121. See supra text accompanying note 115.
122. The administrative ruling, discussed supra note 102, interprets this as a requirement that “[w]ater will not be furnished hereunder in any case where it may legally be supplied under other provisions of law.” 47 Pub. Lands Dec. at 405. Read literally, this sentence would prevent the supplying of any M&I customer with water pursuant to the Miscellaneous Water Supply Act: Whether in 1920 or today, there is no town or industry for which the Bureau of Reclamation is the only legal source of water. Read in a more reasonable fashion, the sentence could mean that a contract with an M&I customer should not be signed subject to the provisions of the Miscellaneous Water Supply Act if it could be signed under another part of the Reclamation Act.
123. It is possible for conservation to be precluded as inconsistent with the project authorization. See, e.g., Jicarilla Apache Tribe v. United States, 657 F.2d 1126 (10th Cir. 1981), where the court invalidated the Bureau’s contract with Albuquerque on the ground that recreation was the primary benefit resulting from the city’s use of the federal water.

[T]he principal uses of the San Juan-Chama Project water are to be municipal, do-
used to maintain flow downstream of the storage facility. A nonfederal agency or private group could buy or lease a project right for this purpose.

The Fish and Wildlife Coordination Act of 1934 directs the Secretary of the Interior to design water projects henceforth "with a view to the conservation of wildlife resources." Before project authorization, the Secretary must report to Congress a summary of recommendations for conservation. The project authorization then includes a mitigation program. Subject to statutory exceptions regarding very small projects or projects substantially completed as of the date of enactment of the Fish and Wildlife Coordination Act:

[W]henever the waters of any stream or other body of water are impounded [and diverted] . . . by any department or agency of the United States, adequate provision, consistent with the primary purposes of such [development] . . . , shall be made for the use thereof, together with any land, water, or interests therein, acquired or administered by a Federal agency in connection therewith, for the conservation, maintenance, and management of wildlife resources thereof, and its habitat thereon, including the development and improvement of such wildlife resources . . . .

This Act also allows the Secretary of the Interior to modify any Bureau project Congress authorized before March 10, 1934, provided construction was less than sixty percent completed at the time of enactment and provided that the modification for wildlife conservation is "compatible with the purposes for which the project was author-

124. This type of use of project water would also be subject to state laws governing the Bureau's water right. Either expressly or by reference to the water code or fish and game code, the state's permit for the Bureau's appropriation may contain provisions relevant to such environmental mitigation. Any provision of state law that is inconsistent with express Congressional directives would not be binding on the Bureau. See infra text accompanying notes 243-59 for a discussion of California v. United States, 438 U.S. 645 (1978). Because the subject of fish and wildlife mitigation at reclamation projects is at the edge of this Article's topic, the author does not discuss further the specific relationship of the relevant federal and state laws.

125. Use of the water for environmental mitigation—for example, to increase downstream production of spawning salmon—may produce more wealth than its use for irrigation of such crops as alfalfa. See, e.g., F. Bollman, A Simple Comparison of Values: Salmon and Low Value Irrigation Crops (May 9, 1979) (speech to the Association of California Water Agencies, Engineers-Managers Section) (on file with author).


127. Id. § 662(a).

128. Id. § 662(b).

129. I.e., where the reservoir has less than 10 acres of surface area. Id. § 662(h).

130. Id. § 663(a) (emphasis added).

131. Id. § 662(g).
ized. . . .” Project modifications may include additions to the “structures and operations” of the project.

In the Water Project Recreation Act of 1965, Congress directed that every reclamation project be “constructed, operated, and maintained” for the purposes of outdoor recreation and wildlife enhancement, whenever the project “can reasonably serve either or both of these purposes consistently with” the Act’s provisions for recovery of federal expenditures. With regard to reclamation projects previously constructed pursuant to federal reclamation laws or under the Secretary of the Interior’s control, except any within a National Wildlife Refuge, the Secretary of the Interior may “investigate, plan, construct, operate and maintain, or otherwise provide for public outdoor recreation and fish and wildlife enhancement facilities, to acquire or otherwise make available such adjacent lands or interests therein as are necessary for [enhancement and other project purposes] . . . .”

Thus, the Bureau has the discretion to approve transactions converting project rights from irrigation use to environmental mitigation, provided the conveyance would not be inconsistent with the project’s “efficiency for irrigation purposes,” and provided the cost of the mitigation is assumed by a nonfederal party to the extent required by the Water Project Recreation Act. It is unclear, however, whether this law or the Fish and Wildlife Coordination Act does more than vest the Bureau with discretion to approve such conveyances. As long as the Bureau has complied with express congressional directives regarding mitigation at an individual project, neither of the generic laws expressly obligates the Bureau to allow a conveyance for the purpose of enhanced mitigation.

An interested party probably does not even have standing to sue the Secretary for violating the Fish and Wildlife Coordination Act by refusing to allow conveyance of a project right for environmental mitigation. No reported case addresses a party’s standing for this purpose.

132. Id. § 662(c).
133. Id. (emphasis added).
135. Id. § 460l-12.
136. Id. § 460l-18(a).
137. See infra notes 236-41 and accompanying text.
138. See Environmental Defense Fund v. Corps of Eng’rs, 325 F. Supp. 749, 754 (E.D. Ark. 1971), dismissed on other grounds, 342 F. Supp. 1211 (E.D. Ark. 1972), aff’d, 470 F.2d 289 (8th Cir. 1972), cert. denied, 412 U.S. 931 (1973) (“It is the Court’s view that, if defendants comply with the provisions of the [National Environmental Policy Act, 42 U.S.C. § 4331] in good faith, they will automatically take into consideration all of the factors required by the Fish and Wildlife [Coordination] Act and it is not reasonable to require them to do both separately.”). See also, Sierra Club v. Morton, 400 F. Supp. 610 (N.D. Cal. 1975), modified on other grounds sub nom. Sierra Club v. Andrus, 610 F.2d 581 (9th Cir. 1979), rev’d on other grounds sub nom. California v. Sierra Club, 451 U.S. 287 (1981), where the court held:

The only authority on this question of which the court is aware has answered in the
under the Water Project Recreation Act.\textsuperscript{139} If plaintiffs do have standing, the Bureau's conduct regarding the application for such a conveyance would be vulnerable if the level of environmental mitigation at the project failed to satisfy express congressional directives or if approval of the conveyance was unreasonably withheld.\textsuperscript{140} Under the Administrative Procedure Act,\textsuperscript{141} the Secretary's judgment regarding reallocation of a project right would be invalidated by a court only if a plaintiff could prove arbitrariness, abuse of discretion, or failure to observe the proce-

\textsuperscript{139} But see, Sierra Club v. Froehlke, 392 F. Supp. 130, 142 (E.D. Miss. 1975), \textit{aff'd on other grounds}, 534 F.2d 1289 (8th Cir. 1976) (The court assumed that the plaintiff had standing to challenge the United States Army Corps of Engineers' construction of the Meramec Park Reservoir and dismissed on the merits the count alleging that such construction would violate the Water Project Recreation Act, 16 U.S.C. § 460l-12. The case does not indicate whether the defendant objected to plaintiff's standing.).

\textsuperscript{140} The "unreasonableness" of the Bureau's conduct might be measured by the extent of the Bureau's compliance with its own regulations under this law at 43 C.F.R. § 24.6 (1985). Part (a) directs that cooperative arrangements between the federal and state agencies for fish and wildlife conservation shall be "continued and encouraged." \textit{Id.} § 24.6(a). Part (b) further directs that "[t]he cooperating parties shall periodically review such cooperative arrangements and adjust them to reflect changed circumstances." \textit{Id.} § 24.6(b).

In Jicarilla Apache Tribe v. United States, 657 F.2d 1126 (10th Cir. 1981), the court invalidated water storage solely for recreation behind Elephant Butte Reservoir, in part because of the practical consequence that 93% of the water evaporated without any consumptive use. \textit{Id.} at 1133. The court held:

\begin{quote}
[The Water Project Recreation Act, 16 U.S.C. § 460l-12,] authorizes consideration of opportunities for recreation and wildlife enhancement. If a project can reasonably serve those purposes, it is to be operated accordingly. Assuming that this statute, passed in 1965, applies to San Juan-Chama water, there is nothing in the statute which authorizes storage solely for recreational purposes. The statute does not suggest that specific limitations on use of project water should be ignored in favor of recreation or wildlife.
\end{quote}

\textit{Id.} at 1143.

Compare County of Trinity v. Andrus, 438 F. Supp. 1368, 1374-87 (E.D. Cal. 1977), where the district court addressed the Secretary of Interior's duties under the Trinity Project Act, Pub. L. No. 84-386, 69 Stat. 719 (1955). Section 2 of this Act states that, in operating the project, "[t]he Secretary is authorized and directed to adopt appropriate measures to insure the preservation and propagation of fish and wildlife, including, but not limited to, the maintenance of the flow of the Trinity River below the diversion point" at a specified level. \textit{Id.} at 719, \textit{quoted in} 438 F. Supp. at 1374. The court held that the project authorization did not create a "duty to maintain fish populations at pre-project levels" or to maintain "any specific level," although they may "set some lower limit" on the Secretary's discretion to operate a project to the detriment of natural resources. \textit{County of Trinity,} 438 F. Supp. at 1375, 1378. The court did not reach the propriety of the Secretary's conduct under the Fish and Wildlife Coordination Act or the Water Project Recreation Act; in fact, the plaintiff apparently did not even base a cause of action on the latter statute.

dures required by law.142

D. Secretary of the Interior’s Discretion in Distributing Water from Individual Projects

Congress has vested the Secretary of the Interior with considerable authority to determine which lands and which parties receive the benefits of federal investment in reclamation projects. Congress authorizes a typical project pursuant to planning documents that do not specify the ultimate mix of water uses.143 Furthermore, absent unusual specificity in the authorizing statute for a project, the Reclamation Act provides that the Secretary may determine the project boundaries after Congress has approved the project and even after the start of actual construction.144

Two general mandates in the Reclamation Act, however, limit administrative discretion in the distribution of the project benefits. Before signing a supply contract, the Secretary must be satisfied that the customer can and will pay an appropriate share of project costs.145 The Secretary must also comply with state law applicable to project construction and operation, unless that law is inconsistent with express congressional directives.146

I. Lack of Specificity in Plans Developed Before Project Authorization

Congress does not normally bind the Secretary of the Interior to a specific allocation of water among customer classes within a project. This practice reflects the shortage of relevant information at the time of authorization and, more importantly, the recognized need for administrative flexibility as the needs and financial abilities of potential customers change over time.

In the planning documents that precede project construction, successive amendments to the Reclamation Act have required an increasing degree of specificity as to the design and operation of project facilities. For projects started before December 5, 1924, the Secretary was obligated to determine, before construction, only that the project would be “practicable.”147 After December 5, 1924 and before August 4, 1939, a

142. See supra notes 76-80 and accompanying text for a discussion of judicial review under the Administrative Procedure Act.
143. See infra notes 147-69 and accompanying text.
144. See infra notes 170-208 and accompanying text.
145. See infra notes 209-35 and accompanying text.
146. See infra notes 242-59 and accompanying text.
project could not be started until the Secretary of the Interior had prepared a report including "information in detail . . . concerning the water supply, the engineering features, the cost of construction, land prices, and the probable cost of development." The Reclamation Project Act of 1939 requires the modern version of a feasibility report to be submitted to the President and Congress. The report must include findings regarding: (a) the project’s engineering feasibility; (b) its estimated cost; and (c) the estimated allocation of costs to reimbursable functions (irrigation, power, M&I water) and to nonreimbursable functions (such as flood control and navigation). Today the Bureau must obtain congressional approval to begin preparing a feasibility report.

Because the Bureau originally constructed projects only for irrigation supply, planning documents prepared before 1939 did not need to deal with the distribution of benefits between customer classes. The original Reclamation Act required that the Secretary be satisfied before construction that the water contracts would secure the repayment of federal costs within ten years. The Fact Finders Act of 1924 somewhat relaxed that requirement. Under that Act, a project could be authorized upon the administrative determination, approved by the President, that the contracts would "probably return" the project cost to the United States.

In determining whether a project's costs will be repaid, the Secretary (1982)), which requires Presidential approval expressed by "direct order" before the start of any future project. 2 WATER AND WATER RIGHTS, supra note 1, § 112.1, at 137.

148. Fact Finders Act, ch. 4, § 4, subsec. B, 43 Stat. 672, 702 (1924) (current version at 43 U.S.C. § 412 (1982)). Reports pursuant to this act were submitted to the President and not to Congress. Id.

149. 43 U.S.C. § 485h(a) (1982) (original version at ch. 418, 53 Stat. 1187, 1193 (1939)). Under 43 U.S.C. § 485h(a), the Secretary of the Interior is automatically authorized to construct a project upon such submission, provided the estimated project cost does not exceed the total of the costs allocated to reimbursable and nonreimbursable functions. The Bureau does not use this procedure for automatic authorization and obtains express Congressional approval for every project. 2 WATER AND WATER RIGHTS, supra note 1, § 112.2, at 139; A. GOLZÉ, RECLAMATION IN THE UNITED STATES 125 (2d. ed. 1961).

150. 43 U.S.C. § 485h(a). Additionally, for every proposal that is a "major" federal action "significantly affecting the quality of the human environment," the National Environmental Policy Act of 1969 requires that the Bureau prepare an Environmental Impact Statement (EIS), including an in-depth comparison of the proposal and alternatives. 42 U.S.C. § 4332(2)(C), (E) (1982).


155. Id.
tary must make a preliminary allocation of costs to various project purposes, including M&I supply. To do this, the Bureau uses a methodology called the "separable costs-remaining benefits analysis."

The purpose of the formula is to allocate to each use in a multi-purpose project the costs properly attributable to it. For each project purpose this amount is the sum of two factors: the separate and separable costs attributable to that purpose alone, plus a proper share of the joint costs, i.e., the costs of those facilities, such as the dam, which serve all the project purposes.\(^{(156)}\)

The Bureau also determines whether potential customers can meet contractual repayment obligations.\(^{(157)}\) Voluntary conveyances to M&I customers could involve three kinds of modification to the assumptions and estimates in the planning documents. The possible modifications include: addition or adaptation of a project facility, revision of the operating regime, and increased allocation of project costs (and benefits) to the M&I function. Administrative modifications, absent congressional approval, are discussed below in order of increasingly certain legality.

First, allocation of water supply to M&I customers might require a new facility such as a delivery canal or pipeline. Where the authorizing statute specifically excludes such a facility, the Bureau cannot take the administrative initiative to construct it.\(^{(158)}\) Where the authorizing statute incorporates the engineering plans in the feasibility report and directs the Bureau to proceed in "substantial conformity" therewith,\(^{(159)}\) the agency's discretion to modify project facilities is, of course, more constrained than in those projects without such incorporation by reference. The cost ceiling in the original authorization may also constrain the Bureau's ability to modify the project.\(^{(160)}\)

For example, the authorizing statute for the San Felipe Division of the Central Valley Project states simply that the Secretary shall construct "the Pacheco tunnel, pumping plants, power transmission facilities, canals, pipelines, regulating reservoirs and distribution facilities."\(^{(161)}\)
Bureau's project construction diverged from the feasibility report in a variety of ways, such as shortening the major project tunnel, substituting conduits for open canals, changing the location of a reservoir, increasing the capacity of project pumping plants, and deferring water service to the area around Watsonville, California.\footnote{162. Adequacy of Legislative Authorization for the San Felipe Division, Central Valley Project, California, 85 Interior Dec. 337, 339 (1978).}

In reviewing the legality of these modifications, absent congressional reauthorization, the Interior Solicitor concluded that the original authorizing statute:

- did not specify the capacities, locations, or costs of any of [the project] features. This suggests that Congress meant to accord the Secretary substantial discretion to modify the project features to meet changing needs, so long as the basic facilities Congress described were built to carry out the project purposes.

\footnote{163. \textit{Id.}}

\ldots This discretion is, however, constrained by the plain terms and requirements of the Act as to what facilities shall be constructed \ldots [S]ubstantial deviations from these general requirements, either by additions or deletions from the project plans, would violate the Congressional authorization \ldots .\footnote{164. Authority to Divert Flows from Hunter Creek Tributaries, Fryingpan-Arkansas Project, Colorado, 85 Interior Dec. 326 (1978).}

Second, the Bureau might modify the operational regime for a project (i.e., how much water will be delivered and when) to accommodate a voluntary conveyance of project rights. Some aspects of the operational regime, such as the delivery schedule, are typically left to the Bureau's discretion because they depend on the actual water contracts. Therefore, to the extent that the new regime is not substantially inconsistent with congressional directives, the Bureau is within its authority to make this sort of modification.

If the authorizing statute precisely describes some aspect of the operational regime, the Bureau does not have authority to alter that. The Bureau will also act cautiously if Congress apparently intended to specify an operational regime, but left ambiguities in the relevant legislative documents. For example, after the Fryingpan-Arkansas Project began operating, a private party challenged the Bureau's proposal to divert 10,300 acre-feet annually from the South Forks of Hunter Creek to supply project contracts. This administrative plan allegedly violated the feasibility report's limit on such diversion to 3,000 acre-feet annually for a specialized purpose (accomplishing a water-rights exchange).\footnote{164. Authority to Divert Flows from Hunter Creek Tributaries, Fryingpan-Arkansas Project, Colorado, 85 Interior Dec. 326 (1978).} In ruling in the complainant's favor, the Interior Solicitor noted that Congress, in the authorizing statute, had directed that the Secretary "construct, \textit{operate}, and maintain" the project in "substantial accordance" with a House
Document including that feasibility report. The legislative document also included a draft set of operating principles, which were ambiguous as to the amount and purpose of the diversion from Hunter Creek. The Solicitor concluded that "there is no clear authority for the Bureau to carry out its current operating plans with respect to [such diversions] and accordingly these plans may not be implemented until such time as affirmative authority is received from Congress."  

Third, voluntary conveyances to M&I use may increase the appropriate allocation of costs to M&I use, or otherwise alter the repayment schedule of a class. This kind of accounting shift would not, by itself, require congressional approval. During normal project operation, as contracts bring in more or less money than expected in the feasibility study, the Bureau routinely adjusts its estimates both regarding project costs and repayment. In interviews with the staff of the National Water Commission, Bureau officials stated that a feasibility study conducted pursuant to the Reclamation Project Act does not constitute "firm allocation[s]" to particular uses, even when the study is incorporated by reference in the congressional authorization for a project. The study is "in the nature of a projection of use, and can be adjusted later," although it generally is "not radically departed from after project authorization." For example, irrigators in the Columbia Basin Project unsuccessfully challenged the Bureau's increase in the cost allocated to irrigation and in the contract rates to irrigators. The Interior Solicitor reasoned that the 1939 Act did not intend that final allocations of cost would be based on estimates; therefore the Bureau necessarily had the power to change the rates after the costs were known.

In short, the Reclamation Act's provisions requiring the preparation of planning documents also grants the Interior Secretary limited discretion to modify the anticipated design or operation of a project. This administrative authority can be used to approve conveyances of project rights not inconsistent with express congressional directives in the project authorization.

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165. Id. at 327-29.
166. Id. at 329.
167. Id. at 334-35. The Solicitor's opinion reflects the policy of administrative restraint where the operating regime may be of central importance to the project.

The question is how to construe these ambiguities where there is no clear record. . . . When, as here, such fundamental values collide and various interests clash openly, it is far better for Congress, most directly expressing the will of the people, to resolve such disputes than for the constructing and operating agency to do it.

Id. at 334.

2. Administrative Discretion in Establishing Project Boundaries

The Reclamation Act does not specify a process or substantive standards that the Secretary of the Interior must follow to establish project boundaries. Unless the authorizing statute for a project specifically delineates boundaries, the Secretary possesses considerable discretion in choosing the irrigable lands and irrigation districts that may receive project rights and the guarantees of rights to continued water delivery.¹⁷⁰

The establishment of project boundaries determines what kind of project right an irrigator holds and may convey for M&I use. Irrigation with project water outside of the boundaries, pursuant to Warren Act contracts, generally cannot create a conveyable project right, insofar as the out-of-project irrigator may have no long-term interest in the use of project facilities.¹⁷² Furthermore, a Warren Act contract does not obligate the Bureau to construct associated delivery facilities to the irrigator (or presumably, an assignee).¹⁷³

The establishment of project boundaries also affects the ability of potential M&I customers to bargain with the Bureau for a project supply at the start of project operation. Most simply, the more irrigable land included within the project’s service area, the less water supply remains for secondary project purposes. Furthermore, whether a potential M&I customer is within the project boundaries can determine what kinds of

¹⁷⁰ Regarding the guaranteed rights pursuant to 9(d) or 9(e) contracts, see infra notes 346-62 and accompanying text.
¹⁷² Under § 1 of the Warren Act, the Secretary may contract with irrigators or irrigation districts to provide water from excess project capacity. The storage and delivery is pursuant to a private water right held by the customer (i.e., not pursuant to a water right held by the United States for project operation). Such a contract must “preserv[e] a first right to lands and entrymen under the project.” 43 U.S.C. § 523. A project supply under such a contract is therefore temporary or provisional, although the contractor’s water right under state law is not.

Under § 2 of the Warren Act, an irrigator or irrigation district may contract with the United States for the construction of capacity in excess of that for which the United States holds water rights. 43 U.S.C. § 524. This section does not expressly subordinate the customer’s project right to the rights of lands and entrymen under the project.

For further discussion of rights created by Warren Act contracts, see infra notes 363-69 and accompanying text.

¹⁷³ According to the United States Department of the Interior:

[T]he Act's legislative history indicates that the additional [project] cost [incurred because of such contracts] would be borne by those desiring such surplus water 'without costing the Government a penny.' Payment would be in cash and it was specifically stated that the funds to be contributed for the construction of surplus capacity of such project facilities would not be advanced by the Government.

BUREAU OF RECLAMATION, U.S. DEP’T OF THE INTERIOR, SPECIAL TASK FORCE REPORT ON SAN LUIS UNIT 20 n.6 [hereinafter SAN LUIS REPORT] (quoting 46 CONG. REC. 2782, 2783 (1911)). The Special Task Force concluded that "those areas lacking appropriate authority for inclusion in the San Luis service area [and thus having contracts under the Warren Act] also lack authority for any construction of a distribution and drainage system with Federal funds." Id. at 18.
conditions apply to that party's project contract (either original or assigned).

