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The 1992 Omnibus Water Act: Three Rubrics of Reclamation Reform

by

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INTRODUCTION

Since Congress enacted the Reclamation Act of 1902,¹ the Herculean efforts² of the federal government have brought water and prosperity to the American West.³ In just over ninety years of federal reclamation projects, the agricultural and hydropower industries have generated benefits that are beyond estimation. The reclamation program, however, has simultaneously developed into an economic juggernaut, leaving serious financial and environmental problems in its wake.⁴ In California, for example, the Central Valley Project (CVP) has created one of the most productive agricultural areas in the world, but at the cost of widespread environmental degradation, including saline intrusion, selenium contamination, destruction of fish and wildlife habitats, and the extinction of entire species of anadromous fish.⁵ Now, reclamation reform is beginning to address these problems. Water scarcity, changing societal values, and concern for the environment are driving a fundamental shift in federal reclamation policy in the West.

1. Reclamation Act of 1902, ch. 1093, 32 Stat. 388 (1902) (codified as amended at 43 U.S.C. §§ 371-498, 1457 (1988)).

2. According to myth, the fifth of Hercules' ten labors was "to remove the cattle manure from Augeas' barnyard in one day's time." GODS AND HEROES OF THE GREEKS: THE *Library* of Apollodorus 94 (Michael Simpson trans., 1976). To accomplish this task, Hercules dug a channel in the ground and diverted two rivers through the barnyard, thus flushing the barnyard clean. *Id.* at 95. Similarly, the Bureau of Reclamation's diversion of western water has accomplished tasks of mythical proportions.

3. SARAH F. BATES ET AL., *SEARCHING OUT THE HEADWATERS: CHANGE AND REDISCOVERY IN WESTERN WATER POLICY* 35-42 (1993).

4. See *Water: The Power, Promise, and Turmoil of North America's Fresh Water*, NAT'L GEOGRAPHIC, Nov. 1993 (special edition), at 4.

5. See *infra* notes 72-76 and accompanying text; Willa Nehlsen et al., *Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho, and Washington*, *TROUT*, Winter 1992, at 24, 40-41 (discussing the decline of Chinook stocks in Central Valley waterways).

The recent western droughts have accentuated the value of reclamation water and focused scrutiny upon its multiple uses.⁶ From 1987 to 1992, six successive years of western drought cost the American economy between \$4 billion and \$6 billion annually in lost agricultural production, hydropower generation, and damage to fisheries and wildlife habitat,⁷ as well as other costs.⁸ Water scarcity has exacerbated the environmental damage caused by the reclamation projects.⁹ Drought also intensified the conflict between competing water users.

Currently, agricultural interests control 80% to 90% of the West's reclamation water.¹⁰ This allocation is perpetuated by the traditional western water law doctrine of prior appropriation,¹¹ and by federal reclamation policy, both of which discourage transfers from old users to new.¹² Entrenched federal subsidies also buttress traditional patterns of use. Reformers, however, are calling for reallocation of west-

6. See generally *Water: The Power, Promise, and Turmoil of North America's Fresh Water*, *supra* note 4, at 48-52 (discussing debates over allocation of Central Valley Project (CVP) water).

7. Charles McCoy, *New Research Suggests Current Drought in Western U.S. May Not Be an Anomaly*, WALL ST. J., Dec. 2, 1992, at A3; see Nehlsen et al., *supra* note 5, at 24. For a discussion of irrigation water supply on fish and wildlife species, see U.S. GEN. ACCOUNTING OFFICE, RCED-91-175, RECLAMATION LAW: CHANGES NEEDED BEFORE WATER SERVICE CONTRACTS ARE RENEWED 18-21 (1991) [hereinafter GAO REPORT ON CONTRACT RENEWAL].

8. For a more detailed description of the costs of the drought, see PETER H. GLEICK & LINDA NASH, PACIFIC INST. FOR STUDIES IN DEV., ENVIRONMENT, AND SECURITY, THE SOCIETAL AND ENVIRONMENTAL COSTS OF THE CONTINUING CALIFORNIA DROUGHT 29-39, 45-48 (1991).

9. *Id.* at 17-29.

10. See DORIS O. DAWDY, CONGRESS IN ITS WISDOM: THE BUREAU OF RECLAMATION AND THE PUBLIC INTEREST 181 (1989) (citing WATER SCIENCE & TECHNOLOGY BD., NATIONAL RESEARCH COUNCIL, ANNUAL REPORT/1986 17-18 (1987)).

11. Most western states allocate surface water under the legal system of prior appropriation, under which a person who claims water and puts it to some beneficial use has a superior (senior) right to a water resource over subsequent potential users. This principle is often summarized as "first in time, first in right." See *Irwin v. Phillips*, 5 Cal. 140, 147 (1855) (stating the principle "*qui prior est in tempore potior est in jure*"). For further discussion of the tenets of prior appropriation, see A. DAN TARLOCK ET AL., WATER RESOURCE MANAGEMENT 149-391 (4th ed. 1993); JOSEPH L. SAX ET AL., LEGAL CONTROL OF WATER RESOURCES 137-300 (2d ed. 1991).

12. Under the prior appropriation doctrine, historical water allocations are perpetuated because a senior water user only loses its rights by failing to use the water. In times of scarcity, junior rights are preempted without regard to the relative economic values of the uses. For greater discussion of the law and effects of nontransferability of water rights, see SAX ET AL., *supra* note 11, at 212-38; BONNIE C. SALIBA & DAVID B. BUSH, STUDIES IN WATER POLICY & MANAGEMENT, NO. 12, WATER MARKETS IN THEORY AND PRACTICE 4-8, 46-48 (Charles W. Howe ed., 1987). Nevertheless, a number of transfer methods, including adverse actions or certain voluntary arrangements between old and new users, have existed under western state laws. See generally Steven J. Shupe et al., *Western Water Rights: The Era of Reallocation*, 29 NAT. RESOURCES J. 413 (1989). Regarding how federal reclamation policy has restricted water transfers, see *infra* note 256 and accompanying text.

ern water in order to meet the increasing needs of urban areas and environmental restoration and preservation goals.

On October 30, 1992, the federal government embarked on a major reform of western water policy when President Bush signed the Reclamation Projects Authorization and Adjustment Act (Reclamation Projects Adjustment Act, or Act).¹³ At first reading, the Act might appear to be just a typical example of public works legislation: most of the Act's forty titles authorize over \$2.4 billion of pork barrel dams, ditches, and loan extensions for sixteen western states.¹⁴ The largest single provision authorizes \$924 million for the completion of the Central Utah Project (CUP).¹⁵ Another \$100 million is authorized for the construction of the Mid-Dakota Rural Water System.¹⁶ Other locally popular provisions include reductions in the amount of cost-sharing by nonfederal entities;¹⁷ instructions to the Department of the Interior to sell, or accept prepayment on, loans to state and local entities;¹⁸ and settlement and compensation of Indian water rights.¹⁹

From this perspective the Act may be viewed as the federal funding of parochial projects championed by Members of Congress with enough seniority to deliver economic boons to their constituents. Beyond the pork content, however, the Act represents a meaningful departure from traditional reclamation policy. This is demonstrated by the vehement opposition from agricultural interests to certain parts of the Act,²⁰ such as the Bradley-Miller Bill (the Central Valley Project

13. Reclamation Projects Authorization and Adjustment Act, Pub. L. No. 102-575, 106 Stat. 4600 (1992). Throughout this comment, unless otherwise noted, citations to statute sections will refer to this Act.

14. See, e.g., Tit. I, 106 Stat. at 4605 (providing additional appropriations to complete the Buffalo Bill Dam and Reservoir in Wyoming); Tit. VII, 106 Stat. at 4655-57 (providing monies for the construction of a water treatment plant to improve a portion of the Leadville Mine Drainage Tunnel in Colorado); Tit. VIII, 106 Stat. at 4658-59 (authorizing the construction of the Lake Meredith Salinity Control Project in New Mexico and Texas); Tit. XVI, 106 Stat. at 4663-69 (providing grants to study the feasibility of water reclamation and reuse in the western states).

15. Tits. II-VI, 106 Stat. at 4605-55. These titles provide for the design and construction of water system tunnels, ditches, and pipes to capture Colorado River water and mountain streams for the Bonneville basin.

16. Tit. XIX, 106 Stat. at 4673-77.

17. See, e.g., Tit. XXI, 106 Stat. at 4683-84 (Rio Grande Floodway Project, New Mexico); Tit. XXVIII, 106 Stat. at 4690-91 (Reclamation Recreation Management Act).

18. See, e.g., Tit. XXIII, 106 Stat. at 4684-87 (Platoro Reservoir and Dam, Colorado); Tit. XXIV, 106 Stat. at 4687-88 (pumping facilities in the Redwood Valley County Water District, California); Tit. XXV, 106 Stat. at 4688-89 (United Water Conservation District, California).

19. See, e.g., Tit. V, 106 Stat. at 4650-55 (Ute Indian Rights Settlement); Tit. XXXV, 106 Stat. at 4731-40 (Three Affiliated Tribes and Standing Rock Sioux Tribe Equitable Compensation Program, North Dakota); Tit. XXXVII, 106 Stat. at 4740-52 (San Carlos Apache Tribe Water Rights Settlement, Arizona).

20. See, e.g., 138 CONG. REC. S17,671-79 (daily ed. Oct. 8, 1992) (reprinting letters from agricultural interests in California to Sen. John Seymour expressing their opposition

Improvement Act, or CVPIA),²¹ which most aggressively asserts the Act's reform of traditional water allocation priorities. Contained in the Reclamation Projects Adjustment Act are three rubrics of reform that offer a glimpse into the future of federal reclamation law and policy.

First, the Act significantly alters federal water law and policy by elevating the importance of environmental protection in the design, planning, and operation of federal reclamation projects.²² The most substantial change now requires the Bureau of Reclamation to manage its largest water delivery system, the Central Valley Project in California, for the mitigation, protection, and restoration of fish and wildlife.²³ The Act explicitly requires the Bureau to comply with previously neglected federal environmental laws, including the National Environmental Policy Act (NEPA),²⁴ in the operation of the CVP,²⁵ the Glen Canyon Dam,²⁶ the Central Utah Project, and other federal projects.²⁷ In addition, the Act integrates fish and wildlife preservation, instream flows, and wetlands protection into federal reclamation projects.²⁸

Second, through the CVPIA, the Act alters federal water policy²⁹ to employ market and economic incentives to encourage conservation and to achieve a more economically efficient allocation of water.³⁰ Significantly, the Act eliminates the Bureau of Reclamation's auto-

to the Central Valley Project Improvement Act (CVPIA), tit. XXXIV, 106 Stat. at 4706-31).

21. Tit. XXXIV, 106 Stat. at 4706-31.

22. See generally *infra* part II.

23. Tit. XXXIV, § 3406(A)(1), 106 Stat. at 4714.

24. 42 U.S.C. §§ 4321-4347 (1988 & Supp. V 1993).

25. See Reclamation Projects Authorization and Adjustment Act § 3404(c)(1), 106 Stat. at 4708-09 (requiring an EIS when water contracts are renewed); § 3409, 106 Stat. at 4730 (requiring an EIS on the entire CVP); see also § 3406(b), 106 Stat. at 4714 (requiring the CVP to comply with the Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (codified as amended at 7 U.S.C. § 136 and in scattered sections of 16 U.S.C.)). Environmental protection provisions in the CVPIA are discussed *infra* part II.A.1.

26. See Tit. XVIII, 106 Stat. at 4670-71 (requiring completion of an EIS for the Glen Canyon Dam within two years); see also *infra* part II.A.2. The Glen Canyon Dam is located on the Colorado River in Arizona, at the head of the Grand Canyon.

27. See Tit. VI, 106 Stat. at 4655 (requiring compliance with the National Environmental Policy Act (NEPA) and the Endangered Species Act in the Central Utah Project (CUP)); see also *infra* part II.B.1.

28. See, e.g., Tit. III, 106 Stat. at 4625-48 (Central Utah Project); Tit. XXXIV, § 3406, 106 Stat. at 4714-26 (Central Valley Project).

29. This comment focuses on reforms to contractual water rights held by the beneficiaries of Bureau of Reclamation projects and does not extensively discuss state water rights, which are based on prior appropriation or riparian allocation regimes.

30. See Tit. XXXIV, § 3405(a), 106 Stat. at 4709-14 (providing for water transfers, other economics-based water management, and conservation measures); see also discussion *infra* part III.

matic contract renewal policy,³¹ which had guaranteed CVP contractors another forty years of water at 1950's prices. In its place, the Bureau will employ incentive-based pricing mechanisms, such as tiered pricing.³² The Act also ratifies water transfers to higher-value uses among CVP beneficiaries and others serving urban and environmental needs.³³ Revenues generated when water is transferred to users who will pay higher rates under the economic reforms will be spent on fish and wildlife habitat restoration.³⁴ Thus, for the first time, CVP beneficiaries will pay for some of the environmental damage³⁵ caused by a reclamation project.³⁶

Third, despite some efforts to strengthen federal control of specific projects to restrain local abuses, the Act actually bolsters state authority and control over water resources.³⁷ Enacted amid calls for wholesale transfer of federal water projects to states,³⁸ the Act contains a number of features that limit the federal government's role in western water allocation. The Act specifically recognizes state primacy in the area of water rights and water quality.³⁹ It also resolves some uncertainty in state water allocation regimes by settling a number of water claim disputes with Indian tribes,⁴⁰ and provides for the low price sale or transfer of federally developed water projects to local districts.⁴¹ Finally, the Act creates a vehicle to study regional solutions by establishing a federal committee to review western water policy.⁴²

31. § 3404(c), 106 Stat. at 4708-09.

32. § 3405(d), 106 Stat. at 4712-13. Pricing will be based on an "inverted block rate structure," under which water becomes more expensive when use exceeds a certain quantity. *Id.*; see *infra* notes 268-69 and accompanying text.

33. § 3405(a), 106 Stat. at 4709-12; see *infra* part III.C.

34. § 3405(f), 106 Stat. at 4714; § 3407, 106 Stat. at 4726 (establishing a restoration fund into which CVP users must pay).

35. See, e.g., *supra* note 5 and accompanying text.

36. See § 3407, 106 Stat. at 4726-28.

37. See generally *infra* part IV.

38. See *infra* note 128 and accompanying text.

39. See, e.g., Tit. XIX, § 1909, 106 Stat. at 4676-77 (containing a non-preemption clause in the Mid-Dakota project); § 3411(a), 106 Stat. at 4731 (requiring the Secretary to comply with state law in reallocating CVP water).

The December 1988 and March 1989 policy statements issued by the Department of the Interior recognize that primacy in water allocation and management rests principally with the states. Brian E. Gray et al., *Transfers of Federal Reclamation Water: A Case Study of California's San Joaquin Valley*, 21 ENVTL. L. 911, 930 (1991) (citing U.S. DEP'T OF THE INTERIOR, PRINCIPLES GOVERNING VOLUNTARY WATER TRANSACTIONS THAT INVOLVE OR AFFECT FACILITIES OWNED OR OPERATED BY THE DEPARTMENT OF THE INTERIOR (1988)).

40. See *supra* note 19; see *infra* notes 338-44 and accompanying text.

41. See, e.g., Tits. XXII-XXV, 106 Stat. at 4684-89.

42. Tit. XXX, 106 Stat. at 4693-98; see *infra* notes 460-62 and accompanying text.

Although the Act falls short of some reformers' goals, and despite numerous political compromises, the Reclamation Projects Adjustment Act substantially shifts federal policy by recognizing changing demographics, values, and water usage in the West. Some recent policy initiatives proposed by the Clinton Administration complement these legislative mandates. The federal government can no longer seek to solve water scarcity solely through building new reclamation projects. Instead, the West must learn to live within limited resources and accept a value system different from that of the last 150 years. The Act is a first step toward reforming federal reclamation policy to meet the future needs of the West.

This comment discusses these three major new directions in federal reclamation law and water policy initiated by the Reclamation Projects Adjustment Act. Part I briefly describes the legislative history of the Act, which is necessary to understand its genesis, complexity, and intent. The major environmental measures of the Act are outlined and analyzed in part II. Part III discusses Congress' use of market concepts and economic incentive mechanisms to reform the reclamation regime. Part IV of this comment evaluates the Act and subsequent policy decisions to determine how the Act's provisions alter the role of the federal government in western water policy. Finally, part V outlines the major developments that have occurred as the Clinton Administration has attempted to implement reclamation reform.

I

LEGISLATIVE HISTORY

A. *Historical Background*

Water defines the American West.⁴³ No other natural resource has been as important to the western states' development of industry, agriculture, energy, transportation, fisheries, and recreation.⁴⁴ Traditionally, westerners thought that water was wasted if it flowed unused along its natural course and out to the ocean.⁴⁵ In 1902, Congress manifested this view when it sought to develop the agricultural poten-

43. See WALLACE E. STEGNER, *BEYOND THE HUNDREDTH MERIDIAN: JOHN WESLEY POWELL AND THE SECOND OPENING OF THE WEST* 294-367 (1954) (discussing the life of John Wesley Powell, who founded the U.S. Geological Survey and pushed for water reclamation in the West); CHARLES F. WILKINSON, *CROSSING THE NEXT MERIDIAN: LAND, WATER, AND THE FUTURE OF THE WEST* 3-27, 219-92 (1992); BATES ET AL., *supra* note 3, at 14-48, 73-90. See generally *Water: The Power, Promise, and Turmoil of North America's Fresh Water*, *supra* note 4.

44. See BATES ET AL., *supra* note 3, at 14-48.

45. Harrison C. Dunning, *Confronting the Environmental Legacy of Irrigated Agriculture in the West: The Case of the Central Valley Project*, 23 ENVTL. L. 943, 946-50 (1993). While he was Governor of California, Earl Warren remarked: "In my opinion, we should

tial of the West and instructed the Department of the Interior, the parent of the Bureau of Reclamation, to build water storage facilities and delivery systems for family farmers in these arid lands.⁴⁶

The 1902 Reclamation Act provided interest-free construction loans to irrigators that were supposed to be paid back within ten years.⁴⁷ Originally, the development subsidies were targeted at small family-owned and operated farms.⁴⁸ The 1902 Reclamation Act lim-

not relax until California has adopted and put into operation a statewide program that will put every drop of water to work." *Id.* at 950.

46. Reclamation Act of 1902, ch. 1093, 32 Stat. 388 (codified as amended at 43 U.S.C. §§ 371-498, 1457 (1988)). Water resource development in the West was grounded in five basic assumptions:

(1) there should be easy private access to public resources, (2) spring runoffs should be captured and impounded for use during the dry growing season, (3) these captured waters should be used for multiple purposes, (4) water rates should be minimal for both agriculture and urban users, and (5) to settle the West and promote regional economic development, water resource development should be federally subsidized.

COMMITTEE ON W. WATER MANAGEMENT ET AL., NATIONAL RESEARCH COUNCIL, *WATER TRANSFERS IN THE WEST: EFFICIENCY, EQUITY, AND THE ENVIRONMENT* 21 (1992). See generally Paul S. Taylor, *The Excess Land Law: Execution of a Public Policy*, 64 *YALE L.J.* 477, 481-89 (1955) [hereinafter *Execution of a Public Policy*] (relating the legislative history of the 1902 Act); DONALD J. PISANI, *TO RECLAIM A DIVIDED WEST: WATER, LAW, AND PUBLIC POLICY, 1848-1902*, at 285-93 (1992) (discussing the interest groups that pushed to develop the West's water resources).

47. § 4, 32 Stat. at 389; SAX ET AL., *supra* note 11, at 645. In 1939, Congress made the terms even more favorable by extending the interest-free repayment period for up to 50 years and allowing the Bureau to enter into new water service contracts for 40-year terms. SAX ET AL., *supra* note 11, at 645 (discussing the Reclamation Project Act of 1939, 53 Stat. 1187). Under the new water service contracts, "the Bureau delivers water to farmers at a rate which repays only that share of construction costs that the Bureau considers 'appropriate'; at expiration, the Bureau enters into a new contract. The 1939 Act does not require capital costs to be repaid within any set period under such contracts." *Id.* Professor Sax notes that a 1981 General Accounting Office (GAO) study found that the federal subsidy resulting from these terms "ranged from 92 to 97.8 percent of total government costs [of the six federal reclamation projects studied]." *Id.* (citing COMPTROLLER GEN., U.S. GEN. ACCOUNTING OFFICE, PAD-81-07, *FEDERAL CHARGES FOR IRRIGATION PROJECTS REVIEWED DO NOT COVER COSTS* 37 (1981)). This figure is significant, considering that the Congressional Budget Office estimated the cost of providing federal irrigation to be in the range of \$33.7 billion to \$70.3 billion. DAWDY, *supra* note 10, at 211.

48. Congressman Newlands, chief sponsor of the 1902 Reclamation Act, proclaimed:

Lord Macauley said we would never experience the test of our institutions until our public domain was exhausted and an increased population engaged in a contest for the ownership of land. That will be the test of our future, and the very purpose of this bill is to guard against land monopoly and to hold this land in small tracts

35 *CONG. REC.* 6734 (1902), cited in Paul S. Taylor, *California Water Project: Law and Politics*, 5 *ECOLOGY L.Q.* 1, 5 (1975) [hereinafter *California Water Project*]. More colorfully stated: "Federal reclamation began as a program to help 'farm boys' who 'want[ed] farm[s] of their own' obtain them 'without being driven into the already overcrowded cities to seek employment.'" Paul S. Taylor, *Excess Land Law: Calculated Circumvention*, 52 *CAL. L. REV.* 978, 978 (1964) [hereinafter *Calculated Circumvention*] (quoting S. Doc. No. 446, 57th Cong., 1st Sess. 21 (1902) (statement of Congressman Underwood)). For further description of the congressional intent behind the federal reclamation laws and the subsequent frustration of congressional intent by monopolistic corporate farming operations, see

ited the application of federally subsidized water to land "not exceeding" 160 acres per resident landowner.⁴⁹ In response, landowners developed ingenious legal methods, including complex lease and trust arrangements, to circumvent the acreage limitations.⁵⁰ Employing a liberal interpretation of its mission, the Bureau of Reclamation may have ignored these possible violations because it believed that large farms were more likely to make their loan payments.⁵¹ A more cynical view suggests that the Bureau had become captured by local agricultural interests, resulting in a symbiotic relationship between the governmental agency and private businesses.⁵² Over time, criticism of the reclamation program swelled.⁵³

generally *Execution of a Public Policy*, *supra* note 46; Paul S. Taylor, *The Excess Land Law: Pressure vs. Principle*, 47 CAL. L. REV. 499 (1959) [hereinafter *Pressure vs. Principle*]; Hamilton Candee, *The Broken Promise of Reclamation Reform*, 40 HASTINGS L.J. 657, 660 (1989).

49. § 5, 32 Stat. at 389. In order to target family farms and avoid speculators, those receiving the federally provided water were required to live on the land. *Id.* For further discussion, see *California Water Project*, *supra* note 48; *Calculated Circumvention*, *supra* note 48; MARC REISNER, *CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER* 337 (rev. & updated ed. 1993); SAX ET AL., *supra* note 11, at 645-46.

50. Candee, *supra* note 48, at 661. In 1981, the Bureau of Reclamation reported that only 23% of the land receiving subsidized water was farmed in operations of less than 160 acres, and 37% of the land irrigated by Bureau water was leased. *Id.* at 661-62. For a detailed description of legal circumvention of reclamation land restrictions, see *California Water Project*, *supra* note 48; *Calculated Circumvention*, *supra* note 48; *Execution of a Public Policy*, *supra* note 46; *Pressure vs. Principle*, *supra* note 48.

51. SAX ET AL., *supra* note 11, at 646.

52. Before becoming Interior Secretary under President Clinton, Bruce Babbitt noted:

[W]e . . . had the bad fortune to invent the Bureau of Reclamation. The Bureau became part of an extraordinarily powerful political force composed of the U. S. Congress, local interests, and a hungry bureaucracy. This coalition elected westerners to Congress by promising to dam every single stream in the region, paid for with a continuous flow of tax dollars from people east of the Mississippi River. Thus did we create and subsidize a welfare state in the West, under the paternal guidance of the Bureau of Reclamation.

Bruce Babbitt, *The Public Interest in Western Water*, Address Before the Continuing Legal Education Conference on Navigability (Nov. 13, 1992), in 23 ENVTL. L. 933, 934 (1993).

53. In 1977, President Carter announced an initiative to eliminate the most inefficient proposed water projects. Although he met with intense resistance and ultimately failed to eliminate the worst projects, Carter's efforts "stimulated debate over the wisdom of federal water projects." SAX ET AL., *supra* note 11, at 657; see also REISNER, *supra* note 49, at 307-31 (detailing President Carter's unsuccessful campaign to scuttle questionable water projects in a chapter entitled "The Peanut Farmer and the Pork Barrel"); DAWDY, *supra* note 10, at 177. President Carter's water policy had four objectives: (1) cost-effective planning and management, (2) emphasis on water conservation, (3) enhanced federal-state cooperation, and (4) increased attention to environmental quality. COMPTROLLER GEN., U.S. GEN. ACCOUNTING OFFICE, CED-79-2, REVIEW OF THE PRESIDENT'S JUNE 6, 1978, WATER POLICY MESSAGE 2 (1978). See generally COMPTROLLER GEN., U.S. GEN. ACCOUNTING OFFICE, CED-81-77, CHANGES IN FEDERAL WATER PROJECT REPAYMENT POLICIES CAN REDUCE FEDERAL COSTS (1981).

In 1982, Congress tried to rein in abuses of the federal water subsidies by enacting the Reclamation Reform Act.⁵⁴ While these reforms increased the acreage limitation to a more realistic 960 acres and eliminated the residency requirement, Congress also increased water rates for land in excess of 960 acres to full cost to ensure that subsidized water was sold to smaller family farms rather than to large corporate operations.⁵⁵ Subsequently, however, the Bureau promulgated rules that benefited large agricultural interests and frustrated the intent of the 1982 reforms.⁵⁶ The continuing marriage of the Bureau to agribusiness and the Bureau's neglect of other water interests led to the legislative showdown that was the genesis of the Reclamation Projects Adjustment Act.

