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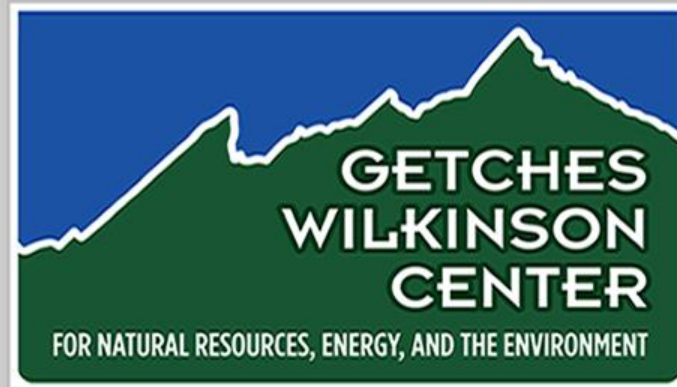
Citation Information

MacDonnell, Lawrence J., "Initiatives and Conflicts in Changing Federal Facility Operation" (1997). *Dams: Water and Power in the New West (Summer Conference, June 2-4)*.
<https://scholar.law.colorado.edu/dams-water-and-power-in-new-west/10>

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**INITIATIVES AND CONFLICTS
IN
CHANGING FEDERAL FACILITY OPERATION**

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DAMS: WATER AND POWER IN THE NEW WEST

June 2-4, 1997

Natural Resources Law Center
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Initiatives and Conflicts in Changing Federal Facility Operation

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I. Summary

The federal government itself constructed, or helped others to construct, a wide array of structures in most of the major rivers of the American West (as well as some smaller ones) intended to capture the rivers' economic benefits and/or to reduce their economic harm. Most active has been the Bureau of Reclamation, with 160 authorized projects since 1902 resulting in the construction of about 250 storage dams with a total water storage capacity of about 150 million acre-feet, 154 diversion dams, and 52 hydroelectric power plants. The Army Corps of Engineers also has constructed dams as well as levees and other structures in and along western rivers for flood control and other purposes. The Department of Agriculture's Natural Resources Conservation Service (formerly Soil Conservation Service) also has constructed small structures in tributary headwaters areas for soil conservation and flood control purposes.

Operation of these facilities is governed by a complex mosaic of federal and state law, water rights, and contract rights. Uses of these rivers and the water they contain are achieved, in large part, through operation of these federal facilities. Authorized uses of federal facilities may include flood control, storage and delivery of water for irrigation, industrial, and domestic use, hydroelectric power generation, recreation, and fish and wildlife.

As documented in a 1996 Natural Resources Law Center report, *Restoring the West's Waters: Opportunities for the Bureau of Reclamation*, operations of federal facilities are changing in some instances to meet other interests in use of the rivers. In most cases, such changes are being made to better meet the needs of fish -- originally for sport fisheries but increasingly for native species.

Improvement of rafting and other recreational uses of the river also has been important in several cases.

From an engineering standpoint, much can be done to change the manner in which existing facilities operate. Cost is probably the primary consideration. More problematic are possible adverse effects on legally protected beneficiaries of project operations.

This outline summarizes the evolution of the federal role in western water from river developer to water claimant. It discusses some of the implications of this shift from partner to sometime competitor. It attempts to summarize the legal framework within which efforts to change federal project operations must operate and some of the competing interests that are at play. It argues that environmental compatibility of federal project operation should be regarded as a purely federal responsibility and that the costs of reconstructing and reoperating federal facilities for this purpose should be publicly borne. Project beneficiaries also should eventually be required to pay the full costs of the services they are provided.

General References

1. Beatrice Hort Holmes, *A History of Federal Water Resources Programs, 1800-1960*, U.S. Department of Agriculture, Economic Research Service, Miscellaneous Publication No. 1233 (1972).
2. Natural Resources Law Center, *Restoring the West's Waters: Opportunities for the Bureau of Reclamation*, vols. I & II (1996).
3. Lawrence J. MacDonnell, *Managing Reclamation Facilities for Ecosystem Benefits*, 67 U.Colo. L.REV. 197 (1996).
4. Lawrence J. MacDonnell, A RECLAMATION VISION FOR THE 21ST CENTURY: WATER, IRRIGATION, AND THE ENVIRONMENT IN THE AMERICAN WEST (manuscript in publication).
5. Duane Mecham, *Ownership and Reuse of Federal Water, Proceedings, The 14th Annual Water Law Conference*, American Bar Association Section of Natural Resources, Energy, and Environmental Law, San Diego, February 8-9, 1996, Tab K.