The original Reclamation Act provides that the Secretary of the Interior must give "public notice of the lands irrigable under such project . . . ."\textsuperscript{174} The statute is vague as to the timing of the notice. Consistent with common sense, the Secretary may issue the notice only after making an administrative determination of the project's practicability.\textsuperscript{175} After letting the construction contracts, the Secretary shall "thereupon" give the public notice.\textsuperscript{176} One state court has held that the "time of giving public notice after the letting of contracts was left to the discretion of the Secretary of the Interior, and notice might reasonably be delayed until the completion of the project."\textsuperscript{177}

The notice defined much of the relationship between project irrigators and the Bureau under the original Reclamation Act. The notice of project boundaries included the limit on farm size, the project charges per acre, and the number of installments for repayment. The notice "fixed" the financial obligations of project irrigators and established a contractual relationship that could not be changed except through mutual consent.\textsuperscript{178} The notice enabled "prospective settlers [to] determine for themselves whether they will or will not settle upon the [project] lands, and thus bind themselves to pay the published price for water."\textsuperscript{179}

The notice provisions in the original Reclamation Act, as a practical matter, no longer serve at least some of the intended functions. For example, later statutory amendments (such as the Reclamation Project Act) set repayment terms.\textsuperscript{180} Yet the notice requirement persists. The terms of the notice for a given project still carry weight in an adjudicatory proceeding to determine what the project boundaries are and the conditions under which a party may receive project supplies. Nonetheless, a typical notice does not fully or clearly describe the project boundaries.\textsuperscript{181}

Typically, the Bureau's feasibility reports are also somewhat inadequate in the delineation of project boundaries. "Feasibility studies often

\textsuperscript{174} Reclamation Act of 1902, § 4, ch. 1093, 32 Stat. 388, 389 (current version at 43 U.S.C. § 419 (1982)). A related requirement is that the Secretary give notice when project water is "actually available." 43 U.S.C. § 423e.

\textsuperscript{175} 43 U.S.C. § 419.

\textsuperscript{176} Id.

\textsuperscript{177} In re Goshen Irrigation Dist., 42 Wyo. 229, 240, 293 P. 373, 376 (1930).

\textsuperscript{178} Shoshone Irrigation Project—Suspension of Public Notices and Extensions of Time for Making Payments, 50 Pub. Lands Dec. 223 (1923); Fox v. Ickes, 137 F.2d 30, 34 (D.C. Cir. 1943), cert. denied, 320 U.S. 792 (1943); In re Goshen Irrigation Dist, 42 Wyo. at 420, 293 P. at 376; see also, 43 U.S.C. § 469 (1982) (expressly prohibiting an increase in project construction charges after the giving of public notice).

\textsuperscript{179} Payette-Boise Water Users' Ass'n v. Cole, 263 F. 734, 738 (D. Idaho 1919).

\textsuperscript{180} See infra text accompanying notes 211-34.

\textsuperscript{181} 2 WATER AND WATER RIGHTS, supra note 1, § 118.1, at 182.
contain maps with project boundaries marked in, but they appear to be somewhat imprecise, and no statement of the exact limitations of the project seems to appear in the text.’’ For example, the feasibility report for the Central Valley Project states that project facilities will provide supplies for “irrigation, municipal, and industrial use along the main [Sacramento] [R]iver and in the fertile delta region of the Sacramento and San Joaquin Rivers . . . [,] in the nearby upper San Francisco Bay area, and for utilization in the San Joaquin Valley.’’ This statement apparently embraces the more than 17 million acres of land, including dozens of cities and towns, located in the Central Valley.

Legislative practice as to specification of project boundaries varies widely, although Congress has never, in the statutory text itself, included “a map or metes and bounds description of the service area . . . . Many acts of Congress authorizing reclamation projects do not even refer to a service area, much less state its approximate acreage.’’ At the same time, some authorizing statutes “demonstrate beyond question that the Congress had a definite service area in mind . . . .’’ The authorization for the San Luis Unit, Central Valley Project describes the appropriate service area as “approximately 500,000 acres of land’’ and refers to the feasibility report, which includes a map that clearly describes the location, size, and elevation of that service area.

For any project authorized after July 31, 1953, the Bureau has discretion to modify the project boundaries to a minor degree through the preparation of an “adequate soil survey and land classification’’ submitted to Congress before any expenditure for project construction. These soil studies determine the extent to which “the lands to be irri-

182. Id.
184. STATE WATER RESOURCES CONTROL BD., STATE OF CAL., NOTICE OF PETITION FOR CHANGES AND EXTENSION OF TIME TO COMPLETE USE OF WATER UNDER PERMIT 12721 (APPLICATION 5626) AND 18 OTHERS, AT 2 (JULY 29, 1986) (ON FILE WITH AUTHOR).
186. Id.
188. 85 INTERIOR DEC. AT 303-05. “AT THE TIME OF AUTHORIZATION, THEN, THERE CAN BE NO DOUBT THAT CONGRESS INTENDED THE UNIT TO SUPPLY IRRIGATION WATER TO APPROXIMATELY 500,000 ACRES AND THAT THE LOCATION OF THAT 500,000 ACRES IS CLEARLY DEFINED IN THE FEASIBILITY REPORT CONGRESS CITED IN THE ACT.’’ Id. AT 305. THIS UNUSUAL SPECIFICITY SERVICES SEVERAL PURPOSES: (1) TO PROVIDE A “FIRM BASIS” FOR PARTNERSHIP WITH THE STATE WATER PROJECT IN SERVICE TO THIS AREA—TO “PROTECT THE FEDERAL INVESTMENT AGAINST ENROACHMENT FROM THE STATE SINCE THAT COULD JEOPARDIZE THE REPAYMENT POTENTIAL OF THE FEDERAL PROJECT”; (2) TO IDENTIFY THE FARMS TO WHICH THE RECLAMATION ACT’S EXCESS-LAND PROVISIONS WOULD APPLY; AND (3) TO FACILITATE THE DESIGN OF THE MASSIVE DISTRIBUTION AND DRAINAGE SYSTEM. Id. AT 303-04.
gated are susceptible to the production of agricultural crops by means of irrigation . . . ." 190 Soil studies are not conducted until just before project construction, after the completion of the feasibility study and the project authorization, because "experience has shown that service areas do change somewhat with time . . . ." 191 The effect of soil classification studies may be limited to minor adjustments in the project boundaries and, according to the Interior Department, cannot "serve as authority for a project to serve substantial additional lands if service to those lands was not initially provided for in the project authorization." 192

In litigation challenging the Bureau's determination that a customer is located outside of the project boundaries and thus has a subordinate project right, federal courts generally "have looked to the service contract negotiated by the Secretary as a determinant of project boundaries." 193 The contract with a water district may specify a geographical service area 194 and commonly provides that the district shall not distribute the federal water outside of the district, except with the Secretary's special permission. 195

In Hudspeth County Conservation & Reclamation District No. 1. v. Robbins, 196 the district and individual landowners sued for declaratory judgment establishing their rights under the Rio Grande Project. The plaintiffs asserted that:

[T]hey must be treated on a parity with land owners within the Rio Grande Project because no geographic boundaries to that project were ever defined by any formal order, and the notices of intent to appropriate [filed as required by New Mexico law] are broad enough to include the

190. Id.
191. SAN LUIS REPORT, supra note 173, 281 app. D at 283.
193. 2 WATER AND WATER RIGHTS, supra note 1, § 118.1, at 182. On the other hand, a contract would be invalid to the extent that it provides for delivery contrary to any limitations Congress clearly specified in the authorizing legislation.

The Reclamation Project Act of 1939, 43 U.S.C. § 485h(a), (d), and (e) (1982), generally permits and governs the Secretary's entry into contracts for water delivery, but it does not authorize contracts "inconsistent with Congressional legislation authorizing the project." 85 Interior Dec. at 318.

194. Some contracts do not. For example:

[The 1963] contract [between the United States and Westlands Water District] does not specifically refer to any service area. It is a contract for delivery of water to the [district] pursuant to the 1902 Reclamation Act and 'acts amendatory thereof or supplementary thereto,' which includes the San Luis Unit authorizing Act.

85 Interior Dec. at 317.

195. 2 WATER AND WATER RIGHTS, supra note 1, § 118.1, at 183. See, e.g., Contract Between the United States and Stockton-East Water District Providing for Project Water Service § 10 (Dec. 19, 1983) (Bureau of Reclamation, U.S. Dep't of the Interior, Contract No. 4-07-20-W0329) ("Water furnished to the Contractor pursuant to this contract shall not be sold, exchanged, or otherwise disposed of for use outside the Contractor's service area without prior written consent of the contracting officer" of the Bureau's Mid-Pacific Region.).

Hudspeth lands lying in the El Paso Valley.\textsuperscript{197} The circuit court disagreed, even while implicitly acknowledging that the Bureau's notices of the project's geographic scope, contained in its applications for state water rights, were somewhat vague.\textsuperscript{198} The court contrasted the Bureau's contract with that of the plaintiffs', which described the plaintiffs' land as being located "just below the Rio Grande Federal Irrigation Project," with other contracts in which the Bureau expressly identified the irrigable lands as within the project boundaries.\textsuperscript{199}

In later litigation for recovery of the value of rights allegedly taken by the United States, the Court of Claims held that Congress, in the 1905 statute authorizing the Rio Grande Project,\textsuperscript{200} gave the Secretary of the Interior the discretion "to determine what lands were to be included within the project."\textsuperscript{201}

When considering an expansion of project boundaries for the purpose of increased irrigation, the Bureau, as a matter of policy (and perhaps local politics), asks the contracting irrigation district to adjust its boundaries in accordance with state law. The Bureau conducts studies to certify the repayment capacities of the potential customers and to classify the potential project lands according to irrigation potential.\textsuperscript{202}

The Reclamation Act does not expressly limit the Secretary's authority to adjust the boundaries to include M&I customers in light of project experience and needs. To the extent that the statute authorizing the project allows administrative establishment of project boundaries by means of service contracts, the Secretary of the Interior may change those boundaries after completion of the project facilities, at least when that alteration does not substantially disadvantage current customers who have taken actions in reliance on the former boundaries.

\textsuperscript{197} Id. at 431 n.6.
\textsuperscript{198} Id.
\textsuperscript{199} Id.
\textsuperscript{200} Act of February 25, 1905, ch. 798, 33 Stat. 814.

That the provisions of the [original] Reclamation Act. . . shall be extended for the purposes of this Act to the portion of the State of Texas bordering upon the Rio Grande which can be irrigated from a dam to be constructed near Engle, in the Territory of New Mexico, on the Rio Grande, to store the flood waters of that river, and if there shall be ascertained to be sufficient land in New Mexico and in Texas which can be supplied with the stored water at a cost which shall render the project feasible and return to the reclamation fund the cost of the enterprise, then the Secretary of the Interior may proceed with the work of constructing a dam on the Rio Grande as part of the general system of irrigation, should all other conditions as regards feasibility be found satisfactory.

\textit{Id.}, quoted in Hudspeth, 213 F.2d at 426-27 n.2.

\textsuperscript{202} Untitled Draft Memorandum by Merlin Ahrens, supra note 160. No policy on boundary adjustment is contained in the Reclamation Instructions, which are the Bureau's internal guidelines for administration of the Reclamation Act. \textit{Id}.
Payette-Boise Water Users' Association v. Cole illustrates judicial protection of such a reliance interest. Having executed contracts for water service at an annual charge per acre (as opposed to a charge per acre-foot of water actually delivered), the plaintiff irrigators sought an injunction against the Bureau's subsequent plan to expand the project boundaries (for the purpose of irrigation) without increasing project storage. The plaintiffs would have continued to pay a fixed charge per acre. Since the contracts only specified the maximum water deliveries (the amounts they could put to beneficial use), this plan might lessen the average or minimum deliveries. The court reasoned that if the boundaries could be expanded, the irrigators could not know the lower limit of their project right; the court rejected this scenario as unacceptable.

Payette-Boise may have continuing vitality despite the direct relationship between individual irrigators and the Bureau—an arrangement replaced, since 1926, by the Bureau's practice of contracting only with irrigation districts. The court's logic applies equally well to an administrative plan for the expansion of project boundaries. However, many modern contracts provide for a minimum amount of water to be stored or delivered (except in droughts or other emergencies), removing many districts' right to object to enlargement of the service area.

3. Statutory Obligation of Beneficiaries to Repay Project Costs

The Bureau of Reclamation delivers water for consumption only pursuant to a written contract with an organization that assumes the repayment obligation. The prohibition of delivery pursuant to oral contracts applies to project customers obtaining water in the first instance from the Bureau and to parties obtaining project rights by conveyance.

203. 263 F. 734 (D. Idaho 1919).
204. Id. at 746.
205. Id. at 737, 746.
206. Id. at 747, 752, 753-54.
207. See infra text accompanying notes 336-41.
208. See, e.g., Repayment Contract Between the United States of America and the A & B Irrigation District, supra note 35, § 17(b), reprinted in Reclamation Repayment Contracts, supra note 35, at 23:

The United States will operate and maintain the existing American Falls Dam and Reservoir, and will make available to the District stored water accruing to two and seven thousand nine hundred ninety-six ten thousandths percent (2.7996%) of the active capacity of that reservoir within the limits and on the terms and conditions provided in this contract. This percentage shall, so long as the reservoir has an active capacity of 1,700,000 acre-feet, be treated as the equivalent of 47,593 acre-feet of active capacity.

Id.

209. Under the Reclamation Project Act:

No water may be delivered for irrigation of lands in connection with any new project, new division of a project, or supplemental works on a project until an organization, satisfactory in form and powers to the Secretary, has entered into a repayment contract with the United States, in form satisfactory to the Secretary . . . .

from some existing customer.\textsuperscript{210}

No existing customer may voluntarily convey a project right until the Bureau has executed two contractual arrangements: first, between the United States and the secondary customer who is buying or leasing the project right; and second, between the United States and the original customer, amending the original contract.

The Reclamation Project Act requires that every contract for water delivery include provisions for repayment of specified costs of construction, operation, and maintenance.\textsuperscript{211} Any conveyance of a project right to an M&I customer would be contingent upon that assignee's agreement to assume the repayment obligation applicable to M&I customers.\textsuperscript{212} The applicable provisions for irrigation and for M&I supply have different practical consequences; M&I users tend to pay much more for project water.\textsuperscript{213} In terms of specific obligations, the contract between the Bureau and the M&I customer would differ in five ways from the irrigation district's original contract.

\textit{a. Separable Costs}

In a multipurpose project, the Bureau allocates to each function (e.g., irrigation, M&I supply, hydroelectricity, and flood control) the costs properly attributable to it under the "separable costs-remaining...

\textsuperscript{210} Project contracts commonly include a provision that prevents conveyance of project rights without the Bureau's approval. \textit{See supra} note 35 and accompanying text.

\textsuperscript{211} 43 U.S.C. § 485h(d), (e). While the generic terms required by the Reclamation Project Act, as discussed in the following text, are not subject to negotiation, the application of those terms varies with each contract. Each repayment contract is a specialized document worked out between the Bureau's regional or district office and the corporate representative of the individual irrigators, usually an irrigation district. The draft contract is referred to the Secretary of the Interior for approval; the approved contract is then returned to the regional or district office for negotiation of final details. The contract is next submitted to the irrigators if such a vote is required by state law. After a favorable vote, the contract is signed by officials of the district and by the Secretary or a designated representative. The district must then bring a proceeding in state court for confirmation of the contract. 43 U.S.C. § 511 (1982); \textit{see infra} notes 296-98 and accompanying text (discussing further the state court proceedings); \textit{see also} A. Golzé, \textit{supra} note 149, at 257-58 (discussing the negotiation procedure).

\textsuperscript{212} The following text relates to financial obligations under both the Reclamation Project Act of 1939 and the Water Supply Act of 1958.

For any contract for M&I use outside of project boundaries, \textit{see supra} text accompanying notes 99-122, the Miscellaneous Water Supply Act of 1920 does not provide any guidance as to the calculation of the customer's financial obligations. It provides that "the moneys derived from such contract shall be covered into the reclamation fund and be placed to the credit of the project from which such water is supplied." 43 U.S.C. § 521 (1982).

Given this statutory vacuum, the Bureau presumably should charge the out-of-project customer an amount at least equal to the appropriate charge for a similarly situated in-project customer, as determined by the appropriate law. This, in fact, seems to have been administrative practice since the passage of the Miscellaneous Water Supply Act. Water for Miscellaneous Purposes—Reclamation Projects—Act of February 25, 1920, 47 Pub. Lands Dec. 404, 405 (1920).

\textsuperscript{213} \textit{See infra} text accompanying note 225.
benefits method." Each contractor for water within each consumer class pays an appropriate share of the allocated cost.

In determining the appropriate share of project costs to be assumed by an M&I customer whose project right was conveyed from an irrigator, the Bureau may have discretion as to which "baseline" to use: the costs allocated to irrigation or those allocated to M&I use. The Reclamation Act does not provide any guidance. For a project authorized only for irrigation, the appropriate "baseline" for a conveyance for M&I use would necessarily be the cost allocation to irrigation.

b. Interest

The Reclamation Act does not authorize the Bureau to charge irrigators interest on the unamortized capital cost attributable to irrigation. Irrigators also do not reimburse the Bureau for interest on the capital advanced during project construction. In contrast, the Reclamation Act does authorize the Bureau to charge M&I customers for interest on their share of the unamortized capital cost "if the Secretary determines an interest charge to be proper." Furthermore, reclamation policy requires that interest be charged on construction costs allocated to industrial supply.

c. Ability to Pay

The Bureau's accounting procedures do not lessen M&I customers' construction share according to ability to pay, as may be the case with irrigators.

214. See supra text accompanying note 156.
215. See the discussion of the Kendrick Project, infra notes 567-76 and accompanying text.
216. For a 40-year repayment period (plus the standard 10-year grace period), with payments made in equal installments, the interest subsidy is an estimated 57% of allocated projects costs at a 3% rate of discount, 79% at a 6% discount, and 91% at a 10% discount. Rucker & Fishback, The Federal Reclamation Program: An Analysis of Rent-Seeking Behavior, in WATER RIGHTS: SCARCE RESOURCE ALLOCATION, BUREAUCRACY, AND THE ENVIRONMENT 53 table 2-1 (T. Anderson ed. 1983) [hereinafter WATER RIGHTS].
218. 43 U.S.C. § 485h(c) (1982). In provisions that are "alternate to and not a substitute for the provisions of the Reclamation Projects Act of 1939 relating to the same subject," the Water Supply Act of 1958 directs that "the entire amount of the construction costs, including interest during construction, allocated to water supply shall be repaid . . . ." 43 U.S.C. § 390b(b) (1982).
219. Despite this provision, "many contracts [for M&I customers] were written without requiring interest payments." U.S. COMPTROLLER GEN., CHANGES IN FEDERAL WATER PROJECT REPAYMENT POLICIES CAN REDUCE FEDERAL COSTS 32 (1981).
220. The reduction for irrigators is pursuant to 43 U.S.C. § 485h(d)(3) (1982). "The repayment of irrigation costs by water users on Federal irrigation projects now being developed is based on the ability of the users to pay, as determined by an analysis of the economic condi-
d. Power Credits

In some projects, the Bureau reduces the irrigators' repayment obligations by crediting surplus power revenues to their account.\(^{221}\) The M&I account is not similarly subsidized by accounting transfers of surplus power revenues.

e. Repayment Schedule

The repayment obligation for irrigation customers may extend for forty years\(^ {222}\) plus a grace period of ten years (a "development period" for each irrigation block),\(^ {223}\) for a total of fifty years. Contracts with M&I customers typically require repayment of the appropriate share of

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\(^{221}\) E. LEVEEN & L. KING, supra note 217, at 67-68.

\(^{222}\) The extent of the power subsidy varies by project, ranging from 11.1% of actual irrigation costs in the Central Valley Project to 82.2% in the Collbran Project, Colorado. Rucker & Fishback, supra note 216, at 62 table 2-2.

\(^{223}\) Under the original Reclamation Act, irrigators paid the entire cost of project construction. Under the Reclamation Project Act and subsequent amendments, and given the modern tendency to build multipurpose projects including large power generation:

- the situation has been virtually reversed. . . . Power has become the principal source of [project] revenue, paying not only its own costs, but subsidizing a part of the irrigation burden as well. While it is universally understood that power is to pay those costs allocated to irrigation construction which are beyond the ability of irrigators to repay, such an arrangement is nowhere authorized in the general reclamation laws.

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223. Id. § 485h(d)(1).
project costs within forty years of the beginning of service.\textsuperscript{224}

In sum, the Bureau generally requires that an M&I customer, including an assignee of a project right, pay more for an acre-foot of water than an irrigator. The Congressional Budget Office has estimated that irrigators pay approximately eighteen percent of the actual cost of irrigation service, while M&I customers pay seventy-one percent of the cost of their service.\textsuperscript{225}

Since the original customer’s contract must be amended to provide for the conveyance, the Bureau may also renegotiate the repayment obligations for any remaining supply that the customer receives. The Reclamation Reform Act of 1982\textsuperscript{226} requires the Secretary, in executing new or amended contracts\textsuperscript{227} subsequent to the date of enactment:

(a) to deliver water at a subsidized rate only to land parcels that do not exceed specified limits in size;\textsuperscript{228}

(b) to charge “full cost” (including interest)\textsuperscript{229} for deliveries to parcels exceeding those specified limits;\textsuperscript{230}

(c) to recover, at a minimum, the contractor’s actual share of operation and maintenance expenses, regardless of whether the original contract did so,\textsuperscript{231} and to recalculate the contractor’s share of such expenses on an annual basis.\textsuperscript{232} In addition, the Secretary may have the authority to withhold approval of the voluntary conveyance until the original con-

\begin{itemize}
\item \textsuperscript{224} Forty years is the minimum period for an M&I contract under the Reclamation Project Act of 1939. \textit{Id.} § 485h(c). As an alternative, the Water Supply Act of 1958 provides that repayment shall be completed “within the life of the project, but in no event to exceed fifty years after the project is first used for storage of water for water supply purposes . . . .” 43 U.S.C. § 390b(b) (1982).
\item \textsuperscript{225} \textsc{Congressional Budget Office, U.S. Congress, Efficient Investments in Water Resources: Issues and Options} 15 table 4 (1983). These are averages. The actual subsidy for each customer class varies with the project due to special provisions in the authorizing statutes and to special practices of regional offices.
\item \textsuperscript{226} 43 U.S.C. §§ 390aa-390zz-1 (1982).
\item \textsuperscript{227} “Contract” is defined to mean “a repayment or water service contract between the United States and a district providing for the payment of construction charges to the United States . . . .” 43 U.S.C. § 390bb(1). The Secretary’s authority to impose unilateral changes, discussed in the following text, therefore may not apply to those Warren Act contracts that do not meet the statutory criteria for “repayment” or “water service” contracts, as codified respectively at 43 U.S.C. § 485h(d) and § 485h(e) (1982).
\item \textit{See also}, Memorandum Regarding Application of the Reclamation Reform Act of 1982 to Contracts Executed Pursuant to the Warren Act of 1911 from Keith Eastin, Associate Solicitor, Div. of Energy & Natural Resources, U.S. Dep’t of the Interior to Commissioner 1-2 (August 28, 1985) (defining the requirements for “repayment” and “water service contracts”).
\item \textsuperscript{228} 43 U.S.C. § 390dd.
\item \textsuperscript{229} \textit{Id.} § 390bb(3).
\item \textsuperscript{230} \textit{Id.} § 390ee.
\item \textsuperscript{231} \textit{Id.} § 390hh(a).
\item \textsuperscript{232} \textit{Id.} § 390hh(b). These provisions “do not apply to districts which operate and maintain project facilities and finance the operation and maintenance . . . from non-federal funds.” \textit{Id.} § 390hh(c).
tractor agrees to an increased charge for unamortized capital costs.\textsuperscript{233} Absent such a contractual amendment (initiated by the contractor), or absent the approval of the contractor, the Secretary is bound by the terms of the original contract as to construction costs and may not impose additional liability on the contractor.\textsuperscript{234}

The above discussion assumes that the original customer has not satisfied contractual obligations for repayment of construction costs. However, when the contractor has done so and is, at most, paying operation and maintenance charges, the Secretary may not impose the Reclamation Reform Act's provisions regarding land ownership and full-cost pricing.\textsuperscript{235} The provision for reassessment (and increase) of operation and maintenance charges is still applicable to the amended contract with the original contractor.