B. *The Central Valley Project of California*

The Central Valley Project has long served as the lightning rod for debate over subsidies and acreage limitations,⁵⁷ as well as over

54. Reclamation Reform Act of 1982, Pub. L. No. 97-293, tit. II, 96 Stat. 1263 (codified as amended at 43 U.S.C. §§ 373a, 390aa to 390zz-1, 425b, 485h (1988)). For a history of the Bureau's lax enforcement of acreage limitations, see DAWDY, *supra* note 10, at 35-44; Candee, *supra* note 48, at 662-63.

55. 43 U.S.C. §§ 390ee(a), 390kk; see S. REP. NO. 373, 97th Cong., 2d Sess. 6-11 (1982), reprinted in 1982 U.S.C.C.A.N. 2570, 2572-75.

[T]he Reclamation Reform Act (1) increased the acreage limit to 960 acres, (2) closed the leasing loophole so that the acreage limit applies to all irrigated lands owned or leased, (3) required yearly modification of contract rates as necessary to keep pace with O & M [operation and maintenance] costs, (4) introduced a "full cost" rate for irrigation of excess lands [greater than 960 acres], and (5) repealed the residency requirement.

Lauri Alsup, Note, *Reclamation Law*, 21 ENVTL. L. 1225, 1228 (1991) (footnotes omitted).

56. See Candee, *supra* note 48, at 668-82 (detailing the gap between the 1982 Act and the Bureau's rules in 1983 and 1987); DAWDY, *supra* note 10, at 178 ("[W]hile giving lip service to the intent of the hammer clause [in the 1982 Act,] the Bureau permitted its agribusiness clients to believe they could get around the provision by creating a new brand of paper farmers."); see also Alsup, *supra* note 55, at 1225-29; U.S. GEN. ACCOUNTING OFFICE, RCED-90-6, WATER SUBSIDIES: BASIC CHANGES NEEDED TO AVOID ABUSE OF THE 960-ACRE LIMIT 15-23 (1989) [hereinafter GAO REPORT ON WATER SUBSIDIES]. In 1987, Congress attempted to override the Bureau's regulations in order to prohibit subsidized water sales to large corporate farms. See Omnibus Budget Reconciliation Act of 1987, Pub. L. No. 100-203, § 5302, 101 Stat. 1330, 1330-268 to 269 (codified at 43 U.S.C. §§ 390nn(b), 390ww(g)-(i) (1988)). See *infra* notes 448-51, for a discussion of the Bureau's new regulations implementing the 1982 Reclamation Reform Act.

57. See, e.g., *California Water Project*, *supra* note 48; *Execution of a Public Policy*, *supra* note 46, at 493-94, 501-14; *Pressure vs. Principle*, *supra* note 48; Paul S. Taylor, *Excess Land Law: Secretary's Decision?—A Study in Administration of Federal-State Relations*, 9 UCLA L. REV. 1 (1962); *Calculated Circumvention*, *supra* note 48; Dunning, *supra* note 45. For a discussion of the historical development and attendant controversies, see REISNER, *supra* note 49, at 332-78; SAX ET AL., *supra* note 11, at 647-54; DAWDY, *supra* note 10, at 37-47, 81-96; *Ivanhoe Irrigation Dist. v. McCracken*, 357 U.S. 275, 279-89 (1958).

economic inefficiency and environmental damage.⁵⁸ The CVP is now the target of progressive reforms under Tit. XXXIV of the Act⁵⁹ and serves as a prototype for overall reclamation reform. A long drought during the late 1920's, and the resulting overdraft of groundwater, led the State of California to develop a plan for a reclamation system to capture and distribute the waters of the San Joaquin and Sacramento Rivers.⁶⁰ When the Depression limited California's ability to secure financing, President Franklin Roosevelt persuaded Congress to authorize the federal takeover of the CVP.⁶¹ Over fifty years and \$3.5 billion in subsidies later,⁶² the CVP now includes twenty dams and 500 miles of canals encompassing two major rivers and most of their tributaries.⁶³ During a normal year, the CVP's dams, tunnels, and canals deliver about 6 to 7 million acre-feet of water to a number of irrigation districts that supply water to 3.8 million acres of land.⁶⁴ In

58. For a discussion of the economic subsidies and environmental damage associated with the CVP, see SAX ET AL., *supra* note 11, at 647-51; REISNER, *supra* note 49, at 346-92; Dunning, *supra* note 45, at 950-54. For a detailed discussion of the environmental effects of the CVP, see *Central Valley Project Improvement Act: Hearings on S. 484 Before the Subcomm. on Water & Power of the Senate Comm. on Energy & Natural Resources*, 102d Cong., 1st Sess. 109-18 (1991) [hereinafter *Senate Subcomm. CVP Hearings*] (statement of Glenn Olson, Regional Vice President, National Audubon Society); *id.* at 243-47 (statement of Thomas J. Graff, Senior Attorney, Environmental Defense Fund, Oakland, Cal.); *id.* at 247-56 (statement of Leslie Friedman, Director of Public Lands Programs, California Nature Conservancy, S.F., Cal.); *id.* at 256-60 (statement of William W. Howard, Executive Vice President, National Wildlife Federation); *id.* at 325-30 (statement of Marc Reisner, Water Policy Consultant); *id.* at 341-47 (statement of Karen Garrison, Senior Project Scientist, Natural Resources Defense Council, S.F., Cal.).

59. See *infra* part II.A.1.

60. SAX ET AL., *supra* note 11, at 648. For a history of the development of the Central Valley Project, see Dunning, *supra* note 45, at 946-50; BARBARA T. ANDREWS & MARIE SANSONE, STANFORD ENVTL. LAW SOC'Y, WHO RUNS THE RIVERS?: DAMS AND DECISIONS IN THE NEW WEST 31-45 (Marc E. Jones & Mark Brewer eds., 1983); REISNER, *supra* note 49, at 332-42.

61. Federal takeover began as a relief effort. Dunning, *supra* note 45, at 947 (citing the Emergency Relief Appropriations Act of 1935, ch. 831, 49 Stat. 115; Act of Aug. 30, 1935, 49 Stat. 1028, 1038). Two years later, the CVP was formally placed in the federal reclamation program. Act of Aug. 26, 1937, 50 Stat. 844, 850; SAX ET AL., *supra* note 11, at 648. From the beginning, however, the CVP was different from other federal reclamation projects aimed at irrigating land to foster family farm settlement. The CVP was established to bail out established farms, including large ones, that had exhausted their ground-water supplies. REISNER, *supra* note 49, at 337-38.

62. See Candee, *supra* note 48, at 658 & n.3.

63. See Elliot Diringier, *State Plan for Water System*, S.F. CHRON., Aug. 10, 1992, at A1.

64. See SAX ET AL., *supra* note 11, at 648; GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 8-10. The CVP provides about 20% of California's usable fresh water. Phillip A. Davis, *California Water Reform Stirs Conference on Omnibus Bill*, 47 CONG. Q. WKLY. REP. 2804, 2804 (1992) [hereinafter *Water Reform Stirs Conference*]; see also Katherine A. Striemer, *The Central Valley Project Improvement Act*, ENVTL. L. NEWS (Cal. State Bar Ass'n, Envtl. L. Section), Spring 1993, at 2.

the drought year of 1992, however, the CVP delivered only 3.1 million acre-feet of water.⁶⁵

Aside from initial capital subsidies and liberal loan repayment terms,⁶⁶ the CVP continues to provide other subsidies. Under CVP contracts, the price for water is about the same as in 1950, ranging from about \$3.50 per acre-foot to \$35 per acre-foot.⁶⁷ Yet, the General Accounting Office (GAO) estimates that it costs the government \$42 per acre-foot to supply the same unit of water in a typical CVP water district.⁶⁸ Competing agricultural users and some urban districts pay over \$400 per acre-foot.⁶⁹ It is estimated that \$400 million per year in CVP subsidies is transferred to a relatively small number of water users.⁷⁰ The GAO estimates that 46% of the acreage irrigated by CVP water benefited from "double dipping"; that is, the crops produced with water at artificially cheap federal prices were also subsidized under federal commodity programs.⁷¹

Beyond these economic inefficiencies, the CVP has left a "devastating environmental legacy."⁷² Intensive irrigation and water diver-

65. *Water Reform Stirs Conference*, *supra* note 64, at 2804.

66. In 1991, the GAO reported that at the end of 1990, irrigators had repaid the federal government only \$10 million of the over \$1 billion in capital costs associated with the construction of CVP irrigation facilities. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 10-11. For further discussion, see generally E. PHILLIP LEVEEN & LAURA B. KING, NATURAL RESOURCES DEFENSE COUNCIL, TURNING OFF THE TAP ON FEDERAL WATER SUBSIDIES, VOLUME I: THE CENTRAL VALLEY PROJECT (1985); SAX ET AL., *supra* note 11, at 649; Yvonne Levy, *Pricing Federal Irrigation Water: A California Case Study*, in ECON. REV. (Fed. Reserve Bank of S.F. ed.), Spring 1982, at 35.

67. Farmers who have water rights that predate the CVP receive water at \$3.50 per acre-foot, *cf. Senate Subcomm. CVP Hearings*, *supra* note 58, at 329 (testimony of Marc Reisner) (stating \$2.50 per acre-foot), while other CVP users whose districts have CVP contracts pay between \$12 and \$35 for the same amount. Phillip A. Davis, *Congress Seeks To Rechannel Flow of Water in the West*, 50 CONG. Q. WKLY. REP. 527, 531 (1992) [hereinafter *Congress Seeks To Rechannel Flow*]. Westlands Water District pays \$17 per acre-foot. GAO REPORT ON WATER SUBSIDIES, *supra* note 56, at 9.

68. GAO REPORT ON WATER SUBSIDIES, *supra* note 56, at 9.

69. San Diego farmers, for example, pay \$400 for an acre-foot of water. *Central Valley Project Improvement Act: Hearings on S. 484 Before the Senate Comm. on Energy & Natural Resources*, 102d Cong., 1st Sess., pt. 2, at 5 (1991) [hereinafter *Senate Comm. CVP Hearings*] (statement of Rep. Miller). In comparison, water generated by the desalination plant built by the city of Santa Barbara will cost over \$1,000 per acre-foot. *Congress Seeks To Rechannel Flow*, *supra* note 67, at 531.

70. Phillip A. Davis, *House Votes Sweeping Reform of Vast Water Project*, 50 CONG. Q. WKLY. REP. 1788, 1788 (1992) [hereinafter *House Votes Sweeping Reform*] (citing Rep. Miller).

71. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 17.

72. Dunning, *supra* note 45, at 954. The GAO estimated that more than 85% of CVP water is used for irrigation, leaving all urban, industrial, and fish and wildlife conservation uses to compete for less than 15%. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 18. For various environmental concerns, see environmentalists' statements to the Senate in *Senate Subcomm. CVP Hearings*, *supra* note 58. See also *Reclamation Reform Act Amendments: Hearings on S. 1501 and H.R. 429 Before the Subcomm. on Water & Power of the Senate Comm. on Energy & Natural Resources*, 102d Cong., 1st Sess. 105-07 (1991)

sion have caused saline intrusion and fostered selenium contamination.⁷³ Fish and wildlife habitats, especially wetlands, have been eliminated or severely degraded.⁷⁴ Some stretches of river have become dry river beds, and entire species of anadromous fish have been wiped out.⁷⁵ Due to decreased water flows, water quality problems are a prime concern in the delta estuary where the Sacramento and San Joaquin rivers empty into the San Francisco Bay.⁷⁶ Birds that migrate along the Pacific Flyway migratory route are harmed by decreasing habitat and water quality.⁷⁷

C. *The Genesis of H.R. 429*

The 1982 Reclamation Reform Act had failed to redress the economic and environmental problems of reclamation projects such as the CVP. The next attempt at reform began with H.R. 429. Congressman George Miller (D-Cal.) became the chairman of the House of Representatives Committee on Interior and Insular Affairs after Morris Udall's (D-Ariz.) resignation in 1991.⁷⁸ At the top of his agenda, Miller sought to eliminate legal loopholes in reclamation law and to end "the brazen and arrogant violations of the spirit of the 1982 law that was designed to eliminate the subsidies to large growers."⁷⁹ In

[hereinafter *Senate Hearings on Reclamation Reform Act Amendments*] (statement of Hamilton Candee, Senior Project Attorney, Natural Resources Defense Council, S.F., Cal.) (noting the effect of federally subsidized water on the environment in California).

73. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 13-16; *see also* Dunning, *supra* note 45, at 952-53.

74. Ninety percent of the Central Valley's original wetlands has been destroyed by agriculture and urban development. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 18; *Senate Subcomm. CVP Hearings*, *supra* note 58, at 114-18 (statement of Glenn Olson, Regional Vice President, National Audubon Society) (noting that only 5% of the Central Valley's historical wetlands areas remains).

75. *See* Dunning, *supra* note 45, at 950-51, 959. According to the California Advisory Committee on Salmon and Steelhead Trout, the amount of river available to migrating fish has been reduced by 95%. The Committee found that the remaining salmon and steelhead are at risk due to insufficient streamflows. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 20. Specifically, Sacramento's winter-run Chinook Salmon was declared "endangered" under the California Endangered Species Act and "threatened" pursuant to the federal Endangered Species Act. Striemer, *supra* note 64, at 9; 50 C.F.R. § 227.4(e) (1993) (listing the species as threatened); *see also* Endangered and Threatened Species; Sacramento River Winter-run Chinook Salmon, 57 Fed. Reg. 27,416 (1992) (to be codified at 50 C.F.R. §§ 222, 227) (proposing reclassification as endangered). The Delta Smelt was listed as threatened. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Delta Smelt, 58 Fed. Reg. 12,854 (1993) (to be codified at 50 C.F.R. § 17.11).

76. *See The Delta on Hold: Bay-Delta Hearings Revisited*, WATER STRATEGIST, Jan. 1992, at 1, 1-2 [hereinafter *The Delta on Hold*].

77. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 18-19.

78. *Water Subsidies Fought Heated Up*, 47 CONG. Q. ALMANAC 218, 218 (1991); *Congressman George Miller Elected Chairman of Interior Panel*, PR Newswire, May 9, 1991, available in LEXIS, Nexis Library, News File.

79. *Senate Comm. CVP Hearings*, *supra* note 69, at 7 (statement of Rep. Miller).

part, Miller's interest was based upon the water needs and environmental concerns of his urban constituency.⁸⁰ Miller's action also reflected his philosophy that public resources should be "the people's resources," rather than private interest subsidies.⁸¹ He believed that federal water reclamation policy should reflect values other than agricultural appropriation for irrigation alone.⁸²

In April 1991, using a western public works bill (H.R. 429)⁸³ as a vehicle for his reforms, Miller successfully tacked on an amendment eliminating corporate farm use of federally subsidized water.⁸⁴ First, Miller's attempt at reclamation reform targeted the large agriculture operations "masquerading as small family farms"⁸⁵ by tightening the acreage limits.⁸⁶ Second, his amendment sought to limit so-called "double-dipping". Under Miller's H.R. 429 provisions, farmers would no longer have received subsidized water to grow federal surplus crops if they received other federal subsidies.⁸⁷

80. See *Management & Operation of the Central Valley Project, California: Hearings on H.R. 5099, H.R. 3876 & H.R. 4687 Before the Subcomm. on Water, Power & Offshore Energy Resources of the House Comm. on Interior & Insular Affairs*, 102d Cong., 2d Sess., pt. 1, at 126-28 (1992), microformed on CIS No. 93-H441-53 (Congressional Info. Serv.) [hereinafter *House Comm. Hearings*] (statement of Rep. Miller).

81. *Water Subsidies Fight Heated Up*, *supra* note 78, at 218.

I can tell you just as sure as hell that change [in western water policy] is coming, and it's going to happen. You will not be able to hold it back. Some of you will carve out niches for another year of privilege, for another year of subsidy . . . but eventually it will happen, and I suspect it will be more painful each and every year it is delayed.

Representative George Miller, Keynote Address to the Colorado River Water Users Association (Dec. 12, 1991), quoted in Tom Melling, Comment, *The CUP Holds the Solution: Utah's Hybrid Alternative to Water Markets*, 13 J. ENERGY NAT. RESOURCES & ENVTL. L. 159, 159 (1993).

82. See Melling, *supra* note 81, at 159.

83. H.R. 429, 102d Cong., 1st Sess. (1991). In 1991, Representative Craig Thomas (R-Wyo.) introduced H.R. 429 to authorize additional federal funds to complete the Buffalo Bill Dam near Cody, Wyoming. 137 CONG. REC. H83 (daily ed. Jan. 4, 1991).

84. *Water Subsidies Fight Heated Up*, *supra* note 78, at 219.

85. *Id.*

86. "The bill placed the burden on Western farmers to demonstrate that they had not created legal schemes to divide up their farms only to qualify for the lucrative subsidies." *Id.* For a discussion of the abuses of the acreage limitations, see *supra* notes 48-52 and accompanying text.

87. *Congress Seeks To Rechannel Flow*, *supra* note 67, at 532. A double subsidy occurs when a crop grown using artificially inexpensive water is also purchased by the U.S. government to raise commodity prices. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 16-18. The GAO has found that such subsidies are significant.

According to Interior, between 1976 and 1985 an average of 38 percent of the acreage served by the Bureau of Reclamation nationwide was associated with the production of subsidized crops. Interior reported that irrigation subsidies throughout the 17 western states totaled \$534 million in 1986, with \$203 million of this amount associated with the production of subsidized crops. Other estimates are higher. For example, the Bureau of Reclamation estimated that annual irrigation subsidies totaled \$2.2 billion in 1986, of which \$830 million was associated with the production of subsidized crops.

Id. at 17; see also DAWDY, *supra* note 10, at 66-69, 85-86.

On June 20, 1991, the House of Representatives passed H.R. 429 by a wide margin, 360-24.⁸⁸ The bill's popularity was due in large part to its various provisions funding the completion of many western reclamation projects, providing for water-related demonstration projects and studies, and protecting the Grand Canyon from fluctuating water releases from Glen Canyon Dam.⁸⁹

D. Senate Efforts at Reclamation Reform

The Senate eventually changed the provisions in H.R. 429 for across-the-board reclamation reform into legislation focused on specific projects, including the CVP. Senator Bill Bradley (D-N.J.), the counterpart to Representative Miller, became chairman of the Senate Water and Power Subcommittee in 1987.⁹⁰ Tired of years of deadlock on the question of agricultural subsidies, Bradley vowed to make "real progress" in updating the CVP.⁹¹ While Bradley generally supported Miller's attempts to tighten the acreage limitations and eliminate water subsidies for surplus crop production, Bradley preferred to focus on reform of the federal CVP water contract policy to increase efficiency and eliminate environmental degradation. He stated: "[I]t may make more sense to focus on achieving those ends directly instead of replowing the rocky ground of reclamation reform."⁹² Bradley realized that the Senate was far more likely to pass single project reform in California than comprehensive reclamation reform throughout the West.⁹³ Redressing the CVP, the Bureau of Reclamation's

88. 137 CONG. REC. H4802, H4853 (daily ed. June 20, 1991). House Bill 429 only made it out of committee in May 1991 after a compromise nine-year extension of subsidies for small family farms. See H.R. REP. NO. 114, 102d Cong., 1st Sess. 204-14 (1991).

89. 137 CONG. REC. H4802, H4802-03 (daily ed. June 20, 1991). The version of H.R. 429 that passed the House on June 20th had 29 titles. They included authorizations to construct the Central Utah Project (titles II-V); complete the Buffalo Bill Dam (title I); continue a High Plains groundwater recharge project (title XXVI); build a rural water system in South Dakota (title XIX); perform studies and research projects on salinity in the Salton Sea in California (title XI); conduct water reclamation in southern California (title XVI); satisfy water, sewerage, and power needs of insular areas of American territories (title XXI); and sell various federal water projects to local water districts (titles XXIV and XXVII). *Id.*

90. Michael Moran, States News Service, Dec. 30, 1987, available in LEXIS, Nexis Library, News File.

91. *Congress Seeks To Rechannel Flow*, *supra* note 67, at 531.

92. *Senate Hearings on Reclamation Reform Act Amendments*, *supra* note 72, at 2 (statement of Sen. Bradley).

93. Just two years earlier, Pete Wilson, as a U.S. Senator, scuttled a similar CVP reform bill. Brigid Schulte & Tracy Corrington, *Fat Farms Busted Under Bill Approved*, States News Service, June 21, 1991, available in LEXIS, Nexis Library, News File. The California delegation, however, became less powerful after the delegation changed; Wilson left to become Governor, John Seymour was a newly appointed Senator for the two-year remainder of Wilson's term, and Senator Alan Cranston had not only announced his retirement, but also favored CVP reform. Robert Crabbe, *Wilson: New Governor a Puzzle to Environmentalists*, UPI, Dec. 24, 1990, available in LEXIS, Nexis Library, News File; Jeff

largest water delivery system, would set an important precedent for overall reclamation reform.⁹⁴

Senator Bradley, along with retiring Senator Cranston (D-Cal.), introduced Senate Bill 484, which conditioned CVP water contracts on environmental and municipal needs.⁹⁵ Bradley sought to attack the economic inequities linked to the CVP's forty-year contract terms and the Bureau of Reclamation's automatic "rollover" terms.⁹⁶ He exhorted: "We need to put two new words into the CVP's vocabulary: 'efficiency' and 'flexibility'."⁹⁷ At that time, some Members of Congress may have felt that it was imperative that the Bureau's renewal practices be amended quickly because more than 25% of the CVP contracts were scheduled to expire within the next five years.⁹⁸

Weir, *Seymour for Senate—Pete Wilson Appoints an Old Ally*, CAL. J., Feb. 1, 1991 (Feature sec.); Michael K. Frisby, *Cranston To Retire in 1992*, BOSTON GLOBE, Nov. 9, 1990. As an indication of Senator Cranston's support for CVP reform, note that he co-sponsored S. 484, Senator Bradley's CVP reform bill. *Brimming Reservoirs*, L.A. TIMES, Aug. 30, 1991, at B6.

94. *Senate Hearings on Reclamation Reform Act Amendments*, *supra* note 72, at 2. The time was ripe for such reform. In 1987, the Bureau of Reclamation released a new mission statement, which was followed by a "Strategy" in 1992. See BUREAU OF RECLAMATION, U.S. DEP'T OF THE INTERIOR, RECLAMATION'S STRATEGIC PLAN (1992) [hereinafter RECLAMATION'S STRATEGIC PLAN]. Although the Bureau "support[ed] environmental management and efficient use" in theory,

as long as the agency's most influential practices—subsidies, inflexible water allocations, and a relegation of fish and wildlife to the lowest priority—do not change, any commitment to a new mission remains little more than lip service. S. 484 would allow the Bureau to realize its new mission by addressing these problematic practices and moving forward with more transfers, stronger conservation requirements, and a meaningful restoration program.

Senate Subcomm. CVP Hearings, *supra* note 58, at 345 (statement of Karen Garrison, Senior Project Scientist, Natural Resources Defense Council).

95. S. 484, 102d Cong., 1st Sess. § 6 (1991); *Brimming Reservoirs*, *supra* note 93.

96. S. 484, *supra* note 95, § 4. At this time, the Bureau of Reclamation considered long-term contract renewal for the same quantity of water to be a nondiscretionary action under the 1939 Reclamation Project Act (as amended in 1956). GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 10; see *Renewal of Friant Unit Contracts*, 96 Interior Decisions 289, 300 (1988).

97. *Senate Subcomm. CVP Hearings*, *supra* note 58, at 3. As proposed, S. 484 would have conditioned all sales or deliveries of water on: (1) completion of environmental assessments, and fish and wildlife restoration plans; (2) transfer to fish and wildlife purposes of 10% of the water under the subject contract on the date of enactment or of actual historic use, whichever is greater, plus an additional 1% for every contract year over 10 years of water availability from CVP contractors; (3) provision of firm water supplies of suitable quality to maintain and improve wetlands habitat on certain national wildlife refuges; and (4) development of plans to mitigate damage to Indian tribes. *Id.* at 3-18. As an exception, the Secretary would have been authorized to make available 100,000 acre-feet of CVP water for sale through water service contracts not to exceed 20 years in length to any California water agencies for municipal and industrial purposes. *Id.* at 10. Through environmental surcharges, S. 484 attempted to make the CVP water prices compensate for the environmental debt. Section 7 of the bill would have established a restoration fund and trust to improve the environment and biological diversity of the Central Valley. *Id.* at 18-26.

98. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 10.

In the first few months of 1992, Bradley inserted his CVP reforms into an evolving version of H.R. 429 and, in the process, discarded Miller's broad-based reclamation reform.⁹⁹ Bradley sought to: (1) shorten the CVP water service contracts, (2) permit water sales to water users outside the project, (3) increase water prices, and (4) set aside water for fish and wildlife.¹⁰⁰

Drawing on Senator Bradley's proposals, Senator J. Bennett Johnston (D-La.), chairman of the Senate Energy and Natural Resources Committee, held additional hearings and introduced his own draft plan to reform the CVP.¹⁰¹ Similar to Bradley's, Johnston's proposal would have: (1) limited water service contract lengths to twenty years, (2) allowed water transfers out of the Central Valley, and (3) set aside \$30 million and 1.5 million acre-feet of water per year for wildlife restoration.¹⁰² Additionally, Johnston's proposal would have revised CVP management to require consideration of water conservation and provided increased federal financing.¹⁰³ Both of these proposals contained the seeds of the Reclamation Projects Adjustment Act.

On March 19, 1992, however, the Senate Energy and Natural Resources Committee "bowed to agricultural interests and discarded key provisions . . . that would have altered the operation of the Central Valley Project."¹⁰⁴ In place of Bradley's CVP reforms, the committee included weaker reforms proposed by Senator Seymour (R-Cal.).¹⁰⁵

99. Senator Bradley's approach to federal reclamation reform was similar to his approach to tax reform in the early 1980's. See generally JEFFREY H. BIRNBAUM & ALAN S. MURRAY, *SHOWDOWN AT GUCCI GULCH* 27-31 (1988). Senator Bradley studied and gathered great amounts of information. He consulted with a myriad of experts. As subcommittee chairman, he held numerous hearings on the CVP, water subsidies, and environmental impacts. For instance, Bradley's subcommittee held several hearings in California and Washington D.C. on his proposal (S. 484) to revamp the CVP. *Senate Subcomm. CVP Hearings*, *supra* note 58.