II. The Evolving Federal Role in Western Water Resources

A. Federal water policy through the 1950s: support the "development" of rivers for economic benefits.

1. Navigation

- a. "The Gallatin Report of 1808 proposed, together with other internal improvements, a complete, nation-wide system of canals and river improvements justified on the grounds of economic development of the West, political unity, and national defense needs." Holmes, *A History of Federal Water Resources Programs, 1800-1960* at 1.
- b. Gibbons v. Ogden, 22 U.S. (9 Wheat.) 1 (1824) held that the Commerce Clause of the U.S. Constitution provided federal authority to deal with matters of navigation.
- c. The General Survey Act of 1824 created the Army Corps of Engineers (COE) for the purpose of constructing roads and canals of national importance.
- d. Beginning in 1826 Congress enacted a long series of "Rivers and Harbors Acts" directing "improvements" to be made by the COE.
- e. In 1890 and 1897 Congress gave the COE regulatory authority over the placement of structures such as bridges as well as refuse and dredge and fill material in navigable waters.

2. Flood control

- a. 1874 and 1879 Congressional commissions looking at flooding problems in the Mississippi River; 1893 commission looking at flooding problems in the Sacramento and San Joaquin Rivers. Flood Control Act of 1917 gave the COE responsibility for flood control on the Mississippi and Sacramento Rivers.
- b. The Flood Control Act of 1936 created a national flood control program.

- c. The Flood Control Act of 1944 gave the COE flood control responsibility at Bureau of Reclamation dams.
 - d. The Watershed Protection Act of 1954 authorized the Secretary of Agriculture to provide assistance for "works of improvement" for flood prevention and water conservation in small watersheds (250,000 acres or less).
3. Water power
- a. In 1879, Congress began enacting special statutes authorizing construction of private dams for hydropower purposes on navigable rivers.
 - b. In 1890, Congress subjected construction of dams and other structures in navigable rivers to the Secretary of War.
 - c. In General Dam Acts enacted in 1906 and 1910, Congress established a process for reviewing proposed new dams in connection with "comprehensive development" of the river.
 - d. The 1920 Federal Power Act established the Federal Power Commission and gave it authority to issue licenses for the construction and operation of hydropower dams (Section 4(e)).
4. Irrigation water supply
- a. Powell, Hayden, and others were commissioned by Congress in the 1860s and 1870s to survey the lands and resources of the public land West to promote settlement of the region.
 - b. Congress encouraged irrigation as a basis for claiming up to 640 acres of land in the Desert Land Act of 1877.
 - c. The 1894 Carey Act provided further encouragement of irrigation by offering up to one million acres of unclaimed public domain lands to states that would provide for their irrigation.
 - d. The 1902 Reclamation Act committed the federal government to the construction of projects to provide water for irrigation.
 - e. The 1911 Warren Act authorized the Secretary of the Interior to contract

with irrigators for use of excess storage capacity in Reclamation-constructed reservoirs.

5. Urban water supply

- a. The 1906 Town Sites Act authorized the Secretary of the Interior to contract with towns nearby to Reclamation irrigation project holding a water right in the same source of water as the project for the delivery of water.
- b. The 1920 Sale of Water for Miscellaneous Purposes Act authorized the Secretary of the Interior to contract to supply water from any irrigation project "for other purposes than irrigation..." under certain conditions.
- c. Section 9 (c) of the 1939 Reclamation Project Act provides the Secretary with specific contracting authority to furnish water for municipal water supply or miscellaneous purposes.
- d. Section 6 of the Flood Control Act of 1944 authorizes the Secretary of War to make contracts for delivery of "surplus" water from COE dams for domestic and industrial uses.
- e. The Water Supply Act of 1958 provided that storage for water for municipal or industrial purposes may be included in any new project planned by either the Bureau of Reclamation or the Army Corps of Engineers

6. Multiple purposes

- a. The 1928 Boulder Canyon Project Act was the first specifically authorized multipurpose federal project. "For the purpose of controlling the floods, improving navigation and regulating the flow of the Colorado River, providing for storage and for the delivery of stored waters thereof for reclamation of public lands and other beneficial uses exclusively within the United States, and for the generation of electrical energy as a means of making the project herein authorized a self-supporting and financially solvent undertaking,...." Section 1.