In the event that the voluntary conveyance is connected to a single-purpose project, the Secretary probably does not have the authority to impose any additional construction charge on the purchaser or lessor of a fully paid project right. If, however, the conveyance involves a multipurpose project for which the M&I share of construction costs has not been fully repaid, the Secretary may have authority to require the M&I customer to pay an operation and maintenance charge plus a charge related to the remaining M&I share, despite the original contractor's complete repayment of the irrigation obligation. The original contractor's right is subject to terms appropriate for its category of service and should not include the right to convey to a user in another category of service under terms not appropriate for that category of service.

\subsection*{f. Payment for Water Used to Conserve Fish and Wildlife}

A nonfederal party, whether a private group or a public agency, may contract for purchase or lease of a project right for conservation of fish and wildlife affected by project construction or operation. The project right can also be reconveyed to the Bureau for use with other water already devoted to environmental mitigation. Such an arrangement, involving a conveyance for nonconsumptive use, is legal if it is not inconsistent with specific directives in the authorizing statute, the Reclamation's Act's preference for irrigation, and applicable state law.\textsuperscript{236} Even though the nonfederal purchaser or lessee is, in effect, donating to the public benefits from the use of the project right,\textsuperscript{237} that party must assume the

\begin{itemize}
  \item \textsuperscript{233} These limits may, in some cases, provide a substantial disincentive for a district to initiate a project conveyance.
  \item \textsuperscript{234} 43 U.S.C. § 469 (1982).
  \item \textsuperscript{235} 43 U.S.C. § 390mm(a) (1982).
  \item \textsuperscript{236} See supra notes 123-42 and accompanying text.
  \item \textsuperscript{237} The Fish and Wildlife Coordination Act, § 1, 16 U.S.C. § 661(3) (1982), and the Water Project Recreation Act, § 2, 16 U.S.C. § 460l-1(h) (1982), do authorize the Bureau to accept a donation of property or money for fish and wildlife purposes.
\end{itemize}
The party acquiring the project right for environmental mitigation would contract with the irrigator (or district) currently using the right and with the Bureau. The Reclamation Act does not provide express guidance as to the repayment terms which should be included in the Bureau's contract with this type of assignee.

The Fish and Wildlife Coordination Act of 1958 \(^{238}\) states that project costs allocated to fish and wildlife preservation are nonreimbursable by project beneficiaries; \(^{239}\) it therefore cannot serve as a foundation for a repayment contract for a voluntary conveyance. By contrast, before project construction or modification, the Water Project Recreation Act of 1965 requires that a nonfederal public agency with appropriate statutory jurisdiction sign an agreement with the Bureau for development of a joint plan for fish and wildlife “enhancement” and for recreational facilities. \(^{240}\) Moreover the Act requires that such a plan include a provision for the nonfederal agency to pay a specified share of the project costs of such environmental mitigation beyond a minimal level. Finally, the nonfederal party's share must bear interest and be repaid within fifty years. \(^{241}\) Under these provisions, the Bureau might be able to craft a contract for repayment of the costs of construction, operation, and maintenance specifically attributable to the conveyed project right.

4. Administrative Obligation to Respect Priorities of State Law in Picking Project Customers

Since western water codes uniformly assign M&I use the highest priority (superior to irrigation in the event of a conflict), \(^{242}\) voluntary conveyances of project rights to M&I customers would be facilitated if the Bureau's policies were in line with state law. Even where irrigators also bid for the project rights, the Bureau's presumption would be in favor of M&I customers. Nonetheless, the Reclamation Act's preference for irrigation survives the redefinition, in \textit{California v. United States}, \(^{243}\) of

\(^{239}\) 16 U.S.C. § 662(d).
\(^{240}\) 16 U.S.C. § 460l-13 (regarding project construction); \textit{id.} § 460l-14 (regarding project modification).
\(^{241}\) \textit{id.} § 460l-13.
\(^{242}\) 1 WATER AND WATER RIGHTS, \textit{supra} note 1, § 54.2, at 370; \textit{see}, e.g., \textit{ARIZ. REV. STAT. ANN.} § 45-147 (West Supp. 1986):

As between two or more pending conflicting applications for the use of water from a given water supply, when the capacity of the supply is not sufficient for all applications, preference shall be given by the department according to the relative values to the public of the proposed use.

The relative values to the public for the purposes of this section shall be: 1. Domestic and municipal uses . . . . 2. Irrigation and stock watering. 3. Power and mining uses.

\textit{Id.}

the relationship between state law and the Reclamation Act.

Section 8 of the Reclamation Act provides that "[n]othing in [the Act] shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in irrigation . . . ."244 In California v. United States, the United States Supreme Court read the act's legislative history as establishing that state law controls in two respects: first, in the Bureau's appropriation, purchase, or condemnation of water rights necessary for the project;245 and second, in the distribution of project waters to "individual landowners" after release from the storage facility.246 The Court noted several motivations for this congressional deference: the avoidance of the "legal confusion that would arise if federal water law and state water law reigned side-by-side in the same locality";247 consistency with precedents in federal law that recognize state law relative to water appropriation and distribution;248 and doubt as to congressional power to override a state's regulation of nonnavigable waters within its borders.249

Despite the breadth of the Court's rhetoric regarding distribution of project waters, the issue in dispute concerned the State of California's authority to impose conditions in its permit granted to the United States to appropriate water, provided that the conditions were "not inconsistent with congressional provisions authorizing the project in question."250 The Court disavowed dicta in earlier cases251—and rejected a United States claim in this case—that section 8 affects only the Bureau's appropriation, purchase, or condemnation of water rights, and that the section does not govern in any way the operation of federal projects. Such a reading would "trivialize the broad language and purpose of [section] 8."252

If a congressional objective relating to project operation is inconsistent with state law where the project would be located, "it is at least arguable" that Congress intended not to override state law, but rather to

246. Id. at 667-68.
247. Id. at 669.
249. 438 U.S. at 669-70.
250. Id. at 674.
251. Id. at 672-75. The disavowed dicta are found in Arizona v. California, 373 U.S. 546, 586-87 (1963); City of Fresno v. California, 372 U.S. 627, 630 (1963); and Ivanhoe Irrigation Dist. v. McCracken, 357 U.S. 275, 291-92 (1958).
252. 438 U.S. at 675.
“enforce those objectives simply by the Secretary’s refusal to approve a
project which could not be built or operated in accordance with
them.” The Court acknowledged, however, that “[t]his intent . . . is
not clear.” The Court then described a “preferable reading” of the Reclama-
tion Act’s legislative history: “specific congressional directives
which were contrary to state law regulating distribution of water would
override that law.”

The Court also explicitly declined to overrule the limited holdings
(as opposed to the broader dicta) in Ivanhoe Irrigation District v. Mc-
Cracken and City of Fresno v. California. The former case held that,
despite an apparent violation of state law (as interpreted by the Califor-
nia Supreme Court), the Secretary of the Interior was bound to respect
the Reclamation Act’s prohibition against contracting for water sales to
tracts larger than 160 acres and owned by a single landowner. The
latter case similarly held that section 8 does not require the Secretary of
the Interior to comply with California law regarding the preference for
M&I use over irrigation: According to statute, the Secretary’s approval
of an M&I contract is conditional upon his finding that its execution
would not “impair the efficiency of the project for irrigation pur-
poses.” In sum, “[f]rom the early years of the reclamation projects,
state law has governed only as to use, allocation and distribution among
water users seeking to utilize water for congressionally recognized
purposes.”

The preceding discussion is premised on the Reclamation Act’s fail-
ure to require the Bureau to approve or to disapprove voluntary convey-
ances of project rights for M&I use and on the assumption that state law
might include an affirmative preference for such conveyances. Under
that scenario, state law would not affect the Secretary’s responsibility to
approve only those conveyances that are consistent with the Reclamation
Act’s irrigation priority.

In the complementary case, where state law restricts conveyances
from irrigation to M&I use, California v. United States may require that
the Bureau condition the conveyance accordingly, provided the state’s

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253. Id. at 673 n.25. This reading would create uncertainty as to the particular law gov-
erning the operation of a project built despite an unresolved conflict between state and federal
law.
254. Id.
255. “Petitioners do not ask us to overrule these holdings, nor are we presently inclined to
do so.” 438 U.S. at 672.
§ 485h(c) (1982)); see supra notes 65-80 and accompanying text (discussing the meaning of 43
U.S.C. § 485h(c)).
259. For further discussion, see infra text accompanying notes 426-39.
restrictions are not inconsistent with any express provision of the Reclamation Act.

II
DEFINING PROJECT RIGHTS: A BASIS FOR VOLUNTARY CONVEYANCES

The United States, the irrigation districts (or other corporate middlemen) that contract with the Bureau for "wholesale" delivery, and the irrigators who contract with the districts for "retail" delivery and put the water to beneficial use all hold different interests in a project water supply. As a general rule, the United States owns the project facilities and retains the authority to ensure project repayment and to veto any conveyance if necessary for the project's "irrigation efficiency." Both the irrigation district and the actual irrigators, in turn, have guarantees of continued delivery of project supply. This general definition of respective interests may be varied by special provisions in a given project's authorizing statute, the contract at issue, or variations in the applicable laws of the states where the Bureau operates. The project rights can be sold or leased subject to the above special provisions. An individual's conveyance may also be subject, under state law, to the district's veto.

A. Sources of Definition of Project Rights

A negotiation for conveyance of a project right cannot reach a positive conclusion until the buyer or lessee is assured of the exact nature of that right. Important components of project rights include the priority date (when the Bureau applied for the water rights for the project); the quantity of water that will be delivered under the project right; the source and point of water diversion; the current place, period, and purpose of water use; and the total cost per acre-foot delivered for the new use. In addition to a "reasonable assurance" of title, the assignee may also require some limitation on the risk of a disappointing yield upon conversion of the right to a new use, for example, a provision that the assignor assume some risk of an unsuccessful new application by a pro rata reduction of the conveyance price.

Most western states maintain formal records of ownership of water rights granted by the designated agencies. The Bureau's water permits

260. See Burley Irrigation Dist. v. Ickes, 116 F.2d 529, 539 (D.C. Cir. 1940), cert. denied 312 U.S. 687 (1940). "The legislation establishing and expanding [the facilities in the Minidoka Reclamation Project] has created a highly complex system of rights and interests, some in the Government, some in the [contracting Burley Irrigation and Minidoka Irrigation] districts, some in the individual water users . . . ." Id.


or licenses are contained in those records, but the project beneficiaries' rights generally are not. Any potential conveyance of a project right is currently burdened by the necessity of untangling the Gordian knot\textsuperscript{263} of the relationship between the Bureau, a contracting district, and irrigators. The Reclamation Act nowhere expressly or fully defines the nature of the project rights that the irrigators and irrigation districts hold.\textsuperscript{264} Furthermore, there is no administrative policy providing guidelines for such a definition.

The confusion as to ownership of project water is due to the welter of laws and legal instruments that define the respective interests of the project operator and beneficiaries. The sources of definition are the Reclamation Act; state law, including the water, irrigation district, and fish and game codes, which the Reclamation Act incorporates into project governance if not inconsistent with congressional directives; contracts between the United States and the districts; and finally, the contracts and, in some instances, local bylaws regulating the relationship between the districts and the actual irrigators. Federal law (including the Reclamation Act's few specific mandates as to water use and the provisions of federal contracts) generally defines the obligations that the United States assumes and which the districts and the irrigators can expect the United States to satisfy; state laws provide the substance of the relationship between the districts and the irrigators, unless these laws frustrate the purposes of the Reclamation Act,\textsuperscript{265} including the requirement that all project water be put to beneficial use.

\textbf{1. Provisions of Federal Law that Define Project Rights}

Although the Reclamation Act contains no single provision expressly defining the interests of the United States and its contracting beneficiaries, statutory and contractual provisions do specify, with reasonable clarity, what the districts or irrigators can expect from the United States and thus what they may voluntarily convey. For example, with few exceptions, they can not convey any part of the legal title to project facilities\textsuperscript{266} or the associated water rights granted to the Bureau by the appropriate state authority.\textsuperscript{267} The project contracts determine the specific amount and timing of water deliveries to the districts\textsuperscript{268} and the allowable locations and kinds of project supply use. The customers have a legitimate expectation of indefinite renewal of their project con-

\textsuperscript{263} \textit{National Water Comm'n}, supra note 58, at 268.
\textsuperscript{264} \textit{2 Water and Water Rights}, supra note 1, § 118, at 180.
\textsuperscript{266} \textit{See infra} text accompanying notes 299-307.
\textsuperscript{267} \textit{See infra} text accompanying notes 308-25.
\textsuperscript{268} \textit{See, e.g., supra} note 208; \textit{infra} note 374 and accompanying text.
tracts (contingent upon continued repayment of project costs and a continuing record of beneficial use). Contracts may not be conveyed without the Bureau's advance approval.

A project right does not depend on two legal principles Congress elected not to incorporate into the Reclamation program: (1) the federal power to associate a water right with land the United States originally owned, and (2) the federal power to regulate navigable waterways.

Under the Desert Land Act of 1877, a homestead entry did not create a "common law right to the water flowing through or bordering upon the lands conveyed." As the owner of the public domain, the government possessed the power to dispose of land and water thereon together, or to dispose of them separately. The fair construction of the Desert Land Act is that Congress intended to establish the rule that for the future [from March 3, 1877 on] the land should be patented separately; and that all non-navigable waters thereon should be reserved for the use of the public under the laws of the states and territories.

Project rights also do not draw their substance or definition from the congressional authority to subject state-created water rights (not connected to a federal project) to a "navigation servitude." In authorizing reclamation projects on navigable waterways, with the exception of the Boulder Canyon Project, Congress has elected not to proceed under its navigation authority, but instead to secure appropriative water rights in compliance with state law. Even the Reclamation Project Act, which authorized multipurpose projects for objects including navigation improvement and flood prevention, "worked no change in this policy. Whenever a project is built by the Bureau of Reclamation under Reclamation law, the Secretary proceeds under section 8, regardless of other possible avenues that Congress might have taken to bypass state laws."

269. See infra text accompanying notes 352, 357-62.
270. See infra text accompanying notes 352, 370-71, 464-65.
271. See infra text accompanying notes 375-96.
272. See supra note 209.
275. Id. at 162 (citation omitted). This holding has been applied to reclamation projects. See, e.g., Nevada v. United States, 463 U.S. 110, 123-24 (1983); California v. United States, 438 U.S. 645, 657-59 (1978); and Ickes v. Fox, 300 U.S. 82, 95 (1937).
276. Although "state law of prior appropriation makes no distinction between navigable and non-navigable waters," federal supremacy has been established at least since 1899 after United States v. Rio Grande Dam & Irrigation Co., 174 U.S. 690 (1899). Trelease, supra note 63, at 486. "Indeed the national interest in navigation goes beyond exercise of jurisdiction over appropriations from navigable portions of a river," and includes nonnavigable portions in the event that the appropriation threatens downstream navigability. Id. See, e.g., United States v. Gerlach Livestock Co., 339 U.S. 725, 739 (1950).
277. Trelease, supra note 63, at 487.
2. Incorporation of State Law Regarding Proprietary Interests in Water Supply

According to section 8 of the original Reclamation Act, neither the Bureau nor a court should interpret the Act as interfering "in any way" with state laws "relating to the control, appropriation, use, or distribution of water used in irrigation."278 Like every other appropriator,279 the Secretary of the Interior has applied for and received state permits to construct and operate the Bureau's project facilities, with the exception of the Boulder Canyon Project.280 The Bureau's appropriation, and the project rights that are carved out of it, thus depend "for [their] existence on the law of the state of [the project's] location."281 The permit defines the amount of water that the Bureau may store and deliver. The permit establishes the Bureau's, and its beneficiaries', claim on a stream's flow relative to other claimants under state law.

State law also governs the internal operation of a project to the extent allowed by the Supreme Court in California v. United States.282 Under the statutory and common law in western states, a right to use water to the exclusion of others is property, albeit incorporeal; as a result of section 8 of the Reclamation Act, a project right therefore is the

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279. Some state codes require the United States to appropriate water under the procedures followed by any other applicant. See, e.g., ARIZ. REV. STAT. ANN. § 45-142 (West Supp. 1986); CAL. WATER CODE § 1252.5 (West Supp. 1986); MONT. CODE ANN. §§ 85-2-102, -302 (1985); NEV. REV. STAT. § 533.325 (1985); UTAH CODE § 73-3-2 (West Supp. 1986). Other state codes exempt the Bureau from some of the normal requirements for obtaining administrative approval for a new appropriation. See, e.g., N.M. STAT. ANN. § 72-5-33 (1978) (prohibiting any competing application for three years after the Bureau has filed an application for storage or diversion of unappropriated water; a nonfederal applicant, by contrast, does not receive such protection).
Congress in passing the Project Act intended to and did create its own comprehensive scheme for the apportionment among California, Arizona, and Nevada of the Lower Basin's share of the mainstream waters of the Colorado River, leaving each state its tributaries. . . . Prior approval was therefore given in the Act for a tri-state compact to incorporate [Congressional] terms [for a fair division of water between the Lower Basin states: 4.4 MAFA to California, 2.8 MAFA to Arizona, and .3 MAFA to Nevada]. . . . The States, subject to subsequent congressional approval, were also permitted to agree on a compact with different terms. Division of the water did not, however, depend on the States' agreeing to a compact, for Congress gave the Secretary of the Interior adequate authority to accomplish the division. Congress did this by giving the Secretary power to make contracts for the delivery of water and by providing that no person could have water without a contract.

The United States Supreme Court in California v. United States was therefore incorrect in stating that the "Bureau of Reclamation, as it has with every other reclamation project, applied for a permit from the appropriate state agency" to build New Melones Dam on California's Stanislaus River. 438 U.S. 645, 652 (1978) (emphasis added).
281. Trelease, supra note 63, at 466.
“property” of the contracting irrigation districts and project irrigators.\textsuperscript{283} Under the common law of western states (generally adopted by statute), the right to use water is independent of the title to the storage and delivery facilities or to the banks or bed of the waterway from which the water is diverted; instead it exists because of continuing beneficial use.\textsuperscript{284} Like a state-granted water right,\textsuperscript{285} a project right for permanent supply is property that may be taxed either as personality or realty\textsuperscript{286} depending upon the definitions in the state’s tax code.

State law also regulates the relationship of the irrigation district and the irrigators who are landowners therein. While the district’s “project right” is largely defined by the contract with the Bureau, an irrigator’s claims on project service—how much water is due, when, and at what price—are largely defined by an individual contract with the district, local bylaws, and the state’s district code.\textsuperscript{287}

As property, a project right can be sold or leased on such terms and conditions as the government agencies with jurisdiction over that conveyance impose in exercising their police power.\textsuperscript{288} Federal law requires that any project beneficiary, by implication including an assignee, must contract with the Bureau; the Bureau’s contracts, in turn, forbid assignment without its advance permission. These statutory and contractual provisions, however, say nothing about the impact of such a conveyance on third parties, specifically, the nonproject appropriators who may be injured by the conveyance.

While common law and statutes in most western states allow conveyances of water rights, the conveying parties usually must file an application to change the nature of water use, the place of use, the place of diversion, or the period of use.\textsuperscript{289} These provisions may not apply to the conveyance of a project right, so long as the Bureau does not alter its operations under the state-granted water right.\textsuperscript{290} A state may exercise

\begin{itemize}
\item \textsuperscript{283} See, e.g., Nevada v. United States, 463 U.S. 110, 124 (1983); Nebraska v. Wyoming, 325 U.S. 589, 614 (1945); Iekes v. Fox, 300 U.S. 82, 95 (1937).
\item \textsuperscript{284} C. Kinney, supra note 26, § 759, at 1313-14; see also I WATER AND WATER RIGHTS, supra note 1, § 19.2, at 86 (“Statutes of nearly all western states contain either positive declarations of the relationship between appropriative rights and beneficial use of water or incidental references to beneficial use in the procedures for appropriating water, or both.”).
\item \textsuperscript{285} See I WATER AND WATER RIGHTS, supra note 1, § 72.1(B), at 443-47.
\item \textsuperscript{286} Northside Canal Co. v. State Bd. of Equalization, 8 F.2d 739, 743-44 (D. Wyo. 1925), modified on other grounds, 17 F.2d 55 (8th Cir. 1926), cert. denied, 274 U.S. 740 (1927). See infra note 344 for further discussion.
\item \textsuperscript{287} See infra text accompanying notes 426-39.
\item \textsuperscript{288} The author uses this term loosely with respect to the Bureau. The United States Constitution does not vest the federal government with police power, strictly defined, except over the District of Columbia. The Bureau’s regulatory authority over the use of project rights derives from the property clause of the Constitution and is discussed infra notes 302-07 and accompanying text.
\item \textsuperscript{289} K. Higginson & J. Barnett, supra note 262, at 4.
\item \textsuperscript{290} The terms of the federal right to appropriate water contain broad “place of use”
advance review of project-right conveyances so long as the terms are not inconsistent with express congressional directives. 291

State law determines what portion of the project right can actually be conveyed. If downhill or downstream appropriators have relied on the conveyor’s return flow and, under state law, have a legally protected interest in the wastewater, 292 then the conveyable right may be limited to the amount of water actually consumed by crops on the uphill property.

“The states unanimously agree that the primary consideration [in conveyances] is the protection of other vested water rights.” 293 Statutes and adjudications have transformed the “right to divert [in]to a right to consume.” 294

3. Rights Defined by Adjudicatory Proceeding

The irrigation district, or the individual irrigator receiving a project supply, does not usually hold a formal record of title. Therefore a project right ultimately is what the Bureau and the courts say it is. Administrative fiat and adjudication reconcile the various definitions of the right pursuant to the original contract, common law, and statutes.

Before a state-granted water right can be conveyed, a complex fac-provisions, which allow use of project water throughout California’s Central Valley. Therefore, “the City of Redding and the United States Bureau of Reclamation did not need to obtain a change of place of use order from the State Water Resources Control Board before selling water” on a temporary basis to local water districts that needed a supplementary supply during the 1977 drought. C. Lee, The Transfer of Water Rights in California 58 (Governor’s Commission to Review California Water Rights Law, Staff Paper No. 5, 1977).

291. For example, under the common law of most western states, see 2 C. Kinney, supra note 26, § 1026, at 1834-36, and under the statutory law of some, see K. Higginson & J. Barnett, supra note 262, at 7, a lease or temporary conveyance of a water right is forbidden. [W]hen an appropriator has no present need of the water which he claims under his prior appropriation, he must not divert it from the natural channel, but it is his duty to let it flow down the natural stream, to be enjoyed by the other appropriators as their numerical priorities entitle them.