100. In October 1991, Senator Bradley also held another series of hearings on H.R. 429, which had been passed by the House of Representatives. *Miscellaneous Bureau of Reclamation Legislation: Hearings on S. 1825 . . . H.R. 429 (Titles X to XXX) Before the Subcomm. on Water & Power of the Senate Comm. on Energy & Natural Resources*, 102d Cong., 1st Sess. 40-443 (1991) [hereinafter *Senate Hearings on Miscellaneous Reclamation Legislation*]. He did not, however, offer a companion bill to H.R. 429 during 1991.

101. *Congress Seeks To Rechannel Flow*, *supra* note 67, at 528. See *supra* note 95, for an explanation of S. 484.

102. See *Senate Comm. CVP Hearings*, *supra* note 69, at 1; *Congress Seeks To Rechannel Flow*, *supra* note 67, at 532.

103. *Congress Seeks To Rechannel Flow*, *supra* note 67, at 532.

104. *Id.*

105. *Western Water Bill Passes in Senate*, 50 CONG. Q. WKLY. REP. 949, 949 (1992); see S. REP. NO. 267, 102d Cong., 2d Sess. 201-19 (1992) (providing additional views of committee members on amendments).

106. See *Western Water Bill Passes in Senate*, *supra* note 104, at 949. Senator John Seymour was appointed by California Governor Pete Wilson when Wilson left the Senate to become Governor. Like his predecessor, Senator Seymour became a champion of the Cal-

Seymour's version would have kept in place the automatic renewals for long-term contracts for subsidized water service. It would not have set aside water for fish and wildlife.¹⁰⁶ On April 10, the Senate passed this amended version of H.R. 429 by voice vote.¹⁰⁷

E. The House Responds to the Senate's Failure at Reclamation Reform

After seeing his attempts at comprehensive reclamation reform die in the Senate, Representative Miller drafted new legislation to reform the Central Valley Project.¹⁰⁸ Representative Miller's bill, H.R. 5099, included many substantive CVP reforms similar to those proposed by Senators Bradley and Johnston that had failed in the Senate. While Miller's H.R. 429 provisions targeted corporate farms, H.R. 5099 included more environmental preservation measures. The bill would have conditioned all new water contracts or agreements for water supply on the preparation of a fish and wildlife plan, as well as other ecological restoration.¹⁰⁹ It would also have killed the automatic rollover of contract terms and set the maximum contract length at twenty years.¹¹⁰ The bill further would have directed the Secretary of the Interior to take steps to double the anadromous fish population by 2002 and to operate the CVP so as to protect, restore, and enhance fish and wildlife.¹¹¹ Finally, the bill would have authorized the purchase of land and water rights that would improve water conservation.¹¹² The "doubling requirement" and the requirement of a fish and wildlife plan ultimately became part of the Reclamation Projects Adjustment Act.¹¹³

ifornia agricultural interests, who strongly supported Seymour's reelection campaign; four months before election day, agricultural donors and Central Valley residents had already donated \$563,976. Glenn F. Bunting, *Water Bill Cleared for Vote in Senate*, L.A. TIMES, Oct. 7, 1992, at A1 [hereinafter *Water Bill Cleared*]. Seymour lost his seat to Dianne Feinstein on November 3, 1992. Bill Stall & Tracy Wilkinson, *California Gets Its First Woman Senator*, L.A. TIMES, Nov. 4, 1992, at A1.

106. See Central Valley Project Fish and Wildlife Act, 138 CONG. REC. S5596-602 (daily ed. Apr. 10, 1992).

107. *Id.* at S5564. By this point, H.R. 429 had lost seven of its original titles, most of which were attempts to revise reclamation water acreage limitations and eliminate double subsidies on water and surplus crops. The bill had gained other provisions, bringing the total number of titles to 37. Principal among these titles were Senator Hatfield's (R-Or.) Western Water Policy Review initiative, discussed *infra* notes 364-73 and accompanying text, and another title providing for increased funding for recreation around federal reclamation projects.

108. Miller introduced a new bill, H.R. 5099, on May 7, 1992. 138 CONG. REC. H3087 (daily ed. May 7, 1992).

109. H.R. 5099, § 4(a)(1), reprinted in *House Comm. Hearings, supra* note 80, at 2, 6-7.

110. *Id.* § 4(c), reprinted in *House Comm. Hearings, supra* note 80, at 9-10.

111. *Id.* § 6(b)(1), reprinted in *House Comm. Hearings, supra* note 80, at 18-19.

112. *Id.* § 9(c), (j), reprinted in *House Comm. Hearings, supra* note 80, at 39-40, 42.

113. See *infra* note 167 and accompanying text.

While H.R. 5099 followed the model proposed by Senator Johnston, it included several compromises to placate agricultural interests.¹¹⁴ First, H.R. 5099 would have allowed contractors who received water at the subsidized price to sell that water to urban and industrial users at a price determined by the market.¹¹⁵ Second, local irrigation districts were given the power to veto outside water transfers of more than 20% of total district water supply. Third, the bill did not include Johnston's proposed 1.5 million acre-feet of water set-aside for fish and wildlife.

The House Interior Committee approved the compromise bill,¹¹⁶ and on June 18, 1992, the House of Representatives approved H.R. 5099 by voice vote.¹¹⁷ The bill was then attached to H.R. 429 and set for conference with the Senate.¹¹⁸

F. Conference Committee and Floor Approval

On September 15, 1992, when sixty-one Members of the House and Senate met to negotiate and craft the final version of H.R. 429, CVP reform continued to be the center of heated controversy. Representative Miller put forth a CVP reform proposal combining the ideas of his H.R. 5099, Senator Bradley's S. 484, and Senator Johnston's proposal offered during committee markup.¹¹⁹ To address environmental concerns, Representative Miller sought to: (1) make fish and wildlife protection a central goal of the CVP, (2) require environmental impact statements, (3) set aside one million acre-feet of water for environmental and wildlife purposes, and (4) establish a \$50 million environmental restoration fund paid for by water users.¹²⁰ To make the project more economically efficient, he proposed to end the automatic water contract renewals, limit water contracts to twenty years, institute an increasing block rate structure, and auction off 100,000 acre-feet of water to urban suppliers.¹²¹ After the complex negotia-

114. Phillip A. Davis, *Bill Would Break Monopoly on Central Valley Water*, 50 CONG. Q. WKLY. REP. 1533 (1992).

115. *House Votes Sweeping Reform*, *supra* note 70, at 1789. The potential windfall created by this provision was reduced by Representative Sam Gejdenson's (D-Conn.) amendment, which created a three-tiered pricing structure. Under the increasing block rate structure instituted by the amendment, the first 60% of farmers' water was fully subsidized, the next 20% was priced halfway between the subsidized cost and full cost, and the last 20% was priced at full cost. *Id.*

116. See generally H.R. REP. NO. 576, 102d Cong., 2d Sess., pt. 1 (1992), *microformed on CIS No. 93-H443-21* (Congressional Info. Serv.).

117. 138 CONG. REC. H4918, H4977 (daily ed. June 18, 1992).

118. *Id.* at H4937.

119. See *Water Reform Stirs Conference*, *supra* note 64, at 2804. The proposal was strongly influenced by Senator Bradley or his staff, but Bradley's name "was hurriedly blacked out from the cover of the 40-page proposal." *Id.*

120. *Id.*

121. *Id.*

tions of this session, the conference committee never formally convened again.

Ultimately, most of Miller's proposal survived the conference committee. Senators Bradley and Johnston negotiated a compromise with agricultural interests that gave water districts veto power over water transfers exceeding 20% of a district's total allotment. The compromise measures also decreased the amount of water set-asides to 800,000 acre-feet and limited the amount of the restoration fund to be collected from water user surcharges.¹²²

Despite its passage by the conference committee, opposition arose to stop the bill. California Governor Pete Wilson and the California agricultural industry argued that the reforms would cripple California's economy.¹²³ Other senators and representatives, however, supported the bill because their constituents stood to gain from the other water projects in the omnibus bill.¹²⁴ The House passed H.R. 429 on October 5, 1992.¹²⁵ In a last ditch effort, Senator Seymour joined Senator Alfonse D'Amato (R-N.Y.) in a filibuster of an unrelated tax bill to scuttle the omnibus bill, but eventually yielded when Majority Leader George Mitchell (D-Me.) vowed to keep the Senate in session until it voted on the omnibus water bill.¹²⁶ Finally, the Senate passed the Reclamation Projects Authorization and Adjustment Act on October 8, 1992 by a vote of 83-8.¹²⁷

G. 1992 Reclamation Projects Authorization and Adjustment Act

Reaching his desk just weeks before election day, the bill presented President Bush with an extremely difficult choice during his bid for reelection. Signing the bill would anger the many farming interests that were vehemently opposed to the CVP reforms.¹²⁸ A veto

122. See Phillip A. Davis, *Water Bill Heads to Bush's Desk Over Farm Interests' Protests*, 50 CONG. Q. WKLY. REP. 3150, 3152 (1992) [hereinafter *Water Bill Heads to Bush's Desk*].

123. See *id.*; 138 CONG. REC. H11,499 (daily ed. Oct. 5, 1992) (House floor debate on H.R. 429); 138 CONG. REC. H11,493-94, H11,497 (daily ed. Oct. 5, 1992) (statements of Reps. Dooley, Lehman, and Condit regarding H.R. 429).

124. *Water Bill Heads to Bush's Desk*, *supra* note 122, at 3152. Congressman Richard Lehman of California noted: "Time and time again over that period of time, I have been told, 'You're right Rick, we would like to help you, Rick, but we got a little project in the bill.'" *Id.*

125. A motion to recommit H.R. 429 to conference committee failed, 138 CONG. REC. H517 (daily ed. Oct. 5, 1992), and the bill was signed after *sine die* adjournment, 138 CONG. REC. H12,610 (daily ed. Oct. 29, 1992).

126. *Water Bill Heads to Bush's Desk*, *supra* note 122, at 3152.

127. 138 CONG. REC. S17,658, S17,658 (daily ed. Oct. 10, 1992).

128. For more discussion of the agricultural opposition to the bill, see James Bornemeier, *House Votes Overhaul of Water Rights*, L.A. TIMES, June 19, 1992, at A3; *Water Bill Cleared*, *supra* note 105, at A1; Ellen Gernerman, *Grand Canyon Bill Passes Senate*, States News Service, Oct. 8, 1992, available in LEXIS, Nexis Library, News Service

would anger the beneficiaries of the other water projects destined for sixteen other western states that seemed critical to Bush's reelection bid. Both the Secretary of the Interior and the Secretary of Agriculture advised the President to veto the bill.¹²⁹ Governor Pete Wilson, President Bush's California reelection campaign chairman, met the President on the campaign trail and appealed to him to veto the bill in the interests of California's long-term water needs and its agricultural industry.¹³⁰ Ultimately, however, election expediency prevailed and President Bush signed the Reclamation Projects Authorization and Adjustment Act on October 30, 1992.¹³¹

In its final form, the Reclamation Projects Adjustment Act is a good compromise, built from widely varying proposals. During the legislative process, initial attempts to make acreage limits more stringent were discarded. Rather, comprehensive reclamation reform yielded to a project-specific approach.¹³² The Act contains a certain amount of pork; however, its treatment of the CVP, the Central Utah Project, and the Glen Canyon Dam represents a dramatic shift in federal reclamation policy. Congress passed significant environmental protection provisions, enacted other measures to promote economic efficiency, and gave the states greater control over western water.

The next three parts of this comment analyze the Act and offer three rubrics of reclamation reform: (1) the inclusion of environmental protection into the planning, operation, and modification of federal water projects; (2) the use of market mechanisms to promote conservation and a more economically efficient allocation of federal water; and (3) an increased federal deference to state water use policies.

II

ENVIRONMENTAL PROTECTION IN RECLAMATION PROJECT REFORM

Historically, environmental issues such as fish and wildlife conservation have not been of primary concern to the federal water development agencies, including the Bureau of Reclamation. The leadership and staff of the Bureau believed that their primary, if not sole, mission was to deliver plentiful amounts of water to project beneficiaries with-

File; Elliot Diringer, *News Analysis: Veto or No, State Must Rethink Water Use*, S.F. CHRON., Oct. 10, 1992, at A14; Alex Barnum, *Winner, Losers in Water Reform*, S.F. CHRON., Oct. 10, 1992, at B1; *Water Bill Heads to Bush's Desk*, *supra* note 122, at 3152.

129. Gamerman, *supra* note 128.

130. Glenn F. Bunting, *Bush OKs Water Policy Overhaul*, L.A. TIMES, Oct. 31, 1992, at A1.

131. Pub. L. No. 102-575, 106 Stat. 4600 (1992); see *The Water Bill*, WASH. POST, Nov. 3, 1992, at A18 (noting Bush's unwillingness to veto accompanying popular measures).

132. See *supra* note 93 and accompanying text.

out regard to economic and environmental costs.¹³³ This myopic approach was evident in the Bureau's management of reclamation projects and drew much criticism.¹³⁴

Congress attempted to expand federal decisionmaking to include consideration of environmental concerns by enacting the National Environmental Policy Act in 1969.¹³⁵ NEPA's policy goal is "to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."¹³⁶ To accomplish this goal, NEPA requires federal agencies to complete assessments and issue environmental impact statements (EIS's), before taking any "major" actions.¹³⁷ This procedural requirement is meant to force federal agencies to consider the environmental consequences of their decisions.¹³⁸

133. For a discussion of the symbiotic relationship that often existed between agencies and their constituents, see Paul Culhane, *NEPA's Impacts on Federal Agencies, Anticipated and Unanticipated*, 20 ENVTL. L. 681, 684-85 (1990). For evidence of this effect in the Bureau of Reclamation, see generally DAWDY, *supra* note 10, *passim*. For a discussion of the Bureau's decisionmaking regarding the CVP and Glen Canyon Dam, see *infra* part II.A.

134. For example, in 1974, the GAO issued a report criticizing the Bureau of Reclamation for its ongoing disregard for the environment. U.S. GEN. ACCOUNTING OFFICE, IMPROVED FEDERAL EFFORTS NEEDED TO EQUALLY CONSIDER WILDLIFE CONSERVATION WITH OTHER FEATURES OF FEDERAL WATER RESOURCE DEVELOPMENTS (1974).

135. Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347 (1988 & Supp. V 1993)); see Culhane, *supra* note 133, at 684-85 (citing LYNTON K. CALDWELL, SCIENCE AND THE NATIONAL ENVIRONMENTAL POLICY ACT 75-77 (1982)); R. LIROFF, A NATIONAL POLICY FOR THE ENVIRONMENT 78-82 (1976); Robert V. Bartlett, *Rationality and the Logic of the National Environmental Policy Act*, 8 ENVTL. PROF. 105-11 (1986).

136. 42 U.S.C. § 4331(a) (1988).

137. *Id.* § 4332(2)(C) (1988).

138. Senator Henry Jackson (D-Wash.), NEPA's chief sponsor, stated on the Senate floor:

Subsection 102(b) [the EIS process] requires the development of procedures designed to [e]nsure that all relevant environmental values and amenities are considered in the calculus of project development and decision making. Subsection 102(c) establishes a procedure designed to [e]nsure that . . . the impact has in fact been considered, that any adverse affects which cannot be avoided are justified by some other stated consideration of national policy, that short-term uses are consistent with long-term productivity, and that any irreversible and irretrievable commitments of resources are warranted.

Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1113 n.9 (D.C. Cir. 1971) (citing 115 CONG. REC. 29,055 (1969)).

Preparation and review of environmental impact statements should "provide decision-makers with an environmental disclosure sufficiently detailed to aid in the substantive decision" and also provide information to other officials, Congress, and the public. *Columbia Basin Land Protection Ass'n v. Schlesinger*, 643 F.2d 585, 592 (9th Cir. 1981) (quoting *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974)). NEPA's administrative requirements are based on the belief that if decisionmakers and the public are given sufficient information and scientific analysis, agency decisions will be less harmful to the environment. See Michael C. Blumm, *The National Environmental Policy Act at Twenty: A Preface*, 20 ENVTL. L. 447, 449 (1990).

NEPA, however, was not an effective means of preventing the Bureau from making environmentally damaging decisions. NEPA's impact has been limited because the federal courts have scrutinized only agency compliance with the statute's procedural mandates, generally affording judicial deference to administrative decisionmaking.¹³⁹ Where other environmental laws are inapplicable, such limited judicial review entrusts environmental policy to the conscience of each agency.¹⁴⁰ One important lesson to be learned from NEPA's in-court record is that substantive environmental protection policies cannot be injected into the mission of each agency by an over-arching environmental policy act.¹⁴¹ Instead, Congress must direct specific mandates at agencies if it wishes to require real environmental protection.¹⁴²

Even without congressional mandates, however, the Bureau of Reclamation began to reconsider its mission. In 1987, the Bureau published an assessment of its future role;¹⁴³ soon thereafter, it issued an implementation plan.¹⁴⁴ Furthermore, in 1992, the Bureau announced an "historic" shift in policy to recognize "changing societal

139. In a key decision, Justice Rehnquist wrote for the majority: "NEPA does set forth substantive goals for the Nation, but its mandate to agencies is essentially procedural." *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978). As a testament to judicial deference, note the U.S. Supreme Court's perfect 12-0 record of ruling in favor of the government since 1973: "The Supreme Court has never ruled in favor of preparation of an environmental impact statement in any of its NEPA cases. The Court has never ruled in favor of those asserting a NEPA claim on the merits." Nicholas C. Yost, *NEPA's Promise—Partially Fulfilled*, 20 ENVTL. L. 533, 539 (1990) (footnote omitted); see also *id.* at 541-42. See generally Blumm, *supra* note 138.

140. See Yost, *supra* note 139, at 540-49.

141. See *id.* This lesson is bolstered by the even more mediocre history of the Fish and Wildlife Coordination Act of 1946, ch. 965, 60 Stat. 1080 (codified as amended at 16 U.S.C. §§ 661-665, 666-666c (1988)). While this legislation attempted to require "equal consideration" for wildlife conservation and provide for a consultation process with fish and wildlife agencies, these "congressional exhortations had little effect on the federal construction agencies— . . . Bureau of Reclamation—which continued to shortchange fish and wildlife resources in the planning and construction of water resource developments." Oliver A. Houck, *Judicial Review Under the Fish and Wildlife Coordination Act: A Plaintiff's Guide to Litigation*, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 50,043, 50,043 (July 1981); see also DAWDY, *supra* note 10, at 158.

142. For a discussion of specific mandates in the Central Valley Project Improvement Act, see *infra* notes 167-72 and accompanying text.

143. BUREAU OF RECLAMATION, U.S. DEP'T OF THE INTERIOR, ASSESSMENT '87 . . . A NEW DIRECTION FOR THE BUREAU OF RECLAMATION (1987). The report identified a shift from development goals to conservation-related goals. "The Bureau's primary role as the developer of large federally financed agricultural projects is drawing to a close . . ." *Id.* at 1. "The goal has been attained—the arid West essentially has been reclaimed . . ." *Id.* at 2. "Opportunities to address water quality and environmental matters should be included in the reshaping of the Bureau from a construction orientation to a resource management orientation." *Id.*

144. BUREAU OF RECLAMATION, U.S. DEP'T OF THE INTERIOR, IMPLEMENTATION PLAN . . . A NEW DIRECTION FOR THE BUREAU OF RECLAMATION (approx. 1988).

values" in a new strategic plan.¹⁴⁵ The 1992 plan listed a set of guiding principles, goals, and broad strategies, including environmental protection, to be supplemented by more detailed implementation plans.¹⁴⁶

Congress did not wait for the Bureau of Reclamation to redefine itself. In October 1992, Congress amended portions of the Bureau's historical mission when it enacted the Reclamation Projects Adjustment Act.¹⁴⁷ Lacking the political consensus necessary to pass broad-based changes,¹⁴⁸ reform advocates in Congress concentrated their efforts on a few reclamation projects' most egregious environmental problems.¹⁴⁹ The Act also conditions the completion of future projects on the maintenance of environmental integrity and mitigation.¹⁵⁰ Many of the Act's provisions require that environmental protection be considered during the Bureau's decisionmaking process.¹⁵¹ Senator Bradley remarked: "[T]his bill in virtually every title marks real progress toward bringing the Bureau of Reclamation's program into conformance with modern notions of environmental and water use policy."¹⁵²

The following two subsections discuss significant examples of environmental reforms required of the Bureau. The first describes reforms applied to two existing projects: the CVP and Glen Canyon Dam. The second discusses reforms to be applied to the unfinished Central Utah Project.

A. Revising Current Operation of Existing Federal Reclamation Projects

1. Central Valley Project, California

During the last sixty years, the Bureau of Reclamation's efforts to harness the Sacramento and San Joaquin rivers' waters have caused

145. RECLAMATION'S STRATEGIC PLAN, *supra* note 94; see Katherine Shaver, *Federal Water Policy Shifts New Emphasis to Environment, Conservation*, States News Service, June 17, 1992, available in LEXIS, Nexis Library, News File. For an overview of the plan, see *Agent of Change: The Bureau of Reclamation's New Strategic Plan*, WATER STRATEGIST, July 1992, at 1 [hereinafter *Agent of Change*].

146. RECLAMATION'S STRATEGIC PLAN, *supra* note 94. The plan addresses five categories of environmental concerns: Fish and Wildlife Resources, Water Quality, Instream Flows, Wetlands and Riparian Habitat, and Hazardous Waste. *Id.* at 10-15. In addition, it delineates a number of goals, which include pursuing partnerships with governmental and private entities, developing fiscally and environmentally responsible programs, and enhancing the quality of life. *Agent of Change*, *supra* note 145, at 1.

147. 106 Stat. 4600.

148. See *supra* notes 90-94 and accompanying text (noting Senator Bradley's assessment of reclamation reform).

149. See *infra* part II.A.

150. See *infra* part II.B.

151. See *infra* part II.A.2.

152. 138 CONG. REC. S17,679 (daily ed. Oct. 8, 1992) (statement of Sen. Bradley).

extensive damage to the Central Valley's once bountiful fish and wildlife populations,¹⁵³ their habitat, wetlands, and water quality.¹⁵⁴ To remedy some of this destruction, title XXXIV of the Act, also known as the Central Valley Project Improvement Act,¹⁵⁵ alters the environmental management of the Central Valley Project in five significant ways.

First, the CVPIA gives environmental and wildlife protection, mitigation, and restoration a higher priority than power generation, ranking those environmental purposes with irrigation and domestic uses.¹⁵⁶ Fish and wildlife "enhancement," as separate from "mitigation, protection, and restoration," is placed on par with power production.¹⁵⁷ These changes will have a major effect on the amount of water allocated to fish and wildlife protection.¹⁵⁸ During Senate hear-

153. See *supra* part I.B. "[In 1850] the Great Central Valley . . . was an American Serengeti . . . The wildlife, even after a century and a half of Spanish settlement . . . was unbelievable: millions of wintering ducks, geese and cranes, at least a million antelope and tule elk, thousands of grizzly bears." REISNER, *supra* note 49, at 334, discussed in Dunning, *supra* note 45, at 944-46.

154. Note, for example, that 93% of the Central Valley's original wetlands were allowed to dry up when water was diverted for irrigation. REISNER, *supra* note 49, at 467. Pesticide runoff and selenium have poisoned migratory birds at the Kesterson National Wildlife Refuge. *Id.* at 466-68; see also DAWDY, *supra* note 10, at 113-27. After runs of over 100,000 fish in the 1960's, only 191 Chinook Salmon returned to the San Joaquin River in 1991. Glenn F. Bunting, *Bush To Boost Water Flow to State's Farmers*, L.A. TIMES, Mar. 5, 1992, at A1, A22 [hereinafter *Bush To Boost Water*].

155. 106 Stat. at 4706-31.

156. § 3406(a), 106 Stat. at 4714. Under the preexisting priority scheme, project priorities were: "[F]irst, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and, third, for power." *Senate Subcomm. CVP Hearings, supra* note 58, at 426 (citing Act of Aug. 26, 1937, ch. 832, § 2, 50 Stat. 844, 850). In a 1977 opinion, the Solicitor of the Department of the Interior noted that, while Congress furnished water supplies for waterfowl management, Congress also made clear that "deliveries of water from the Central Valley [P]roject for waterfowl purposes [are] to be subordinate to the priority of deliveries of water for agricultural purposes." *Id.* at 440-41 (citing 16 U.S.C. § 695d (1988)). The Interior Solicitor concluded: "[W]ithout further Congressional legislation, the Bureau of Reclamation may utilize CVP water for fish and wildlife purposes only in those instances where such use has been authorized by Congress . . . and where such use would not otherwise infringe upon presently authorized functions." *Id.* at 444. The CVPIA altered these priorities, placing fish and wildlife protection and restoration on equal footing with the other second-level demands for CVP water. § 3406(a), 106 Stat. at 4714.

157. Dunning, *supra* note 45, at 961. Moreover, the Act provides for firm water supplies for wildlife refuges. § 3406(d), 106 Stat. at 4722. In contrast, contract water for other uses is reallocated each year. *Westlands Water Dist. v. United States*, No. CV-F-93-5327-OWW, 1994 U.S. Dist. LEXIS 6276, at *23 (C.D. Cal. Apr. 28, 1994). "[S]everal factors are primary considerations for all water allocation decisions, whether for agricultural, municipal or for fish and wildlife purposes: 1) hydrologic conditions; 2) compliance with applicable Delta water quality standards; and 3) the Bureau's obligations under the ESA [Endangered Species Act] to avoid jeopardy to the winter-run Chinook salmon and Delta smelt." *Id.*

158. See generally Dunning, *supra* note 45, at 961. Professor Dunning notes that, under the regime before the Act, 90% of CVP water was sold for irrigation purposes. *Id.* at 961

ings on the CVPIA, the Bureau of Reclamation was asked to identify all limits on its authority to operate the CVP for fish and wildlife.¹⁵⁹ The Bureau responded that, while the "Secretary is authorized to provide water for fish and wildlife purposes," those deliveries "are subordinate to the purposes established in the earlier CVP authorizations."¹⁶⁰ The CVPIA affirmatively alters this water allocation priority scheme to provide more water for the environment of the Central Valley.