- b. Section 9 (a) of the 1939 Reclamation Project Act, directing the Secretary to determine the engineering and financial feasibility of proposed new projects, specifically identifies irrigation, power, municipal water supply, and other miscellaneous purposes as well as flood control and navigation as potential project uses.
7. Fish & Wildlife/Recreation
- a. A 1934 act to promote the conservation of wild life [sic], fish and game provided an "opportunity" for the Bureau of Fisheries and the Bureau of Biological Survey to "make such uses of the impounded water [behind Bureau of Reclamation-constructed dams] for fish-culture stations and migratory-bird resting and nesting areas as are not inconsistent with the primary use of the waters"
 - b. Section 4 of the Flood Control Act of 1944 authorized the Chief of Engineers to construct and operate park and recreational facilities at its projects or to allow others to do so.
 - c. 1946 amendments to the 1934 fish and wildlife law provided that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs" and that the federal construction agencies are to consult with the U.S. Fish and Wildlife Service regarding ways to meet this objective.
 - d. Further amendments in 1958 gave this law the title the "Fish and Wildlife Coordination Act" and strengthened and expanded the procedures under which wildlife conservation at new federal water impoundment projects was to be incorporated.
 - e. Congress passed the Federal Water Project Recreation Act in 1958 to reaffirm its interest in including recreational and fish and wildlife uses in federal projects and to clarify the manner in which such benefits should be treated in evaluating project feasibility and determining project repayment costs.

B. Federal water policy since the 1960s: ?? In transition

1. In transition from

- "progressive" resource developer to resource use regulator
- river developer to river protector and restorer
- river flow regulator to river operator
- public land manager to water claimant
- passive tribal guardian to active tribal trustee

In the process, federal agencies have shifted from partner and helpmate of western development to regulator and sometime competitor for the use of the limited water resources of the West. In effect, Congress has directed federal agencies to act as a surrogate for some of the environmental values of rivers and their water.

2. River preservation

- a. The 1964 Wilderness Act prohibits most developmental uses of public lands areas set aside as wilderness (§4(c)). Section 4(d)(4) authorizes the President to allow "prospecting for water resources, the establishment and maintenance of reservoirs, water-conservation works, power projects, transmission lines, and other facilities needed in the public interest, including the road construction and maintenance essential to development and use thereof, upon his determination that such use or uses in the specific area will better serve the interests of the United States and the people thereof than will its denial;" This authority has never been used.
- b. The 1968 Wild and Scenic Rivers Act declared a national policy that "certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition," 16 U.S.C. § 1271. Adoption of such a policy was explicitly stated to be a 'complement' to our policy of

dam building. Wild river areas and scenic river areas were to be "free of impoundments", while recreational river areas could have some existing impoundment or diversion.

3. Consider/mitigate the adverse environmental effects (especially related to fish and wildlife) of federal actions
 - a. The National Environmental Policy Act of 1969
 - (1) NEPA requires all federal agencies to review possible environmental impacts of their proposed actions, to identify adverse effects that cannot be avoided, and to consider alternatives. Thus the Bureau of Reclamation and the Army Corps of Engineers are required to prepare environmental impact statements for all proposed projects.
 - (2) Despite numerous challenges to the adequacy of these statements, the courts have been largely deferential. *See, e.g., Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974); *Environmental Defense Fund v. Armstrong*, 352 F. Supp. 50 (N.D. Cal. 1972), 356 F. Supp. 131 (N.D. Cal. 1973), *aff'd*, 487 F.2d 814 (9th Cir. 1973), *cert. denied*, 416 U.S. 974 (1974).
 - (3) NEPA has been determined not to require a review of ongoing water project operations. *See, e.g., County of Trinity v. Andrus*, 438 F. Supp. 1368 (E.D. Cal. 1977). An agency may decide to do so, however, as did the Secretary of the Interior in 1989 with respect to the operations of Glen Canyon Dam. Interior now has adopted operating criteria for Glen Canyon regarded as more environmentally acceptable and, in 1996, Interior tested its ability to manage the river downstream from the dam for improved sand beaches and native fish habitat. Congress essentially ratified this process in the Grand Canyon Protection Act of 1992.
 - b. Federal Land Policy and Management Act of 1976
 - (1) In FLPMA, Congress directed the federal land management agencies,