2 C. Kinney, supra note 26, § 1026, at 1835.

Such a prohibition may interfere with the Secretary’s statutory obligation to repay the federal investment on a timely basis and to insure that the project supply is put to “beneficial use.” It also conflicts with the statutory provisions allowing the Bureau to enter into leases for project water supplies in certain circumstances. The Miscellaneous Water Supply Act of 1920 authorizes the Secretary to convey surplus waters to nonproject customers for periods when project water is not needed for irrigation (the project purpose for which a state water right was obtained). 43 U.S.C. § 521 (1982); see also 43 U.S.C. § 423 (1982) (authorizing water rentals to “permanently unproductive” lands normally excluded from a project).


“Return flow,” by definition, is that water which, after diversion for irrigation, is not consumed by the irrigated crops (due to loss in conveyance or excess application on the farm) and that finally seeps downhill (possibly across other fields) and eventually back into natural waterways. Return flow is a substantial source of water supply. See supra note 24.


tual determination of the quantity of diverted water that was actually consumed in the original use is usually required. For example, in litigation regarding the purchase of an irrigation supply by the city of Fort Collins, Colorado, expert estimates of consumption (versus diversion by the seller) ranged from 35% to 71.2%. A project right is a more complex legal concept than a state-granted water right, making judicial confirmation of the project right even more necessary to the security of the transaction. Project rights are based in both contract and property law and are derived from both federal and state law.

The Bureau must give prior approval to any conveyance of a project right. Following negotiations with the would-be conveyors, the Bureau sets the terms and conditions for remaining service, if any, to the irrigation district, and for the new service to the M&I customer. If the nonfederal parties agree to those terms and conditions, then the validity of the resulting contractual arrangement must be confirmed by a court of competent jurisdiction. Such a confirmation proceeding is in rem and is brought against

all persons having or claiming to have an interest... in the operation of the proposed contract and the lands affected thereby. It will fix the status of all property within the district lawfully affected by the contract and a final judgment will foreclose further inquiry into the matters to which the judgment properly relates. Within its pertinent issues it will be binding on the world at large.

If the Bureau refuses to approve a particular conveyance, then the irrigator may seek a declaratory judgment that the Bureau's action was "arbitrary, capricious, [or] an abuse of discretion," or a violation of a statutory or constitutional right (e.g., deprivation of property without due process of law). Whether through confirmation of, or challenge

295. Id. at 127.
296. An irrigation district must confirm the validity of a contract with the Bureau. 43 U.S.C. §§ 423e, 511 (1982). No provision of the Reclamation Act expressly requires such confirmation for an M&I contract. Nonetheless, the Bureau includes the same provision in M&I contracts: provisions assuring the validity of contracts are common to all contracts and are required by law and not subject to negotiation. Reclamation Repayment Contracts, supra note 35, at 7. See, e.g., Contract Between the United States and the Central Oklahoma Master Conservancy District § 24(c) (1961) (Bureau of Reclamation, U.S. Dep't of the Interior, Contract No. 14-06-500-590), reprinted in Reclamation Repayment Contracts, supra note 35, at 120.
297. Ivanhoe Irrigation Dist. v. All Parties, 47 Cal. 2d 597, 606, 306 P.2d 824, 829 (1957), rev'd on other grounds sub nom. Ivanhoe Irrigation Dist. v. McCracken, 357 U.S. 275 (1958). "[E]ven confirmation by a state court itself does not automatically bind the United States, which is not a party to the state court proceeding; rather, it is merely a condition precedent to the United States' being bound." Westlands Water District—Legal Questions, 85 Interior Dec. 297 at 322 n.53 (1978). As a practical matter, the United States may escape the obligations of a confirmed contract only if a proper court determines that those obligations, assumed by the Bureau, are contrary to federal law.
298. 5 U.S.C. § 706(2)(A)-(C) (1982); see supra notes 75-80 and accompanying text.
to, the Bureau’s action, courts have the final say in determining what, if anything, the plaintiff can convey.

B. Bureau of Reclamation’s Proprietary Interests in Project Water

Project water is a commodity that the Bureau creates, and its use is thus subject to continuing federal regulation. The Bureau, not the project customer, generally holds the water right granted by the state regulatory agency for project construction and operation. Federal ownership of project facilities also entitles the Bureau to impose conditions on the continuation of project service to protect the federal investment. As discussed below, those conditions include the requirement that the contractor’s use of water be “beneficial,” as defined by state law and federal common law. Unless the contract provides otherwise, the United States also owns the project seepage, at least until it returns to a natural waterway. The Bureau can revoke a project right if the project beneficiary fails to make payments required by contract and can apportion shortage among its contractors, regardless of priority of application or use. The Bureau may recapture at least part of the value of the project right upon its voluntary conveyance.

I. Ownership of Project Facilities

The project rights held by irrigation districts and irrigators generally do not include part of the title to storage and diversion facilities. Even when the project beneficiaries have completely repaid the federal investment in project facilities, the United States retains title unless Congress expressly provided otherwise in the project authorization.299 The Secretary of the Interior may only convey “the management and operation of such irrigation works”300 to project beneficiaries.

Federal ownership of project facilities does not by itself entitle the United States to ownership of water rights. Under the law of western states, “a water right is a species of property in and of itself, and exists separate and independent of the right to the ditch, canal, reservoir, or other works constructed to divert, conduct, or store the water.”301 Nonetheless, under the property clause of the United States Constitution, Congress may “impose reasonable conditions on the use of the federal funds, federal property, and federal privileges.”302 Project rights represent a claim for water from federal facilities, and the United States may “regulate that which it subsidizes.”303 States may not “compel use

300. Id.
303. Id. at 296 (quoting Wickard v. Filburn, 317 U.S. 111, 131 (1942)).
of federal property on terms other than those prescribed or authorized by Congress."\textsuperscript{304} For example, in \textit{Ivanhoe Irrigation District v. McCracken},\textsuperscript{305} the United States Supreme Court reversed the California Supreme Court's judgment that project contracts were invalid, in part due to the prohibition on project service to farms larger than 160 acres. The state court invalidated the prohibition as inconsistent with the Bureau's status under state law as trustee for the irrigators, the beneficiaries of the project's permits. The United States Supreme Court held that the statutory provision prohibiting delivery to large farms was "a specific and mandatory prerequisite laid down by the Congress as binding in the operation of reclamation projects . . . ."\textsuperscript{306} The Court held that state law governing water appropriations, regardless of its incorporation by section 8, cannot lessen the Bureau's continuing interest in satisfying the congressional policy that "the benefits therefrom be made available to the largest number of people, consistent, of course, with the public good."\textsuperscript{307}

2. Ownership of Appropriative Permits

The water rights needed under state law for project operation are generally obtained and held by the United States, not project beneficiaries. The more than 400 contracts executed pursuant to the Warren Act\textsuperscript{308} (out of the Bureau's approximately 4000 water-supply contracts) are the major exception: that act permits a nonfederal party to contract with the Bureau to use excess capacity in project facilities for the storage and distribution of water to which a private right is held.\textsuperscript{309}

The United States has legal (as distinct from equitable or "beneficial")\textsuperscript{310} title in the water rights under its name. The Supreme Court's terminology in the 1983 case \textit{Nevada v. United States}\textsuperscript{311} refers to the law of trusts, wherein the trustee (who owns legal title to the trust property) is "held to equitable duties to deal with the property for the benefit of another person . . . ."\textsuperscript{312} As the Supreme Court concluded in \textit{Ickes v.}

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\item \textsuperscript{304} \textit{Id.} at 295.
\item \textsuperscript{305} 357 U.S. 275 (1958).
\item \textsuperscript{306} \textit{Id.} at 291.
\item \textsuperscript{307} \textit{Id.} at 292.
\item \textsuperscript{308} This estimate is by the United States Department of the Interior. Memorandum from Keith Eastin, \textit{supra} note 227, at 3.
\item \textsuperscript{309} Nowhere does the Warren Act provide for—nor did Congress intend for—the delivery of or 'sale' of water to which the United States holds a permitted or adjudicated right under State water law. The Warren Act allows only the impoundment, storage, or carriage of water to which a Warren Act contractor holds a permitted or adjudicated right under State water law. \textit{Id.} at 4 n.3.
\item \textsuperscript{310} \textit{Nevada v. United States}, 463 U.S. 110, 124 (1983).
\item \textsuperscript{311} 463 U.S. 110 (1983).
\item \textsuperscript{312} \textit{RESTATEMENT (SECOND) OF TRUSTS} § 2 (1959).
\end{itemize}

An equitable interest is that kind of interest which has its origin in the principles, standards and rules developed by courts of chancery. A legal interest is that kind of
Although the government diverted, stored, and distributed the water, the contention of petitioner [Secretary of the Interior] that ownership of the water or water rights became vested in the United States is not well founded. Appropriation was made not for the use of the government, but, under the Reclamation Act, for the use of the landowners; and by the terms of the law and of the contract already referred to, the water rights became the property of the landowners, wholly distinct from the property right of the government in the irrigation works. Compare Murphy v. Kerr. The government was and remained simply a carrier and distributor of the water (Id.), with the right to receive the sums stipulated in the contracts as reimbursement for the cost of construction and annual charges for operation and maintenance of the works.314

Because it holds legal title to any water right used in a project facility, the United States and not the project customer may litigate to protect that right—for example, to prevent an injurious appropriation upstream of a project storage facility.315 In a stream-wide adjudication,316 the court would award the United States, not project beneficiaries, any decree settling the project’s rights relative to those of nonproject appropriators.

The rights of the Bureau as storer and carrier are “not necessarily exhausted when it delivers the water to grantees under its irrigation interest which has its origin in the principles, standards and rules developed by courts of common law . . . . [A] judgment in an action at law declared unconditionally that the plaintiff was or was not entitled to recover land, chattels, or money, and this judgment, if in favor of the plaintiff, was enforced through execution levied by an officer of the court upon the property or person of the defendant, whereas a decree in a suit in equity was a command addressed to a party to the suit to do or not to do certain acts and this command might be either absolute or conditional.

Id. § 2 comment f.

In this context, an equitable interest would support a judicial order requiring the Bureau to deliver water to the party possessing the interest.

In this Article, the term “project right” is used as a synonym for “equitable interest.”

In Ickes, the Court referred to the following quotation in Murphy v. Kerr:

In the larger [nonfederal] systems it has been the practice for an irrigation company to construct diversion dams, canals, ditches, reservoirs, and other physical works for the irrigation of bodies of land, and to sell the land to be irrigated to farmers and to enter into contracts with the purchasers thereof to maintain the physical works, and to divert, store and deliver, or where storage is not used to divert and deliver to the owner of the water right at the land, the water for beneficial use thereon. The property right in the irrigation works is in the irrigation company, and the water right is appurtenant to the land and belongs to the owner thereof. . . .

The owner of the irrigation works then becomes an intermediary agent of the owner of the land and water right . . . .

296 F. 536, 545 (D.N.M. 1923).


projects." Its legal interest in the project’s water supply would:
clearly . . . entitle [the carrier] to take any necessary steps to protect the
scope of the rights conferred by the state appropriation statutes, not
merely in representatively securing and protecting the full measure of
beneficial use for the landowners under the project or canal, but also in
effectuating generally the object of the project or canal as an enterprise.318
Therefore, the Bureau does “not give up all control over the water or do
more than pass to the purchaser a right to use the water so far as may be
necessary in properly cultivating the land.”319 Under both federal and
state law, the Secretary of the Interior (or an authorized delegate) has
quasi-police power to ensure that each project customer puts project
water to “beneficial use.”320 In practical terms, this is the authority to
require or prohibit certain uses.
Section 8 of the Reclamation Act directs that “beneficial use shall be
the basis, the measure, and the limit of the right” acquired by the project
irrigator.321 “[I]t is clear that the Secretary of the Interior may not, con-
sistent with the Reclamation Act, knowingly release water to an individ-
ual or entity for a use which is not recognized as beneficial under state
law, unless such use is specifically authorized by a congressional direc-
tive.”322 The Bureau cannot deliver water to a customer under a plan
“which is nothing more than speculative with respect to the beneficial
uses.”323 Furthermore, this congressional prohibition trumps any con-
flicting right vested in the project irrigator, or irrigation district, by a
state law that defines “beneficial use” in too loose a fashion.324
Finally, the United States retains legal title to the water rights
needed for project operation, even when the beneficiaries have completely
repaid the federal investment in the associated facilities.325

3. Right to Recapture Project Return Flow

In some circumstances, the United States may claim the return flow
from irrigation and resell the surplus water within the project for further
irrigation. In judicial proceedings, the Bureau has successfully asserted
this right to recapture against: (a) nonproject irrigators who appropri-
ated water (including project seepage) from tributaries of the natural wa-
terway from which the Bureau had originally diverted the project

318. United States v. Tilley, 124 F.2d 850, 861 (8th Cir. 1941), cert. denied, 316 U.S. 691
(1942) (emphasis added).
320. See infra note 392 and accompanying text.
323. Id. at 1135.
324. See infra text accompanying notes 375-96.
325. C. MEYERS & R. POSNER, supra note 38, app. 3 at 2 ("BOR continues to hold the
water right even after the project pays out, as has occurred in some 50 cases . . . .").
supply;\textsuperscript{326} (b) nonproject irrigators who appropriated project seepage that had returned to the natural waterway from which the Bureau had originally diverted its supply, given that the Bureau had not expressly abandoned that seepage;\textsuperscript{327} (c) nonproject owners of land where project seepage had flowed and accumulated into a lake that the owners had used for commercial recreation;\textsuperscript{328} (d) nonproject irrigators who had a temporary contract with the Bureau for delivery of seepage that the Bureau had collected from project lands;\textsuperscript{329} and (e) purchasers of public land, with or without project rights, who diverted project seepage from a natural waterway, which lacked a usable natural flow and which the Bureau had improved for collection of that seepage.\textsuperscript{330}

The Bureau may sell the recaptured seepage for further irrigation within the project boundaries; the sale does not have to be to the district where the original use was made.\textsuperscript{331} On the other hand, the recaptured seepage cannot be applied to a new kind of use, or for irrigation on lands not covered by the scope of the original appropriative permit when “in-

\begin{itemize}
\item \textsuperscript{326} Ramshorn Ditch Co. v. United States, 269 F. 80 (8th Cir. 1920); United States v. Haga, 276 F. 41 (D. Idaho 1921).
\item \textsuperscript{327} J.B. Bean v. United States, 163 F. Supp. 838 (Ct. Cl. 1958).
Seepage and waste water may be said to have been abandoned by the original appropriator when it is returned or allowed to return to its natural channel, with no intention on the part of the appropriator of recapturing it. To constitute abandonment, however, there must be an intent to abandon, the existence or nonexistence of which is a question of fact to be determined according to the evidence presented in each particular case, and one whose rights depend on an alleged abandonment must assume the burden of proving such abandonment.

The appropriator who has abandoned his rights to water may at any time resume the possession and exercise of them, if no new rights have intervened.

\textit{Ramshorn Ditch Co. v. United States, 269 F. at 83-84 (citations omitted).}
\item \textsuperscript{328} Hunter v. United States, 283 F.2d 874 (Ct. Cl. 1962).
\item \textsuperscript{329} Hudspeth County Conservation & Reclamation Dist. No. 1 v. Robbins, 213 F.2d 425 (5th Cir. 1954), cert. denied, 348 U.S. 833 (1954).
\item \textsuperscript{330} Ide v. United States, 263 U.S. 497 (1924).

The defendants insist that when water is once used under the appropriation it cannot be used again—that the right to use it is exhausted. But we perceive no ground for thinking the appropriation is thus restricted \ldots . A second use in accomplishing [the reclamation of the land within the project] is as much within the scope of the appropriation as a first use is.

\textit{Id. at 505.}
\item \textsuperscript{331} United States v. Tilley, 124 F. 2d 850, 861 (8th Cir. 1942), cert. denied, 316 U.S. 691 (1942).

The contention that each District or division should be treated as a separate unit in determining the scope of the rights in the waters applied to the lands under the project rests upon a provincial view as to the real nature and object of a reclamation project, and it fails to take into account the fact that the State has itself recognized the unity and integration of the project by making possible and allowing a single appropriation to be made for the benefit of all the lands thereunder.

\ldots 

\ldots [T]he scope of the appropriative rights in connection with a federal reclamation project must [include] the right, by proper means, to collect seepage waters from any part of the lands, and to reapply them upon other lands within the project and under the appropriation.

\textit{Id.}
terests of secondary users have intervened. This [use] would not be an exercise of [the] prior appropriation, but a forbidden enlargement of it; in effect . . . a new appropriation of the return flow . . . .”332

Under common law, not applicable in some western states, any party lawfully diverting water from a natural waterway has the right to recapture return flow prior to reentry into that waterway, or even afterwards, if the return flow occurs during a period when the waterway has no natural flow.

[O]ne who by the expenditure of money and labor diverts appropriable water from a stream, and thus makes it available for fruitful purposes, is entitled to its exclusive control so long as he is able and willing to apply it to beneficial uses, and such right extends to what is commonly known as wastage from surface run-off and deep percolation . . . . Nor is it essential to his control that the appropriator maintain continuous actual possession of such water. So long as he does not abandon it or forfeit it by failure to use, he may assert his rights. It is not necessary that he confine it upon his own land or convey it in an artificial conduit. It is requisite, of course, that he be able to identify it; but subject to that limitation, he may conduct it through natural channels and may even commingle it or suffer it to commingle with other waters.333

If this recapture rule applied to the operation of project facilities, the Bureau, not the project irrigator, would dispose of project return flow. The project irrigator could not convey the portion of his project right currently resulting in return flow, even if nonproject irrigators had not relied on that return flow and thus had no legal claim for its continuation. Some contracts expressly affirm the federal claim to all return flow and thus implicitly deprive a project contractor of any claim to the flow, even when recaptured within the contractor’s boundaries.334 Other contracts restrict the federal claim to return flow escaping beyond the contractor’s boundaries.335 Subject to state law requirements protecting the rights of other appropriators, the district or irrigator, pursuant to the

332. Trelease, supra note 63, at 471.
334. See, e.g., Repayment Contract Between the United States of America and the A & B Irrigation District, supra note 35, § 26(a), reprinted in Reclamation Repayment Contracts, supra note 35, at 33:

The United States does not abandon or relinquish any of the waste, seepage, or return flow waters attributable to the irrigation of the lands to which water is reserved under this contract. All such waters are reserved and intended to be retained for the use and benefit of the United States as a source of supply for the project. Id.; see also, Contract Between the United States of America and the Uintah Water Conservancy District § 21(b) (July 14, 1958) (Bureau of Reclamation, U.S. Dep’t of the Interior, Contract No. 14-06-400-778), reprinted in Reclamation Repayment Contracts, supra note 35, at 101 (“The United States claims all of the waste, seepage, and return flow water derived from water delivered pursuant to this contract and the same is hereby reserved and retained by the United States for beneficial use on the project.”).
335. See, e.g., Contract Between the United States, the State of California, and Kern-Tulare Water District, Providing for Water Service from the Central Valley Project § 9(b) (No-
latter contract type, may recapture return flow within the district's boundaries.

C. Irrigation District's Project Right

Under the Reclamation Act, an irrigation district contracting with the Bureau has a right to receive a specified supply (for reallocation to actual irrigators) for a specified period under specified terms.

Unlike the original Reclamation Act, which authorized contracts between the Bureau and individual irrigators, a 1926 amendment required the Secretary to henceforth contract only with "irrigation districts organized under State law." State law typically characterizes such a district as a public agency and authorizes it to levy and collect taxes; the delinquency of an individual irrigator would not affect the nature of the district's financial obligation to the Bureau or its capacity to discharge that obligation.

The Reclamation Act is vague as to the type of organizations allowed to contract with the Bureau for irrigation supply. Although the 1926 amendment specified only "irrigation districts," the Reclamation Project Act of 1939 broadened the acceptable range of contractors to "any conservancy district, irrigation district, water users' association, or other organization which is organized under State law and which has capacity to enter into contracts with the United States pursuant to the Federal reclamation laws." This same amendment further provided that the organization must be "satisfactory in form and powers to the

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338. 2 WATER AND WATER RIGHTS, supra note 1, § 123.2(H), at 270.
Secretary.' The Bureau has generally, although not uniformly, contracted with irrigation districts.

Just like the United States in the operation of a federal project, a district that builds its own storage facility "holds legal title to the [water] rights . . . in trust for the landowners." Neither the Bureau nor the district puts the water to beneficial use, which is the measure (under federal and state law) of a continuing right to use water: the irrigator does. Where the district does not own its own storage facility, but instead receives a supply from a federal project, it would be inaccurate to say, at least as between the district and the Bureau, that the district holds legal title to the project or its associated water rights: the Bureau holds that kind of title. The district holds an equitable interest in the project, as defined by its contract, in trust for its irrigators, who in turn have equitable shares of the district's interest.

This doctrine reflects the historical development in the relationship between irrigators and organizations that created their own supplies pursuant to water rights held in their corporate names, e.g., supplies independent of the Bureau of Reclamation. In the 1870's and 1880's, when these land and water companies were widely incorporated to develop water supplies in large river valleys, the contracting farmers were more or less at the companies' mercy regarding the terms of their own water contracts. Statutory and judicial reforms gave the customers protection in the form of a "property right independent of and superior to the contract right he had from the company." As a result, in external relations with other appropriators, the distributor was the "proprietor of the [appropriation]," but internally, between the distributor and the consumer, the courts would protect from arbitrary action by the distributor.

Under the contract with the plaintiff, the [Federal] government appears to have given the plaintiff the absolute right to the use of a certain quantity of that water to be

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340. Id. § 485h(d).
341. A. Golze, supra note 149, at 241.
342. See supra text accompanying notes 299-325.
343. United States v. Imperial Irrigation Dist., 559 F.2d 509, 529 (9th Cir. 1977), modified on other grounds, 595 F.2d 524, 525 (1979); see also Murphy v. Kerr, 296 F. 536, 540 (D.N.M. 1923) (stating that a majority of western states have declared that ownership of natural streams in the state are "owned by the state and held in trust for the people"); Ivanhoe Irrigation Dist. v. All Parties, 47 Cal. 2d 597, 624, 306 P.2d 824, 840 (1957) (reaffirming that the irrigation district is a trustee for landowners), rev'd on other grounds sub nom. Ivanhoe Irrigation Dist. v. McCracken, 357 U.S. 275 (1958); Holguin v. Elephant Butte Irrigation Dist., 91 N.M. 398, 401, 575 P.2d 88, 91 (1977) (reaffirming that under the Reclamation Act the United States is a trustee, not an owner of water).