Second, title XXXIV requires that the operation of the CVP comply with all federal and state environmental laws, including NEPA and the Endangered Species Act.¹⁶¹ Application of some environmental laws to federal water projects such as the CVP previously had been in dispute. For example, the Department of the Interior had believed that contract renewals for the long-term at the same quantity of water were nondiscretionary and that, therefore, environmental impact statements were not required prior to contract renewal.¹⁶² In contrast, the CVPIA explicitly requires the Department of the Interior to complete a NEPA programmatic environmental impact statement addressing all of the effects of CVP provisions and actions prior to granting any long-term contracts.¹⁶³ Each individual water contract renewal is additionally subject to "appropriate environmental re-

n.68 (citing BUREAU OF RECLAMATION, U.S. DEP'T OF THE INTERIOR, BUREAU OF RECLAMATION AND THE CENTRAL VALLEY PROJECT 3 (1991)). Irrigators received most of the CVP water because irrigation had priority over other water uses. *Id.*

159. *Senate Subcomm. CVP Hearings, supra* note 58, at 426.

160. *Id.* at 427. Several Department of the Interior Solicitor's opinions, collected in the "Hearing Appendix 1," illustrate the federal government's adherence to statutory priorities that subordinate fish and wildlife to other water allocations. *Id.* at 429-47.

161. § 3409, 106 Stat. at 4730 (requiring analysis under NEPA, 42 U.S.C. §§ 4321-4370a (1988 & Supp. III 1991)); § 3406(b), 106 Stat. at 4714 (stating that "the Secretary . . . shall operate the [CVP] to meet all obligations under State and Federal law, including but not limited to the Federal Endangered Species Act [principally codified at 16 U.S.C. §§ 1531-1544 (1988)]"). See *infra* note 336 and accompanying text, discussing *United States v. State Water Resources Control Bd.*, 227 Cal. Rptr. 161 (1986), which conditions all new water contracts on the completion of a Delta water quality review pursuant to state law.

162. Renewal of Friant Unit Contracts, *supra* note 96, at 300; see GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 26-28 ("Interior's Solicitor determined in the 1988 opinion . . . that since the Secretary has no discretion over renewing long-term contracts for the same quantities of water, an impact statement need not be prepared for their renewal."). Accordingly, Interior renewed the first long-term contract in 1989 without preparing an EIS. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 26. That same year, however, the Council on Environmental Quality recommended that the Bureau either prepare a programmatic EIS addressing all CVP contract renewals or prepare separate environmental impact statements for each unit. *Id.* at 27. While the Department of the Interior stated that it would comply with NEPA, it maintained that contract provisions would not be changed as a result of the environmental impact statements. *Id.* at 28.

163. § 3409, 106 Stat. at 4730.

view.”¹⁶⁴ The CVPIA also requires that each contracting district or agency comply with “State and Federal water quality standards applicable to surface and subsurface agricultural drainage discharges generated within its boundaries.”¹⁶⁵

Third, the CVPIA prohibits renewing or issuing new short-term or long-term water supply contracts until the Bureau satisfies the following conditions for the benefit of fish and wildlife:¹⁶⁶

-Develop and implement a program making “all reasonable efforts” to double anadromous fish population levels by the year 2002, and to make such levels naturally sustainable;¹⁶⁷

-Dedicate a minimum of 800,000 acre-feet of CVP water to be managed for fish, wildlife, water quality, and habitat restoration purposes pursuant to conditions of the U.S. Fish and Wildlife Service;¹⁶⁸

-Develop and manage a program to acquire additional water supply to be dedicated to fish and wildlife purposes;¹⁶⁹

164. § 3404(c)(1), 106 Stat. at 4709. This rather vague requirement came out of the conference committee. While it is debatable whether this language triggers NEPA, one affirmative indication came from complaints by Senator Seymour, who opposed any environmental review: “[The CVPIA] says that before you can get a 25-year contract, you must have a complete environmental impact statement.” 138 CONG. REC. S17,670 (daily ed. Oct. 8, 1992).

165. § 3405(c), 106 Stat. at 4712. This provision is buttressed by

[A] number of additional references to [California’s] water rights law, including a provision that nothing in the [Act] is intended to affect the State’s authority to condition water rights permits for the CVP and a provision requiring modification of permits and licenses in a manner consistent with State law prior to the reallocation of water from any purpose or place of use specified in a CVP permit or license.

Strierner, *supra* note 64, at 8 (referring to § 3411, 106 Stat. at 4731).

166. § 3404, 106 Stat. at 4708-09.

167. § 3406(b)(1), 106 Stat. at 4714-15.

The Act requires the Secretary to develop within three years and implement a program which makes all reasonable efforts to ensure that by the year 2002 (the 100th anniversary of the Federal Reclamation Law), natural production of anadromous fish in CVP rivers will be sustainable, at levels not less than twice the average levels attained during the 1967-1991 levels.

Strierner, *supra* note 64, at 11. Interestingly, the Secretary’s plan will be under the Bureau’s jurisdiction and must accommodate the U.S. Fish and Wildlife Service’s recovery plans for the Sacramento winter-run Chinook Salmon and other fish species such as the Delta Smelt. See *supra* notes 75, 154, 157, and *infra* note 407, and accompanying text.

168. § 3406(b)(2), 106 Stat. at 4715-16. During debate over the bill, Senator Wallop contended that this water would not be a “dedicated permanent supply, but a temporary commitment which will be released to other beneficial uses as soon as it is no longer needed.” 138 CONG. REC. S17,660 (daily ed. Oct. 8, 1992) (statement of Sen. Wallop). The actual language of the CVPIA does not include the word “temporary.” The 800,000-plus acre-feet may be crucial to satisfy habitat needs pursuant to the Endangered Species Act. Strierner, *supra* note 64, at 11. The CVPIA sets aside an additional 340,000 acre-feet of water from the Trinity River diversion for fisheries purposes to meet the government’s trust obligations to the Hoopa Valley Tribe. § 3406(b)(23), 106 Stat. at 4720.

169. § 3406(b)(3), 106 Stat. at 4716. Congress expressly instructed the Secretary to utilize: “[I]mprovements in or modifications of the operations of the project; water banking; conservation; transfers; conjunctive use; and temporary and permanent land fallowing,

-Develop and implement programs to mitigate the detrimental effects to wildlife and fisheries at particular facilities and locations in the CVP;¹⁷⁰

-Develop a comprehensive plan for restoration of fish, wildlife, and habitat in the San Joaquin and Stanislaus River systems;¹⁷¹ and

-Establish firm water supplies to maintain and improve the wetland habitat in the National Wildlife Refuges, state wildlife management areas, and in the Central Valley's Grassland Resources Conservation District.¹⁷²

By requiring the foregoing programs and plans, Congress sought to force the Bureau to chart the course toward environmental protection before renewing or issuing new water supply contracts. Environmentalists had fought hard for the doubling requirement.¹⁷³ Indeed, a primary purpose for the 800,000 acre-feet set-asides was to increase fish populations. This mandate was a compromise between Senator Johnston's proposed 1.5 million acre-feet set-aside¹⁷⁴ and Senator Seymour's proposal not to set aside any water.¹⁷⁵ Representative Miller's H.R. 5099, proposed in response to Senator Seymour's bill, had included the doubling requirement, conditioned transfers on the preparation of a fish and wildlife plan, and provided for 1.5 million acre-feet of water to be set aside.¹⁷⁶ As a caveat, most of the water set-asides in the CVPIA are subject to a possible 25% reduction during natural water shortages, such as droughts.¹⁷⁷ The practical effect of dedicating this water will be to stop further allocation to new users of CVP water until the needs of fish, wildlife, and habitat are met.¹⁷⁸

The fourth change in the CVP mandated by title XXXIV requires the Department of the Interior to investigate issues of environmental concern and make appropriate recommendations to Congress. Within

including purchase, lease, and option of water, water rights, and associated agricultural land." *Id.*

170. § 3406(b)(4)-(22), 106 Stat. at 4717-20. Such measures include: installing fish screens, fish passage and recovery facilities, and structural temperature control devices; meeting flow standards and using short pulses of increased water flows to increase survival of anadromous fish; rehabilitating and expanding U.S. Fish and Wildlife Service fish hatcheries; restoring and replenishing spawning gravel lost during construction and operation of the CVP; and providing farmers with incentives to participate in a winter field flooding program to provide habitat for water fowl. *Id.*

171. § 3406(c), 106 Stat. at 4721-22.

172. § 3406(d), 106 Stat. at 4722.

173. See *infra* note 405 and accompanying text.

174. See *supra* note 102 and accompanying text.

175. See *supra* note 106 and accompanying text.

176. See *supra* notes 109-11 and accompanying text; H.R. 5099, § 6(b)(2), reprinted in *House Comm. Hearings, supra* note 80, at 21 (setting aside 1.5 million acre-feet of water).

177. § 3406(b)(2)(C), (d)(4), 106 Stat. at 4716, 4723.

178. As discussed *infra* notes 265-67 and accompanying text, the CVPIA revokes the Bureau's automatic contract renewal policy. Nevertheless, allocations to fish and wildlife are more likely to affect new users.

five years, the Secretary must report on temperature control measures in rivers and dams for anadromous fish, opportunities for additional hatchery production, measures to eliminate migration barriers, and other methods to increase the success of anadromous fish populations.¹⁷⁹ Within two years, the Secretary shall report on the effects on anadromous fish populations and the various affected parties who “now or in the past had significant economic, social or cultural association with those fishery resources.”¹⁸⁰ In addition to the various research and reporting requirements, the Department of the Interior, in cooperation with the State of California, must develop ecosystem operations models to aid in CVP management.¹⁸¹

Fifth, the CVPIA establishes a \$50 million restoration fund to pay for the required environmental programs, projects, and studies.¹⁸² The Central Valley Project Restoration Fund will be financed by surcharges on water supplied from the CVP.¹⁸³ Contractors will pay up to an additional \$6 per acre-foot for agricultural uses, and municipal and industrial users will pay up to an additional \$12 per acre-foot.¹⁸⁴ Agricultural users’ payments may be reduced based on their probable ability to pay.¹⁸⁵ Other revenues will come from surcharges on water users of the Friant Division, which has been a particularly problematic CVP division,¹⁸⁶ and from those who fail to renew their water contracts in a timely fashion.¹⁸⁷ The CVPIA guarantees that not less than 67% of the funds will be appropriated for fish and wildlife “habitat restoration, improvement and acquisition.”¹⁸⁸ Given the extensive amount of restoration and rehabilitation required as a result of the CVP, however, it is doubtful that the restoration fund will be sufficient.

Other potential environmental provisions were lost to political compromise.¹⁸⁹ The final version of the CVPIA omitted citizen

179. § 3406(e)(1)-(6), 106 Stat. at 4724.

180. § 3406(f), 106 Stat. at 4724-25.

181. § 3406(g)(1)-(9), 106 Stat. at 4725.

182. § 3407, 106 Stat. at 4726-28. Note that many of the environmental measures require state cost-sharing. See *infra* part IV.C.

183. Under § 3407(a), “donations” to the fund will be provided from revenues collected under §§ 3404(c)(3), 3405(f), 3406(c)(1), and 3407(d). § 3407(a), 106 Stat. at 4726.

184. § 3407(d)(2)(A), 106 Stat. at 4727-28. States or agencies not previously contracting for CVP water could pay a surcharge of up to \$25 per acre-foot. *Id.*

185. *Id.*

186. See § 3406(c)(1), 106 Stat. at 4722.

187. § 3404(c), 106 Stat. at 4709.

188. § 3407(a), 106 Stat. at 4726. To this end, § 3408(h) authorizes the Secretary to buy agricultural land and associated water rights for land retirement. § 3408(h), 106 Stat. at 4729.

189. Senator Wallop catalogued pro-agriculture amendments and revisions in a letter to Governor Wilson. 138 CONG. REC. S17,658-59 (daily ed. Oct. 8, 1992); see also *supra* note 168 (discussing whether the 800,000 acre-feet is a reliable supply).

suits.¹⁹⁰ Congress also delayed decision about releases from Friant Dam until the completion of further studies.¹⁹¹ Nevertheless, the five sets of improvements outlined above will undoubtedly have some positive effect on the environment in California's Central Valley. In the future, these sorts of reforms should be applied to projects in other geographical areas. For instance, the Bureau may exercise administrative prerogative to require compliance with the National Environmental Policy Act in other projects to maintain uniformity among water contracting regimes.

2. *Glen Canyon Dam, Grand Canyon, Arizona*

Like the Central Valley Project Improvement Act, the Grand Canyon Protection Act (GCPA)¹⁹² responds to environmental problems caused by a large Bureau of Reclamation project. In 1956, Congress authorized the construction of Glen Canyon Dam across the Colorado River in Arizona¹⁹³ to enable the states of the Upper Colorado River region to utilize their apportioned water while still meeting water obligations to Arizona, Nevada, and California.¹⁹⁴ After the Bureau of Reclamation completed the dam in 1963, it took seventeen years to fill the reservoir.¹⁹⁵ During the construction and early operation of Glen Canyon Dam, Congress ignored the dam's downstream environmental effects.¹⁹⁶ The Bureau of Reclamation did not begin to evaluate the dam's detrimental environmental effects until its actions were legally challenged.¹⁹⁷

The Bureau postponed an EIS for seven years while conducting the Glen Canyon Environmental Studies (GCES).¹⁹⁸ The GCES con-

190. 138 CONG. REC. S17,660 (daily ed. Oct. 8, 1992) (statement of Sen. Wallop).

191. § 3406(c)(1), 106 Stat. at 4721-22 (requiring that any releases from Friant Dam be congressionally approved).

192. Grand Canyon Protection Act of 1992, tit. XVIII, 106 Stat. at 4669-73. See generally Michael Connor, *Extracting the Monkey Wrench from Glen Canyon Dam: The Grand Canyon Protection Act—An Attempt at Balance*, 15 PUB. LAND L. REV. 135 (1994).

193. Colorado River Storage Project Act of 1956, Pub. L. No. 84-485, 70 Stat. 105, 106 (codified as amended at 43 U.S.C. § 620o (1988)).

194. H.R. REP. NO. 114, *supra* note 88, at 86.

195. *Id.*

196. *Id.* at 88; see Connor, *supra* note 192, at 14 and accompanying citations (listing the negative environmental impacts of the dam).

197. See, e.g., *Grand Canyon Dorries, Inc. v. Walker*, 500 F.2d 588 (10th Cir. 1974); *Badoni v. Higginson*, 638 F.2d 172 (10th Cir. 1980); *Environmental Defense Fund v. Higginson*, 655 F.2d 1244 (D.C. Cir. 1981), cited in H.R. REP. NO. 114, *supra* note 88, at 88-89.

198. As a result of the cases and public pressure, the Bureau consented to review the environmental consequences of its operation of the Glen Canyon Dam. H.R. REP. NO. 114, *supra* note 88, at 89. In 1982, the Bureau began environmental studies to determine whether the dam was indeed having an adverse effect on the Grand Canyon. *Id.* Six years later, after finding that dam operations were damaging the canyon environment, the Bureau began more studies aimed at the economic impacts of dam operation. *Id.* In 1989, the Bureau finally decided to prepare an EIS. *Id.*

firmed that the highly variable water releases were having detrimental effects on the environment, aquatic species, and recreational resources of the Grand Canyon.¹⁹⁹ Even after the July 1989 announcement that an EIS would be prepared, the Bureau continued to stall, reflecting a general reluctance to alter the dam's power-generating operations.²⁰⁰ The Bureau did establish interim flow criteria in order to mitigate the environmental damage that would occur prior to the completion of the EIS.²⁰¹ However, these criteria provided controversial exceptions to the flow requirements that were designed to protect the Grand Canyon.²⁰² Commissioner of Reclamation Daniel Beard released the Final EIS for the Glen Canyon Dam on March 24, 1995.²⁰³

As with the CVP, Congress was not willing to wait for the Bureau to take the initiative to alter its practices. The Grand Canyon Protection Act of 1992 demonstrates Congress' intent to: (1) take "immediate and lasting steps to protect the resources of the Grand Canyon," (2) address the "institutional reluctance by the Bureau," and (3) "eliminate[] the confusion and uncertain[ty] . . . regarding the statutory authorities that govern operation of the power generation facilities at the dam."²⁰⁴ Specifically, section 1802 of the Act mandates that the Secretary of the Interior operate the Glen Canyon Dam "in such a manner as to [protect], mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established, including . . . natural and

199. *Id.* at 87-88. The Glen Canyon Environmental Studies (GCES) revealed that "flood releases" (releases greater than power plant capacity) have a devastating scouring effect on the Grand Canyon's riparian vegetation and beaches. The GCES estimated flood releases have a 20-year frequency. *Id.* In contrast, "fluctuating releases" (releases made in the operation of the dam to produce peaking power) have less effect on the environment, yet still have a substantial effect on aquatic and recreational resources. *Id.* Fluctuating releases can cause the river level to vary by up to 13 feet within a few hours. *Id.* at 88. See generally Bo Shelby et al., *Effects of Streamflows on River Trips on the Colorado River in Grand Canyon, Arizona*, 3 RIVERS 191 (1991).

200. See Ronald Harris, *Political Science in the Grand Canyon; Glen Canyon Dam Turned into a Cash Register; In Another Sense, a Toilet*, ARIZ. REPUBLIC, Oct. 9, 1994, at F1.

201. See *Senate Hearings on Miscellaneous Reclamation Legislation*, *supra* note 99, at 345-50 (statement of Dennis B. Underwood, Commissioner, Bureau of Reclamation).

202. See *id.* at 349-55.

203. Congressman Jim Hansen, *Final Glen Canyon Dam Study*, Federal Document Clearing House, Inc., Congressional Press Releases, Mar. 24, 1995, available in LEXIS, Nexis Library, News File.

ED. NOTE: The *Ecology Law Quarterly* recognizes that Commissioner Beard resigned by letter dated June 12, 1995. His resignation is effective September 1, 1995. Our publication schedule prevented us from incorporating this new information into the comment.

204. H.R. REP. NO. 114, *supra* note 88, at 85-86. For a more detailed analysis of the Grand Canyon Protection Act's provisions and legislative history, see Connor, *supra* note 192.

cultural resources and visitor use.”²⁰⁵ This section thus integrates environmental criteria into the legal regime that governs the dam’s operation. Like its CVP counterpart,²⁰⁶ this section also bolsters environmentally favorable management of the dam against possible legal assertions that the goal of producing hydroelectric power takes precedence over environmental concerns.²⁰⁷

To limit bureaucratic recalcitrance, Congress also imposed a two-year deadline for the Bureau to complete an environmental impact statement for the project.²⁰⁸ Section 1804(b) also requires the Department of the Interior’s Comptroller General to conduct an audit of the costs and benefits to all water and power users, including the users of downstream resources.²⁰⁹ Based upon the EIS, the cost-benefit audit, and consultations with various interest groups,²¹⁰ the Bureau must adopt long-term flow criteria and operation plans consistent with the environmental guidance provisions set forth in section 1802.²¹¹ Finally, the EIS, audit, flow criteria, plans, and subsequent yearly reports must be submitted to Congress.²¹² These requirements should help to ensure that the Bureau of Reclamation will operate the Glen Canyon Dam with a greater regard for the environment.

A review of these sections of the Reclamation Projects Adjustment Act reveals a congressional desire to redress the Bureau of Reclamation’s traditionally myopic approach. The revision of priorities at two of the Bureau’s most significant projects should encourage the Bureau to reconsider its old management practices and recognize that it now has a wider constituency.

205. § 1802(a), 106 Stat. at 4669; see Connor, *supra* note 192, at 54 (“The legislative history emphasizes that all other values, including power generation, are subservient to the goal of protecting both the natural and cultural downstream resources.”).

206. See *supra* notes 156-60 and accompanying text (discussing priorities under the CVP).

207. Senator McCain (R-Ariz.) noted that the Western Area Power Authority was prepared to sue to assert that the maximization of power generation had primacy under the Colorado River Storage Project (CRSP) Act. *Senate Hearings on Miscellaneous Reclamation Legislation*, *supra* note 99, at 297 (statement of Sen. McCain). The environmental and recreational community urged the Senate: “We must drive a stake through the heart of the policy that power has primacy over all other resource values in Glen Canyon National Recreation Area and Grand Canyon National Park.” *Id.* at 357 (statement of Robert Elliot, Vice President, Western River Guides Association).

208. § 1804(a), 106 Stat. at 4670.

209. § 1804(b), 106 Stat. at 4670.

210. Those consulted included: (1) representatives of the academic and scientific communities, (2) environmental organizations, (3) the recreation industry, and (4) contractors for the purchase of federal power produced at Glen Canyon Dam. § 1804(c)(3), 106 Stat. at 4671.

211. § 1804(c)(1), 106 Stat. at 4671.

212. § 1804, 106 Stat. at 4670-71.

B. Environmental Protection in Future Reclamation Projects' Design and Operation

Congressional concern for the environment was not limited to the correction of past inadequacies. Several provisions of the Act evince a new congressional desire to ensure that future projects give proper emphasis to environmental protection.

1. The Central Utah Project

Title II of the Reclamation Projects Adjustment Act authorizes \$924 million for the completion of the Central Utah Project.²¹³ The CUP is the final component of the Colorado River Storage Project (CRSP),²¹⁴ which was designed to maximize Colorado River water usage and power production. The CUP, the largest part of the CRSP, will consist of six new reservoirs.²¹⁵ The Bonneville Unit alone will include: “[S]ix new reservoirs; enlargement of an existing reservoir; more than 200 miles of aqueducts, tunnels and canals; one power plant; seven primary pumping plants; and about 162 miles of drains and modifications to existing natural channels.”²¹⁶

Completion of the CUP will undoubtedly have serious impacts on fish and wildlife.²¹⁷ Concerned about the Bureau of Reclamation's record,²¹⁸ Congress included explicit requirements for environmental protection in the Act's CUP provisions.²¹⁹ First, the disbursement of federal funds is contingent on compliance with federal environmental laws, including NEPA and the Endangered Species Act.²²⁰ Second, the Act requires the preparation of water management improvement plans encouraging conservation and maintenance of water quality (the prevention of selenium contamination), quantity, and streamflow conditions.²²¹ Third, title III requires that various fish and wildlife mitigation and conservation measures, such as minimum instream flows, be

213. § 201(a)(1), 106 Stat. at 4606-07. See generally Melling, *supra* note 81, at 160-62, 184-93 (relating the history of the CUP and the provisions in the 1992 Act).

214. See Colorado River Storage Project Act of 1956, Pub. L. No. 84-485, 70 Stat. 105, 106 (codified as amended at 43 U.S.C. § 620o (1988)).

215. Melling, *supra* note 81, at 160 n.8.

216. H.R. REP. NO. 114, *supra* note 88, at 71.

217. See Melling, *supra* note 81, at 188-91; H.R. REP. NO. 114, *supra* note 88, at 75-76.

218. Although the 1956 CRSP authorization act provided for “mitigation” of losses and “improvement” of fish and wildlife, Congress found that “the Bureau of Reclamation has done an inadequate job of mitigating fish and wildlife impacts” and has “consistently delayed implementation of fish, wildlife, and recreational mitigation measures.” H.R. REP. NO. 114, *supra* note 88, at 76.

219. See generally Melling, *supra* note 81, at 191-93 (detailing the interesting consensus-building and compromise that eventually became the CUP provisions in the 1992 Act).

220. § 205(b), 106 Stat. at 4615; § 202(a)(1)(B)(i), 106 Stat. at 4608.

221. § 207(a)-(b), 106 Stat. at 4616-20.

incorporated into CUP operations from the outset.²²² To carry out the programs mandated by title III, Congress authorized over \$400 million to be spent over five years for fish, wildlife, and recreation mitigation and conservation.²²³

This commitment represents a substantial shift in the way Congress views reclamation projects. Irrigation and power production no longer trump protection of natural resources, as nearly half of the entire monetary commitment for the CUP is dedicated to fish and wildlife.²²⁴

2. *Other Bureau of Reclamation Projects*

Beside providing for environmental policies to be included in the completion of the Central Utah Project, the Act authorizes federal funds for other significant environmental measures. For instance, title XXXII provides for both a \$12 million trust fund for protection of biodiversity and \$7 million for the purchase and preservation of wetlands in South Dakota.²²⁵ Congress also authorized several Bureau of Reclamation studies and demonstration projects to address various environmental concerns, such as salinity intrusion in Texas, New Mexico, and California's Salton Sea;²²⁶ selenium contamination in South Dakota;²²⁷ and depleted groundwater supplies in the Southwest and High Plains states.²²⁸

With these expenditures, the 102d Congress may have created a new type of pork barrel project—Bureau of Reclamation environmental projects. The financial beneficiaries of the federal subsidies remain the constituents back home, but fish and wildlife will benefit as well. A skeptical observer might see such projects as a continuation of the subsidies under a different guise for the benefit of different local interests. Yet, the costs of these environmental studies and the trust funds mitigating the adverse environmental effects of reclamation

222. Tit. III, 106 Stat. at 4625-48. Section 301 establishes a commission to coordinate and to carry out the various fish, wildlife, and recreation provisions. The commission is authorized to appropriate 25,000 acre-feet of water rights in the Utah Lake drainage basin (§ 302); provide, and if needed, acquire, streamflows of various amounts throughout the project (§ 303); acquire, rehabilitate, and enhance rangelands, wetlands, fisheries, and watersheds (§§ 305, 306, 307, 313); stabilize and rehabilitate certain high mountain lakes (§ 308); and increase stream access and rehabilitate riparian habitat (§ 309).

223. § 315, 106 Stat. at 4641-48. Recreation is included in this amount because some projects, such as stream access and habitat development, arguably benefit both anglers and fish.

224. This assertion is based upon a calculation from the Fish, Wildlife, and Recreation Schedule, contained in § 315 of the Act. *See id.* at 4642-48.

225. Tit. XXXII, §§ 3201, 3203, 106 Stat. at 4700, 4703.

226. Tits. VIII, XI, 106 Stat. at 4658-59, 4661.

227. Tit. XX, 106 Stat. at 4677-83.

228. Tits. XVI, XXVI, 106 Stat. at 4663-69, 4689-90.

projects are insignificant when compared to the capital and operational subsidies of the projects themselves.

C. Summary—Rubric of Environmental Reform

The Reclamation Projects Adjustment Act provides a road map for environmental reform, but it is not comprehensive. Congress concentrated on a few of the Bureau's older projects and created some new environmental initiatives, while leaving the Bureau to "business as usual" in other projects. The changes in the Central Valley Project, Glen Canyon Dam, Central Utah Project, and other Bureau of Reclamation projects are an important step in the recognition of the environmental impacts of reclamation projects. Moreover, the Bureau's own "strategic plan" incorporates environmental protection and has become a vehicle for internal change; in addition, the Clinton Administration has administratively moved the Bureau toward environmental reform.²²⁹ These changes help give effect to the view that water is part of "the people's resources," rather than a private commodity.²³⁰ Ultimately, how much environmental protection is achieved will depend upon institutional reluctance, lawsuits based on environmental statutes, and new leadership. In addition to the outright environmental reforms, Congress also employed pricing and market mechanisms in the Act that could benefit the environment. The next part details the economic reforms.