when granting a right-of-way, to include terms and conditions that will "minimize damage to scenic and aesthetic values and fish and wildlife habitat and otherwise protect the environment;" 43 U.S.C. § 1765 (a).

- (2) The use of this authority by the Forest Service to regulate the manner in which changes were to be made for an existing irrigation ditch right-of-way was upheld in Elko County Board v. Glickman, 909 F. Supp. 759 (1995).
- (3) Assertion of this authority by the Forest Service to improve wintertime water releases from dams located on national forest in Colorado prompted Congress to create a task force to study the issue while placing a moratorium on its use.

c. Electric Consumers Protection Act of 1986

- (1) In ECPA, Congress amended FERC's hydroelectric power licensing responsibility to require "equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and the enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality." 16 U.S.C. § 797(e), 803(a). In addition to new licensing decisions this provision also applies to the large number of relicensing decisions now being made by FERC.

4. Water quality protection

- a. The 1972 Federal Water Control Act Amendments directed the COE and the BOR to consider including water storage for purposes of water quality improvement (dilution is a solution to pollution). 33 U.S.C. § 1252 (b).
- b. Dams are not point sources of pollution requiring an NPDES permit. National Wildlife Federation v. Gorsuch, 693 F.2d 156 (D.C. Cir. 1982). National Wildlife Federation v. Consumers Power Co., 862 F.2d 580 (6th

Cir. 1988).

- c. The discharge of dredged or fill material into the navigable waters of the U.S. requires a permit from the Secretary of Army. 33 U.S.C. § 1344 (a). A permit may be denied based on a finding of "unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas." 33 U.S.C. § 1344 (c). Potential adverse effects on designated critical habitat of endangered whooping crane 260 miles downstream upheld as basis for denying nationwide permit for Wildcat Dam. Riverside Irrigation District v. Andrews, 568 F. Supp. 583 (D.Colo. 1983), *aff'd*, 758 F.2d 508 (10th Cir. 1985).

5. Endangered species protection and recovery

- a. With the 1973 Endangered Species Act Congress prohibited federal actions likely to jeopardize the continued existence of a listed threatened or endangered species or to adversely modify designated critical habitat. The ESA does not apply on its face to rivers or water but, because all living things require water, it ends up having widespread application to water-related development.
- b. In Tennessee Valley Authority v. Hill, 437 U.S. 153 (1978), the U.S. Supreme Court ruled that completion of the Tellico Dam was precluded because its operation would further jeopardize the continued existence of the only known (at that time) population of the endangered snail darter fish.
- c. Later that year (1978), Congress amended the ESA to create an Endangered Species Committee with authority to exempt federal actions from compliance with the ESA and specifically directing such consideration for the Tellico Dam and the Grayrocks Project in Wyoming. An exemption for the Grayrocks Project rested on a settlement agreement among the parties involving a number of conditions on its operation. *See*

MacDonnell, The Endangered Species Act and Water Development Within the South Platte Basin, Colorado Water Resources Research Institute Completion Report No. 137 (1985) at 44.