The federal title to the project facilities and associated water rights is exempt from state taxation under McCulloch v. Maryland, 17 U.S. (4 Wheat.) 316 (1819). However, the beneficial claims—held by a contracting district and member irrigators—may be taxable to those parties. In Northside Canal Co. v. State Bd. of Equalization, 8 F.2d 739 (D. Wyo. 1925), modified, 17 F.2d 55 (8th Cir. 1926) (on the question of whether, for the purpose of tax assessment, the property is located in the state of diversion or the state of use), cert. denied, 274 U.S. 740 (1927), the plaintiff (a private water company) protested the assessment of a property tax against its project right. The plaintiff asserted, among other arguments, that such a tax was in effect against the United States because the government retained title to and control over the reservoir. 8 F.2d at 740. This claim was rejected:

Under the contract with the plaintiff, the [Federal] government appears to have given the plaintiff the absolute right to the use of a certain quantity of that water to be
1. Conveyability of Irrigation District Project Rights Under Three Standard Contracts

The Reclamation Project Act of 1939 authorizes the Secretary to contract for project deliveries on different sets of terms, depending on the repayment status of the project and on the districts' financial circumstances. Two kinds of contracts—called "9(d)" and "9(e)" contracts—are relatively suitable for voluntary conveyances. A third kind, based on the Warren Act, is less suitable, insofar as it sometimes cannot be conveyed for profit or use outside of project boundaries.

a. Repayment Contracts

A "9(d)," or repayment, contract provides that the district will repay an appropriate share of the project's annual operating costs in advance of annual deliveries, and that it will repay the district's share of all construction costs allocated to irrigation in annual installments over a term of not more than forty years plus a development period of not more than ten years. The district's annual payment may, at the Secretary's discretion, be varied "in the light of economic factors pertinent to the ability of the organization to pay." Upon the completion of capital repayment, the district obtains a first right to receive a stated share of the project's available water supply in perpetuity, subject only to continued payment of the required share of operating costs.

delivered to it at the reservoir in the state of Wyoming. The government by its contract parted with its right to the use of the disposed-of portion of the waters so appropriated for a valuable consideration which is the equivalent to a grant to the plaintiff. Under the authorities heretofore cited, if the legal title of the government in lands where there is a beneficial ownership in their use in another does not exempt that property from taxation, ... how can the ownership of the government of the reservoir or the control and management of it, together with the waters therein contained, affect for taxation purposes a water right which the government has granted and transferred to another?

Id. at 746.

345. See infra notes 363-69 and accompanying text.
348. Id. § 485h(d)(2).
349. Id. § 485h(d)(3).
350. Id. § 485h(d)(1), (3).
351. Id. § 485h(d)(3).
352. [T]he other party to any contract entered into pursuant to subsection (d) ... shall, during the term of the contract and of any renewal thereof and subject to fulfillment of all obligations thereunder, have a first right (to which right the rights of the holders of any other type of irrigation water contract shall be subordinate) to a stated share or quantity of the project's available water supply for beneficial use on the irrigable lands within the boundaries of, or owned by, the party and a permanent right to such share or quantity upon completion of payment of the amount assigned for ultimate return by the party subject to payment of an appropriate share of such costs, if any, as may thereafter be incurred by the United States in its operation and maintenance of the project works . . . .

Id. § 485h-1(4).
b. Water Service Contracts

Congress created the "9(e)," or "water service" contract based on a utility-customer model with the Bureau acting as the utility. The Secretary may enter into a water service contract at a rate fixed to cover an appropriate share of the project's operating and maintenance costs and only that share of construction costs as he "deems proper." The term may be for any period up to forty years. This kind of contract was "designed for situations where total repayment in 40 years would be beyond the ability of water users to pay."

According to the National Water Commission: "When, if ever, the water right passes to the district is uncertain." In fact, in Ivanhoe Irrigation District, project customers challenged water service contracts partly on the ground that they did not include a provision for automatic renewal. The California Supreme Court invalidated the contracts, holding that the contracts violated the due process clause by imposing a "burden under which [the customers] may suffer the loss of water rights at the discretion of the United States . . . ." The state court also held that the Bureau, in issuing such contracts, must comply with the state law, such as the California Water Code and the Public Utilities Code, but

354. 43 U.S.C. § 485h(e). Such a contract, however, is "applicable only to works connected with water supply and do[es] not apply to distribution systems." SAN LUIS REPORT, supra note 173, 275 app. C at 280.
355. 43 U.S.C. § 485h(e).
356. Trelease, supra note 63, at 479. Professor Maass suggests several other reasons for such contracts in the Central Valley Project: (1) In a complex project with highly integrated facilities and purposes, 9(d) contracts would "introduce serious rigidity into the operation . . . [which] would result in the attainment of less than the maximum benefits that can be derived from all purposes of the project"; (2) Bureau officials were convinced that full financial integration between project functions (e.g., irrigation supply, M&I supply, and hydroelectricity) would be facilitated by using the same kind of service contracts as public utilities; (3) CVP officials also believed that 9(e) contracts were more suitable for the "postage stamp" rates the Bureau intended to charge (under these rates, all customers for a given use within a large service area would pay the same rate, regardless of their distance from the major supply facilities). Maass, Administering the CVP, 38 CALIF. L. REV. 666, 672-73 (1950).
357. NATIONAL WATER COMM'N, supra note 58, at 264. The California Irrigation Districts Association objected to such contracts for Central Valley Project water because they believed that "[n]o water rights whatever are acquired by irrigation districts through the purchase of water . . . ." Maass, supra note 356, at 673.

This use of the term "water right," both by the National Water Commission and the districts' association, is technically inaccurate. The state-granted water right (under which the federal project operates) does not pass to the irrigators under any reclamation contract. It is true, however, that prior to the 1956 statutory amendment, a 9(e) contract created a kind of project right inferior to a 9(d) contract in that it did not include a provision for automatic renewal.

359. Id. at 643.
that it had not in this case. The United States Supreme Court reversed, partly on the ground that the plaintiff's objections had been mooted by a 1956 statute that allowed a 9(e) contractor to henceforth have the same renewal rights as a 9(d) contractor. "Eventually, then, all water users on Reclamation projects will have the same type of right, whether they started with 9(d) or 9(e) contracts . . . . [P]roject water users with 9(e) contracts may [however] have future negotiations to face before their rights become permanently fixed."  

c. Warren Act Contracts

Under the Warren Act of 1911, the Secretary of the Interior may store water under privately held water rights for persons who would otherwise not receive project rights if the project has excess capacity.

(i). Section 1 Contracts

Under a section 1 contract, the contractual term is contingent upon the availability of excess capacity and cannot extend beyond the surplus. The Secretary must "preserv[e] a first right to lands and entrymen under the project." Such a contract may provide for temporary deliveries pending full development of lands within the project, or it may expressly indicate that the "rental" of water is secondary and inferior to the right to use the water within the project boundaries. Therefore, any project right held under such contract would accommodate only a temporary conveyance. It is unlikely that an interest under such a section 1 contract would be conveyed to an M&I customer. Not only is the contractual term limited, but the statute also restricts the use of water to

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360. Id. at 646-48.
361. Ivanhoe Irrigation Dist. v. McCracken, 357 U.S. 275, 297-98 (1958); see also 43 U.S.C. § 485h-1(4) (1982) (stating that both 9(d) and 9(e) contracts have first right to a stated share of the project's available water).
362. Trelease, supra note 63, at 481. Of course, a 9(d) contractor may not permanently receive a water supply on the basis of the original contract alone if the term of the contract expires before repayment is completed (due to costs unanticipated at the time the contract was signed).
365. Id.
366. Trelease, supra note 63, at 478; see, e.g., J.B. Bean v. United States, 163 F. Supp. 838 (Ct. Cl. 1958). In Bean, the plaintiffs challenged the Bureau's recapture of project seepage during a drought for redelivery to project lands instead of continued delivery to plaintiffs' lands under a Warren Act contract. The United States Court of Claims denied the plaintiffs' petition for compensation for the taking of their water interests:

The contract entered into [between the Bureau and plaintiffs' Hudspeth Irrigation District] follows the Warren Act and makes clear that the rights of the landowners in the District are inferior to those in the project, and that when the project lands need the water, they are entitled to it, and landowners in the District cannot complain when it is given to them.

Id. at 842.
“lands held in private ownership within Government reclamation projects.” This section further undercut the desirability of subcontracting by requiring that any contractor thereunder “shall [not] make any charge for the storage, carriage, or delivery of such water in excess of the charge paid to the United States except to such extent as may be reasonably necessary to cover cost of carriage and delivery of such water through their works.”

(ii). Section 2 Contracts

A contract under Section 2 of the Warren Act is much more suitable for voluntary conveyance to an M&I customer than a section 1 contract. The Secretary may authorize a private party holding a state-granted water right to construct storage or delivery capacity in excess of that needed for regular project customers, which can then be incorporated into the federal project. Alternatively, the private party may simply contract with the United States for construction of additional capacity. “Under both scenarios, a contractor may receive the right to a definite capacity which is not subject to being reduced by another user, for a definite or perpetual time period. The contractor’s right to the use of project facilities is thus not secondary to other project lands or entrymen.” Furthermore, this section does not restrict use of contract water to project lands, privately held or otherwise, and does not prohibit profit through subcontracting.

Finally, even if the Bureau held that a contractor under either section 1 or 2 could not convey a project right, that contractor would still hold the private water right that had been previously incorporated into project operation. The Warren Act contractor presumably could withdraw from the project and convey the private right, free from entanglement with the federal project, under such terms as are required by state law.

d. Contingency of Contractual Rights Upon Continued Payment

Every voluntary conveyance is contingent upon the irrigation district’s (or its assignee’s) satisfaction of existing repayment obligations, or its cure of any past delinquency.

369. Memorandum from Keith Eastin, supra note 227, at 9; see, e.g., Northside Canal Co. v. State Bd. of Equalization, 8 F.2d 739, 740 (D. Wyo. 1925), modified on other grounds, 17 F.2d 55 (8th Cir. 1926), cert. denied, 274 U.S. 570 (1927), which concerned the plaintiff’s right, under § 2 of the Warren Act, to water from Jackson Lake, Wyoming. The canal company had contracted with the Bureau to raise the dam 17 feet. The work was to be done under the Bureau’s supervision and at the company’s expense, and the title of the dam was to remain with the United States. The contract entitled the canal company to a perpetual supply—namely all water available as a result of the extra storage.
Under 9(d), 9(e), and Warren Act contracts, a district's delinquency in meeting its various repayment obligations\(^{370}\) compels the Bureau to withhold water from it or from its beneficiaries, the actual irrigators.\(^{371}\) This express mandate in the Reclamation Act overrides contrary provisions under state law.\(^{372}\)

2. Measuring a District's Project Right

Every contract for project water supply includes provisions that define the Bureau's obligations as to the amount and timing of delivery. Those provisions, of course, enable the district's members to plan how much land to irrigate and what crops to produce. Thus, those contractual provisions are at least the starting point for determining what the district's project right is for the purpose of a voluntary conveyance.

The method of describing water delivery varies from contract to contract. Variable factors influencing the nature of the Bureau's obligations include: the needs of the project irrigators (as expressed in the negotiations leading up to the contract), the storage capacity of the project relative to the demand for the project water, and the history and character of the waterway's development (e.g., the seniority of the Bureau's state-granted water rights relative to the rights of other appropriators). There are two typical kinds of provisions for delivery. Some contracts provide a right to a specified percentage of the project's storage capacity;\(^{373}\) others provide for a specified maximum delivery.\(^{374}\)

a. Limitation to Beneficial Use

After stating that "nothing" in the Reclamation Act shall interfere with state law governing the "use of water," section 8 of the original Reclamation Act continues with a key qualification: "Provided, . . . beneficial use shall be the basis, the measure, and the limit of the right [to the use of project water]."\(^{375}\) This "specific congressional directive"\(^{376}\) over-

\(^{370}\) 43 U.S.C. § 485e (1982) defines delinquency as being in arrears in the advance payment of operation and maintenance charges or "toll charges" and being in arrears for more than 12 months in the payment of construction charges.

\(^{371}\) "[A]ny such contract shall require that no water shall be delivered to lands or parties which are in arrears . . . ." Id.

\(^{372}\) See infra text accompanying note 465.

\(^{373}\) See, e.g., Repayment Contract Between the United States of America and the A & B Irrigation District, supra note 35, § 17(c), reprinted in RECLAMATION REPAYMENT CONTRACTS, supra note 35, at 23.

\(^{374}\) See, e.g., Contract Between the United States and Orestimba Water District Providing for Water Service § 3(a) (November 27, 1959) (Bureau of Reclamation, U.S. Dep't of the Interior Contract No. 14-06-200-8091), reprinted in RECLAMATION REPAYMENT CONTRACTS, supra note 35, at 50; Contract Between the United States and Westlands Water District for Temporary Water Service from San Luis Unit and Mendota Pool, 1981, supra note 335, § 3(a).

rides any state-law provision to the contrary.

In *United States v. Alpine Land & Reservoir Company*, the appeals court affirmed the trial court's holding that neither the project beneficiaries' contractual relationship with the Bureau nor a Nevada law that limited the appropriation of water for irrigation to three acre-feet per acre annually was the final measure of a project right. This court affirmed an award of a water duty, based on a history of beneficial use, of 3.5 acre-feet per acre annually for bottomland farmers and 4.5 acre-feet for benchland farmers in the Newlands Project. The contracts and the state law were not even "compelling evidence" of beneficial use. As to the state law, the district court had emphasized that the statute was enacted in 1903, after the vesting of the farmers' project rights in 1902. But "[e]ven assuming the Nevada statute provided a measure other than beneficial use, the limit would be ineffective in view of the binding 'congressional directive' that 'the water right must be . . . governed by beneficial use.'"

Where Congress has not provided a precise definition of the substantive rights and obligations of parties dealing with a federal agency, the binding rule of law can be either state or federal, depending on the expression of congressional intent, the nature of the agency's mission, and the disadvantages (if any) of incorporating state law. For example, in *Clearfield Trust Company v. United States*, the Court held:

In our choice of the applicable federal rule we have occasionally selected state law. But reasons which may make state law at times the appropriate federal rule are singularly inappropriate here. The issuance of commercial paper by the United States is on a vast scale and transactions in that paper from issuance to payment will commonly occur in several states. The application of state law, even without the conflict of law rules of the forum, would subject the rights and duties of the United States to exceptional uncertainty. It would lead to great diversity in results by making identical transactions subject to the vagaries of the laws of the several states. The desirability of a uniform rule is plain.

According to the Ninth Circuit in *Alpine Land & Reservoir Company*, Congress in the original Reclamation Act adopted "beneficial use" as the "necessary rationale and source" of the project right. Although

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378. *Id.* at 853, 855-56.
379. *Id.* at 857.
380. *Id.* at 855.
381. *Id.*
382. *Id.* (quoting California v. United States, 438 U.S. 645, 668 n.21 (1978)).
383. 318 U.S. 363 (1943).
384. *Id.* at 367 (footnote omitted).
385. *Alpine Land & Reservoir Co., 697 F.2d at 853.*
on the surface it appears that Congress intended beneficial use to be "governed" or defined by the state law where the use occurs, the law of beneficial use throughout the western states is "general and without significant dissent."\(^{386}\) The legislative history of the Reclamation Act thus makes clear that the "‘principles underlying and governing water rights’ under the Act were to be the existing beneficial use concepts of western water law."\(^{387}\) A special state rule, therefore, is not binding if it "point[s] to a different water duty than a beneficial use inquiry would indicate."\(^{388}\)

Hence, the federal common law of beneficial use is inherently a "dynamic concept which is ‘variable according to conditions’ and therefore over time."\(^{389}\) The Ninth Circuit applied two tests. "First, the use cannot include any element of ‘waste’ which, among other things, precludes unreasonable transmission loss and use of cost-ineffective methods. Second, and often overlapping, the use cannot be ‘unreasonable’ considering alternative uses of the water."\(^{390}\)

No matter how generous the contractual promise to supply water, the district’s maximum project right, whether for continuing use or conveyance, is the amount of water that the district’s members use beneficially. A typical provision entitled "Delivery Schedules" or just "Schedules" requires the district, at some point before the irrigating season, to inform the Bureau how much water the district will need and when the need will arise (e.g., month by month). If a district proposes to convey its project right, the proper measure of the extent of the right is not the contractual entitlement, but rather the amount the district requested and the Bureau delivered, reduced by any egregious wastefulness in actual use.

It is arguable whether the district’s project right includes that portion of its current supply that could be conserved by better irrigation practices or equipment, particularly when the district or its members can afford such conservation but have not taken the necessary initiatives.\(^{391}\) Neither the Reclamation Act nor the Bureau’s Reclamation Instructions provides any definition of "beneficial use." The term certainly does not encompass gross wastefulness, such as a district’s consistent overordering of project water.\(^{392}\)

\(^{386}\) 1 \textit{WATERS AND WATER RIGHTS}, supra note 1, § 19.2, at 85.
\(^{387}\) \textit{Id.} at 853 (quoting 35 \textit{CONG. REC.} 6677 (1902) (statement of Rep. Mondell)).
\(^{388}\) \textit{Id.} at 855.
\(^{389}\) \textit{Id.} (quoting Farmers Highline Canal & Reservoir Co. v. City of Golden, 129 Colo. 575, 585, 272 P.2d 629, 634 (1954)).
\(^{390}\) \textit{Id.} (citations omitted).
\(^{391}\) See supra note 24 for estimates of the conservation possibilities.
\(^{392}\) In \textit{Yuma County Water Users' Ass'n v. Udall}, 231 F. Supp. 548 (D.D.C. 1964), the district court refused to grant the plaintiff an injunction against the Secretary of the Interior’s order lessening the plaintiff’s water deliveries, given undisputed evidence that the district consistently ordered more water than its members needed and then dumped the unused excess into the Colorado River at a point where other appropriators could rarely capture it. There are
Although few contractors practice gross and intentional wastefulness, many may be able to afford conservation of some part of their current supply even without the income from a profitable conveyance. An administrative policy that strictly defined "beneficial use" would discourage conveyances because districts would not want to call the Bureau's attention to routine waste and thus risk the downgrading of their project rights even before a conveyance is taken into account. By contrast, a policy that defines conservation as a beneficial use would encourage conveyances.

The Reclamation Act also provides no guidance as to whether the project right is the district's maximum or average "beneficial use." Resolution of this question would be particularly important for a district that intended to convey only part of its maximum entitlement under the original contract; the revised contract with the district would have to establish what portion of the original right was retained. One solution to this puzzle is for the M&I assignee to make improvements in the district's delivery system and to receive whatever water is conserved. Under this scenario, which was followed in the conveyance to the City of Casper, Wyoming, the amount of water actually delivered to the district's members would not decline. Another solution is for the Bureau to require that farmland (from which a project right is detached) remain unirrigated (with water from any source) for the term of the conveyance and to reduce the district's delivery by the same proportion as the retired land bears to all land irrigated with project water.

very few such instances where the Interior Secretary has taken the initiative to lessen deliveries on the ground of nonbeneficial use.

393. The cheapness of the Federal irrigation supply, resulting from subsidies discussed supra notes 216-25, may discourage district investment in conservation measures.

394. Cf. CAL. WATER CODE § 1011(a) (West Supp. 1986):
When any person entitled to the use of water under an appropriative right fails to use all or any part of the water because of water conservation efforts, any cessation or reduction in the use of such appropriated water shall be deemed equivalent to a reasonable beneficial use of water to the extent of such cessation or reduction in use. No forfeiture of the appropriative right to the water conserved shall occur upon the lapse of the forfeiture period applicable to [such appropriation].

395. See infra text accompanying notes 559-78.

396. Where all of the water right is to be severed from the land to which it was attached, provision should be made in the closing transaction which will assure that the land will never again be irrigated with water from the same source. That is, provision should be made to assure that the duty of the water once associated with the land is effectively transferred to the purchaser. An effective technique for accomplishing this result is for the purchaser to acquire the land and hold it as dry land. Another approach is to acquire only a small portion of the land and bind the remainder to it by covenants running with both parcels that neither shall ever again be irrigated with water from the previous source.

Ross, supra note 261, at 505; see also supra note 117 (regarding El Paso's use of the first of Mr. Ross' approaches).
b. Nature of Project Rights During a Shortage

A project right is for a supply of water that can be beneficially used, except during a drought or any other circumstance when the Bureau cannot meet normal contractual obligations. Then, “water in a project is distributed among the users by some principle of apportionment, rather than by a seniority scheme which totally cuts off the most junior users.” This administrative practice, of course, protects project beneficiaries from a total loss of water supply even in a severe drought; it contrasts with state law governing this circumstance, which typically entitles the senior appropriator to divert the full measure of his or her right, even to the complete foreclosure of supply to junior appropriators.

A few project authorizations, such as that for the San Juan-Chama Project, require such sharing. Project contracts and the irrigation districts’ rules widely require apportionment when the federal supply is short. “Sometimes it is provided, without elaboration, that water shall be equitably distributed; sometimes rules specify pro rata distribution; and in some instances, users contract to receive a certain fractional share of the available supply.”

The Secretary has wide discretion to choose the apportionment scheme for a project, absent a congressional directive. In the Boulder Canyon Project, neither provisions in the authorizing statute nor the water contracts require the use of any particular formula for apportioning shortages. The United States Supreme Court held that “[w]hile the Secretary must follow the standards [establishing the water shares of basin states as] set out in the Act, he nevertheless is free to choose among the recognized methods of apportionment or to devise reasonable methods of his own.”

In a drought, an M&I assignee might receive more water than the irrigation district would have received had it retained the project right. The Bureau’s administrative practice is to require irrigators to bear most of any project shortage.
3. State Law Governing District's Conveyance

When conservation reduces historical demand, or when landowners retire formerly irrigated land, a district might consider conveying all or part of its project right. As argued in this Article, nothing in the Reclamation Act prohibits or expressly requires such a conveyance, provided the buyer or lessee assumes the appropriate repayment obligations. This statutory vacuum leaves some regulation of conveyances to state law and the district's bylaws. For example, Arizona law allows an agricultural improvement district or an irrigation district, but not an irrigation water delivery district, to sell or lease surplus water to irrigators or M&I customers outside of its boundaries. California law authorizes an irrigation district to lease water for use outside of its boundaries for a period not exceeding 7 years, unless the trade results from water conservation, in which case it may continue for any period agreeable to the parties.

4. District's Profit from Conveyance

Under the uniform contractual provision prohibiting conveyance without its approval, the Bureau could allow a conveyance on conditions limiting the district's profit from the transaction—at the most extreme, not allowing any profit whatsoever, so that the assignee pays the irrigation district only what the district paid the Bureau. Essentially, such an administrative practice may be required for a contract under the Warren Act's section 1, which provides that no contractor "shall make any charge for the storage, carriage, or delivery of such water in excess of the charge paid to the United States except to such extent as may be reasonably necessary to cover cost of carriage and delivery of such water through their works." No similar provision of the Reclamation Act applies to normal supply contracts.