III

MARKET MECHANISMS FOR MORE EFFICIENT FEDERAL WATER ALLOCATION

Like environmental protection, the principle of economic efficiency has been virtually absent from federal reclamation law and policy. During the last ninety years, Congress and the Bureau of Reclamation authorized numerous dams and irrigation projects to promote agricultural settlement of the West, to optimize use of its vast land resources, and to disperse population growth.²³¹ Today, the federal government must reevaluate the benefits and costs²³² of these projects in light of scarce federal funds, a lack of political will to build new projects, and few rivers left to "develop." Overlooked environmental effects of reclamation projects must be considered along with

229. See *infra* part IV.

230. See *supra* note 81 and accompanying text.

231. See *supra* part I.A (discussing the history of reclamation).

232. Benefit-cost analysis, as an analytic tool for evaluating public policy and projects, began in the area of federal water projects. See generally Joseph P. Biniak, *Benefit-Cost Analysis: An Evaluation*, in *CONTROVERSIES IN ENVIRONMENTAL POLICY* 136, 137-51 (Sheldon Kamieniecki et al. eds., 1986).

their economic costs and benefits.²³³ The looming crises of water scarcity and endangered species present Congress with an opportunity to examine innovative solutions and to “find” more water by reforming the federal reclamation water regime. The Reclamation Projects Adjustment Act is part of a continuing congressional effort²³⁴ to employ pricing and market mechanisms to encourage water conservation and to achieve a more efficient allocation of water. This fundamental shift in reclamation law and policy comprises the second rubric of reclamation reform.

A. Economic Mechanisms and Environmental Policy

1. Generally

Market-based reclamation reform stems in part from a movement toward the use of economics-based market mechanisms in environmental regulation.²³⁵ While economists and fiscal conservatives have long criticized command-and-control environmental regulation,²³⁶

233. Until the 1970's, benefit-cost analyses generally failed to account for environmental values because of the difficulty of quantifying environmental benefits and costs. See SAMUEL P. HAYS, BEAUTY, HEALTH, AND PERMANENCE: ENVIRONMENTAL POLITICS IN THE UNITED STATES, 1955-1985, at 274-76 (1987). NEPA was a congressional attempt to deal with this problem “by requiring each agency to devise methods of incorporating into its analyses nonquantifiable factors.” *Id.* at 275; see also Michael S. Baram, *Cost-Benefit Analysis: An Inadequate Basis for Health, Safety, and Environmental Regulatory Decision-making*, 8 ECOLOGY L.Q. 473, 483-89 (1980) (discussing the limitations of cost-benefit analysis in environmental decisionmaking). For ethical critiques of cost-benefit analysis, see JOHN O'NEILL, ECOLOGY, POLICY AND POLITICS 44-82 (1993); MARK SAGOFF, THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW, AND THE ENVIRONMENT (1st ed. 1988).

234. Earlier, by enacting the Reclamation Reform Act of 1982, Pub. L. No. 97-293, tit. II, 96 Stat. at 1263, Congress had attempted to use full cost pricing to eliminate excess irrigation with federal water. See 43 U.S.C. § 390ee (1988). The full cost price applied to lands in excess of 960 acres. *Id.* The 1982 Act also required yearly modification of contract rates as necessary to keep pace with operation and maintenance costs. *Id.* § 390hh (1988); see also Alsup, *supra* note 55, at 1228 n.18.

Additionally, the regulations implementing the 1982 Act may employ pricing incentives. Under the settlement agreement between the Department of the Interior and environmental groups in *Natural Resources Defense Council, Inc. v. Duvall*, Interior agreed to consider the use of tiered pricing to encourage conservation in implementing the 1982 Act. Nos. 92-15640, 92-15643 (9th Cir. filed 1992); see *infra* notes 447-51 and accompanying text.

235. Professor Robert Stavins of the John F. Kennedy School of Government at Harvard University has called the emergence of market approaches “the most dramatic change that we have seen in environmental policy circles in the last 20 years.” Karen Riley, *Rewards for Friends of the Earth, Market Incentives Are the Latest Tactics To Get Businesses To Be Environmentally Friendly*, WASH. TIMES, Nov. 22, 1992, at A10; see also PROJECT 88—ROUND II, INCENTIVES FOR ACTION: DESIGNING MARKET-BASED ENVIRONMENTAL STRATEGIES: A PUBLIC POLICY STUDY SPONSORED BY SENATOR TIMOTHY E. WIRTH, COLORADO & SENATOR JOHN HEINZ, PENNSYLVANIA 1-13 (1991) [hereinafter PROJECT 88].

236. See, e.g., Richard B. Stewart, *Controlling Environmental Risks Through Economic Incentives*, 13 COLUM. J. ENVTL. L. 153, 153 (1988) (“The inevitable drawbacks of this command and control regulatory strategy are increasingly apparent: excessive bureaucratic centralization, rigidity, cost, litigation and delay.”).

some environmental advocates have recently found common ground with these critics by linking economic inefficiency with environmental degradation.²³⁷ A unique coalition of environmentalists and “free-marketeers”²³⁸ has begun to promote greater reliance on economics-based mechanisms in government policies, rather than traditional command-and-control regulation.²³⁹ Similarly, some environmentalists have joined water reform advocates, such as urban districts and industrial users, in calling for the use of market mechanisms to protect and transfer water resources.²⁴⁰

237. ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND SOCIETY: NATURE, LAW, AND POLICY 29-33 (1992). The argument is twofold. First, environmentalists and economists both advocate internalization of environmental costs. *See id.* at 29. Second, they both argue that efficient use of resources results in overall savings that benefit the environment. *Id.* at 31-32. “Water conservation allows a lesser amount of water to provide most of the same benefits as were obtained from a larger amount of water in the past, while incurring decreased total social and environmental costs.” *Id.* at 32.

Certain government policies tend to induce “market failures.” These include inaccurate prices on pollution and natural resources, inefficient subsidies that lead to overdevelopment, and centralized political decisions that lead to inefficient allocations of societal resources. *See generally* ROBERT W. HAHN, A PRIMER ON ENVIRONMENTAL POLICY DESIGN (1989). Also, see the work of the Cato Institute and the American Enterprise Institute.

238. *See, e.g.*, STEVEN E. RHOADS, THE ECONOMIST’S VIEW OF THE WORLD 61-81 (1985) (discussing government, markets, and public policy).

239. *See* PROJECT 88, *supra* note 235, at 1-13. The 1990 Clean Air Act amendments exemplify the cooperation between some environmental groups and free-market advocates. Pub. L. No. 101-549, 104 Stat. 2399 (1990). Congress instituted several pricing mechanisms and pollution permit markets in order to attain air quality goals and allow for economic efficiency. Norman W. Fitchorn, *Command-and-Control vs. the Market: The Potential Effects of Other Clean Air Act Requirements on Acid Rain Compliance*, 21 ENVTL. L. 2069, 2069-72 (1991). *See generally* Symposium, *The Clean Air Act Amendments of 1990*, 21 ENVTL. L. 1549 (1991).

So-called free-market environmentalism represents the melding of economics and environmental advocacy. *See* TERRY L. ANDERSON & DONALD R. LEAL, FREE MARKET ENVIRONMENTALISM 3-8 (1991). *See generally* Continuing Legal Education Conference, *Free Market Environmentalism: The Role of the Market in Environmental Protection* (Apr. 13, 1991), in Symposium, 15 HARV. J.L. & PUB. POL’Y 297 (1991) [hereinafter CLE Conference]. Not all environmentalists, however, are enamored of market approaches, such as pollution credits, because the credits represent a condoned right to pollute. *See* RHOADS, *supra* note 238, at 51-56; SAGOFF, *supra* note 233, at 205-10; Thomas G. Ingersoll & Bradley R. Brockbank, *The Role of Economic Incentives in Environmental Policy*, in CONTROVERSIES IN ENVIRONMENTAL POLICY, *supra* note 232, at 201, 215-16.

240. *See generally* Terry L. Anderson, *Introduction: The Water Crisis and the New Resource Economics*, in WATER RIGHTS: SCARCE RESOURCE ALLOCATION, BUREAUCRACY, AND THE ENVIRONMENT 1 (Terry L. Anderson ed., 1983); THE CONSERVATION FOUND., AMERICA’S WATER: CURRENT TRENDS AND EMERGING ISSUES 69-74 (1984); Kenneth D. Frederick, *Overview*, in SCARCE WATER AND INSTITUTIONAL CHANGE 1, 19-24 (Kenneth Frederick ed., 1986); Zach Willey & Tom Graff, *Federal Water Policy in the United States—An Agenda for Economic and Environmental Reform*, 13 COLUM. J. ENVTL. L. 325 (1988) (discussing economic valuation of water resources); ROBERT STAVINS, ENVIRONMENTAL DEFENSE FUND, TRADING CONSERVATION INVESTMENTS FOR WATER: A PROPOSAL FOR THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA TO OBTAIN ADDI-

The following brief overview of the theory of an efficient market highlights the shortcomings of the current federal water allocation system. Proponents of water reform employ welfare economics²⁴¹ to champion unencumbered water markets and flexible prices to attain economic efficiency. Application of welfare economics is based upon two basic assumptions. First, the interaction of supply and demand produces accurate market prices,²⁴² which take into account all costs of production.²⁴³ These prices provide an efficient and automatic conduit of information between buyers and sellers.²⁴⁴ Second, based upon market prices, a vast collection of rational, self-interested individuals will choose the optimum allocation of societal resources (in this case, water).²⁴⁵

Some economists argue that for optimal prices to prevail in the market, property ownership should be exclusive, transferable, universal, and enforceable.²⁴⁶ Of course, this requires stable legal protection

TIONAL COLORADO RIVER WATER BY FINANCING WATER CONSERVATION INVESTMENTS FOR THE IMPERIAL IRRIGATION DISTRICT 25-53, 131-32 (1983).

241. The study of welfare economics is not limited to "welfare" in the sense of government entitlement programs. Practitioners of welfare economics seek to utilize principles of microeconomics to improve government policy decisions and programs by evaluating impacts on the collective public welfare. RHOADS, *supra* note 238, at 62; see EDGAR K. BROWNING & JACQUELENE M. BROWNING, MICRO-ECONOMIC THEORY AND APPLICATIONS 558 (3d ed. 1989). The field of resource economics is based upon concepts of welfare economics and seeks to evaluate and improve natural resource allocation and use based upon two normative criteria: efficiency and sustainability. See generally TOM TIETENBERG, ENVIRONMENTAL AND NATURAL RESOURCES ECONOMICS 21-33 (2d ed. 1988).

242. See BROWNING & BROWNING, *supra* note 241, at 15-16.

243. To the extent practicable, prices should not only reflect traditional costs of production, but should also include external costs to society. See generally RHOADS, *supra* note 238, at 113-23 (discussing externalities and the desired scope of government intervention).

244. BROWNING & BROWNING, *supra* note 241, at 576.

245. See *id.* at 156-57. This assumption, however, is based upon a perfectly competitive market. Government bureaucracies are incapable of tapping myriad information and administering flexible programs; they thus cannot approximate the accuracy of the free market's "invisible hand." See *id.* at 157.

An immense amount of knowledge must be utilized to achieve an efficient allocation of resources. Perhaps the most significant implication of our analysis is that, in principle, an efficient outcome can be accomplished by decentralized, voluntary transactions among people, each of whom has only a tiny portion of the requisite knowledge.

Id. at 576.

246. TIETENBERG, *supra* note 241, at 39. *Exclusivity* is required because common ownership often leads to exploitation of the common resource, while private ownership encourages long-term stewardship. See Garrett Hardin, *Tragedy of the Commons*, 162 SCI. 1243, 1244-45 (1968). *Transferability* is necessary because an efficient market requires fluid movement of property from lesser valued toward higher valued uses. *Universality* refers to the condition in which all resources and substitutes are privately owned, and all entitlements are completely specified (meaning that the ownership of all resources is definite). See TIETENBERG, *supra* note 241, at 39. Finally, *enforceability* guarantees that property rights are secure from encroachment or involuntary seizure by others. *Id.* See generally RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 10-30 (1st ed. 1973).

of property interests. Therefore, some free-market environmentalists, economists, and other market enthusiasts advocate complete privatization of all water rights.²⁴⁷ In the short term, wholesale privatization of water resources and reclamation projects is unlikely to occur, given legal traditions and social notions that water resources belong to the public.²⁴⁸ Even without complete privatization, however, market mechanisms can still be used to improve the economic efficiency of federal water allocations.

2. Barriers to Efficiency in Reclamation Projects

The Bureau of Reclamation's operation of the Central Valley Project epitomizes two barriers to economic efficiency: (1) gross disparity between water price and market value, and (2) restrictions on transferability of contracted water allotments.²⁴⁹ The first major source of inefficiency stems from the CVP's unrealistic water prices. The current forty-year contract rates for irrigation water do not accu-

247. Fred Smith, President of the Competitive Enterprise Institute, stated: "[T]he best way to protect something isn't to put it in the public domain, but to privatize it. That way, it belongs to somebody with a vested interest in protecting it—and not to a faceless bureaucracy, whose interests and environmental protection may not coincide." Michael Fumento, *Smith Seeks New Ways To Protect Nature*, INVESTOR'S BUS. DAILY, Nov. 19, 1992, available in LEXIS, Nexis Library, News File; see RICHARD W. WAHL, *MARKETS FOR FEDERAL WATER: SUBSIDIES, PROPERTY RIGHTS, AND THE BUREAU OF RECLAMATION* (1989) [hereinafter *MARKETS FOR FEDERAL WATER*]; ANDERSON & LEAL, *supra* note 239; TERRY L. ANDERSON, CATO INST., *WATER CRISIS: ENDING THE POLICY DROUGHT 70-71* (1983) [hereinafter *WATER CRISIS*] (arguing, in a chapter entitled "Salvaging the Appropriations Doctrine," that water should be allocated by "a system of well-established and transferable property rights" and that such a system does not have significant potential for market failure); CHARLES J. MEYERS ET AL., NATIONAL WATER COMM'N, LEGAL STUDY NO. 4, *MARKET TRANSFERS OF WATER RIGHTS: TOWARD AN IMPROVED MARKET IN WATER RESOURCES* (1971); H. Stuart Burness & James P. Quirk, *Water Law, Water Transfers, and Economic Efficiency: The Colorado River*, 23 J.L. & ECON. 111, 133 (1980), cited in *WATER CRISIS*, *supra*, at 70 ("[O]ften what appears to be a shortage of water is actually the manifestation of restrictions on water rights transfer.").

But see David H. Getches, *From Askhabad, to Wellton-Mohawk, to Los Angeles: The Drought in Water Policy*, 64 COLO. L. REV. 523 (1993).

To be sure, our system of western water law is imperfect, but all the flaws cannot be fixed simply by declaring a free market in water. . . . A system based upon market economics would improve rationality of water decisions and would anticipate economic consequences to entities involved in a transaction. But it would not necessarily make the system fairer or the outcome better for those not directly involved.

Id. at 544 (citing COMMITTEE ON W. WATER MANAGEMENT ET AL., *supra* note 46, at 249); see Lawrence J. MacDonnell, *Transferring Water Uses in the West*, 43 OKLA. L. REV. 119, 128-30 (1990) (discussing the necessary "balance" provided by some restrictions to transfer). For other criticisms of outright privatization, see CLE Conference, *supra* note 239.

248. See generally Babbitt, *supra* note 52; see *supra* text accompanying note 81 (stating Rep. Miller's philosophy that water and other public resources are "the people's resources").

249. For a discussion of transferability of resources and economic efficiency, see *supra* note 246 and accompanying text.

rately reflect actual capital and operational costs,²⁵⁰ price potential in an open market,²⁵¹ or economic opportunity costs.²⁵² The artificially low price of subsidized water also defeats healthy incentives that would exist in an unfettered market. The subsidy provides irrigators with little reason to conserve water, modernize their irrigation practices, or grow higher value crops. Artificially low water prices have led to the over-development of marginal land with low-value crops, as well as caused extensive environmental damage.²⁵³ Aside from the water price, a further subsidy arises from the fact that "by the end of fiscal year 1990 irrigators had repaid only \$10 million of over \$1 billion in capital costs associated with construction of irrigation facilities."²⁵⁴

Second, restrictions on the transferability of water rights also create economic inefficiency. While water transfers *within* CVP boundaries have not been limited by federal law,²⁵⁵ until recently the Bureau of Reclamation had imposed a number of restrictions on such transfers.²⁵⁶ Water transfers *outside* the CVP boundaries have been effec-

250. "Irrigators in the San Joaquin Valley, for example, pay only about 15 percent of the cost of their delivered water." ANDERSON & LEAL, *supra* note 239, at 103.

251. Many contracting irrigation districts pay as little as \$2.50 per acre-foot of CVP water due to locked-in 1950's rates. The state now charges farmers as much as \$130 for the same amount. *Senate Subcomm. CVP Hearings, supra* note 58, at 329 (testimony of Marc Reisner). Urban districts are expecting to pay as much as \$1000 per acre-foot. *See supra* note 69.

252. The Bay Area Economic Forum estimated: "[E]very 1,000 acre-feet of water used in producing low-value crops such as cotton or alfalfa creates 1.5 agricultural jobs and \$400,000 in revenue. The same amount of water might provide 2,600 jobs and \$400 million in product revenue if it were used by an urban high-technology industry." Nancy Hass, *Water Power*, FIN. WORLD, Jan. 5, 1993, at 24.

253. LEVEEN & KING, *supra* note 66 (chronicling the detrimental economic and environmental effects of the estimated \$3.5 billion in federal subsidies to the CVP). *See generally* *Senate Subcomm. CVP Hearings, supra* note 58. For a discussion of the adverse effects of subsidized water in the West, see BATES ET AL., *supra* note 3, at 133-35.

254. GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 11.

255. *See* Gray et al., *supra* note 39, at 18. Gray states: "Neither the general provisions of federal reclamation law nor the specific legislation that established the CVP directly address water transfers. As a consequence, transfers of CVP water are governed primarily by California law." *Id.* State law, in fact, has allowed certain water transfers. Section 382 of the California Water Code states:

Notwithstanding any other provision of law, every local or regional public agency authorized by law to serve water to the persons or entities within the service area of the agency may sell, lease, exchange, or otherwise transfer, for use outside the agency, either or both of the following: (1) Water that is surplus to the needs of the water users of the agency[;] (2) Water, the use of which is voluntarily foregone during the period of the transfer, by a water user of the agency.

CAL. WATER CODE § 382 (West Supp. 1995).

256. Gray et al., *supra* note 39, at 928-33. Gray lists the five pre-1988 restrictions on transfers and analyzes a recent shift toward allowing transfers. *Id.* The Bureau began to liberalize its transfer policy in December 1988. *See id.* (analyzing, among other things, BUREAU OF RECLAMATION MID-PAC. REGION, 1991 CENTRAL VALLEY PROJECT TRANSFER GUIDELINES (1991)). For further discussion, see Brian E. Gray, *Water Transfers in*

tively prohibited by ambiguous federal law and state water law "place of use" restrictions.²⁵⁷

Due to the lack of an effective market for water rights, water continues to be allocated predominantly to low-value uses, such as growing alfalfa. Allocating water to such low-value crops results in a huge social opportunity cost.²⁵⁸ Under a market theory of resource allocation, water should be transferred from lower-value uses to higher-value uses.²⁵⁹ If CVP farmers, who pay as little as \$5 per acre-foot for irrigation water, were to sell that water to an urban district at a prevailing market price of \$200, they could make enough profit to modernize their irrigation equipment to conserve even more water.²⁶⁰

Economists, environmentalists, and others have advocated several market-based solutions to the reclamation dilemma.²⁶¹ First, pricing incentives would offer the most economically efficient method to elicit changes in behavior in the use of natural resources.²⁶² Second, liberalizing voluntary water transfers could help rectify dysfunctional water use in the CVP.²⁶³

Congress was persuaded by the calls for reform. Accordingly, it incorporated several pricing and market mechanisms into the Act. While the Act's provisions are not as progressive as some reformers would have liked, they are a significant step forward toward economic efficiency.

California: 1981-1989, in 2 THE WATER TRANSFER PROCESS AS A MANAGEMENT OPTION FOR MEETING CHANGING WATER DEMANDS ch. 2, at 22-24 (Robert S. Robinson & Lawrence J. MacDonnell eds., 1990).

257. Gray et al., *supra* note 39, at 939-41, 949-51 (citing Reclamation Projects Authorization and Adjustment Act § 8, 43 U.S.C. § 372 (1988)).

258. Some researchers estimate that 2564 gallons of water are needed to produce \$1 of alfalfa. Compare this figure with alternative crops: \$1 of almonds requires 971 gallons of water; fruit trees, 429 gallons; and tomatoes, 305 gallons. Alex Barnum, *Water Reform Angers Growers*, S.F. CHRON., Dec. 8, 1992, at C1.

259. See *supra* note 246.

260. ANDERSON & LEAL, *supra* note 239, at 102-03. A survey in the early 1980's revealed that of 2700 water users in California, almost one-fifth of respondents were willing to sell their water. SAX ET AL., *supra* note 11, at 222.

261. For economics-based critiques of federal reclamation law and the CVP, see Willey & Graff, *supra* note 240; MARKETS FOR FEDERAL WATER, *supra* note 247, at 127-46; LEVEEN & KING, *supra* note 66; Joseph L. Sax, *Selling Reclamation Water Rights: A Case Study in Federal Subsidy Policy*, 64 MICH. L. REV. 13 (1965).

262. See generally PROJECT 88, *supra* note 235, at 1-13.

263. Beginning in 1987, the National Resource Council's Water Science and Technology Board and Committee on Western Water Management initiated a study of water marketing as a solution to the environmental and economic inefficiency problems of irrigation. Released in 1992, the study contained a synopsis of the history and reasons for water transfers, an analysis of "third party" impacts and opportunities, and several case studies assessing water transfers. See COMMITTEE ON W. WATER MANAGEMENT ET AL., *supra* note 46. One case study focused on California's Central Valley. *Id.* at 213-33.

B. Pricing To Promote Efficiency

The Reclamation Projects Adjustment Act's four most significant pricing measures are included in the CVPIA.²⁶⁴ First, title XXXIV revokes the Bureau of Reclamation's automatic contract renewal policy, which had effectively guaranteed CVP contractors the same quantity of water at near 1950's prices for forty years.²⁶⁵ Renewal of existing long-term contracts will be limited to a twenty-five-year term and conditioned upon "appropriate environmental review, including the preparation [and completion] of the [programmatically] environmental impact statement."²⁶⁶ However, three-year temporary contract renewals are available until the EIS is completed.²⁶⁷ The theoretical effect of this change is to allow prices, quantities, and allocation to fluctuate at contract renewal periods. If bidding occurs, water may actually be allocated to the highest value uses. As discussed below, however, subsidized water rates will continue to apply to 80% of CVP water. The Bureau will retain control of prices, and any movement toward market prices will ultimately be left to the Bureau's discretion.

Second, Congress imposed a tiered rate structure to promote conservation of CVP water.²⁶⁸ Under this new scheme, subsidized rates (as low as \$2.50 per acre-foot) will continue to apply to the first 80% of the total contract, the next 10% will be charged at a rate halfway between the subsidized rate and full cost, and the last 10% will be priced at the full federal CVP capital and operational cost of between \$15 and \$50 per acre-foot.²⁶⁹ While these provisions are not as aggressive as those first proposed, they give irrigators some incentive to cut

264. Other parts of the Reclamation Projects Adjustment Act also have price-based incentives. For example, user fees may be charged for public access to reclamation recreation projects. Tit. XXVIII, § 2805(a)(1)(B), 106 Stat. at 4692; *see also* Water Conservation Pricing Study, § 207(c), 106 Stat. at 4620.

265. Tit. XXXIV, § 3404, 106 Stat. at 4708-09. As recently as 1988, the Department of the Interior had issued an opinion that interpreted the Act of July 2, 1956, to require automatic renewal of all CVP long-term contracts for the same quantity of subsidized water for irrigation. Renewal of Friant Unit Contracts, *supra* note 96; GAO REPORT ON CONTRACT RENEWAL, *supra* note 7, at 10. Section 3404 reverses this policy.

As an alternative to eliminating automatic contract renewal, some economists may advocate converting the water leasing contracts into full property rights that could be sold on the market. This alternative, however, would require federal taxpayers to simply donate the \$3 billion CVP system to irrigators who have paid back only a small fraction of its costs. *See supra* note 66.

266. § 3404(c), 106 Stat. at 4708-09.

267. § 3404(c)(1), 106 Stat. at 4709.

268. § 3405(d), 106 Stat. at 4712-13. For an explanation of the merits of water rate structures, see JANICE A. BEECHER & ANN P. LAUBACH, NATIONAL REGULATORY RESEARCH INST., NRRI 89-15, COMPENDIUM ON WATER SUPPLY, DROUGHT, AND CONSERVATION 246-57 (1989).

269. § 3405(d), 106 Stat. at 4712-13; *see supra* notes 69, 251 (discussing the range of prices). The 80-10-10 rate structure was a compromise from the more aggressive 60-20-20 structure originally proposed by Representative Gejdenson. *See* 138 CONG. REC. S17,658-

back their water use.²⁷⁰ Even the full cost rate, however, does not account for externalities such as environmental costs. As discussed below, section 3407(d)(2)(A) attempts to account for environmental costs by levying a surcharge on all water users that will be paid into the restoration fund.²⁷¹

Third, section 3405(b) mandates that all new, renewed, or amended water contracts must include the metering of CVP water use.²⁷² Traditionally, the amount of water used by a customer was not measured unless there was a complaint from another user. Metering will provide the accounting required to make a tiered pricing system work and will also discourage wasteful water usage.

Environmental enhancement surcharges are the fourth major pricing reform.²⁷³ Agricultural water contractors will be charged up to an additional \$6 per acre-foot, and municipal users up to an additional \$12 per acre-foot, to fund the fish and wildlife restoration fund.²⁷⁴ New project users will pay an additional \$25 per acre-foot.²⁷⁵ In some respects, the beneficiaries of the CVP will now begin to pay back some of the environmental debt incurred over the past fifty years.