- d. In connection with the Upper Colorado River Endangered Fishes Recovery Program, the Bureau of Reclamation has reoperated Flaming Gorge Reservoir on the Green River to manage releases more compatibly with the needs of native fish species and is studying needed changes for the Aspinall Unit on the Gunnison River. Wigington & Pontius, *Toward Range-Wide Integration of Recovery Implementation Programs for the Endangered Fishes of the Colorado River*, Proceedings Report, the Colorado River Workshop, The Grand Canyon Trust, Phoenix, Arizona, February 26-28, 1996, at 53.
- e. Dam operations on the Columbia and Snake Rivers are under thorough scrutiny for changes, including their decommissioning, that might improve the plight of anadromous fishes in that basin. For a thoroughly readable and comprehensive discussion see John M. Volkman, *A River in Common: The Columbia River, the Salmon Ecosystem, and Water Policy*, Draft Report to the Western Water Policy Review Advisory Commission, March 1997. Measures include so-called pulse releases of water and timed drawdowns of water levels behind dams to attempt to better move salmon smolts downstream.
- f. The flow-related needs of the endangered whooping cranes and other species along the central Platte River in Nebraska has stopped new dam development within the basin (e.g. Wildcat and Grayrocks) and is driving a three state/federal effort to review existing water uses to determine ways in which flows might be increased. See McLaughlin Water Engineers, Ltd & J. David Aiken, *Platte River Basin Study, Draft Report* prepared for the Western Water Policy Review Advisory Commission, March 1, 1997.

- g. Listing of the Rio Grande silvery minnow as endangered in 1994 launched a process to review existing water uses in the Upper Rio Grande that could result in dam reoperation. *See* ECONorthwest, *Water Management Study: Upper Rio Grande River Basin*, Draft Report prepared for the Western Water Policy Review Advisory Commission, February 1997.

C. Federal water resources protection and restoration

1. Beyond just requiring federal agencies to consider and mitigate certain adverse environmental effects associated with their actions, Congress also has been directing affirmative environmental protection and restoration efforts associated with existing and proposed federal water projects.
2. Corps of Engineers
 - a. The Water Resources Development Act of 1986 has been described as “the most comprehensive water resources development legislation enacted by Congress in 50 years,” Grumbles & Kopocis, *Water Resources Acts: Developing an Environmental Corps*, 21 ELR 10308, 10310 (1991). Section 906 sets out mitigation measures for fish and wildlife. Section 907 provides that the benefits of environmental improvements accomplished by Corps projects are regarded as equal to their costs. Section 1135 gives the Corps authority to revisit existing projects to determine if changes can be made to improve the environment.
 - b. The Water Resources Development Act of 1990, in Section 306 (a), “directs the Secretary of the Army to include environmental protection as one of the Corps’ primary missions in planning, designing, constructing, operating, and maintaining water resources projects.” Grumbles & Kopocis, at 10314.
 - c. The Water Resources Development Act of 1992 “goes one step further than its predecessors. It includes major new provisions and themes reinforcing the Corps’ environmental mission.” Grumbles & Kopocis, *The Water Resources Development Act of 1992: Expanding the “Corps of*

Environmental Engineers, "23 ELR 10379 (1993). Among its provisions is direction to the Corps for the Kissimmee River restoration project, undoing the Corps' channelization work accomplished in the 1960s.

3. Bureau of Reclamation

- a. Central Valley Project Improvement Act allocating 800,000 acre-feet of project storage to fish and wildlife and directing a doubling of the anadromous fish population in the Sacramento and San Joaquin Rivers.
- b. Central Utah Project Act, creating an environmental restoration trust fund that, among other things, will be used to restore the flood plain of the Provo River.
- c. The Pyramid Lake Paiute Settlement Act of 1990, expanding the purposes of the Newlands Project to include fish and wildlife and directing the Secretary of the Interior to acquire water and water rights necessary to support about 25,000 acres of primary wetlands in the Lahontan Valley at the terminus of the Carson River in Nevada.
- d. The 1993 Yakima River Basin Enhancement Project Act, authorizing federal funding to support water conservation efforts that will increase flows to help achieve target levels in the Yakima River at points critical for anadromous fish migration.