Several provisions enacted during the period when individual irrigators contracted directly with the Bureau may be intended to limit profit from conveyances. The basic policy behind those provisions—preventing speculation in government-created benefits—could be administratively extended to apply to the districts' conveyances. Of course, if the Bureau recaptured all profit from a conveyance, no district would voluntarily part with a project right. Furthermore, a district could challenge a prohibition of any profit as arbitrary, capricious, or an abuse of

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4. See infra notes 466-84 and accompanying text.
discretion, under the terms of the Administrative Procedure Act.\textsuperscript{409}

The Reclamation Act provides indirect guidance as to the propriety of profit from the sale of Federal project benefits. For example, when a district takes over the operation and maintenance of a project and receives profits from the operation and control of power plants, the leasing of project grazing and farming lands, and the sale of town sites, "[n]o distribution to individual water users shall be made out of any such profits before all obligations to the Government shall have been fully paid."\textsuperscript{410} This provision could be broadly interpreted as a congressional policy that a district should generally use profits created by the project to improve its operations as a district. For example, profits could be used to lessen the seepage of water from its own distribution systems.

\textbf{D. Project Right of Actual Irrigator}

Even though they typically do not have a contractual relationship with the Bureau of Reclamation, the actual irrigators hold the primary beneficial interest in the project’s agricultural water supply. The Bureau and the contracting irrigation district are "intermediary agent[s]" for those irrigators.\textsuperscript{411} As the United States Supreme Court held with regard to the Newlands Reclamation Project, "the beneficial interest in the [state-granted water] rights confirmed to the Government resided in the owners of the land within the Project to which these water rights became appurtenant upon the application of Project water to the land."\textsuperscript{412} This is so even in the typical case where the irrigators, prior to the project construction and operation, had no such state-granted water rights to the waterway from which the Bureau now diverts the project supply.\textsuperscript{413}

The "primacy" of an irrigator's project right is a conclusory label that does not indicate the nature and the limits of the obligations owed by the Bureau and the irrigation district. The irrigator does have a right to continued water service on terms specified by his or her contract with the district; neither the Bureau nor the district can unilaterally and arbitrarily deprive the irrigator of that service. Yet, like the district, the irrigator typically does not hold any title to the federal project facilities. Furthermore, the Reclamation Act does not provide that the irrigator's right of continued water service includes the complementary power unilaterally to convey the project right.

\begin{itemize}
\item \textsuperscript{409} 5 U.S.C. § 706(2) (1982); see supra note 76.
\item \textsuperscript{410} 43 U.S.C. § 501 (1982).
\item \textsuperscript{411} Murphy v. Kerr, 296 F. 536, 545 (D.N.M. 1923).
\item \textsuperscript{412} Nevada v. United States, 463 U.S. 110, 126 (1983).
\item \textsuperscript{413} See, e.g., Ivanhoe Irrigation District v. McCracken, 357 U.S. 275, 285 (1958) (Irrigators in the Madera Irrigation District are supplied with CVP water from the San Joaquin River "in which they never had or were able to obtain any water right." (emphasis added)).
\end{itemize}
1. Measuring an Irrigator's Project Right

Like the irrigation district, the irrigator usually holds a project right of uncertain dimension; the amount of water that can be voluntarily conveyed to an M&I customer is often ambiguous. It is the irrigator's relationship with the district that defines his or her project right. A key issue in defining an individual's project right is how to measure the exact amount of water that the individual legally may convey.

a. Absence of Contractual Privity Between Irrigator and Bureau of Reclamation

The irrigator typically does not have a contract with the Bureau. Much of the uncertainty regarding the irrigator's project right stems from this lack of a direct, mutual relationship, or privity.

Early in the history of the reclamation program, when the Bureau contracted with irrigators and not irrigation districts, each irrigator would be awarded a "water-right certificate" upon satisfaction of repayment obligations.414 This certificate "describes the land upon which the water is to be used, the amount of water use allowed and aids in establishing priorities under state laws."415 The execution of this final certificate vested in the applicant "absolute title to the water right involved," subject to a lien for continuing charges for operation and maintenance.416

A statutory amendment in 1922 authorized the Secretary to contract with districts and to dispense with the water right applications on the part of individual water users.417 In the judgment of the Bureau and the courts, the intent of Congress in dispensing with individual user applications was to "eliminate unnecessary amounts of work and possible complications."418

In 1926, the act was further amended to require that all future Bureau of Reclamation contracts be made only with irrigation districts.419 This new practice did not lessen the primacy of the irrigators' equitable interests in project supply.420 On the other hand, an irrigator typically does not hold any paper record issued by the United States as to his or her entitlement. There are exceptions: (i) Warren Act contracts between the Bureau and individuals holding private water rights that are exer-

cised in conjunction with the federal projects; (ii) projects such as the Columbia Basin Project where Congress expressly provided that the Bureau should enter into contracts both with districts and with actual irrigators; and (iii) those older projects where the courts, state regulatory agencies, or the Bureau (in its contracts with districts), have given individual irrigators equitable rights to specified amounts of water, paralleling the water-rights certificates that irrigators assigned to their districts after the 1922 and 1926 statutory amendments.

b. Irrigator’s Beneficial Use

The irrigator’s project right is measured by the beneficial use of project water on the project land. Notwithstanding the terms of the irrigator’s contract with the district, no right exists for continuing service (or for assignment) of any amount of water that is not beneficially used. The Reclamation Act leaves the definition of “beneficial use” up to the Bureau and the courts through the creation of a federal common law. The stringency of the definition of “beneficial use” (i.e., of the project right) largely determines whether an irrigator has any incentive to try to convey a project right.

c. District’s Control over Member’s Conveyance of a Project Right

With two exceptions, the Reclamation Act does not expressly define the relationship between the actual irrigators and the district that has contracted with the Bureau. The first exception is that the district may not deliver any water to any irrigator who is delinquent in payment of the district-imposed project charges. The second exception concerns the district’s calculation of each irrigator’s project charge. The Reclamation Act authorizes (but does not require) the district to “vary its distribution of construction charges in a manner that takes into account the productivity of the various classes of lands and the benefits accruing to the lands by reason of the construction ...” The calculation of what each irrigator pays for project water otherwise is left to the districts’ contracts.

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421. 16 U.S.C. § 835 (1982). The provision for individual contracts apparently was intended to insure that no water would be delivered to lands defined as “excess.” See, e.g., Israel v. Morton, 549 F.2d 128 (9th Cir. 1977).
425. See supra text accompanying notes 375-96.
Even more to the point, the Reclamation Act does not specify any relationship between an irrigator's payment to the district and the amount of water then received. Given this statutory vacuum, the district's contracts with its members, the district's bylaws, and applicable state law determine the share of project water each member receives for the purpose of irrigation, either normally or during a drought.

Furthermore, the individual repayment obligation to the district may affect whether the irrigator can convey more or less water than actually put to beneficial use.

Although the water users as a group comprise the district and are thus coextensive with it, the extent of each user's right to share in district assets is not properly measured by the proportion of project water he uses, but rather by the proportion of repayment obligation which he bears.\textsuperscript{428}

For example, in some project districts, a repayment obligation is charged as a fixed fee, imposed even if no water is delivered to the individual farmer.\textsuperscript{429} In other districts, the individual obligation is calculated on the basis of irrigated acreage, not actual water use.\textsuperscript{430} A third approach is to vary the charge per acre with the crop.\textsuperscript{431} In other words, even if beneficial use is the measure of the irrigator's right to continuing irrigation service, the financial provisions in the individual's contract with the district may limit the amount of water the irrigator may convey. The Reclamation Act provides no guidance on this subject.

Except where the individual irrigators have confirmed project rights,\textsuperscript{432} contracts with irrigators, district bylaws, and state law determine how the district's directors must divide the project supply. The Secretary of the Interior has "no concern in disputes between the various entrymen [irrigators] which concern their respective priorities, other than as a stakeholder."\textsuperscript{433} Although member irrigators have a "proprietary interest in the district property,"\textsuperscript{434} "no particular landowner or particular piece of land [under California law] is entitled to use any particular portion of the water to which the irrigation district owns..."\textsuperscript{435}

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\textsuperscript{429} Id.; see also Shoshone Irrigation Dist. v. Lincoln Land Co., 51 F.2d 128, 129 (D. Wyo. 1930) (approving district's assessment of defendant's irrigable lands, which received no water from the project because the lands were "shown by the general trend of the evidence to be benefitted by the [federal] irrigation project, so that their value [became] enhanced thereby").

\textsuperscript{430} Sax, supra note 428, at 37.

\textsuperscript{431} Gardner, Water Pricing and Rent Seeking in California Agriculture, in WATER RIGHTS, supra note 216, at 107.

\textsuperscript{432} See supra text accompanying notes 421-24.

\textsuperscript{433} Fox v. Ickes, 137 F.2d 30, 33 (D.D.C. 1943), cert. denied, 320 U.S. 792 (1943).

\textsuperscript{434} Hall v. Superior Court, 198 Cal. 373, 383, 245 P. 814, 818 (1926).
Moreover, even if the irrigator is able to define a confirmed share in the district’s supply, the district may have the statutory or contractual authority to control the circumstances of a conveyance, particularly if the transaction involves a buyer or lessee outside of the district’s boundaries. State law may prohibit such a conveyance if it operates to the disadvantage of other irrigators within the district. “Individual members within that class [of landowners for whose benefit the district operates] can demand services to which they are entitled if they qualify and as long as they qualify as members of that class.”

Restrictions on conveyances—particularly those to a customer outside of the district’s boundaries—are routine in western states. For example, in California an individual member can convey a share in the district’s supply only with the district’s advance consent. In Arizona, no right to the use of water may be conveyed without the consent of all irrigation districts that draw supply from the watershed. Over three-quarters of the irrigation districts or companies in Idaho do not allow a permanent conveyance from a member to a nonmember. Less than fifteen percent permit temporary water transfers from members to nonmembers.

Restrictions on a conveyance outside of the district boundaries have several justifications. If irrigated land is made fallow as a result, the tax revenue of the public district decreases in proportion to the decline in the land’s assessable value. To the extent that the irrigator’s right to water service is not well defined, the district runs the risk that the transaction will injure fellow members if the district’s approval accidentally allows the conveyance of more than the irrigator’s actual share. By participating in an adjudication, the district incurs legal costs. Conveyances may also disrupt operational schedules for the district’s storage or delivery

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435. United States v. Imperial Irrigation Dist., 559 F.2d 509, 529 (9th Cir. 1977), modified on other grounds, 595 F.2d 524 (9th Cir. 1977).
440. However:

The right to continue assessment after the transfer offers a seemingly simple solution to meeting the repayment obligation to the federal government. In the case of sale and transfer of water rights, new owners continue to be liable for assessments whether or not they utilize the delivery system of the ditch company.

Gisser & Johnson, Institutional Restrictions on the Transfer of Water Rights and the Survival of an Agency, in WATER RIGHTS, supra note 216, at 155; see also supra note 117 (describing the City of El Paso’s purchase of taxable land within an irrigation district as part of its acquisition of the associated project right).
systems. Finally, permanent conveyances may defeat a state interest in the long-term use of the land for agriculture.

Federal courts have not determined the legality of restrictions applied to contracts executed under the Reclamation Act. A district’s arbitrary veto of an irrigator’s conveyance seems inconsistent with the notion that the federal project was built for the benefit of actual irrigators, not districts. On the other hand, Congress has given the highest project priority to irrigation, implying that an irrigator should not be able to convey a project right for M&I use outside the district if beneficial use of that right could be made by irrigators within the district. Therefore, it is not surprising that neither the Reclamation Act nor the Bureau-district contracts authorize an irrigator’s conveyance of a project right. The Bureau’s contracts with districts incorporate state law in effect at the time of signature—including provisions restricting conveyances—to the extent not inconsistent with express congressional directives. Finally, as a political matter, the Bureau will not require its institutional beneficiaries, the irrigation districts, to approve conveyances in violation of state law, provided that Congress has not clearly asserted federal supremacy on the subject.

As between an irrigation district and an individual member, the member’s conveyable project right is what the district, or what a court in a proper proceeding, says it is.

2. Reclamation Act’s Limitations on Irrigator’s Conveyance

If conveyable, the irrigator’s project right would be subject to applicable conditions under the state’s water code, the irrigation district’s code, and further subject to whatever constraints are created by the Reclamation Act. As discussed above, these federal conditions include satisfaction of repayment obligations and a possible restriction on windfall profits. Furthermore, although a literal reading of the Reclamation Act might suggest that conveyance to M&I use is prohibited by the requirement that a project right for irrigation is appurtenant to the irrigated land, this provision may be less restrictive than it appears.

Until October 12, 1982, the irrigator’s project right was dependent

441. Generally, state law allows voluntary conveyance of an interest in water supply on the conditions that (1) the irrigator files the appropriate application with the state regulatory agency for approval of the change in use or place of use and (2) no injury is done to holders of other water rights as a result of the conveyance. See supra note 279; supra text accompanying notes 289-91.

442. “Appurtenant” means belonging to, accessory, or incident to.

[I]t is the rule of law that, where the water right is acquired under the Arid Region Doctrine of appropriation; and where, in fact, the water right is an appurtenance to the land, a deed conveying the land, without any reference to the water right, will pass to the grantee all of such water rights then owned by the grantor. In order for the water right, or any portion thereof, not to pass with the deed transfer-
in theory—although not in practice—upon continued residence on the irrigated land. If enforced, this requirement might have served as a barrier to a temporary conveyance where the irrigator would not be a resident during the term of the conveyance. However, the Reclamation Reform Act of 1982 eliminated this condition precedent to the existence (or conveyance) of a project right.

a. Project Right’s Appurtenance to the Land

Section 8 of the Reclamation Act directs that the “right to the use of [project] water ... shall be appurtenant to the land irrigated ...” This provision could be read to mean that a project right obtained for irrigation of a particular tract cannot then be used on any other tract, or for M&I consumption. Although this interpretation finds some isolated support in the legislative history of the Reclamation Act, it is inconsistent with the congressionally mandated limitation of project rights to “beneficial use” and with the intent of the Reclamation Project Act.

The appurtenance provision “does [not] attempt to make the water an inseparable appurtenance to any land.” Inseparability is inconsistent with other provisions of the Reclamation Act, including the directive that “beneficial use”—not appurtenance or any other factor—is “the basis, the measure, and the limit of the right.” Furthermore, the Reclamation Project Act implicitly repealed the appurtenance provision at least to the extent of authorizing perpetual supply to M&I customers, whose use cannot be expected to be appurtenant to irrigated land.

In the legislative history, the most extreme assertion in favor of inseparable appurtenance was made by Representative F. Mondell, one of the bill’s chief sponsors in the House of Representatives:

The main-line canals having been constructed by the Government,

ring the land, there must be some limitation or reservation specifically expressed in the deed . . . .

. . . . The doctrine is well settled in the States of the arid region, that . . . a water right, which secures to the owner of a tract of land water for the irrigation of the same, or for some other use or purpose, necessary to the beneficial enjoyment of the land, becomes appurtenant to such land, but not an inseparable appurtenance.

2 C. KINNEY, supra note 26, §§ 1010-1011, at 1800, 1804.

443. “No right to the use of water for land in private ownership . . . shall be made to any landowner unless he be an actual bona fide resident on such land . . . .” 43 U.S.C. § 431 (1982).


445. “Notwithstanding any other provision of law, irrigation water made available from the operation of reclamation project facilities shall not be withheld from delivery to any project lands for the reason that the owners, lessees, or operators do not live on or near them.” 43 U.S.C. § 390kk (1982).


447. 2 C. KINNEY, supra note 26, § 1015, at 1817.

the entryman or landowner would proceed to the construction of such laterals as were necessary for the irrigation of his own tract and the preparation of the same to receive the water. The water having been beneficially applied and payments having been made under the provisions of the bill, the water right would become appurtenant to the land irrigated and inalienable therefrom.

The settler or landowner who complies with all the conditions of the act secures a perpetual right to the use of a sufficient amount of water to irrigate his land, but this right lapses if he fails to put the water to beneficial use and only extends to the use of the water on and for the tract originally irrigated. It is believed that it is much better to risk the individual hardships which will inevitably occur under a provision of appurtenance than to risk the evils certain to result from unlimited authority to transfer water rights.  

Representative Mondell's interpretation is not persuasive as an expression of legislative intent. This claim appears only once in the record of debate on the House floor and does not appear at all in the reports preparatory to that debate. Representative Mondell's report from the Committee on Irrigation of Arid Lands stated only that "the character of the right which is contemplated under the act is clearly defined to be that of appurtenance or inseparability from the lands irrigated . . . ." This report and the statutory proviso do not define the phrase "lands irrigated."  

There was almost no discussion of the meaning of this provision on the House floor in the two days allocated to the bill that became the Reclamation Act. Opponents of the bill concentrated almost entirely on their objections to the bill as a whole: it being "the most insolent and impudent attempt at larceny [of the federal Treasury] that I have ever seen embodied in a legislative proposition"; the unfairness of "[g]overnment-made farmers" in the "tens of thousands every year" entering into competition with self-made farmers; its "enormous depreciation" of the value of existing farms east of the Bureau's jurisdiction; and its "real beneficiaries" being the railroads. These opponents very
briefly advanced two arguments about the nature of the project right: that "no one knows who would control the water made available by public funds";457 and that "Congress can pass no valid law making these water rights appurtenant to the land, for this is legislation as to real estate (relating to the law of real property) situate[d] within a State and subject to its sovereignty and any laws it sees fit to pass."458 These concerns were not repeated or debated.

A few proponents of the bill, other than Representative Mondell, mentioned the definition of a project right, but did not claim that such a right would be inseparably attached to any land. For example, Representative E. Burkett (Neb.) focussed specifically on the proviso regarding beneficial use: "Every safeguard has been thrown around the bill to make it impossible of speculation. Water rights are limited, acquisition of land is limited in amount, and the bill specially provides that—'Beneficial use shall be the basis, the measure, and the limit of the right.'"459 In sum, Congress did not achieve a uniform understanding of the meaning of the provision regarding appurtenance.

Thirdly, Representative Mondell's understanding of "appurtenance" is inconsistent with common and statutory law typical of his time.460 He seems to have been aware of that and claimed "'[t]his is an advance over the water usages of most of the States . . . .'"461 Yet Representative Mondell also claimed that "we are urging no new experiment and exploiting no new theories . . . [in] the principles which underlie this measure, the policies which it outlines, the detail of administration which it provides. There is in it all no new thing."462 According to Professor Clesson Kinney in his treatise published a decade later, Congress "undoubtedly" recognized the principle that "the inherent rights guaranteed under our [states'] constitutions and laws to own, hold, and dispose of all or any portion of our property, either as a whole or in parts, permits the sale and transfer of a water right separate from the land."463

b. Satisfaction of Repayment Obligation

The irrigator's project right may be suspended, and no water may be delivered to that irrigator (or to an assignee), in the event of delinquency

457. 35 CONG. REC. 6741 (1902) (statement of Rep. Ray) (quoting Secretary of Agriculture Wilson in JOURNAL OF COMMERCE (no date)).
459. 35 CONG. REC. 6728 (1902).
460. In A TREATISE ON THE LAW OF IRRIGATION, the standard reference book of that time, Clesson Kinney stated that a water right (as a property right "of the highest order") should never be considered "an inseparable appurtenance to any particular tract of land." 2 C. KINNEY, supra note 26, § 1015, at 1811.
461. 35 CONG. REC. 6679 (1902).
462. Id. at 6677.
463. 2 C. KINNEY, supra note 26, § 1015, at 1816.
in satisfying individual repayment obligations. This express mandate in the Reclamation Act overrides any contrary provision of state law; for example, a state provision that an owner of a irrigation project is without authority to refuse service because of the irrigator's financial delinquency would have no effect.

\(\text{c. Irrigator's Profit from Conveyance of a Project Right}\)

No conveyance of a district's project right or of an irrigator's share therein can occur without the Bureau's advance approval. This contractual provision does not establish a presumption either for or against the Bureau's eventual approval of a conveyance; it means that a project right is not a fee simple that a beneficial owner may freely convey, and further that the owner may not legitimately expect all profits from sale or lease of a project right.

If the appurtenance provision does not prohibit a voluntary conveyance either for irrigation elsewhere or for M&I use, then Congress has not expressly established the amount of private profit allowable from such a transaction, with the exception of a conveyance involving a contract under section 1 of the Warren Act. Absent a clear congressional directive, an irrigator's profit depends on the terms of the irrigator's contract with the district and upon an interpretation of the consistency of the conveyance with the underlying purposes of the Reclamation Act.

Since 1902 Congress has tried in various ways to limit profits realized from sales of farmlands irrigated with project water. Since at least some of the conveyances of project rights to M&I customers would be accompanied by purchase (and retirement) of farmland, the limits on land transactions are relevant to defining appropriate restrictions on profits from water conveyances.

\(\text{i.) Regulation of Profit from Sale of Excess Land}\)

One of the 1902 Reclamation Act's very purposes was to promote home building, and the distribution of the Act's benefits was limited accordingly in the original statute. The Reclamation Act prohibited the Bureau from providing project benefits to farms larger than 160 acres;

\(\text{464. See supra notes 370-71 and accompanying text.}\)
\(\text{465. Mower v. Bond, 8 F.2d 518 (S.D. Idaho 1925).}\)
\(\text{466. See supra text accompanying note 367.}\)
\(\text{467. Home building is insured, because no one can acquire this land without living on it for five years. There can be no speculation or monopoly, because, in addition to the five years' residence, no homesteader can take more than 160 acres, and in many cases he can take no more than 40 to 80 acres. This is an absolute guarantee of home building and certain protection against land monopoly.}\)

\(35\text{ CONG. REC. 6753 (1902) (statement of Rep. Jones).}\)
additional land was defined as "excess."468

The policy behind the prohibition of service to excess land was to guard against land monopoly of the sort that "plagued" the late nineteenth-century programs for distribution of public lands in western states.469 In the 1902 debate, Representative O. Underwood (Ala.) argued that, absent the reclamation program, land barons would acquire the waterways and water rights for the purpose of raising stock.

Then it will be impossible to ever convert it into the homestead lands for our own people or to build up the population of this Western country. I believe the passage of this bill is in the interest of the man who earns his daily bread by his daily toil.470

The debate in Congress demonstrates that the excess-lands provision was predominantly directed against monopoly and not speculation (the would-be monopolist's later resale of project lands): The provision limits entry into the project but says nothing about exit. Therefore, the excess-lands provision does not directly concern the relationship between original and subsequent settlers, and it does not aid in synthesizing a congressional policy regarding irrigator profit from water conveyance.

By contrast, later statutory amendments are intended to prevent speculative profits from the sale of "excess" lands and allocated water rights. The Reclamation Extension Act of 1914471 requires the owners of large, private holdings adjacent to projects to dispose of "excess" land before project construction.472 The Omnibus Adjustment Act of 1926473 expressly restricts the sale price for such excess land to a dryland level (e.g., as though the project were not planned or built) and also regulates later sales of formerly excess land.474 The Reclamation Reform Act of 1982 reconfirms that policy by requiring that henceforth project water be delivered to excess land only at full cost.475

(ii.) Profit from Sale of Nonexcess Land

The Reclamation Act does not clearly express any policy against speculation in project benefits received by owners of nonexcess lands. "Congress apparently never considered that in distributing the benefit of

469. Sax, supra note 428, at 16.
470. 35 CONG. REC. 6672 (1902). In a similar vein, Representative F. Newlands (Nev.) suggested that our democratic institutions would be tested if Congress failed to prevent the "evil of land monopoly" in the distribution of public lands in western states; he cited as historical examples the French Revolution and the then-recent outbreak of the Filipinos against Spain. 35 CONG. REC. 6734 (1902).
474. Id.
the incremental value, it would have to choose between competing classes of bona fide settlers. . . . [T]here is no binding statutory intent which must determine the administrative or judicial attitude toward incremental values."