Relative to past reclamation pricing policy, these provisions are very progressive. Unfortunately, political compromises allow the Bureau to continue to subsidize more than 80% of the water supplied to irrigation districts.²⁷⁶ Additionally, the Act's final version failed to address the problem of double subsidies in the CVP.²⁷⁷

The four pricing reforms—(1) elimination of automatic contract renewal, (2) implementation of tiered pricing, (3) metering requirements, and (4) environmental enhancement surcharges—exemplify the market mechanisms used to regulate resource consumption. All four provide water users with the incentive to reduce their usage.

59 (daily ed. Oct. 8, 1992) (statement of Sen. Wallop); 138 CONG. REC. H4918, H4933-34 (daily ed. June 18, 1992) (statement of Rep. Gejdenson).

270. The tiered pricing system is waived for water delivered to a crop that "provide[s] significant and quantifiable habitat values for water fowl." § 3405(d), 106 Stat. at 4712-13. This waiver may be designed for the wintertime inundation of rice fields. See *Senate Subcomm. CVP Hearings*, *supra* note 58, at 330 (statement of Marc Reisner).

271. § 3407(d)(2)(A), 106 Stat. at 4727-28.

272. § 3405(b), 106 Stat. at 4712.

273. § 3407, 106 Stat. at 4726-28.

274. § 3407(d)(2)(A), 106 Stat. at 4727.

275. *Id.*

276. Given the rate structure, only 20% of the water allocated for irrigation will be sold at a price above the artificially low subsidized rate that currently prevails. See *supra* note 269 and accompanying text (discussing the rate structure).

277. For a discussion of Representative Miller's efforts to eliminate double dipping, see *supra* note 87 and accompanying text. The Central Utah Project provisions of the Reclamation Projects Adjustment Act do, however, address double dipping. See § 212, 106 Stat. at 4625.

Elimination of automatic contract renewal, however, can only cause major changes in water usage by reducing the amounts of water allowed in the reclamation contracts at times of contract renewal. Because contract periods will now last twenty-five years,²⁷⁸ a provision allowing water transfers is necessary to make pricing reforms effective. The next section discusses transferability.

C. *Water Markets To Provide for a More Efficient Allocation*

Section 3405 harnesses the efficiency of the market by providing for the transfer of water to other users.²⁷⁹ Section 3405(a) provides that all individuals or districts who receive CVP water pursuant to contract

are authorized to transfer all or a portion of the water subject to such contract to any other California water user or water agency, State or Federal agency, Indian tribe, or private nonprofit organization for project purposes or any purpose recognized as beneficial under applicable State law.²⁸⁰

With this provision, Congress endorsed the Bureau's growing willingness to make project water more transferable by allowing CVP contractors to sell their allotments to other CVP agricultural users at market prices, provided that the users pay at least full cost for the CVP water.²⁸¹ After the water has been offered to current CVP customers, the contractors can then offer any remaining water to others, including municipal and industrial users, at market prices.²⁸²

In spite of these changes, some significant restrictions still apply to transfers.²⁸³ All transfers of greater than 20% of a water district's total allotment are subject to approval by the Secretary of the Interior and, arguably, the district's membership.²⁸⁴ The Secretary's approval is contingent on a finding that the proposed sale meets thirteen crite-

278. § 3404(c), 106 Stat. at 4708-09.

279. § 3405(a), 106 Stat. at 4709-12. On market transfers of water, see generally Joseph L. Sax, *Understanding Transfers: Community Rights and the Privatization of Water*, 1 W. Nw. 13 (1994); Brian E. Gray, *The Market and the Community: Lessons from California's Drought Water Bank*, 1 W. Nw. 17 (1994); Richard W. Wahl, *Market Transfers of Water in California*, 1 W. Nw. 49 (1994).

280. § 3405(a), 106 Stat. at 4709-10.

281. § 3405(a)(1)(B), 106 Stat. at 4710.

282. See § 3405(a)(1)(F), 106 Stat. at 4710-11.

283. See § 3405(a)(1)(A)-(M), 106 Stat. at 4709-11.

284. § 3405(a)(1), 106 Stat. at 4710. When signing the Act, President Bush noted that the districts' and agencies' role under § 3405(a)(1) is only "an advisory one." Statement of George Bush upon Signing H.R. 429, 28 WEEKLY COMP. PRES. DOC. 2232 (Nov. 9, 1992), reprinted in 1992 U.S.C.C.A.N. 4054, 4055 [hereinafter Statement of George Bush]. Bush reasoned that allowing districts and agencies to simply reject water transfers "could be construed to permit the exercise of Federal executive power by the districts or agencies, which are not composed of individuals appointed pursuant to the Appointments Clause of the Constitution." *Id.* For a contrary view, see *infra* notes 441-42 and accompanying text.

ria. Among the most important of these criteria are that the proposed transfer: (1) will have no adverse effects on the Secretary's ability to meet other contract obligations;²⁸⁵ (2) will not exceed the amount consumed by the CVP contractor,²⁸⁶ or actually delivered to the contracting district or agency during the last three years of normal water delivery;²⁸⁷ (3) will have no significant long-term adverse effect on groundwater conditions in the transferor's service area;²⁸⁸ (4) will create no significant reduction in water supplies for fish and wildlife purposes;²⁸⁹ (5) will comply with state water law;²⁹⁰ and (6) is between willing buyers and sellers.²⁹¹

In sum, the transferability provisions do not permit a free market for water. The numerous conditions for transfer will undoubtedly have a dampening effect on the allocation of water to its most economically efficient use. Yet, potential windfall profits²⁹² and the lifting of many restrictions will create incentives for CVP contractors to use water more efficiently and sell the conserved water for higher-value uses. Industry and urban water districts heralded these provisions as a first step toward the formation of a properly functioning market and a loosening of agriculture's monopoly on reclamation water.²⁹³

The CVP water transfer provisions, like those affecting water pricing, will test the future of market-based reclamation reform. They will also test whether efficiency and allocative flexibility can be part of the Bureau's project management and operations. President Clinton has stated that he favors economic incentive mechanisms to realize environmental goals.²⁹⁴ So far, however, only one water transfer pursuant to the Reclamation Projects Adjustment Act has been proposed.²⁹⁵

285. § 3405(a)(1)(H), 106 Stat. at 4711.

286. § 3405(a)(1)(I), 106 Stat. at 4711.

287. § 3405(a)(1)(A), 106 Stat. at 4709-10. These conditions are designed to limit transfers to "real water," rather than "paper water" that has never actually been used. Striemer, *supra* note 64, at 10 (referring to § 3405(a)(1)(A)).

288. § 3405(a)(1)(J), 106 Stat. at 4711.

289. § 3405(a)(1)(L), 106 Stat. at 4711.

290. § 3405(a)(1)(D), (M), 106 Stat. at 4710-11.

291. § 3405(a)(1)(C), 106 Stat. at 4710.

292. See *supra* text accompanying note 260.

293. See *Water Bill Heads to Bush's Desk*, *supra* note 122, at 3150, 3152. James Harvey, Chief Executive Officer of TransAmerica, Inc., urged Senator Seymour to support the bill because "passage of [Central Valley Project] reform legislation is crucial for a free market to function properly." *Id.* at 3152.

294. See Wayne Thompson, *BPA and Bill Clinton: Is This a Good Match?*, OREGONIAN, Jan. 31, 1993, at K1, K4.

295. See *Westlands Water Dist. v. Natural Resources Defense Council*, 43 F.3d 457 (9th Cir. 1994). For a discussion of the Bureau's interim water transfer guidelines, see *infra* part V.B.

The Act's environmental and economic provisions may be compatible. While environmentalists sometimes oppose markets in natural resources on ethical grounds, or dispute whether economic incentives are the most effective means of regulation,²⁹⁶ the Act contains restrictions that modify the water "market" that it creates. Some of the restrictions on water transfers are designed to protect the environment.²⁹⁷ Environmental enhancement surcharges also regulate the market somewhat.²⁹⁸ Moreover, as discussed earlier, if water is used more efficiently, greater flows will remain for instream uses and the preservation of natural ecosystems.²⁹⁹

The Act's environmental and economic reforms represent an enhancement and modification of federal authority. Yet, in other respects, the Reclamation Projects Adjustment Act transfers much control to the states. This third rubric of reform in the Act is discussed below.

IV

CHANGING ROLE OF THE FEDERAL GOVERNMENT

The Act's reforms evince significant shifts in federal reclamation and water policy. The most significant changes in the Reclamation Projects Adjustment Act were designed to alter the powers of the Bureau of Reclamation and discourage its cozy relationship with large agricultural interests, particularly those served by the Central Valley Project. Much opposition to the Act came from those who believed that the CVP reforms were an over-ambitious assertion of federal power at the expense of traditional state primacy in the allocation of water resources.³⁰⁰ Indeed, the water in the CVP might now be under greater federal control than at any time in the past, but there are other provisions in the Act that provide for a significant shift of some power from the federal government back to the states.³⁰¹ The Reclamation Projects Adjustment Act also promotes greater cooperation between state and federal governments,³⁰² which may begin to reduce tension over the control of western water. This evolving notion of federalism

296. See *supra* note 239. For a contrary view, advocating complete privatization of water resources, see *supra* note 247.

297. See, e.g., § 3405(a)(1)(L), 106 Stat. at 4711 (conditioning water transfers on the absence of a significant reduction in water supplies for fish and wildlife).

298. See *supra* notes 273-75 and accompanying text.

299. See *supra* note 237 and accompanying text.

300. See, e.g., *Senate Subcomm. CVP Hearings, supra* note 58, at 40-41, 181 (statement of Sen. Burns), 182-84 (statement of Sen. Seymour), 186-89 (statement of Rep. Condit). In addition, see President Bush's comments, *infra* note 333, expressing concern about the intrusiveness of the bill and its effects on state primacy.

301. See *infra* part IV.B-C.

302. See *infra* part IV.B.

in reclamation policy is the driving force embodied in the third rubric of reform.

A. History of Conflict

Federalism has long been a central issue in the debate over western water law and policy.³⁰³ During the nineteenth century, legal allocation of western water resources rested solely within local custom and sovereign powers of the states.³⁰⁴ During the same period, the federal government was reluctant to commit itself to internal state improvements.³⁰⁵ An interpretation of federal constitutional authority restricted federal involvement to navigational improvement projects.³⁰⁶

The 1902 Reclamation Act, however, started the expansion of federal control over western water.³⁰⁷ By the 1940's, the federal government had become the dominant force in western water policy by virtue of the enormous volume of western water controlled by its rec-

303. See D. Craig Bell & Norman K. Johnson, *State Water Laws and Federal Water Uses: The History of Conflict, the Prospects for Accommodation*, 21 ENVTL. L. 1, 23-49 (1991). Water law issues have also pervaded discussions of the decline of federalism. See, e.g., G. Thomas Koester, *Of Equal Footing: A Historical Perspective on Title Navigability*, Paper Presented Before the Continuing Legal Education Conference on Navigability (Nov. 13, 1992). For a general overview of the decline of federalism and suggestions to return power to the state level, see WORKING GROUP ON FEDERALISM, DOMESTIC POLICY COUNCIL, *THE STATUS OF FEDERALISM IN AMERICA* (1986).

304. Following statehood and passage of the Desert Land Act of 1877, ch. 107, 19 Stat. 377 (prior to the March 26, 1908 amendment), several states asserted primacy over water rights that were not specifically granted to others by federal patents. *Lux v. Haggin*, 10 P. 674, 719-22 (Cal. 1886). The U.S. Supreme Court affirmed state primacy in 1935:

[F]ollowing the [Desert Land Act] of 1877, if not before, all non-navigable waters then a part of the public domain became *publici juris*, subject to the plenary control of the designated states, including those since created out of the territories named, with the right in each to determine for itself to what extent the rule of appropriation or the common-law rule in respect of riparian rights should obtain [T]he full power of choice must remain with the state.

California Or. Power Co. v. Beaver Portland Cement Co., 295 U.S. 142, 163-64 (1935).

305. "The nineteenth century debate on internal improvements brought vetoes from six presidents." Daniel P. Moynihan, *Foreword to ANDREWS & SANSONE*, *supra* note 60, at 5.

306. *Id.* (discussing interpretations of the Commerce Clause and *Gibbons v. Ogden*, 22 U.S. 1 (1824)).

307. See TARLOCK ET AL., *supra* note 11, at 622-23 ("[T]he Reclamation Act of 1902 marked the entry of the federal government into the business of directly financing western agricultural development . . .").

Around this time, the definition of "navigability" began to expand, and Congress authorized more and more new projects. See Bell & Johnson, *supra* note 303, at 26.

The states did not object to the federal government's growing involvement. "[D]uring the first 60 years of the reclamation program, no state filed suit challenging the Bureau's growing authority in the field of western water." ANDREWS & SANSONE, *supra* note 60, at 316. One obvious reason for the lack of controversy was the fact that recipient states' goals coincided with those of the federal reclamation program. *Id.*

lamation projects.³⁰⁸ In addition, the federal government gained greater control of western water through its vast land holdings in the western states.³⁰⁹ Starting in 1908, the Supreme Court took the view that Congress had reserved to the federal government in the acts granting statehood sufficient water to meet the needs of federal "reserved lands," which are lands that were withdrawn from settlement and reserved for specific federal purposes.³¹⁰ These federal reserved rights were first recognized by the courts for the benefit of Indian tribes.³¹¹ Later, the Court found that federal reserved rights were attached to other types of federal lands, such as national parks, forests, and monuments.³¹² In contrast to state prior appropriation laws,³¹³ federal reserved water rights do not require actual use, and the priority date is the date on which the lands involved were reserved.³¹⁴ Federal reserved rights potentially represent very large quantities of water.³¹⁵ Therefore, uncertainty surrounding the actual quantities represented by these rights and their priority significantly hinders state water allocations.³¹⁶

308. See Reclamation Act of 1902 § 8, ch. 1093, 32 Stat. 390 (codified at 43 U.S.C. § 383 (1988)) (savings clause):

[N]othing in this 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, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws

See also Federal Power Act § 27, 16 U.S.C. § 821 (1988).

309. TARLOCK ET AL., *supra* note 11, at 760-830 (discussing federal reserved rights in water).

310. Bell & Johnson, *supra* note 303, at 28; SAX ET AL., *supra* note 11, at 804-06.

311. *Winters v. United States*, 207 U.S. 564, 577 (1908). "The *Winters* decision is the acknowledged source of the reserved rights doctrine." SAX ET AL., *supra* note 11, at 809. See generally Susan M. Williams, *The Winters Doctrine on Water Administration*, Proceedings of the Thirty-Sixth Annual Rocky Mountain Mineral Law Institute, § 24, reprinted in *Western Water Policy Review Act of 1991: Hearings Before the Subcomm. on Water & Power of the Senate Comm. on Energy & Natural Resources*, 102d Cong., 1st Sess. 87 (1991) [hereinafter *Senate Western Water Policy Hearings*].

After the *Winters* decision, decades passed before Indian water rights were actually quantified. DAWDY, *supra* note 10, at 176 (citing NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE 474-75 (1973)). During this time, the Bureau of Reclamation built water storage projects that captured water that fell within the federal reserved rights and distributed the water to non-Indian settlers. *Id.* Conflicts predictably arose when the superior federal reserved rights were later exercised. *Id.*

312. *Arizona v. California*, 373 U.S. 546, 601 (1963) (national parks and forests); *Cappaert v. United States*, 426 U.S. 128 (1976) (national monument).

313. Prior appropriation requires the beneficial use of water. The priority date of the use is the date of first use of the water. See SAX ET AL., *supra* note 11, at 138, 142, 164-69.

314. *Id.* at 806.

315. *Id.* at 815 n.3 ("More than 60% of the average annual water yield in the 11 Western States is from federal reservations.")

316. TARLOCK ET AL., *supra* note 11, at 763.

*California v. United States*³¹⁷ represents one of the latest major developments in the struggle over western water. In that case, the Bureau of Reclamation applied for a permit from the California State Water Resources Control Board (SWRCB) to appropriate water that would be impounded by the New Melones Dam, a CVP addition.³¹⁸ The SWRCB approved the application, but attached twenty-five conditions to the permit.³¹⁹ Ultimately, the U.S. Supreme Court upheld these state efforts to maintain some control over state water resources³²⁰ because section 8 of the Reclamation Act of 1902 reflected a congressional intent to defer to state water law.³²¹ The Court held that the federal government must apply to the state for water permits or purchase rights from other water users.³²² Alternatively, the federal government could condemn water rights under the power of eminent domain and compensate the owner for the "taking."

While *California v. United States* represents a legal victory for the states,³²³ the federal-state relationship has not changed significantly since that decision because the federal government still controls vast quantities of water. Relations are generally amicable when state and federal policies coincide, such as when the federal government provides drought relief.³²⁴ However, congressional attempts to alter the operation of reclamation projects usually generate vehement protests from state officials and project beneficiaries.³²⁵ States also criticize the federal government for lack of policy coordination both among the numerous federal agencies with jurisdiction over water and be-

317. 438 U.S. 645 (1978). For an extensive review of the federal-state conflict that led to the *California v. United States* decision, see ANDREWS & SANSONE, *supra* note 60, at 313-406.

318. *California v. United States*, 438 U.S. at 652.

319. *Id.*

320. *Id.* at 647.

321. *Id.* at 675; see Reclamation Act of 1902, § 8, 32 Stat. at 390.

322. See *California v. United States*, 438 U.S. at 677-79 (requiring the federal government to obtain state water use permits); cf. PUD No. 1 of Jefferson County v. Washington Dep't of Ecology, 114 S. Ct. 1900, 1914 (1994) (holding that the State of Washington may impose minimum streamflow requirements as well as numerical water quality criteria in a certification issued pursuant to § 401 of the Clean Water Act, 33 U.S.C. § 1251 (1988), to ensure compliance with state water quality standards).

323. ANDREWS & SANSONE, *supra* note 60, at 350-55 (examining how the *California v. United States* decision reaffirmed and expanded the role of states in reclamation); see also Roderick Walston, *Reborn Federalism in Western Water Law: The New Melones Dam Decision*, 30 HASTINGS L.J. 1645, 1646, 1669-73 (1978-79).

324. See, e.g., *Bush To Boost Water*, *supra* note 154, at A1.

325. For a discussion of the legislative history of the Central Valley Project reforms, see *supra* part I.

tween federal and state governments.³²⁶ Nationally, the debate over federalism continues.³²⁷

B. *Respecting the Primacy of State Water Law*

The Reclamation Projects Adjustment Act attempts to minimize the disagreements between state and federal governments.³²⁸ Several of its provisions represent a shift away from federal domination and toward greater cooperation with states. First, Congress acknowledged the primacy of state water laws with respect to reclamation water³²⁹ and resolved some of the conflicts over reserved water rights.³³⁰ Second, the Act requires states to contribute toward the cost of improvements to reclamation projects that primarily benefit state citizens.³³¹ Third, the Act establishes a mechanism for developing regional solutions to water reclamation and allocation problems.³³²

Despite some statements to the contrary,³³³ the Reclamation Projects Adjustment Act recognizes the sovereignty of state control

326. In 1989, the Western Governors' Association identified six flaws in federal water policy coordination:

1. Lack of "global thinking" about water;
2. Redundancy of functions;
3. Protracted disputes;
4. Turf battles;
5. Absence of the articulation of policy; [and]
6. Lack of finality of water decisions.

WESTERN GOVERNORS' ASS'N, WHITE PAPER ON FEDERAL WATER POLICY COORDINATION 3-7 (1989).

327. The state-federal conflict intensified with the return to state control espoused by the Reagan and Bush Administrations. In 1987, President Reagan issued an Executive order on Federalism, which established a number of guiding principles: "In most areas of governmental concern, the States uniquely possess the constitutional authority, the resources, and the competence to discern the sentiments of the people and to govern accordingly. . . . Uncertainties regarding the legitimate authority of the national government should be resolved against regulation at the national level." Exec. Order No. 12,612, 52 Fed. Reg. 41,685 (1987), *cited in* WESTERN GOVERNORS' ASS'N, *supra* note 326. Recently, as Republicans gained control of both Houses of Congress, state control has once again become a mantra for reform.

328. See Reclamation Projects Authorization and Adjustment Act of 1992, § 3002, 106 Stat. at 4694.

329. See, e.g., § 3411(a), 106 Stat. at 4731 (requiring compliance with state laws and permits).

330. See *infra* notes 338-44 and accompanying text.

331. See § 3406(b)(4)-(6), (10), (13)-(18), (20), 106 Stat. at 4717-20; see also *infra* part IV.C. Cost-sharing might at first be thought objectionable, but it represents a necessary first step in the eventual transfer of federal projects to state ownership and control. See *infra* notes 348-52 and accompanying text.

332. See Tit. XXX, §§ 3001-3010, 106 Stat. at 4693-98; see *infra* part IV.D.

333. When President Bush signed the bill, for example, the CVP provisions caused him to voice concerns about the erosion of state water law primacy:

Unfortunately, Congress threatens continued encroachment on the States' traditional prerogatives. For example, pending legislation concerning the [CVP] has been proposed which would impair the State of California's authority in matters

over water allocation in several ways. First, the Act requires the Bureau of Reclamation to conform the CVP and other project operations to state water law and policy.³³⁴ Congress recognizes that the State of California should control transfers of CVP water.³³⁵ Beside facilitating a shift toward state control, these provisions also deflect political battles over water allocation to the state level.

The Act also conditions all new CVP water contracts on the SWRCB's Delta water quality review ordered by the California court of appeal in *United States v. State Water Resources Control Board*.³³⁶

of water allocation, distribution, and use . . . Such legislation . . . would pose a dangerous precedent for federal legislation involving other States.

President George Bush, *Water Policy in the West: Promoting Economic Growth and Protecting the Environment*, WATER STRATEGIST, Oct. 1992, at 1, 2; see also Statement of George Bush, *supra* note 284.

334. See §§ 3406(a)(4), (b), 3411, 106 Stat. at 4714, 4731. Senator Cranston remarked on the floor of the Senate: "I disagree with those who may argue that the CVP provisions of H.R. 429 represent inappropriate Federal intervention in State water matters. The Central Valley project is after all a Federal project. Moreover the legislation will help reduce Federal intervention in California's water matters, not increase it." 138 CONG. REC. S17,662 (daily ed. Oct. 8, 1992). As discussed earlier, the Act also clarifies that reclamation projects are subject to federal environmental laws. See *supra* notes 161-65 and accompanying text.

335. Section 3411(a) provides:

[T]he Secretary shall, prior to the reallocation of water from any purpose of use or place of use specified within the applicable [CVP] water rights permits and licenses to [any other] purpose . . . or place of use[,] . . . obtain a modification in those permits and licenses, in a manner consistent with the provisions of applicable State law

§ 3411(a), 106 Stat. at 4731.

If California had state laws prohibiting such transfers, the state could effectively veto transfers of CVP water. However, California laws favor water marketing and transfers. John B. Loomis, *The 1991 State of California Water Bank: Water Marketing Takes a Quantum Leap*, 3 RIVERS 129 (1992). In 1991, California established a temporary water bank to reallocate water during the extended drought. *Id.* The state government provided a clearinghouse where irrigators could sell water to the state at \$125 per acre-foot and buyers (cities and industrial consumers) could buy water at \$175 per acre-foot. *Id.* at 130. The difference covered the cost of water lost during transfer and water dedicated to mitigate potential adverse environmental effects. *Id.* The water bank concept successfully transferred 800,000 acre-feet, and the program was continued in 1992. *Id.*

336. § 3404(a)(2), 106 Stat. at 4708 (citing *United States v. State Water Resources Control Bd.*, 227 Cal. Rptr. 161 (Ct. App. 1986)). In this case, the court invalidated the water quality standards for consumptive uses established by the State Water Resources Control Board (SWRCB) to protect fish and wildlife and required the SWRCB to conduct hearings (as the SWRCB had planned) regarding the water quality of the San Joaquin-Sacramento River Delta. *United States v. State Water Resources Control Bd.*, 227 Cal. Rptr. at 181. Under the public trust doctrine, the state, as trustee, has a duty to preserve trust property from harmful diversions by water rights holders. *Id.* at 171. Thus, the SWRCB has the authority under the public trust doctrine to regulate streamflows to meet water quality objectives, including salinity control. *Id.* at 192. Furthermore, the SWRCB retains "continuing jurisdiction to impose new standards upon the projects in 'the public interest.'" *Id.* at 201-02.

Originally scheduled for release in 1989, the SWRCB's plan has been held up by "paralysis of analysis." *The Delta on Hold*, *supra* note 76, at 1. The draft plan was issued in December 1994. STATE WATER RESOURCES CONTROL BD., CALIFORNIA ENVTL. PROTEC-

In other titles of the Act, Congress expressly limits the commissioning of various reclamation projects so as not to invalidate or preempt state water law or interstate compacts governing water.³³⁷

Congress also resolved some of the uncertainty caused by unquantified federal water rights for Indian reservations. The specter of large, but unquantified, federal reserved water rights looms large over the allocative regimes of several states.³³⁸ The Act provides some relief by settling Indian water rights for three states.³³⁹ For example, in the Ute Indian rights settlement,³⁴⁰ the federal government ratified the quantification of the tribe's reserved water rights determined by a 1990 settlement between the tribe, the State of Utah, and the conservancy district.³⁴¹ Title V provides the legal framework for the Ute tribe to "lend" 60,000 acre-feet of tribal water to allow development of the Central Utah Project's Bonneville Unit.³⁴² In return, the tribe will receive for the next fifty years a certain percentage of the municipal and industrial repayment obligations attributable to its portion of the Bonneville Unit water.³⁴³ The federal government also agreed to contribute \$125 million to a Tribal Development Fund established for economic projects.³⁴⁴ By reducing conflict between federal water rights and state law, title V limits potential future litigation over reserved water rights and thus removes some of the federal law impediments to state control of water resources.

C. *Transfer to State Ownership and Control*

Another means of lessening the conflict between the states and the federal development agencies is to gradually shift control of federally developed water to state water resource entities. In California,

TION AGENCY, DRAFT WATER QUALITY CONTROL PLAN FOR THE SAN FRANCISCO BAY/SACRAMENTO-SAN JOAQUIN DELTA ESTUARY (1994). See *infra* notes 457-459 and accompanying text.