III. Some Issues for Discussion

A. What should be the basis on which changes are made?

1. Fixing squeaky wheels: the dominant motivation
2. Compliance with legal requirements: today's driver
3. Completing the job: a commitment to sustainable uses of the hydrologic cycle

B. Who is responsible (who pays)?

1. Direct project beneficiaries: polluter pays principle
2. Identifiable project beneficiaries: broadening the net
3. The federal government: the "but for" principle
4. All of us: an investment, not a cost

- C. Are the changes within the project authorization?
1. When Congress directs project changes, it specifically amends the project authorization to accommodate the changed operations (see examples above).
 2. Administratively made changes must occur within the terms of the project authorization, whether spelled out in statute or by administrative determination. Thus, for example, operation of a federal water project for fish and wildlife purposes may not be possible if the project is not authorized for these purposes. *But see Carson-Truckee Water Conservancy District v. Clark*, 741 F.2d 257 (9th Cir. 1984) (ESA mandate for species conservation provides legal basis for secretarial decision to use Stampede Reservoir for cui-ui protection).
- D. Are the changes limited by water rights?
1. The U.S. holds legal title to the water rights for most Bureau of Reclamation projects. Courts have recognized the U.S.'s interest in realizing the benefits of the water appropriated as against other, nonproject junior appropriators (*see, e.g., Ide v. United States*, 263 U.S. 497 (1924)).
 2. Actual project water users are regarded as the beneficial owners of the water rights, at least to the extent of their historical use and perhaps to the extent of their authorized use. *Ickes v. Fox*, 300 U.S. 82 (1937); *Nevada v. United States*, 463 U.S. 110 (1983); *Nebraska v. Wyoming*, 324 U.S. 589 (1945).
 3. Project users may make changes of use without loss of priority in accordance with federal administrative and state law procedures. For a thorough discussion *see MacDonnell, Wahl & Driver, Facilitating Voluntary Transfers of Bureau of Reclamation - Supplied Water, Vol I., Natural Resources Law Center (1991)*.
 4. Project operation changes involving new or different water uses may also require changes of the project water right. But what if a state denies the change or restricts it in a manner that frustrates its purpose? What if the Idaho legislature refused to allow Reclamation to augment Snake River flows by

purchasing water from the Upper Snake water bank? For the background see Mecham, "Ownership and Reuse of Federal Water," Proceedings, 14th Annual Water Law Conference (American Bar Association, San Diego, February 1996) at 17-18.

5. The mere existence of a water right does not stand as a bar to project changes required by the Endangered Species Act. United States v. Glenn-Colusa Irrigation District, 788 F. Supp. 1126 (1992).
6. The contractual agreement between the U.S. and the project water user may bear on analyzing the effect of a project operation change on a user's legal right to project water. In O'Neill v. United States, 50 F.3d 677 (9th Cir. 1995), the court found a contract provision making Reclamation not liable for water shortages due to drought, errors in operations or "any other causes" shielded the government from liability for reduced water deliveries from the Central Valley Project resulting from Congressional allocation of reservoir carryover capacity to fish and wildlife uses.

E. To what degree can changes affect traditional uses? Expectations?

1. Respecting the quantity of water historically delivered? The quantity of water allocated?
2. Respecting the timing of deliveries?
3. Respecting charges for services? See Mecham & Simon, "Forging a New Federal Reclamation Water Pricing Policy: Legal and Policy Considerations," 27 Ariz. St. L.J. 509 (1995).
4. Respecting conditions of use?
5. Respecting the sharing of risks (e.g. of drought, of ecological loss, etc.)?

IV. Possible Future Directions

A. Congress could broaden the purposes of all federal water projects to include ecosystem benefits, subject to existing legal commitments.

1. Arguably, by making environmental protection one of the Corps' primary missions Congress, in the 1990 Water Resources Development Act, has done

this with respect to COE projects.

2. Congress has been doing this for BOR projects on a project-by project basis.
- B. Congress could direct the Bureau of Reclamation and the Army Corps of Engineers to take steps necessary to make their projects compatible with sustainable uses of rivers and their water.
1. Congress, in the 1986 Water Resources Development Act, has now given the Corps the **authority** to do this but has not directed it to do so.
 2. Similar authority could be given to the BOR.
- C. Congress could direct the BOR and the COE to move toward full cost recovery of the services provided by federal projects.
1. Mecham & Simon provide a thorough discussion of the substantial differential between what Reclamation project users pay for the water they receive and the value of the water, concluding that current charges would have to be increased from 30 to 100 % to bring these two into balance. They also conclude that Interior probably has the legal authority to increase charges in connection with contract renewals for project water delivery.
 2. Congress could direct the COE and the BOR to begin building in schedules for increasing charges at the time of contract renewals that would result in full cost recovery at some point during the contract renewal period