Although he argues that the Omnibus Adjustment Act could authorize administrative regulation of sales of nonexcess land, Professor Sax acknowledges that the relevant provisions are a "grammatical and legal puzzle of some complexity," and that Congress was "groping—not unwilling to accept broad controls when they were included in legislative drafts and not sufficiently concerned to make sure that the broad coverage did not slip out of the laws."

The Bureau of Reclamation therefore has considerable discretion in determining whether to recapture some or all of the profit from the conveyance of a project right associated with nonexcess land. A survey of all Bureau contracts executed between 1926 and 1954 shows that the agency's practice has not been to regulate the "incremental value" associated with such lands by including a recapture provision in the original contracts: "Excluding contracts which require the provision by reasons of specific legislation . . ., only 36 out of well over 1,000 contracts contain the provision . . . ." Where sale of "incremental value" has been restricted, the irrigation district has recaptured some fraction of that value, usually fifty percent, for rededication to the reclamation program. Sometimes, a more complex sliding scale has been used, requiring the seller to repay the district between fifty and ninety-nine percent of the incremental value.

As a matter of policy, unregulated sale of nonexcess land (and the associated project right) allows the conveyor to "[convert] the reclamation subsidy into cash . . . at the expense of [his] successors on the project." As the trial court in *Yellen v. Hickel* explained: "The law was not intended to provide supplemental income to former residents who have returned to San Diego, Burbank and other locations far removed from the Reclamation project."

476. Sax, supra note 428, at 32, 32 n.64.

As used here, 'incremental value' means the market value of the right to receive project water. 'In practice 'incremental value' has been defined as the amount realized from the sale of land in excess of [the sum of] (1) original appraisal, (2) appraised value of improvements, (3) construction charges paid, and (4) twice the amount of any previous payments to the district.'

477. Id. at 23.

478. Id. at 28.

479. Id. at 27 n.52 (quoting letter from Edward Weinburg, Deputy Solicitor, U.S. Dep't of the Interior to Joseph Sax (June 1965)).

480. Id. at 39 n.86.

481. Id. at 13-15.

Proponents of allowing at least some profit in such a transaction agree that "taxpayers dislike seeing the benefits of tax-developed resources flow to private individuals . . . ."\textsuperscript{483} Nonetheless, such transfers of public wealth are a "widespread phenomenon in our society, ranging all the way from airline subsidies, increased value of land located at interstate highway interchanges, and property benefitting from flood control projects, to grazing rights and other uses of federal lands and even federally-supported research and education and universities throughout the land."\textsuperscript{484} A less cynical point is that the windfall is partially recaptured through the capital gains tax. Furthermore, the Bureau could establish a rule limiting such windfall without eliminating a conveyor's profit, for example, by recapturing the difference between the actual cost of project water and the price the irrigator paid for service.

(iii.) \textit{Mandate of Beneficial Use}

The prohibition of profitable voluntary conveyances could lessen the social benefits from project supplies. The districts and irrigators holding project rights would not be concerned with the value of water in other uses. Since they could not, through sale of water, benefit from the transfer, their only concern would be: does it pay to use it on the farm? If it did, they would continue to use it rather than let it go to some other use.\textsuperscript{485} Because the government has already invested in project facilities, one of the prime objectives of the Bureau's policies should be to use the project supply as efficiently as possible. "The question of whether the funds would have been better spent on some other project or better utilized if left in the hands of the taxpayers is beyond consideration at this point."\textsuperscript{486} The Reclamation Reform Act of 1982 does require every contracting district to prepare a conservation plan,\textsuperscript{487} which itself constitutes an incentive to irrigators to use water more efficiently, i.e. to care about alternative uses regardless of the Bureau's policy concerning voluntary conveyances. Nonetheless, an administrative policy that allowed conveyors to retain some profit (above that created by continued irrigation) would provide a positive incentive to use project water efficiently.

(iv.) \textit{Effect of Conveyance on Repayment of Federal Investment}

Administrative encouragement of voluntary conveyances to M&I customers would certainly hasten the retirement of the federal debt in-

\textsuperscript{483} Anderson, \textit{supra} note 32, at 265.
\textsuperscript{484} \textit{Id}.
\textsuperscript{485} \textit{Id.} at 267.
\textsuperscript{486} \textit{Id.} at 272.
\textsuperscript{487} See \textit{supra} notes 22-24 and accompanying text.
curred in project construction. Under the economic logic of voluntary conveyances, wherein the conveyor parts with the project right only if the price exceeds the capitalized value of continuing irrigation, M&I customers would be willing to pay more to the Bureau than the irrigators they replace as project beneficiaries. That result, of course, is also required by the relevant provisions of the Reclamation Act: The average M&I customer pays approximately four times more of its actual cost of project service than does an irrigator. 488

In some circumstances, conveyances may help an otherwise strapped irrigation district meet its original obligations for repayment of the construction costs allocated to irrigation. For example, the contract between the Bureau and the Northern Colorado Water Conservancy District, for delivery of a water supply from the Colorado-Big Thompson Project, required increasingly large payments over time. The district could have met this future obligation by raising taxes, but instead it facilitated transfers to M&I members within the district: Their willingness and ability to make the required payments on the federal contract exceeded that of the irrigators. 489

III
EXAMPLES OF CONVEYANCES OF PROJECT RIGHTS

Without effecting a systemwide policy on the subject, the Bureau of Reclamation has, throughout its history, approved occasional conveyances of project rights. Most conveyances have been to project irrigators. However, some have involved utilities such as Utah Power and Light 490 or municipalities such as the City of Casper, Wyoming. 491 With the major exception of an emergency program for relief from the 1976-77 drought, 492 the conveyances were initiated and completed without statutory amendment.

The following case studies provide a practical background for evaluating the desirability of the Bureau's adoption of a formal conveyance rule and for anticipating the problems such a rule should address. The substantial failure of the drought program exemplifies the need for a clear rule that, in advance of the demand for conveyances, establishes substantive and procedural terms for the conveyance of project rights. The other case studies portray administrative precedent for the rule advocated in this Article 493 and illustrate the financial benefits conveyances can create for all parties, including the Bureau.

488. See supra note 225 and accompanying text.
489. Anderson, supra note 32, at 269.
490. See infra notes 542-58 and accompanying text.
491. See infra notes 559-78 and accompanying text.
492. See infra notes 494-541 and accompanying text.
493. See infra notes 579-88 and accompanying text.
A. Emergency Drought Act of 1977

During the winter of 1976-77, rain and snowfall throughout the western states were at their lowest recorded levels. On April 4, 1977, Congress enacted the Emergency Drought Act to "mitigate and forestall to the maximum practicable extent the potential economic loss and social disruption that will potentially occur as a result of inadequate water supplies for the crop year of 1977." Congress authorized $100 million for this emergency program, to be spent before the termination of the Act's authority, nearly six months later, on September 30, 1977. Congress directed the Secretary to establish water banks for the redistribution of project water from willing sellers to willing buyers.

Regulations published on April 14, 1977 allowed the Secretary of the Interior to authorize the Bureau Commissioner to establish a water bank in each district designated by the President or Secretary as "an emergency impact drought area." The Bureau was to buy and sell water "based upon priorities to be determined by the Secretary within the constraints of State water laws . . . ." The Act only authorized sales to irrigators defined (in this context) as "any person or legal entity who holds a valid existing water right for irrigation purposes within Federal reclamation projects and within all irrigation projects constructed by the Secretary for Indians."

The buyers and sellers of a temporary federal water supply were allowed to negotiate directly. In the actual contract, however, the Bureau was a necessary third party: The agency was to determine whether

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496. H.R. REP. No. 155, supra note 494, at 71.
497. Emergency Drought Act § 1(a).
498. Id. § 9.
499. Id. § 1(b).
501. Id. at 19,611 (temporarily codified at 43 C.F.R. § 423.5 (1977)).
502. Id. at 19,610 (temporarily codified at 43 C.F.R. § 423.3 (1977)).
503. Emergency Drought Act § 1(b). The Commissioner was also to decide who would sell or buy water under the act. 42 Fed. Reg. at 19,611 (temporarily codified at 43 C.F.R. § 423.5 (1977)).
504. Emergency Drought Act § 1(b).
505. Id. § 3(b).
the would-be buyer was eligible to receive available water.\textsuperscript{506} An interest-free federal loan (to be repaid within five years) was made available to qualified buyers.\textsuperscript{507} Alternately, the Bureau itself could purchase available water and then sell it to those in need.\textsuperscript{508} Both kinds of transactions—the first, where the Bureau would serve as a regulating third party; and the second, where the Bureau would be a middleman—were to become part of the water bank established by the Emergency Drought Act.

In setting the priorities for distribution of water from the water bank, Congress directed the Secretary to take into "consideration, among other things, State law, national need, and the effect of losing perennial crops due to drought."\textsuperscript{509} The regulations issued a week later provided that water sales should serve the following priorities, in this order: (1) preservation of orchards and other perennial crops with the longest remaining productive life; (2) irrigation of alfalfa or other forage or grain crops to support dairy and beef cattle herds and other breeding stock; and (3) achievement of crop maturity suitable for harvest.\textsuperscript{510}

Congress mandated that nothing in the Emergency Drought Act shall be construed "(a) as expanding or diminishing Federal or State jurisdiction, responsibility, interests, or rights in water resources development or control; . . . (d) as superseding, modifying, or repealing, except as specifically set forth in this Act, existing laws applicable to the various Federal agencies . . . ."\textsuperscript{511} No provision in the Act expressly modified the project interests that the Bureau, the seller, and the buyer otherwise had in the project water. This implies that Congress judged the creation of a water bank to be consistent in principle with applicable law.

I. Pricing of Supplies Distributed Through the Emergency Water Banks

The Secretary or the eventual buyer were free to negotiate with a potential seller to set the price for water conveyed under the program. In either case, Congress directed that the price "not confer any undue benefit or profit to any person or persons compared to what would have been realized if the water had been used in the normal irrigation of crops adapted to the area . . . ."\textsuperscript{512} The price for a particular conveyance would be set following Interior's consultation with the United States Department of Agriculture, universities, and other parties as appropriate to "de-
termine equitable water values." More specifically, the negotiated purchase price was to be set in accord with one or a combination of the following:

(1) Enterprise analysis showing net income adjusted for fixed and variable costs already incurred and associated variable costs or expenses foregone.

(2) A reasonable percentage of average gross crop values (3- to 5-year historic averages from annual Reclamation crops reports or other comparable census data).

(3) A reasonable return on investment plus fixed costs.

(4) Any other reasonable evaluation process or technique for an equitable measurement of the price of water, which will not allow undue benefit or profit to the seller.

If the Bureau, rather than the eventual buyer, contracted with the seller, the Bureau’s sale price to the user was to “cover actual expenditures [of the federal government] in acquiring and redistributing the water.”

Prevailing water rates during the shortage were, not surprisingly, higher than normal. In the Mid-Pacific Region, for example, sellers who gave up their project rights on a temporary basis received from $15 to $85 per acre-foot of water. The price paid to Reclamation District No. 108 approximated the district’s cost of pumping groundwater in lieu of receiving the project supply. In another area, the Pleasant Grove-Verona Mutual Water Company sold project water at $70 per acre-foot, which compensated some irrigators for foregoing rice production ($60 per acre-foot) and others for additional costs ($10 per acre-foot) incurred because of the loss of return flow from temporarily retired fields. California’s price for water from the State Water Project reflected the costs of construction, operation, and maintenance, plus those power costs associated with pumping increased diversions from the Colorado River. According to the State of California’s Assembly Office of Research, “[t]he bank is significant because it approached marginal cost pricing. Water suppliers were paid an amount intended to cover foregone production, and water users had to cover the full cost of the water.”

513. 42 Fed. Reg. at 19,611 (temporarily codified at 43 C.F.R. § 423.5 (1977)).
514. Id. at 19,611 (temporarily codified at 43 C.F.R. § 423.6(a) (1977)).
515. Id.
516. See Table I infra p. 866.
518. Id. at 1.
519. Id. at 1-2.
520. ASSEMBLY OFFICE OF RESEARCH, STATE OF CAL., A MARKETING APPROACH TO WATER ALLOCATION (1982).
2. Water Bank in Central Valley Project

Most of the transactions under the Emergency Drought Act occurred in the Mid-Pacific Region. In the Central Valley Project (CVP), the Bureau was forced to reduce significantly deliveries under contracts. All irrigation customers with their own state-granted water rights in the Sacramento and San Joaquin Rivers received 75% of their project entitlements; all others received only 25%. M&I customers received 50% of their entitlements. The water bank redistributed approximately 1.3% of the 3.3 million acre-feet the Bureau delivered to its customers there in 1977. Twenty-six water agencies (listed in Table II) received 42,544 acre-feet from seven supplying agencies (listed in Table I).

In implementing the Act, the Bureau first obtained firm commitments from potential buyers in the San Joaquin Valley, the most water-poor region in the Central Valley. The Bureau's limited success in securing water for sale resulted from various restrictions in federal and state law.

The Emergency Drought Act required that any water transferred must be project water, in this case, developed by the CVP. Each state permit for appropriation by the Bureau restricted the permissible area of use. For maximum flexibility in redistribution, the Bureau elected to draw temporary supplies from the Trinity River Division, the permits for which cover extensive areas of the Sacramento and San Joaquin Valleys.

There were two sources of water in the Sacramento Valley that could be tapped for redistribution through the water bank: (a) the base supply, consisting of the customers' riparian and appropriative rights established prior to the CVP's development; and (b) project water supply, consisting of water the CVP made available in the first instance.

The Bureau eliminated one of these options by deciding not to contract for water grounded in riparian rights. The State Water Resources Control Board determined that, beginning in May 1977, there would be no natural flow for Sacramento River appropriators (excluding the CVP's customers) above the confluence with the American River; and

523. Id.
524. Id.
525. Trinity Dam diverts water from the Trinity River, through the Clear Creek Tunnel, and into the western drainage of the Sacramento River. This division is operated in concert with Shasta Dam on the Sacramento River to supply contractors in the Sacramento and San Joaquin Valleys.
that only a partial supply (approximately 50%) would be available for riparian users.\footnote{526} "Because limited water supplies were available for riparian rights, and because of uncertainties in riparian water requirements which could affect the available water supply, it was decided not to purchase project water allocated for those rights despite offers to sell."\footnote{527} Within the remaining category of available water, a limitation on the Bureau's success in obtaining commitments to sell project supply was that "there was no way under the Emergency Drought Act to pay an individual farmer for his water if he had assigned his water rights to a water district under contract with the [Bureau]."\footnote{528}

The Bureau's first purchase for the water bank was from the Pleasant Grove-Verona Mutual Water Company. The company sold all of its base supply to the water bank, except that portion associated with its shareholders' riparian rights. The Bureau required shareholders to leave fallow the area that otherwise would have been irrigated with the transferred water. Because the company's shareholders had not assigned their water rights to it, the company distributed the Bureau's payment to them.\footnote{529}

Groundwater pumped by sellers as a substitute for project water provided another source for the water bank. The Bureau identified the surface water thus freed up as "conservation water" available for purchase from the seller's base supply.\footnote{530} The Bureau made a purchase of this kind from the Pelger Mutual Water Company.

Where the purchase contracts required sellers to let some lands lay fallow, the CVP could not recapture return flows normally available from those lands. The Bureau charged this reduction in return flow, and a minor loss for wheeling, against the water bank's account. Altogether, 3,894 acre-feet were deducted from the 46,438 acre-feet of purchased water, leaving 42,544 for actual redistribution in the San Joaquin Valley.\footnote{531}

According to the California Department of Water Resources, the water bank program in the 1977 drought proved "successful in satisfying all requests for water used for survival of permanent crops and maintaining crops to support dairy and cattle herds; some water was left over for use in achieving maturity on other crops."\footnote{532} Nonetheless, given that the CVP in 1977 delivered only 3.3 million acre-feet of its normal total of 7 million acre-feet,\footnote{533} the demand on the water bank, totalling less than

526. DEPT OF WATER RESOURCES, supra note 522, at 96.
527. Id.
528. Id.
529. Id.
530. Id.
531. Id. at 96-97.
532. Id. at 97.
533. Id. at 41.
50,000 acre-feet, may seem surprisingly low. Several factors may account for the modest demand.

First, the potential buyers may have hesitated, despite the drought’s severity, to participate in what amounted to an experimental water supply. The Bureau’s water bank, in combination with the State Water Project’s facilitation of water transfers, constituting “the state’s first experience in using a ‘market’ approach to allocate a fixed supply of water.”

Second, because the Bureau’s authorization for the program was enacted in April (immediately before the start of the summer irrigation season), contract negotiations had to be conducted at a pace which, in water law, could only be considered light-speed. Bureau staff completed some negotiations by telephone with written documents to follow.

Third, irrigators in the San Joaquin Valley (not just CVP customers) turned largely to their wells to compensate for the shortfalls in surface supplies. Overdraft in the valley (use of groundwater at a rate exceeding recharge) was approximately five million acre-feet, four times the historical average.

Finally, some CVP contractors may have suffered losses either due to ignorance of the water bank, unwillingness to buy water at its marginal value, or unavailability of a supply on a timely basis. According to the Bureau, “[b]y the time the act became law, there was little uncommitted water available; consequently, the water bank provision of the act was of little value.”

534. ASSEMBLY OFFICE OF RESEARCH, supra note 520, at 14.
535. Id. at 10.
536. DEPT OF WATER RESOURCES, supra note 522, at 14.
537. The prices paid by buyers of emergency CVP water, ranging from $55 to $142 per acre-foot as shown in Table II, infra p. 867, dramatically exceed the CVP’s average contractual price of less than $5 per acre-foot in a normal year. This latter estimate is based on total irrigation payments of $20,867,587 in 1981, 1981 ANNUAL REPORT, supra note 58, app. II at 79, divided by the total irrigation delivery of 4,360,005 acre-feet in 1984, 1984 SUMMARY STATISTICS, supra note 4, at 68 table 12. Note that this average is somewhat inaccurate because it is based on payments in one year (the most recent year for which the relevant information is available) and water delivery in a later year.
538. The California Department of Food and Agriculture estimated that, in the San Joaquin Valley as a whole, the cattle industry lost more than $206 million in 1977. “Loss” in this context is defined as the reduced weight of the herds plus the increased feed costs, given the shortage of productive pastureland. The losses in annual and perennial crops were somewhat less, but still in the tens of millions of dollars. This estimate of losses includes land farmers could not irrigate, and thus left fallow, and reduced yields. DEPT OF FOOD & AGRICULTURE, STATE OF CAL., DROUGHT DAMAGE TO CALIFORNIA AGRICULTURE (1977), summarized in DEPT OF WATER RESOURCES, supra note 522, at 54-55.
539. EMERGENCY DROUGHT REPORT, supra note 521, at 11.
### TABLE I
WATER SUPPLIED TO BUREAU OF RECLAMATION'S WATER BANK IN THE CENTRAL VALLEY PROJECT (1977)

<table>
<thead>
<tr>
<th>Supplying Agency</th>
<th>Water Provided (acre-feet)</th>
<th>Price per acre-foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Water Resources</td>
<td>8,185</td>
<td>$84.51</td>
</tr>
<tr>
<td>Chaplin-Lewis-Lewis</td>
<td>1,279</td>
<td>$34.00</td>
</tr>
<tr>
<td>Pelger M.W.C.</td>
<td>4,425</td>
<td>$25.00</td>
</tr>
<tr>
<td>Pleasant Grove-Verona M.W.C.</td>
<td>15,752</td>
<td>$70.00</td>
</tr>
<tr>
<td>Natomas Central M.W.C.</td>
<td>6,000</td>
<td>$15.00</td>
</tr>
<tr>
<td>Reclamation District No. 108</td>
<td>5,000</td>
<td>$25.00</td>
</tr>
<tr>
<td>Sacramento River Water Contractors' Assoc.</td>
<td>5,797</td>
<td>$15.00</td>
</tr>
<tr>
<td><strong>TOTAL SUPPLY</strong></td>
<td><strong>46,438</strong></td>
<td></td>
</tr>
</tbody>
</table>

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TABLE II
AGENCIES WITHDRAWING FROM BUREAU OF RECLAMATION’S WATER BANK IN CENTRAL VALLEY PROJECT (1977)\textsuperscript{541}

<table>
<thead>
<tr>
<th>Purchasing Agency</th>
<th>Water Purchased (acre-feet)</th>
<th>Price per acre-foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arvin-Edison W.S.D.</td>
<td>500</td>
<td>$60.71</td>
</tr>
<tr>
<td>Broadview W.D.</td>
<td>120</td>
<td>$61.57</td>
</tr>
<tr>
<td>Centinella W.D.</td>
<td>329</td>
<td>$58.98</td>
</tr>
<tr>
<td>Contra Costa W.D.</td>
<td>1,250</td>
<td>$56.20</td>
</tr>
<tr>
<td>Davis W.D.</td>
<td>304</td>
<td>$59.90</td>
</tr>
<tr>
<td>Delano-Earlimart I.D.</td>
<td>200</td>
<td>$136.47</td>
</tr>
<tr>
<td>Del Puerto W.D.</td>
<td>1,326</td>
<td>$58.06</td>
</tr>
<tr>
<td>Foothill W.D.</td>
<td>1,100</td>
<td>$57.76</td>
</tr>
<tr>
<td>Glenn-Colusa I.D.</td>
<td>22</td>
<td>$54.93</td>
</tr>
<tr>
<td>Hills Valley I.D.</td>
<td>76</td>
<td>$142.44</td>
</tr>
<tr>
<td>Hospital I.D.</td>
<td>1,389</td>
<td>$61.39</td>
</tr>
<tr>
<td>Kern Canon W.D.</td>
<td>605</td>
<td>$60.98</td>
</tr>
<tr>
<td>Lindsay-Strathmore I.D.</td>
<td>300</td>
<td>$135.15</td>
</tr>
<tr>
<td>Mustang W.D.</td>
<td>112</td>
<td>$64.00</td>
</tr>
<tr>
<td>Orestimba W.D.</td>
<td>843</td>
<td>$58.72</td>
</tr>
<tr>
<td>Panoche W.D.</td>
<td>891</td>
<td>$55.96</td>
</tr>
<tr>
<td>Plain View W.D.</td>
<td>1,180</td>
<td>$57.52</td>
</tr>
<tr>
<td>Quinto W.D.</td>
<td>435</td>
<td>$58.18</td>
</tr>
<tr>
<td>Romero W.D.</td>
<td>120</td>
<td>$62.35</td>
</tr>
<tr>
<td>Salado W.D.</td>
<td>500</td>
<td>$59.08</td>
</tr>
<tr>
<td>San Luis W.D.</td>
<td>5,469</td>
<td>$57.58</td>
</tr>
<tr>
<td>(via Delta-Mendota Canal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Luis W.D.</td>
<td>1,144</td>
<td>$63.59</td>
</tr>
<tr>
<td>(via San Luis Canal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stone Canal I.D.</td>
<td>124</td>
<td>$138.97</td>
</tr>
<tr>
<td>Sunflower W.D.</td>
<td>1,205</td>
<td>$57.03</td>
</tr>
<tr>
<td>Terra Bella I.D.</td>
<td>503</td>
<td>$134.10</td>
</tr>
<tr>
<td>Tri-Valley W.D.</td>
<td>135</td>
<td>$138.43</td>
</tr>
<tr>
<td>Westlands W.D.</td>
<td>22,362</td>
<td>$57.92</td>
</tr>
</tbody>
</table>

TOTAL DELIVERY 42,544

AVERAGE PRICE $60.64

\textsuperscript{541} Id. at 18 table 2.
B. Utah Power & Light Company’s Contract for Water Supply from the Emery County Project

In 1972, the Utah Power & Light Company (UPL) leased 6,000 acre-feet of water per year for forty years from the Emery Water Conservation District (EWCD). This water supply, formerly used for irrigation, now helps cool the utility’s coal-fired electric powerplant in Huntington Canyon, about 150 miles southeast of Salt Lake City, Utah.