337. See, e.g., §§ 207(k), 1909, 106 Stat. at 4624, 4676-77 (respectively).

338. A. Dan Tarlock, *The Illusion of Finality in General Water Rights Adjudications*, 25 IDAHO L. REV. 271, 282-88 (1988-89) (discussing the process of water rights adjudications and concluding that such adjudications result only in a "myth of finality"). Some states, such as Wyoming, have attempted to integrate and even limit federal reserved water rights according to principles of state water law. See, e.g., *In re Rights To Use Water in Big Horn River Sys.*, 753 P.2d 76, 107-08, 114-15 (Wyo. 1988).

339. Tit. V, 106 Stat. at 4650 (Ute Indian Rights Settlement, Utah); Tit. XXXV, 106 Stat. at 4731 (Three Affiliated Tribes and Standing Rock Sioux Tribe Equitable Compensation Program, North Dakota); Tit. XXXVII, 106 Stat. at 4740 (San Carlos Apache Tribe Water Rights Settlement, Arizona).

340. Settlement with the Ute Tribe was essential for completion of the Central Utah Project. See §§ 501-502, 106 Stat. at 4650-52.

341. § 503, 106 Stat. at 4652; H.R. REP. NO. 114, *supra* note 88, at 125-26.

342. H.R. REP. NO. 114, *supra* note 88, at 125; Reclamation Projects Authorization and Adjustment Act § 502(a), 106 Stat. at 4651.

343. § 502(a), 106 Stat. at 4651.

344. § 506, 106 Stat. at 4654-55.

opponents of federal CVP reform advocate transferring control of CVP operations to the state.³⁴⁵ It is unlikely that the federal government would transfer outright *ownership* of such projects to the states, given that a large percentage of the costs is still owed to the federal government, and the states and local districts remain unable to pay their debts.³⁴⁶ Particularly when public concern about the federal deficit is high, the federal government is limited in its ability to single-handedly build and operate projects that benefit individual states. User fees³⁴⁷ and state cost-sharing agreements, however, indicate a gradual transfer of control and ownership to the states.

The Reclamation Projects Adjustment Act includes several cost-sharing agreements.³⁴⁸ Section 204, for example, sets the “non-Federal” share of the cost for the design, engineering, and construction of the Central Utah Project at 35%.³⁴⁹ The significance of this allocation becomes apparent when compared to the sharply lower contribution that the State of California and CVP irrigators made to the Central Valley Project.³⁵⁰ Along with co-ownership, the State of Utah will be given greater authority over management of the reclamation project.³⁵¹ Another significant cost-sharing provision requires states to pay for “not less than one-half” of the cost of expanding or modifying Bureau of Reclamation recreational facilities.³⁵² Provisions like these should lead to greater state involvement with the planning, develop-

345. Senator Malcomb Wallop (R-Wyo.) wrote to Governor Wilson:

You have been absolutely correct in your insistence that the only real solution to California's long term water situation is for the federal government to turn over at least the operational control of the CVP to the State so that it can be integrated into the State project. [However,] that option is not available given the political climate in Congress.

138 CONG. REC. S17,658 (daily ed. Oct. 8, 1992); see also *State Plan for Water System*, S.F. CHRON., Aug. 10, 1992, at A1 (discussing Governor Wilson's efforts to get control of the CVP without actually taking title to or paying for the project).

346. See, e.g., Dan Bernstein, *State Budget Will Beat Deadline, Ignore Woes*, SACRAMENTO BEE, June 25, 1994, at A1. Note, however, that several of the Act's provisions do provide for some small Bureau projects or property to be transferred to state or local district control. See, e.g., Tit. XIV, 106 Stat. at 4662 (Vermejo Project Relief, New Mexico); Tit. XXII, 106 Stat. at 4684 (Sunnyside Valley Irrigation District, Washington); Tit. XXX-III, 106 Stat. at 4705 (Elephant Butte Irrigation District, New Mexico).

347. For a discussion of environmental enhancement surcharges, see *supra* notes 273-75 and accompanying text.

348. See, e.g., § 204, 106 Stat. at 4614-15 (Central Utah Project); § 708(c), 106 Stat. at 4657 (Leadville Mine Drainage Tunnel, Colorado); § 803(b), 106 Stat. at 4658 (Lake Meredith Salinity Control Project, Texas and New Mexico); § 903(a), 106 Stat. at 4660 (Cedar Bluff Unit, Kansas); § 1101(b), 106 Stat. at 4661 (Salton Sea Research Project, California); §§ 1604-1614, 106 Stat. at 4665-68 (Reclamation Wastewater and Groundwater Studies); § 2008, 106 Stat. at 4682-83 (Lake Andes-Wagner/Marty II, South Dakota); § 3406(b), (d), 106 Stat. at 4717-18, 4722-23 (Central Valley Project, California).

349. § 204, 106 Stat. at 4614.

350. See *supra* note 66.

351. See § 301, 106 Stat. at 4625-32.

352. See §§ 2801-2806, 106 Stat. at 4690-93.

ment, and operation of reclamation projects. Co-ownership and control may usher in a new era of cooperation and coordination between the federal and state governments.

Other provisions of the Act explicitly provide for the eventual transfer of control to states after significant cost sharing during project development. For example, title VIII authorizes the Bureau to construct the Lake Meredith Salinity Control Project in Texas and New Mexico.³⁵³ The Bureau will not construct the salinity control project until it contracts with and receives all necessary permits from state authorities governing the design and operation of the project.³⁵⁴ The federal share is not to exceed 33% of project costs.³⁵⁵ After construction and testing of the project, the Bureau will transfer "the care, operation and maintenance of the project works" to the state authority.³⁵⁶ This provision for eventual transfer of control to the state exemplifies a new way of doing business for the Bureau, a method that will undoubtedly reduce federal-state tension.³⁵⁷

D. Regional Solutions to Western Water Scarcity

Throughout the history of federal water development projects, numerous attempts were made to form a comprehensive national water policy.³⁵⁸ Even today, however, it appears that no articulated

353. Tit. VIII, 106 Stat. 4658.

354. § 802, 106 Stat. at 4658.

355. § 803(b), 106 Stat. at 4658.

356. § 804(c), 106 Stat. at 4659.

357. Similar provisions for transfer of control can be found throughout the Reclamation Projects Adjustment Act. *See, e.g.*, Tit. IX, § 902, 106 Stat. at 4659-60 (Cedar Bluff Unit, Kansas); Tit. XXIII, § 2302, 106 Stat. at 4685-86 (Platoro Reservoir and Dam, San Luis Valley Project, Colorado); Tit. XXIV, § 2401, 106 Stat. at 4687 (Redwood County Water District, California); Tit. XXV, § 2501, 106 Stat. at 4688-89 (United Water Conservation District, California); Tit. XXXI, § 3101, 106 Stat. at 4698-99 (Mountain Park Master Conservancy District, Oklahoma).

358. Stephen M. Born, *Redefining National Water Policy*, in AMERICAN WATER RESOURCES ASS'N, PUB. NO. 89-1, REDEFINING NATIONAL WATER POLICY: NEW ROLES AND DIRECTIONS 1 (Stephen M. Born ed., 1989). Born gives a brief history of the efforts to establish a national water policy and the "notion of coordinated river basin planning." *Id.* In the early 1900's, the first such initiatives were advocated by waterways commissions for multipurpose management. The New Deal led to greater coordination of the federal construction agencies' work. Then, under President Truman, the Water Resources Policy Commission recommended basinwide comprehensive programs. *Id.* at 1-2. In 1965, the Water Resources Planning Act established the U.S. Water Resources Council and river basin commissions. *Id.* at 2. Congress established the National Water Commission in 1968, and this commission released a "massive synthesis of water issues" in 1973. *Id.* (discussing NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE (1973)). President Carter unsuccessfully attempted to forge a national water policy. *Id.* Born notes that the Reagan Administration "consistently opposed the development of a national water policy, and dismantled much of the nation's water resources institutional capacity including the U.S. Water Resources Council and the river basin commissions." *Id.* For a more extensive survey of the history of federal water policy coordination, see CHARLES H.W. FOSTER &

federal water policy exists.³⁵⁹ In 1989, the Western Governors' Association charged:

First, poor federal water coordination hampers state water management by prolonging water disputes, by increasing the cost of dispute resolution and by unnecessarily infringing on state water management prerogatives. Second, poor federal water policy coordination increases the uncertainty associated with and imposes unnecessary costs on water allocation decisions³⁶⁰

The recent six-year drought in the West drew attention to the lack of coherent government coordination.³⁶¹ At the federal level, thirteen congressional committees and subcommittees, eight executive cabinet offices, and six independent agencies have some jurisdiction over federal water policy.³⁶² Differing missions and constituents, turf battles, and redundancy of functions are both the product and the partial cause of this fragmented federal authority. Lack of a coherent national water policy allowed the federal bureaucracy, Congress, and the courts to focus too closely on individual problems without regard to the overall concerns of the states or their water users.³⁶³

While a gradual shift to state control may ease this problem, the Act also provides for the improvement of coordination at the federal level.³⁶⁴ The Western Water Policy Review Act, title XXX, directs the President to appoint a commission³⁶⁵ to "undertake a comprehensive review of Federal activities in the nineteen Western States which directly or indirectly affect the allocation and use of water resources"³⁶⁶ and to present the results of this review to Congress within three years.³⁶⁷ Specifically, the Act instructs the commission to review "present and anticipated water resource problems," "the current and proposed Federal programs . . . including the possible reorganization or consolidation of the current water resources development and man-

PETER P. ROGERS, JOHN F. KENNEDY SCH. OF GOV'T ENERGY & ENVTL. POLICY CTR., DISCUSSION PAPER NO. E-88-05, FEDERAL WATER POLICY: TOWARD AN AGENDA FOR ACTION 13-40 (1988).

359. Stephen S. Light & John R. Wodraska, *National Water Policy: A Prospect for Institutional Reform*, PUB. ADMIN. REV., Sept./Oct. 1990, reprinted in *Senate Western Water Policy Hearings*, *supra* note 311, at 48 (citation omitted).

360. WESTERN GOVERNORS' ASS'N, *supra* note 326, at 3.

361. In the last four years, the Western Governors' Association has joined several academics in criticizing the amorphous federal water policy. See Born, *supra* note 358, at 6; FOSTER & ROGERS, *supra* note 358, at 8-11; WESTERN GOVERNORS' ASS'N, *supra* note 326, at 1.

362. MARK O. HATFIELD, THE NATION NEEDS A COMPREHENSIVE WATER POLICY 1 (1992) (leaflet distributed by Sen. Hatfield).

363. See *Senate Comm. CVP Hearings*, *supra* note 69, at 3 (statement of Rep. Miller).

364. See §§ 3001-3010, 106 Stat. at 4693-98.

365. § 3004, 106 Stat. at 4695.

366. § 3003(a), 106 Stat. at 4694.

367. § 3003(b), 106 Stat. at 4695.

agement agencies," "the history, use, and effectiveness of various institutional arrangements," and the federal-state relationship and legal authorities and activities of federal agencies.³⁶⁸ The commission's membership is to include representatives from states and Indian tribes.³⁶⁹ Additionally, the governors of the western states will appoint representatives to assist the commission.³⁷⁰

The western water policy initiative reflects two important principles. First, it calls for pro-active, rather than reactive, management of western water.³⁷¹ The commission was designed to create a forum where problems can be discussed and solved prior to the crisis stage.³⁷² Senator Hatfield, the bill's chief sponsor, exhorted:

[W]e cannot afford to wait for Congress to have to legislate solutions to each and every one of these water management problems as they increase. Our nation cannot afford to wait until a water crisis has passed before acting. We must learn from our past mistakes how to work and evaluate our nation's water policies.³⁷³

Second, the Act reflects the belief that the regions and states should solve their own water allocation problems.³⁷⁴ While the lack of a coherent federal water policy is a nationwide problem, title XXX focuses solely on western problems.³⁷⁵ The bill's sponsors found that regional problems varied too much for a nationwide solution to be effective.³⁷⁶ Rather, if successful, the Western Water Policy Commission would serve as a model that could be adapted to other regions.³⁷⁷ In effect, Congress created a forum in which western states could have a significant voice in the continued existence and focus of federal reclamation and water policy. The commission may be able to generate regional consensus and alter the role of the federal government, thus leaving the states to assert more control of water resources.

368. § 3005, 106 Stat. at 4696.

369. § 3004(b)(1)(C), (D), 106 Stat. at 4695.

370. § 3006(a), 106 Stat. at 4696. The commission may also select additional representatives from tribal organizations, as well as private and public interest groups. § 3006(b), 106 Stat. at 4696.

371. See § 3002(3), 106 Stat. at 4694 ("[C]oordination on both the Federal level and the local level is needed to achieve water policy objectives.").

372. See § 3002(10), 106 Stat. at 4694 (stating that federal agencies, such as the Bureau, "have major responsibilities in assisting States in the wise management and allocation of scarce water resources").

373. Senator Mark O. Hatfield, Address at Bonneville Power Administration (Nov. 12, 1992).

374. See generally Symposium, *Seattle Master Builders and Creative Cooperative Federalism*, 17 ENVTL. L. 767 (1987) (discussing the legal merits of novel federal and state arrangements, such as the Northwest Power Planning Council and the Columbia River Gorge Commission, that create innovative forums for river basin government).

375. See §§ 3002(6), (11), 3005, 106 Stat. at 4694, 4695-96.

376. See § 3002(6), 106 Stat. at 4694.

377. 138 CONG. REC. S17,667 (daily ed. Oct. 8, 1992) (statement of Sen. Hatfield).

As discussed in part I, comprehensive reclamation reform is very difficult to achieve.³⁷⁸ The economic and environmental reforms of the Reclamation Projects Adjustment Act take a project-specific approach. Indeed, reforming reclamation may be compatible with the transfer of control back to the regional or state level. Along these lines, the Act respects the primacy of state law,³⁷⁹ creates cost-sharing arrangements,³⁸⁰ and provides for regional policy coordination.³⁸¹ The next part of this comment discusses the implementation of these reforms, as well as the environmental and economic rubrics.

V

EFFORTS AT RECLAMATION REFORM AND RESISTANCE

Two years after Congress passed the Reclamation Projects Adjustment Act,³⁸² significant progress toward reclamation reform is underway. While increased rains finally ended the six-year drought in California, the continued demand for water and the federal set-asides for fish and wildlife mean that CVP irrigators still face potential shortfalls.³⁸³ The dry spring of 1994, and the reintroduction of water rationing³⁸⁴ reintensified the battle over western water.

Taking office just three months after the reclamation reform legislation became law,³⁸⁵ the Clinton Administration set out to reform the Bureau of Reclamation and its mission.³⁸⁶ Most importantly, the President appointed two administrators willing to implement both the specific mandates of the Act and broad reclamation reform. First, early in 1993, the Senate confirmed Bruce Babbitt, a long-time Bureau critic,³⁸⁷ as Secretary of the Inte-

378. See *supra* notes 90-94 and accompanying text.

379. See *supra* part IV.B.

380. See *supra* part IV.C.

381. See *supra* part IV.D.

382. 106 Stat. 4600.

383. See Elliot Diring, *Water Deliveries Will Increase, But Some Farmers Still Hurting*, S.F. CHRON., Apr. 8, 1993, at B7; Robert Reinhold, *West's Drought Ends, the Political Terrain Altered*, N.Y. TIMES, Feb. 25, 1993, at A14; David B. Rosenbaum, *California Faces Growing Conflicts: Environmental Restrictions Take Toll on Already Overly Taxed Supplies*, ENGINEERING NEWS-REC., Aug. 2, 1993, at 26-27.

384. See Elliot Diring, *U.S. To Cut Water Supply for Central Valley Farms: This Rain Season Drier Than Drought Years*, S.F. CHRON., May 10, 1994, at A1 (stating that irrigators with senior contract rights were to get 75% of their contract allocations, while junior users would get 35%). The year 1994 turned out to be California's fourth driest "water year" in recorded history. *Fourth Driest Year for State*, S.F. CHRON., Oct. 4, 1994, at A22.

385. Dan Balz, *An Oath at Noon Opens Clinton Era*, WASH. POST, Jan. 20, 1993, at A1.

386. See, e.g., Tom Kenworthy, *The Lord of the Land; Bruce Babbitt Rode Out of the Mythical Old West*, WASH. POST, Jan. 23, 1994, at A17, F1 ("Of this you can be certain," proclaimed Babbitt during a National Press Club speech in late April, '1993 will be the year of reform for public land and water.'").

387. See *supra* note 52. For other expressions of Babbitt's view of the federal government's role in the West, see Maura Dolan, *Babbitt Seeks To Balance Land Use, Conserva-*

rior.³⁸⁸ Soon thereafter, President Clinton appointed Dan Beard as Commissioner of the Bureau of Reclamation.³⁸⁹ Like Babbitt, Beard had long criticized federal reclamation policy.³⁹⁰

Within weeks of his confirmation, Beard started to define the "new" Bureau of Reclamation. Visiting the Denver Bureau office, he announced: "To me, the Bureau of Reclamation is an environmental organization As we look out and see the construction budget decline, we'll place a priority on being the pre-eminent water management agency."³⁹¹ On November 1, 1993, Secretary Babbitt and Commissioner Beard formally announced a "Blueprint for Reform."³⁹² The Blueprint for Reform was designed to change the Bureau's organization and culture to reflect increased environmental and water management concerns.³⁹³ This redefinition of the agency was also in accord with the Administration's recommendations for "reinventing government."³⁹⁴ In September 1993, Vice President Gore's National Performance Review Report had specifically called for the Bureau "to redefine its mission toward new environmental priorities and clarify its role in water management."³⁹⁵ The Bureau's new management transformed the traditionally construction-oriented bureaucracy into an organization with a flattened, decentralized management structure that aimed to be a "preeminent water resource manage-

tion, Politics: Pro-Environment Interior Secretary Is Trying To Redirect Priorities During an Era of Profound Change, L.A. TIMES, Apr. 27, 1993, at A1, A22-23 (discussing Babbitt's agenda to alter the policies of the Department of the Interior in favor of conservation).

388. See Dolan, *supra* note 387, at A1.

389. John Wright, *Dan Beard Confirmed by Senate To Head the Interior Department's Bureau of Reclamation*, U.S. Newswire, May 25, 1993, available in LEXIS, Nexis Library, News File.

390. Dean E. Murphy, *Nomination Signals Water Policy Shift*, L.A. TIMES, Mar. 18, 1993, at A3 (stating that Beard "has been one of the main people throwing spears at the reclamation programs, and now he is going to have to catch them"). Prior to taking the post at the Bureau of Reclamation, Beard served for eight years as staff director for the House Committee on Natural Resources (formerly Interior and Insular Affairs), chaired by Representative Miller, and was one of the principal architects of the 1992 reclamation reform legislation. *Id.*; Wright, *supra* note 389. For a critical view of Beard's nomination, see *Miller's Man at Reclamation*, SACRAMENTO BEE, Feb. 1, 1993, at B12 (asserting that the appointment of Beard would be "the San Joaquin Valley's worst nightmare" because Beard had already "alienated" the Bureau's staff and constituency).

391. Michael Doyle, *New Chief Sees Changing Federal Water Agency Role*, SACRAMENTO BEE, May 30, 1993, at B7. For a discussion of earlier reform within the Bureau of Reclamation, see *supra* notes 143-46 and accompanying text.

392. DANIEL P. BEARD, BUREAU OF RECLAMATION, BLUEPRINT FOR REFORM: THE COMMISSIONER'S PLAN FOR REINVENTING RECLAMATION (1993).

393. See Rita Beamish, *Water Agency Cuts Staff, Shifts Focus Away from Dam Building*, AP, Nov. 1, 1993, available in LEXIS, Nexis Library, News File; Martin Van Der Werf, *No New Canals or Dams for the West*, ARIZ. REPUBLIC, Nov. 2, 1993, at A1.

394. Van Der Werf, *supra* note 393, at A1; see also Laura R. Hamburg, *Reinventing Government Is Back*, States News Service, Oct. 14, 1994, available in LEXIS, Nexis Library, News File.

395. Kenworthy, *supra* note 386, at A17.

ment agency.' ”³⁹⁶ Indeed, when referring to new large water projects, Commissioner Beard declared: “The barn door is now shut You’ve got to use the existing sources.”³⁹⁷

Although the Bureau of Reclamation has begun to change its mission, administration, and leadership, significant new resistance has arisen to reclamation reform and the implementation of the 1992 legislative directives. Irrigators are employing political pressure, including using the congressional budget process,³⁹⁸ to thwart both the Act and the Bureau’s redefinition. Quite possibly, those opposed to reform hope to bide their time until a new administration takes office. Reclamation reform has also been stalled by litigation.³⁹⁹ The Administration has met like resistance in other public resources arenas in the West, but unlike plans for revising the 1872 Mining Act⁴⁰⁰ and implementing grazing reform,⁴⁰¹ Congress has already agreed to reclamation reform.

The next three subsections analyze the Bureau’s progress in implementing the three rubrics of reclamation reform. Significant progress has been achieved, but true reform of the Bureau of Reclamation will require years of executive dedication and initiative, congressional support, and success in court.

396. See Leslie Kaufman, *Reinvention Reality Check, the Bureau of Reclamation Finds It’s Not Easy Going Green*, GOV’T EXECUTIVE, Apr. 1994, at 19, 20 (quoting Commissioner Beard and his associates). As of October 1994, the Bureau had reduced its staff by 1000 employees and reduced the supervisor-employee ratio from 1:5 to 1:15. Hamburg, *supra* note 394.

397. Bruce Finley, *New Dams Out, Feds Tell West*, DENVER POST, Oct. 18, 1994, at A1.

398. The congressional budgetary process has provided a mechanism for opponents to slow implementation of reclamation reform. See, e.g., *Testimony, Feb. 24, 1994, Sen. Malcolm Wallop: Hearings Before the Senate Comm. on Energy & Natural Resources on the Dep’t of the Interior & the U.S. Forest Serv., Fed. Document Clearing House Congressional Testimony*, available in LEXIS, Legis Library, Testimony File.

Once you sort through some of the smoke and mirrors in the budget documents, it is clear that what we are facing in the Interior budget is a continuation of the scorched earth campaign of this Administration against the West High on the target list are concepts of private property and the private sector.

[The Bureau’s use of a tiered pricing mechanism in water contracts] is simply an indication of this Administration’s intent to inflict the greatest level of pain it can on water users.

Id.

399. See *infra* note 404 and accompanying text.

400. 30 U.S.C. § 22 (1988); see Carl Pope, *Wrong-Headed Right*, SIERRA, Mar. 1994, at 31, 31-32 (describing various Takings Clause challenges to government controls brought by the property rights movement).

401. See generally *Klump v. Bureau of Land Management*, 130 Interior Bd. Land App. 119, 144 (1994) (describing one person’s defiance of the Bureau of Land Management’s grazing controls).

A. Environmental Reform

Previous congressional efforts to impose environmental mandates on federal agencies through the National Environmental Policy Act, a broad policy statute, had limited success.⁴⁰² Indeed, parts of the Reclamation Projects Adjustment Act appear to be a response to NEPA's failure to alter federal reclamation policy in even the most dire environmental situations. As shown above, the Reclamation Projects Adjustment Act addresses Bureau recalcitrance by limiting the Bureau's discretion and requiring the implementation of specific environmental programs on a defined schedule.⁴⁰³ Ironically, those opposed to the implementation of such reclamation reforms have recently invoked NEPA's procedural mandates in their defense.⁴⁰⁴

Integral to the environmental reforms embodied in the Central Valley Project Improvement Act is the set-aside of water for environmental restoration.⁴⁰⁵ On February 15, 1994, the Bureau announced that 1994 would be a critically dry year.⁴⁰⁶ Because of its obligations under the CVPIA and the biological opinions for the Delta Smelt and the winter-run Chinook Salmon, the Bureau determined that water contractors would receive only 35% of their contracted water.⁴⁰⁷ A group of CVP contractors then filed suit seeking to enjoin the Bureau from implementing the CVPIA set-asides until it conducted environmental studies required by NEPA.⁴⁰⁸

402. See *supra* note 141 and accompanying text.

403. See *supra* notes 167-72 and accompanying text.

404. See, e.g., *Westlands Water Dist. v. United States*, No. CV-F-93-5327-OWW, 1994 U.S. Dist. LEXIS 6276, at *2 (E.D. Cal. Apr. 28, 1994), *vacated sub nom.* *Westlands Water Dist. v. Natural Resources Defense Council*, 43 F.3d 457 (9th Cir. 1994) (involving a water district's NEPA challenge to the Bureau's decision to dedicate 800,000 acre-feet of water to fish and wildlife without performing an environmental impact statement).

405. Reclamation Projects Authorization and Adjustment Act § 3406(b)(2), 106 Stat. at 4715-16 (setting aside 800,000 acre-feet); § 3406(b)(23), 106 Stat. at 4720 (setting aside water to meet federal trust obligations to the Hoopa Valley Tribe); § 3406(d)(1), 106 Stat. at 4722-23 (setting aside water to maintain and improve wildlife refuges in the Central Valley); see also *supra* note 167 and accompanying text. In a letter to Secretary Babbitt, Representative Miller and Senator Bradley, the authors of the CVPIA, expressed their belief that the primary purpose of the 800,000 acre-foot set-aside is to help implement the anadromous fish populations doubling program, mandated by § 3406(b)(1) of the Act. Wendy Pulling, San Francisco Bay/Sacramento-San Joaquin Delta, Remarks at the Hastings *West-Northwest* Symposium (Feb. 4, 1995).

406. *Westlands Water Dist. v. United States*, 1994 U.S. Dist. LEXIS 6276, at *3.

407. See *id.* at *3-4. These species are listed under the Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (codified as amended at 7 U.S.C. § 136 (1988) and in scattered sections of 16 U.S.C.).

408. *Westlands Water Dist. v. United States*, 1994 U.S. Dist. LEXIS 6276, at *4. In addition, the plaintiffs alleged that the implementation of the CVPIA impairs their federal contract rights in violation of the Fifth Amendment's Due Process and Takings Clauses. *Id.* at *2-3.

On April 28, 1994, the district court issued a preliminary injunction preventing the Bureau from implementing the set-asides and dedication provisions pending the completion of an environmental impact statement.⁴⁰⁹ Rejecting the environmental intervenors' argument that the set-aside provisions created an irreconcilable conflict with NEPA,⁴¹⁰ the court also held that, "reading the CVPIA as a whole, Congress evidenced its intent to require the Bureau to comply with all provisions of law, including NEPA."⁴¹¹ The court found that the water contractors would likely prevail on their NEPA claim because, absent statutory language to the contrary, the implementation of the water set-aside for environmental purposes would have environmental effects sufficient to trigger NEPA.⁴¹²

The district court found that NEPA required balancing the "potential damage to one aspect of the environment, plaintiffs' lands and CVP water supplies[,] . . . against potential damage to another aspect of the environment, fish, wildlife and habitat."⁴¹³ The court agreed with the plaintiffs' contention that implementation of the set-asides would cause irreparable injury by requiring the plaintiffs to fallow land that would impair their ability to cover their operation and maintenance costs.⁴¹⁴ The court included in its evaluation of economic injury the dubious environmental damage that could result from increased groundwater pumping, such as subsidence and a decrease in

409. *Id.* at *66. The district court only enjoined the federal government from implementing the set-aside of CVP water under § 3406(b)(2) and (d)(1) of the CVPIA. *Id.* It did not enjoin the federal government from implementing the set-aside to meet federal trust responsibilities to the Hoopa Valley Tribe, which was required under § 3406(b)(23). *Id.* See generally Lynn Ludlow, *Chutzpah in the Westlands*, S.F. EXAMINER, May 9, 1994, at A14 (discussing the injunction).

410. *Westlands Water Dist. v. United States*, 1994 U.S. Dist. LEXIS 6276, at *37-38. In *Flint Ridge Development Co. v. Scenic River Ass'n*, the United States Supreme Court held that an irreconcilable conflict between NEPA and a statute is created when the statute mandates a fixed time period for implementation and the time period is too short to allow the lead agency to comply with NEPA. 426 U.S. 776, 791 (1976). Under such situations, NEPA compliance is deemed to be waived. *Id.*

411. *Westlands Water Dist. v. United States*, 1994 U.S. Dist. LEXIS 6276, at *37.

412. *Id.* at *59-60. On the other hand, the court found that NEPA compliance was not required for the water set aside for the Hoopa Valley Tribe, because an EIS for water releases from the Trinity River was prepared in 1981 and was supplemented by a more recent environmental assessment and a finding of no significant impact. *Id.* at *30-31.

The Bureau had argued that an EIS was not required. The Bureau reasoned that water dedications were not discretionary because they were required pursuant to the Endangered Species Act to protect the listed salmon. See *id.* at *22-24, *38-39. The court found that there was discretion not in the amount to be supplied, but rather in the selection of sources of supply. *Id.* at *35-36, *38-39, *65-66. The Bureau also argued that some releases in the Trinity River basin that were required under the Act had already passed NEPA review in a prior agency decision. *Id.* at *25-26.

413. See *id.* at *58.

414. *Id.* at *43-44.

water quality.⁴¹⁵ The court also considered effects on fish and wildlife.⁴¹⁶ While fish and wildlife would suffer adverse effects without the set-asides, enjoining implementation of the CVPIA set-asides would increase water delivery to contractors by 5% to 10%,⁴¹⁷ in itself alleviating some of the environmental harms alleged by the plaintiffs due to the lack of water.⁴¹⁸ The court held that the plaintiffs had shown sufficient adverse impacts on the human environment to outweigh other environmental concerns, "particularly when the harm plaintiffs s[ought] to remediate [was] *essentially environmental*."⁴¹⁹

Just eight months later, the Ninth Circuit Court of Appeals vacated the preliminary injunction.⁴²⁰ Because the set-aside provisions direct the Secretary, "upon enactment of this title," to manage water for fish and wildlife purposes⁴²¹ and to deliver a specified amount of water to the wildlife refuges in the Central Valley,⁴²² the court held that these provisions could not be reconciled with NEPA.⁴²³ The court reasoned that the plain meaning of the phrase "upon enactment" means that enactment triggers implementation.⁴²⁴ Once the Act was passed, the Secretary had no discretion to refuse to set aside the water.⁴²⁵ In vacating the preliminary injunction, the court of ap-

415. *Id.* at *44-45. The court hypothesized environmental damage, perhaps to counter the obvious argument that economic harm rarely outweighs environmental interests. See *id.* at *49-50 (citing *Steamboaters v. FERC*, 777 F.2d 1384 (9th Cir. 1985)); *United States v. Midway Heights County Water Dist.*, 695 F. Supp. 1072 (E.D. Cal. 1988).

416. See *Westlands Water Dist. v. United States*, 1994 U.S. Dist. LEXIS 6276, at *54-57.

417. *Id.* at *46, *52.

418. *Id.* at *52. The alleged environmental harms included "land fallowing, soil erosion, increased groundwater pumping, depletion of groundwater supply and quality of soil, and subsidence which may cause permanent damage to the groundwater supply and water facilities." *Id.* Environmental intervenors claimed that the nature of the plaintiffs' harms was essentially economic and that such harms are rarely adequate to counterbalance environmental interests. *Id.* at *49; see also *Steamboaters*, 777 F.2d 1384; *Midway Heights*, 695 F. Supp. 1072. The court also found the environmental intervenors' argument unpersuasive because the Bureau may devote 100% of its water to fish and wildlife purposes after full compliance with NEPA. *Westlands Water Dist. v. United States*, 1994 U.S. Dist. LEXIS 6276, at *50-51.

419. *Westlands Water Dist. v. United States*, 1994 U.S. Dist. LEXIS 6276, at *53 (emphasis added).

420. *Westlands Water Dist. v. Natural Resources Defense Council*, 43 F.3d 457 (9th Cir. 1994).

421. § 3406(b)(2), 106 Stat. at 4715.

422. § 3406(d)(1), 106 Stat. at 4722.

423. *Westlands Water Dist. v. Natural Resources Defense Council*, 43 F.3d at 460.

424. *Id.*

425. *Id.*; see *Forelaws on Bd. v. Johnson*, 743 F.2d 677, 681 (9th Cir. 1984) (quoting decisions of other circuits "that have developed the principle that an EIS is not required where the agency's action is 'mandatory'").

peals frustrated the water districts' attempt to hold the set-aside water hostage.⁴²⁶

Although the environmentalists achieved a major victory in vacating the preliminary injunction, they appear to be losing support in the political arena. During the fall 1994 election campaign, Senator Feinstein (D-Cal.) apparently found it politically necessary to curry favor with the Central Valley agricultural community.⁴²⁷ In a letter to Secretary Babbitt, Senator Feinstein objected to the notion that the U.S. Fish and Wildlife Service was considering requiring additional CVP water supplies for endangered species.⁴²⁸ She also complained about the Bureau's statutorily mandated plan to study a "foolish" alternative of restoring a salmon run below Friant Dam.⁴²⁹ Ultimately, Secretary Babbitt vowed that no more water would be released from Friant Dam to restore anadromous fisheries despite the requirements of section 3406(c)(1).⁴³⁰ This announcement shocked environmental and fishing groups who saw hope in the comprehensive plan to restore salmon fishing in the San Joaquin River.⁴³¹ Babbitt's political decision eviscerated the statutory objective of the Fish and Wildlife Service study before it was underway.⁴³² Thus, the hope of a more environmentally friendly administration may be tempered by changing political realities.

Yet, the Reclamation Projects Adjustment Act has had some successes. It has inspired other environmental reclamation reform. On January 6, 1994, the Bureau of Reclamation proposed new permanent

426. If the court of appeals had left the preliminary injunction intact, the Bureau of Reclamation would not have been able to enforce the set-aside provisions until adequate environmental assessments or environmental impact statements evaluating the provisions had been issued pursuant to NEPA. The water districts would have had the opportunity to further delay the implementation of the set-aside provisions.

427. Elliot Diringor, *Farmers Win Battle Over River: Interior Dept. Won't Try To Restore Salmon to San Joaquin*, S.F. CHRON., Oct. 22, 1994, at A18 [hereinafter *Farmers Win Battle*] (stating that the "Central Valley is [a] key swing area in a tight Senate race [for Feinstein]").

428. Letter from Senator Dianne Feinstein to Secretary Bruce Babbitt 1 (Oct. 18, 1994) [hereinafter *Feinstein Letter*] (on file with the *Ecology Law Quarterly*).

429. *Id.* at 2.

430. *Farmers Win Battle*, *supra* note 427. See generally *Feinstein Letter*, *supra* note 428. Section 3406(c)(1) of the Act directs the Bureau, in cooperation with the U.S. Fish and Wildlife Service, to develop a "reasonable, prudent, and feasible" plan to restore anadromous fisheries to the upper San Joaquin River below Friant Dam. § 3406(c)(1), 106 Stat. at 4721-22. This provision does not allow the Secretary to release water from Friant Dam without congressional approval. *Id.*

431. See Jane Kay, *Babbitt Won't Divert San Joaquin Water; Interior Secretary Rules Out Tapping Friant Reservoir To Aid Salmon, Irking Environmentalists*, S.F. EXAMINER, Oct. 21, 1994, at A-4 ("This is a slap in the face of the fishing and environmental communities who worked so hard to pass the federal law" . . .). Note that the agricultural interests on the Sacramento River were also hurt by Babbitt's decision because restoration efforts will have to be fueled by Sacramento River water. *Id.*

432. See *id.*

operating guidelines for Glen Canyon Dam.⁴³³ The new guidelines would limit the maximum releases from the dam, thus reducing the scouring of the Grand Canyon's beaches and vegetation.⁴³⁴ Another example of a Bureau operation being modified for the good of the environment centers around the concept of "water spreading."⁴³⁵ Commissioner Beard has condemned the unauthorized practice of expanding the number of acres receiving federal project water⁴³⁶ and instituted an aggressive program to stop the practice, which has been estimated to involve 370,000 to 429,000 acre-feet of reclamation water in the West.⁴³⁷

B. Economic Reform

When Secretary Babbitt and Commissioner Beard announced the Administration's plans to reform the Bureau of Reclamation, they embraced the use of markets and economic incentives to further water conservation and other goals of reclamation reform.⁴³⁸ Since then, the Clinton Administration has made significant progress in implementing the Reclamation Projects Adjustment Act's rubric of economic reform.

In an effort to implement the water transfer provision of the CVPIA,⁴³⁹ the Bureau recently promulgated interim guidelines pend-

433. See Tom Kenworthy, *Dam Limits Proposed To Aid Grand Canyon*, WASH. POST, Jan. 7, 1994, at A3 [hereinafter *Dam Limits Proposed*]; Jim Mayer, *U.S. Effort Hopes To Keep the Grand Canyon "Grand"*, SACRAMENTO BEE, Apr. 2, 1994, at A1.

434. *Dam Limits Proposed*, *supra* note 433, at A3. The Bureau of Reclamation's plan would substantially and permanently reduce fluctuations in water level beneath the Glen Canyon Dam. Fluctuations have eroded Grand Canyon beaches, destroyed wildlife habitat, and endangered important Native American burial sites. *Id.* For further discussion of the adverse environmental effects, see *supra* note 199 and accompanying text.

435. See generally David M. Howitt, *Oregon Water Management: The Need To Combat Water Spreading and Some Proposals for the Future*, 9 J. ENVTL. L. & LITIG. 249 (1994). Water spreading occurs when water appropriators transfer or use excess water on land not designated in the water right or contract. *Id.* at 257.

436. 140 CONG. REC. D832 (daily ed. July 19, 1994) (statement of Daniel P. Beard, Commissioner, Bureau of Reclamation).

437. *Id.* For a detailed analysis of reclamation water spreading, see Reed D. Benson & Kimberley J. Priestley, *Making a Wrong Thing Right: Ending the "Spread" of Reclamation Project Water*, 9 J. ENVTL. L. & LITIG. 89 (1994).

438. Brad Knickerbocker, *Behind Standoff on Water Rights: A Century of Policy and Habit*, CHRISTIAN SCI. MONITOR, Nov. 9, 1993, at 2.

Clinton officials want to dispel the notion that they intend to steamroller Western water users. "Incentives, rather than regulations will be encouraged whenever possible," Beard says. But they recognize that changing a century of habit and policy will be difficult. "Doing so will be about as easy as transitioning the Kremlin to a market economy," Babbitt has said.

Id.

439. § 3405(a), 106 Stat. at 4709; see Memorandum from Daniel P. Beard, Commissioner, Bureau of Reclamation, on Contracts and Repayment Policy (July 20, 1994) ("Pricing and rate-setting provisions [of the new water contracts] will promote efficient use of project water supplies.").

ing the issuance of the final rules.⁴⁴⁰ While Congress enacted section 3405(a) to encourage water transfers, the guidelines as promulgated are more likely to have the opposite effect.

Section 3405(a) subjects long-term transfers to water district review only if more than 20% of the district's project water is at stake.⁴⁴¹ The guidelines, on the other hand, permit district review of all long-term water transfers.⁴⁴² Thus, the guidelines ensure that the districts will continue to have an important influence over all water transfers. The guidelines make the transferors responsible for complying with federal and state environmental statutes.⁴⁴³ Since the likely transferors are individual users within a water district, they are unlikely to have the resources to prepare the documents and implement the mitigation measures required by law.

The guidelines also subject all long-term transfers to an annual review by the Bureau to ensure no adverse impacts on project purposes.⁴⁴⁴ If such review shows that changing conditions would cause the transfer to adversely impact the water district's and/or the Bureau's operations, the Bureau may condition, temporarily suspend, or terminate the transfer.⁴⁴⁵ Because natural conditions such as water availability constantly vary, this provision essentially limits transfers to one-year terms.

The lack of an active water transfer market demonstrates how ineffective the interim guidelines are in encouraging water transfer. Since the passage of the Act, only one water transfer has been proposed under the CVPIA's water transfer provision.⁴⁴⁶

440. Interim Guidelines for Implementation of the Water Transfer Provisions of the Central Valley Project Improvement Act (Tit. XXXIV) (rev. Feb. 19, 1993) [hereinafter Interim Water Transfer Guidelines]. The Bureau of Reclamation is currently receiving public comments pursuant to administrative rulemaking procedures. 59 Fed. Reg. 67,265 (1994) (advance notice of proposed rulemaking, Dec. 29, 1994); U.S. FISH & WILDLIFE SERV. & BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR, CENTRAL VALLEY PROJECT IMPROVEMENT ACT—SUBSECTION 3408(A): CONSIDERATION OF RULES AND REGULATIONS (1994). Unlike the set-aside provisions, the water transfer provision is subject to NEPA compliance under § 3409 of the Act. § 3409, 106 Stat. at 4730. Thus, the final rules may not be promulgated until the programmatic EIS is completed.

441. § 3405(a)(1), 106 Stat. at 4709.

442. Interim Water Transfer Guidelines, *supra* note 440, at pt. V.D. This section provides that the affected water district must review all transfers to evaluate and advise the Bureau whether the transfer will have an "unreasonable impact on the water supply, operations, or financial conditions" of the district. *Id.*

443. *Id.* at pt. V.M.

444. *Id.* at pt. V.Q. In addition to annual review by the Bureau, long-term transfers involving 20% or more of project water are also subject to annual review by the water district. *Id.*

445. *Id.*

446. See Initial Agreement Between Areias Dairy Farms and the Metropolitan Water District of Southern California for Transfer of Water (June 27, 1994) [hereinafter Initial Agreement] (on file with the *Ecology Law Quarterly*); J.A. Savage, *The Selling of Water*,

Although the Bureau's effort to encourage water transfers under the CVPIA is faltering, the Bureau is seeking to implement the water conservation and water pricing reform provisions of the CVPIA through the rulemaking process implementing the Reclamation Reform Act of 1982.⁴⁴⁷ The Bureau of Reclamation recently agreed to draft new federal regulations implementing the 1982 Reclamation Reform Act that will enforce the acreage limitations and the use of subsidized water.⁴⁴⁸ As discussed above, the 1992 Act did not address acreage limits; rather, Representative Miller's initial attempts at comprehensive reclamation reform were replaced by project-specific reforms.⁴⁴⁹ The administrative initiative is a result of the Bureau's decision to settle a five-year-old lawsuit, *Natural Resources Defense Council, Inc. v. Duvall*,⁴⁵⁰ which, in turn, is due entirely to the change in administrations. The Bush Administration had vigorously defended the 1987 rules challenged by the Natural Resources Defense Council (NRDC), and reclamation reform advocates in Congress were unable to muster enough support to defeat these rules legislatively in the Reclamation Projects Adjustment Act. In September 1993, however, the "new" Bureau of Reclamation announced that, as a result of the settlement, the Bureau "would open all of the rules governing water prices, water conservation, and acreage limits."⁴⁵¹ While the new rules have not yet been proposed under the two-year deadline, the new regulations will hopefully reflect the economic and environmental agenda of the reform-minded officials in charge at the Bureau of Reclamation and the Department of the Interior.

CAL. J., June 1, 1994. A family of dairy farmers has received initial approval to sell part of its CVP allocation of water to the Metropolitan Water District of Los Angeles. Initial Agreement, *supra*. This first example of a federal reclamation water market will net the farmers over \$100 per acre-foot of water transferred. *Id.*

447. Reclamation Reform Act of 1982, Pub. L. No. 97-293, tit. II, 96 Stat. at 1236. By implementing the CVPIA's water conservation and pricing reform provisions under the aegis of the 1982 Act, the Bureau makes the requirements applicable all across the West rather than only within the Central Valley Project.

448. See Richard C. Paddock, *U.S. To Tighten Water Subsidy Rules*, L.A. TIMES, Sept. 17, 1993, at A3; William Carlsen, *Big Farms Lose Decision Over Water Subsidy*, S.F. CHRON., Sept. 17, 1993, at A1; see also Michael Doyle, *Farms Fear Tighter Clinton Rules on Subsidized Water*, SACRAMENTO BEE, Sept. 8, 1993, at A5 (discussing Central Valley farmers' views of the proposed settlement).

449. See generally *supra* part I.

450. *Natural Resources Defense Council, Inc. v. Beard*, Nos. 92-15640, 92-15643 (9th Cir. 1993) (agreement signed Sept. 16, 1993).

451. Paddock, *supra* note 448, at A3. Note that several Members of Congress representing the western states opposed the settlement. In a letter to U.S. Attorney General Janet Reno and Secretary Babbitt, 17 Members of Congress asserted that no justification existed for reexamination and that reclamation law precluded reforms such as a tiered pricing system. Letter to Hon. Janet Reno & Hon. Bruce Babbitt from Hon. Cal Dooley et al. (Sept. 15, 1993) (on file with the *Ecology Law Quarterly*).

The scope of the settlement contract reveals the new philosophy at the Bureau. For instance, in proposing the new rules and the attendant environmental impact statement, the Bureau is required to examine the following:

- (1) adoption of a tiered pricing system to encourage conservation;
- (2) implementation of water conservation plans;
- (3) alterations designed to achieve the greatest degree of water conservation and environmental restoration possible under the Reclamation Reform Act (RRA), such as (i) requiring full capital and operational costs to be accounted for in water contract prices, (ii) eliminating fictional legal entities to avoid acreage limitations, and (iii) actually implementing the full cost provisions of the RRA;
- (4) collection of all information necessary to enforce the RRA; [and]
- (5) making conserved water available for fish and wildlife.⁴⁵²

Lead counsel for the NRDC in this matter stated: " 'For the first time since Congress revised the subsidy laws in 1982, the Bureau of Reclamation will finally take a hard look at the enormous environmental impacts of providing taxpayer-subsidized water to large farms and rewrite all of its rules accordingly' ."⁴⁵³

C. State-Federal Relationship

After President Bush lost the November 1992 election, he offered a concession to Governor Wilson and the California irrigators: an agreement to negotiate a state takeover of the CVP.⁴⁵⁴ This agreement appears to have been an effort to assuage fears of federal encroachment in the CVP. The new Administration, however, promptly scuttled the plans for the state takeover of the CVP.⁴⁵⁵

While this would seem to run counter to creating more favorable interaction between state and federal agencies, other developments demonstrate opportunities to foster a better relationship. For instance, after failing to create a water quality plan that was agreeable to the State of California,⁴⁵⁶ the federal government began to cooperate with California to devise a plan to address the water quality and

452. *Natural Resources Defense Council, Inc. v. Beard*, Nos. 92-15640, 92-15643 (9th Cir. 1993) (agreement signed Sept. 16, 1993).

453. *Environmentalists and Farmers Announce Landmark Settlement with U.S. Interior Department*, NATURAL RESOURCES DEFENSE COUNCIL NEWS RELEASE (Natural Resources Defense Council, Inc., S.F., Cal.), Sept. 16, 1993.

454. Elliot Diringer, *Preliminary Pact on State Control of Water System*, S.F. CHRON., Dec. 15, 1992, at A15 (stating that the Bush and Wilson Administrations formally agreed to a three-year timetable for negotiating a state takeover of the CVP).

455. See Steve La Rue, *Water Is "Cash Crop" in Central Valley*, SAN DIEGO UNION-TRIB., Nov. 20, 1993, at A3. Commissioner Beard states that the initiative to transfer control of the CVP " 'is pretty much of a dead issue with us' because the [B]ureau is spending all of its energy implementing the Central Valley Project reform bill." *Id.*

456. For a history of the conflict, see Elliot Diringer, *State Blasts U.S. Plan To Restore S.F. Bay*, S.F. CHRON., Nov. 1, 1993, at A4; Robert Reinhold, *U.S. Proposes To Divert*

fish and wildlife problems in the San Francisco Bay Delta.⁴⁵⁷ The effort, dubbed Cal Fed,⁴⁵⁸ led to an agreement in December 1994 under which the federal government will create federal standards for water requirements for wildlife in the Delta and will assist the state in arriving at state water standards.⁴⁵⁹

Other cooperative developments with even broader implications for the West and its use of water have begun to take shape. On July 29, 1994, the Clinton Administration finally named but did not formally nominate, all of the members of the Western Water Policy Review Commission.⁴⁶⁰ Created by title XXX of the Reclamation Projects Adjustment Act,⁴⁶¹ the commission will review the tangled relationship between the federal and state governments.⁴⁶²

Unfortunately, the October 1995 deadline⁴⁶³ is fast approaching, and political realities are impeding the commission's work. With the new Congress came increased rhetoric about the federal "War on the West."⁴⁶⁴ In this political climate and with the 1996 election looming, the Clinton Administration is less than enamored of the idea of embarking on a major federal effort to review western water policy. Moreover, given the new congressional leadership, a progressive commission report would undoubtedly receive the scorn of western senators. The Administration's reluctance may be ill-founded, however, for the real purpose of the commission's study involved creating a forum where states could proactively identify how to reform federal water policy.⁴⁶⁵ The Western Water Policy Review Commission is a vehicle for giving the West greater control over water, its most precious resource.

The Department of the Interior has already begun an equally remarkable effort to reform reclamation and water law and policy in the

Fresh Water To Restore Damaged California Delta, N.Y. TIMES, Dec. 16, 1993, at A18; Tom Kenworthy, *Redirection of California Water Proposed*, WASH. POST, Dec. 16, 1993, at A3.

457. Dana Wilkie, *State, Federal Pact Ends Delta-Water Standoff*, SAN DIEGO UNION-TRIB., June 21, 1994, at A3.

458. *Interview: Babbitt Outlines Priorities for Coming Year*, Greenwire, Mar. 28, 1994, available in LEXIS, Nexis Library, News File.

459. *Principles for Agreement on Bay-Delta Standards Between the State of California and the Federal Government* (Dec. 1994) (on file with the *Ecology Law Quarterly*); Wilkie, *supra* note 457, at A3.

460. Meredith Cohn, *Idahoan Named to Water Policy Commission Advising President Clinton*, States News Service, Sept. 7, 1994, available in LEXIS, Nexis Library, News File.

461. 106 Stat. at 4693.

462. See *supra* notes 364-70 and accompanying text.

463. Reclamation Projects Authorization and Adjustment Act § 3003(b), 106 Stat. at 4695.

464. Meredith Cohn, *Washington Thinkers Offer Their Guides to Federal Land Management*, States News Service, Apr. 4, 1995, available in LEXIS, Nexis Library, News File.

465. See *supra* notes 371-77.

West.⁴⁶⁶ Secretary Babbitt has proposed opening the Colorado River Compact—the seventy-two-year accord that governs how states are apportioned the water of the Colorado River.⁴⁶⁷ Urban and environmental needs are driving the efforts to loosen the rigid allotment system to allow states to trade the water more freely. Despite the federal government's nascent efforts, any real change in the Colorado River Basin will be determined by the states.⁴⁶⁸

CONCLUSION

Due to the Reclamation Projects Adjustment Act and the Clinton Administration's efforts to implement the Act's mandates, federal reclamation policy is undergoing a slow metamorphosis. The Bureau of Reclamation has started to redefine itself along three rubrics of reform. First, the Bureau is paying greater attention to the environmental consequences of constructing and operating reclamation projects. Second, the Bureau is employing market incentives to conserve reclamation water and allow economic influences to direct water to higher value uses. Third, the federal government will cooperate with states to operate federal water projects. Thus, the Bureau of Reclamation will be one of the first federal resource agencies to adapt to a modern mission.

Once these reforms are securely in place, the Bureau of Reclamation may attempt a further mission—one more consistent with its name and presenting as big a challenge as controlling the waters of the West. Secretary Babbitt has suggested that the Bureau “restore, if in small measure, the ecological balance that existed before Interior's Bureau of Reclamation began its nearly 100 years of dam-building.”⁴⁶⁹ The Secretary has already selected his choice for the first project: the Elwha River in Washington State.⁴⁷⁰ Secretary Babbitt has proposed dismantling the two privately owned hydroelectric dams on that river that block passage of the once phenomenal runs of salmon. While few people would advocate tearing down all dams in the West, restoring a few watersheds like the Elwha River would truly symbolize the new Bureau of Reclamation.

466. See Melissa Healy, *Interior Dept. Aims To Rechanel Water Policy in West*, L.A. TIMES, Sept. 19, 1994, at A12.

467. *Id.*

468. *Id.*; see also Jennifer Gavin & Adriel Bettelheim, *Western Water Showdown*, DENVER POST, Sept. 18, 1994, at A1.

469. Melissa Healy, *Are West's Dams Set in Stone?*, L.A. TIMES, Mar. 31, 1994, at A1.

470. Todd G. Glass, *Valuing the Elwha River: Complex Decisionmaking in Environmental Impact Statements (1992)* (unpublished M.P.A. thesis, University of Washington) (on file with author).