The source of the water supply, the Emery County Project, was authorized as part of the Colorado River Storage Project, for which Congress did not particularize priorities of use. The authorizing legislation exempted the Colorado River Storage Project, including the Emery County Project, from section 9(c) of the Reclamation Project Act of 1939, which provides that “[n]o contract relating to municipal water supply shall be made unless, in the judgment of the Secretary, it will not impair the efficiency of the project for irrigation purposes.” The original contract between the Bureau and EWCD specified that “the United States has investigated, planned and proposes to construct said Project . . . for irrigation, fish and wildlife and recreational purposes.” The contract with the district was for the single purpose of irrigation within the district’s boundaries. In the contract, the Bureau reserved the right at any time after construction to increase the capacity of the project for purposes other than irrigation, without cost to EWCD and without impairment of the district’s use of project water.

1. Nonfinancial Terms of the Conveyance

In a three-party contract dated November 17, 1972, the Bureau approved the EWCD’s sale of 6,000 acre-feet a year to UPL, a public utility which, at the time, was constructing the steam powerplant for service beginning in 1974. The powerplant is located within the EWCD’s boundaries.

An amendatory contract with EWCD, executed the same day, preserved the provision of the original contract that the “District shall have

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543. 43 U.S.C. § 620c(e) (“contracts relating to municipal water supply may be made without regard to the limitation in the last sentence of section 485h of this title . . . .”).
546. Id. § 2(c).
the *permanent right* to use and dispose of the annual yield of water from project works and project water rights, subject to . . . [specified] fish, wildlife and recreational purposes . . . ."548 By contrast, under sections 8 and 9 of the three-party contract, the utility has an interest more like a lease, for a term of forty years, subject to renewal for periods not to exceed forty years, on terms and conditions "mutually agreeable" to the principal parties.549

Before contracting directly with the United States and EWCD, UPL had acquired "primary water rights" from shareholders in the irrigation companies served by EWCD.550 The 6,000 acre-feet a year supply supplements the water obtained from the shareholders.

The two reservoirs in the Emery County Project, behind Joes Valley Dam and Huntington North Dam, have an active storage capacity of 59,000 acre-feet. Prior to 1972, district irrigators used approximately 28,000 acre-feet from the project. Two irrigation companies in the district contracted to reduce their allotments of project water so that the district could supply the utility. As a result of the conveyance, 4,604 of 18,755 acres formerly receiving project service were retired.551

UPL committed to use the conveyed supply to help conserve fish and wildlife in Huntington Creek. The utility agreed to operate its Electric Lake Reservoir to maintain a minimum flow in that creek and to avoid releasing destructive flood flow.552 The contract committed the utility to develop an operational plan in conjunction with the Utah State Division of Wildlife Resources, the United States Forest Service, and other interested parties.553

2. Repayment Terms

The conveyance has the dual effect of reducing EWCD's financial obligations and hastening recoupment of the federal investment in the Emery County Project.


553. *Id.*
a. *Emery Water Conservancy District's Obligations*

In the original contract, EWCD agreed to repay $2,935,000 for construction in fifty annual installments of $58,700, beginning in 1965. The first installment was actually paid December 31, 1970. Under article four of the amendatory contract, the irrigation repayment obligation was reduced to $2,433,600, payable in annual installments of $47,800.

b. *Utah Power & Light's Obligations*

The utility assumed a repayment obligation of $4,440,000 (including interest at a rate of 3.046% for the unamortized capital cost), payable in annual installments of $120,000. The conveyance thus has resulted in a net increase of $3,938,600 in repayment obligations assumed by project customers. UPL also pays the district a "fair and proportionate share" of the project's operation and maintenance costs.

UPL has not disclosed its payments, if any, to EWCD, its member irrigation companies, or irrigators.

C. *City of Casper's Contract with Casper-Alcova Irrigation District for Supply from Kendrick Project, Wyoming*

The city of Casper, Wyoming is expected to grow from a population of 58,400 in 1980 to more than 112,000 by 2000; water demand will increase correspondingly. City officials estimate that the city's historical sources of water supply will be sufficient only until 1990. In the past, the city relied on groundwater pumping for its water supply. The city also had rights to divert water from the North Platte River to recharge its groundwater and to serve as a supplemental M&I supply. On April 15, 1982, the United States, the city of Casper, and the adjacent Casper-Alcova Irrigation District signed a forty-year contract for annual water delivery to the city of 7,000 acre-feet.

560. *Id.*
561. The diversion permits are junior to those of some irrigators and to various storage rights on the river. *Id.* at 3.
562. Water Service Contract Among the United States, the Casper-Alcova Irrigation Dis-
1. Nonfinancial Terms of Conveyance

The conveyed supply will be created by a concerted program of controlling the seepage from the district's Casper Canal, which runs 250 miles from the Bureau's Alcova Dam, and from the lateral canals within the district. The Bureau estimated that project water seeped from some twenty-seven areas in the main canal. Section 6(a) of the contract requires the city and the district to obtain the Bureau's approval for the program's engineering specifications before any repair to the distribution system and to complete the program within fifteen years of the contract's execution or by 1997.

Before any particular segment of the canal is repaired, the Bureau's contracting officer will estimate how much water escapes at the site and how much will be conserved. Upon acceptable completion of the repair, the officer will declare that the city of Casper is entitled to the amount conserved. During any given year in the first decade of the contract's term (pending the completion of the conservation program), the city may request that the Bureau deliver project water in excess of the conserved supply, up to a total of no more than 7,000 acre-feet per year. However, the cumulative project supply delivered during the decade cannot exceed the amount actually conserved. In any year of the second decade, the city may receive only the amount actually conserved, not to exceed 7,000 acre-feet per year.

Casper's project supply will be released from Alcova Reservoir for downstream diversion at the city's current facility on the North Platte River. The city assumes responsibility for conveyance and distribution of its project water, including losses. In sum, the conveyance "will not impair" the district's irrigation use, since it will consist of water the district currently does not deliver to its members.

2. Repayment Terms

The city of Casper assumed a variety of financial obligations, both to the irrigation district and to the Bureau, to receive the project supply.

a. Repayment of District's Existing Deficits

The city will pay the irrigation district, which will pay the United

563. Memorandum from Robert N. Broadbent, supra note 559, at 4. The conservation program will not correct all major leaks because the land around several such leaks is now key wildlife habitat.
564. Casper-Alcova Contract, supra note 562, § 6(a).
565. Id. § 7(b).
566. Id. § 7(a).
567. Id. § 7(g).
568. Id. § 2.
States, $750,000 in three equal annual installments to retire the district’s repayment obligations for its share of the construction cost of the Kendrick Project and for the federal cost of building a shop building and buying heavy equipment for the district’s exclusive use. The district’s obligations, which otherwise were scheduled to be repaid in forty-two years, will be repaid in three years.

b. Investment in Conservation

The city will invest not less than $150,000 a year for up to fifteen years for the improvement of the conveyance and distribution system serving the irrigation district.

Since January 1, 1958, Casper-Alcova Irrigation District has had contractual responsibility for operating and maintaining the project’s conveyance and distribution system. The United States retains title to this system, including improvements consequent to this contract.

c. Payment for Municipal Water Service

The city will pay the United States $24 per acre-foot for water actually furnished. This rate was calculated on the basis of the original allocation of project costs to irrigation; the Bureau charged interest at 9.352% (over the contract’s term) on the city’s share of this allocation. The city’s rate may be adjusted not less than every five years to account for changes in Kendrick Project’s costs and rate-setting policies.

569. Id. § 5(a)-(c).
570. Amendatory Contract Between the United States and the Casper-Alcova Irrigation District for Repayment Obligations § 11(a) (as to construction obligation), § 12(c) (rehabilitation and betterment obligation) (April 15, 1982) (Bureau of Reclamation, U.S. Dep’t of the Interior, Contract No. 2-07-70-W0535).

Out of the Kendrick Project costs of $35.3 million, $0.2 million is allocated to recreation, $19.3 million to power, and $15.8 million to irrigation. The Bureau reallocated just over $15 million of the irrigation costs for repayment with power revenues. Memorandum from Robert N. Broadbent, supra note 559, at 1.

Casper-Alcova Irrigation District is the only customer for the project’s irrigation supply; it serves approximately 23,000 acres of irrigated farmland for the production of alfalfa, small grains, and pasture. Id. at 2; WATER & POWER RESOURCES SERV., U.S. DEP’T OF THE INTERIOR, PROJECT DATA 588 (1981).

Even though the Kendrick Project was authorized in August 1935 and the first delivery of project water was made in 1946, the outstanding irrigation obligation was still $15.8 million as of the execution of the three-party contract for the conveyance. Memorandum from Robert N. Broadbent, supra note 559, at 1. The irrigation district was obligated to pay approximately $600,000 towards this total. Id. at 2.

The Bureau’s expenditures for the district’s shop building and equipment totalled approximately $150,000. Repayment of this 1966 loan was to begin upon completion of the district’s repayment, by the year 2037, of its share of project construction. Id. at 3.

571. Casper-Alcova Contract, supra note 562, § 6(a), (c).
572. Id. § 6(g).
573. Id. § 9(a).
574. Id. § 9(b).
575. Id.
The Bureau will apply Casper's water service payments to: (i) any annual deficit in the irrigation district's payment for the costs of operation and maintenance (O&M) of the central project facilities (such as Kendrick Dam); (ii) the accumulated deficiency for that purpose; and (iii) the unamortized capital investment in irrigation.576

d. Payment for Operation and Maintenance

The city of Casper will pay for a pro rata share of the annual O&M costs allocated to irrigation. The share will be calculated by dividing the total irrigation supply into Casper's supply.577

e. Period for Conveyance

The contract's term is forty years, subject to renewal and renegotiation. The United States may cancel the contract on thirty-days' notice if Casper and the district become delinquent by two years or more in their repayment obligations. The city may cancel the contract by giving five-years' advance notice to the district and the Bureau.578

IV
RECOMMENDATIONS FOR RULEMAKING

Pursuant to its authority under the Reclamation Act579 and the Administrative Procedure Act,580 the Bureau of Reclamation should draft,
circulate, and issue a rule clearly establishing generic terms, conditions, and procedures for voluntary conveyances of project rights. The current case-by-case procedure is an undesirable disincentive to the transfer of project rights.\textsuperscript{581}

Preparation of a rule for the conveyance of project rights could involve a substantial commitment of agency resources to handle public participation and legal challenges (if any) upon issuance of the rule. The Bureau therefore may be reluctant to abandon the much less visible approach of individualized proposal review.\textsuperscript{582} Even if the Administrative Procedure Act does not require the Bureau to proceed through rulemaking, that course is advisable for several reasons.

First, since the Bureau distributes the largest single water supply in the western states, its priorities—not just in choosing new customers, but as expressed in its policy for conveying project rights—dramatically affect the economies\textsuperscript{583} and the environments\textsuperscript{584} of these states. As the Ninth Circuit concluded in approving the industrial option contracts for delivery of water from Boysen and Yellowtail Reservoirs:

Water is a precious and limited resource throughout the Northern Great Plains. The region is sparsely settled and semi-arid with an economy


\textsuperscript{582} Even if a rule is not adopted, interested members of the public routinely will be involved in the Bureau's case-by-case consideration of proposed conveyances. Under the regulations adopted pursuant to the Reclamation Reform Act, the Bureau is obligated to publish notice of any proposed new or amendatory irrigation contract at least 60 days prior to contract execution. The notice must indicate the period for comments and the relevant Bureau contact. Acreage Limitation: Rules and Regulations; Final Rule, 43 C.F.R. \textsection 426.20(a) (1985).

\textsuperscript{583} An M\&I customer would enter into such a conveyance only if it seemed cheaper than an alternative source of water. If the estimate of relative costs proved to be correct, the M\&I customer would benefit from that savings. On the other hand, the conveyance of a project right for M\&I use can result in the reduction of irrigation and thus in lowered property taxes (unless the arrangement advocated \textit{supra} notes 117 & 440 is adopted) and increased unemployment in that agricultural area.

\textsuperscript{584} Voluntary conveyances of water from existing facilities would uniformly cause less environmental damage than the construction of new storage projects, which are an alternative source for satisfying new demand.

In a rulemaking proceeding, the Bureau could also examine the relative desirability of conveyances versus the initial marketing of currently unused capacity in federal reservoirs. The General Accounting Office has estimated that the Bureau has a total of approximately 12.1 million acre-feet per year of "underutilized capacity," which is currently available for sale in all regions except the Mid-Pacific and the Lower Colorado Regions. \textit{U.S. Comptroller Gen.}, \textit{supra} note 219, at 9-10. Some portion of this capacity may be needed to satisfy increased irrigation demand; some portion may be available for M\&I use. The Bureau has not contracted for delivery of these water supplies for a variety of reasons, including its minimal marketing efforts. \textit{Id.} at 16-17.
based predominantly on farming and ranching. The availability of water for industrial use in [conversion of coal reserves into petrochemical products] is a key factor of [such development's] feasibility. Allocation of the region's water resources will determine the nature and extent of future development, whether agricultural or industrial.\textsuperscript{585}

Absent congressional authorization, public involvement in a rulemaking for conveyances would help ensure that all affected interests have had a say in the Bureau's eventual policy and might help establish a consensus.

Second, a rule would promote consistency among the Bureau's regional offices when dealing with proposed conveyances. As a result, contractors who are potentially interested in conveyances could learn from the experiences of completed conveyances, even in other regions. This administrative uniformity would contrast dramatically with the Bureau's historical approach to pricing policy. Traditionally, regional officials have derived that policy in part from regulation and in part from their office's "oral history," the administrative practices that reflect their projects' unique needs and experiences.

The five Reclamation offices we [the General Accounting Office] visited apparently established local repayment policies without headquarter's guidance. We were often told that one of our suggestions for improvement was 'inconsistent with policy,' only to discover that it was policy elsewhere. For example, . . . [w]e were told that the Federal Government cannot make a 'profit' on water sales; then we found that the agency charged prices several times the allocated cost on a total acre-foot basis on reservoirs such as Glendo and Navajo.\textsuperscript{586}

Third, the Bureau's case-by-case approach may have the effect of hindering voluntary conveyances.\textsuperscript{587} Subject to exceptions involving ma-

\textsuperscript{585} Environmental Defense Fund v. Andrus, 596 F.2d 848, 850 (9th Cir. 1979) (modifying Environmental Defense Fund v. Morton, 420 F. Supp. 1037 (D. Mont. 1976)).

\textsuperscript{586} U.S. COMPTROLLER GEN., supra note 219, at 45.

\textsuperscript{587} Problems in negotiation and execution of project contracts have, in some circumstances, lessened the desirability of project water even though supply for M&I use receives a substantial taxpayer subsidy. As to the size of that subsidy, see supra text accompanying note 225.

For example, "[a]t one time, there were lists of prospective contractors [in the business of energy development] waiting for an opportunity to obtain Federal project water . . . . Reclamation [now] has lists of former contractors." U.S. GEN. ACCOUNTING OFFICE, supra note 16, at 34. This radical decline in the oil, gas, and coal companies' demand for federal water (between the OPEC oil embargo in 1973 and the 1980's) was caused by three factors. One short-lived problem was "uncertainty," id., regarding the Bureau's authority to sell industrial water, a legal issue resolved by Environmental Defense Fund v. Morton, 420 F. Supp. 1037 (D. Mont. 1976), modified on other grounds sub nom. Environmental Defense Fund v. Andrus, 596 F. 2d 848 (9th Cir. 1979), discussed supra text accompanying notes 65-87. Another continuing cause is "change in market demand [for energy]," U.S. GEN. ACCOUNTING OFFICE, supra note 16, at 34, obviously unrelated to the Bureau's administration of water-supply contracts. The final cause for the slump in the energy developers' demand for project water consists of "time-consuming federal requirements" in contracting. Id. at 34-36.

The rulemaking proposed in this Section is expressly intended to minimize the red tape involved in the conveyances of project rights for M&I use.
jor irrigation contractors or major M&I agencies, many parties potentially interested in voluntary conveyances may not follow through because of the high "transaction costs." Conveyance even of a state-granted water right generally requires a "costly court proceeding, the outcome of which is highly uncertain."588 Currently, the conveyance of a project right involves many legal unknowns that reflect the complex and unique nature of the project right. The uncertainty as to the result of negotiating with the Bureau, and the risk of not getting as good a deal as a later conveyor, may seriously inhibit even the expression of interest in conveyances.

More positively, an administrative rule could facilitate the planning for potential conveyances. Such a rule would reduce uncertainty about the following subjects where the Reclamation Act and adjudications have provided little guidance to would-be conveyors:

1. what standards the Secretary will follow in determining whether a conveyance would impair a project's irrigation function;

2. whether out-of-project M&I customers may be supplied to the extent of their demand, provided the conditions precedent in the Miscellaneous Project Act are satisfied;

3. under what circumstances the Secretary may amend the project's existing boundaries without congressional authorization;

4. how to measure the conveyor's "beneficial use," and whether "beneficial use" is average or maximum use (without any egregious waste);

5. whether an irrigator's conveyable share in the project supply is measured according to local law or the district's contract with that irrigator, or whether federal law is also relevant to this determination;

6. whether, in a drought, the delivery pursuant to the conveyed project right would be adjusted according to the policy for the original use (irrigation) or M&I consumption;

7. under what circumstances, if at all, an irrigator may convey a project right for use outside of the district in the face of the district's veto;

8. whether, as a condition precedent for the Bureau's approval, the contracting irrigator or irrigation district must commit not to obtain an

588. Tregarthen, supra note 294, at 127. One Colorado water official estimates that the legal cost of a water hearing is approximately $100,000 per inch of submitted briefs, such briefs often being "several inches thick." Id. at 127 n.24. In some states, however, the cost of such a conveyance is quite modest. The administrative cost for recent conveyances in New Mexico has averaged $4.36 per acre-foot, compared to a market value exceeding $300 per acre-foot. Gisser & Johnson, supra note 440, at 149.

The expense of such a proceeding to confirm the conveyance of a state-granted water right is roughly proportional to the difficulty of determining the conveyor's consumptive use, see supra text accompanying note 295, and to the reliance by downstream or downhill irrigators on the conveyor's current return flow, see supra notes 292-94 and accompanying text.
alternate supply for irrigation of the land formerly irrigated with the conveyed project supply;

(9) the extent to which an irrigation district or irrigator conveying a project right connected to nonexcess land may profit from the transaction;

(10) how the repayment obligations of the M&I contractor will be determined, particularly where Congress authorized the project only for irrigation;

(11) how the Bureau will calculate the repayment obligation of the nonfederal agency or group that acquires a project right for use in environmental mitigation; and,

(12) whether the Bureau will participate in any state proceeding necessary to effect the conveyance for the purpose of certifying the nature and extent of the conveyor’s project right. 589

Rulemaking has a final advantage over case-by-case determinations regarding conveyances: it will highlight issues ripe for congressional action. Vague or confusing statutory provisions, and issues that are extremely controversial among interested parties are two incentives for the Secretary to seek congressional guidance.

The issuance of a rule dealing with the above legal uncertainties will facilitate conveyances best if the regional offices implement it consistently. In the context of pricing policy, the General Accounting Office has made a recommendation which applies equally well in this context:

[T]he Secretary of the Interior should require—nationwide distribution of its and Reclamation repayment policies, procedures, and applicable interpretations for establishing and implementing repayment requirements, and—a periodic review of regional pricing and accounting practices to ensure that they consistently and equitably apply agency policy. 590

CONCLUSION

Under the Reclamation Act, the Secretary of the Interior has the authority to approve the voluntary conveyance of a project right to an M&I customer or for use in environmental mitigation. The main proviso is that such a conveyance must not impair the project’s capacity to service remaining irrigation customers within the project’s boundaries.

589. “Reclamation policy” currently forbids the involvement of Bureau officials in a state’s administration of water rights. U.S. GEN. ACCOUNTING OFFICE, supra note 16, at 35. The Reclamation Act itself does not require this policy; it is silent on the subject of the Bureau’s participation in such proceedings, including, for example, adjudications contractors initiate in state courts for confirmation of new contracts. See supra notes 296-98 and accompanying text. The Bureau’s regulations (published in the C.F.R.) also do not require or even mention this policy.

A party proposing a conveyance must obtain the Secretary's advance, written permission. The buyer or lessee must make a secured commitment to repay specified project costs, including a share of the costs of construction, operation, and maintenance. The Bureau must also amend the conveyor's contract, not just by adjusting the financial liability in proportion to the decreased amount of project supply due to that customer, but also by reflecting new congressional mandates (such as those regarding "excess" land) that apply to any amendment of an existing contract.

An irrigator's conveyance of a project right may, under state law, require the approval of the irrigation district in which the irrigator is located. The district may not, however, withhold its approval if failure to approve would be inconsistent with the "beneficial use" of the project right as defined by federal law.

The project right the existing customer can convey consists of the right to continue receiving the amount of water the customer has put to beneficial use. That right is subject to reduction during drought or other emergencies, and it may be further diminished by claims the United States (and, under state law, downstream appropriators) may have to the return flow from project irrigation.

Because the Reclamation Act establishes no clear policy to the contrary, the Bureau can allow existing customers to retain at least some of the profit realized by the conveyance of project rights.

Subject to these conditions, voluntary conveyances to nonirrigation customers would be consistent with the Reclamation Act and would, in a prosaic fashion, help fulfill the prediction of Representative W. Jones in the House debate of June 13, 1902:

As in many of the tales of the Arabian Nights the touch of the magic wand alone is needed to bring release to the beautiful princesses and great nobles from the vilest shapes and conditions, so all that is needed here is the magic touch of air and [water] to bring forth the richest products of the soil and cause the founding of cities, towns, and villages. Only in fairy tale and story is there fitting simile to the wonderful transformation that will occur in arid America.\footnote{591
591. 35 CONG. REC. 6757 (1902). This purple prose is an answer in kind to Daniel Webster's question quoted at the beginning of this Article.}