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POLITICS IN THE UNITED STATES AND THE SALINITY PROBLEM OF THE COLORADO RIVER*

DEAN E. MANN**

Mr. Herbert Brownell, the special negotiator appointed by President Richard Nixon to obtain an agreement with Mexico with respect to the salinity problem of the Colorado River, made the following statement at a news conference on the conclusion of that agreement:

This is a project that is based on dollars and not on water. I told the Western States at the beginning of the negotiations that nothing would be done, and nothing has been done as a result of this agreement, which would adversely affect the orderly development of the Western States. There are no limitations in the agreement which would adversely affect any of the planned programs for the development of natural resources of the basin States.¹

The fundamental assumption of the negotiators was that any agreement made with Mexico would be virtually costless to those interests in the United States having a direct stake in the decision. Those interests are primarily irrigation farmers within and without the Colorado River Basin who depend on Colorado River water for their water supply.

TRADITIONAL WATER POLITICS

Mr. Brownell's statement contains the key to an understanding of water policymaking in the United States. In most respects it is "distributive" in character and shares with some other policy issues the following characteristics: (1) local initiation and definition of program and derived benefits; (2) settlement of conflicts through coalition-building at the local and regional levels before going to the federal level; (3) avoidance of confrontation among competing interests as a result of which winners and losers in the political battle and in income consequences are disguised; (4) dependence on federal financing; (5) logrolling for mutual benefit with other similarly

*Presented at Oaxtepec, Mexico, March 15, 1974.

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1. 69 Dep't State Bull. 395-96 (Sept. 24, 1974).

situated interests who seek diverse objectives through congressional action.²

Most irrigation was originally developed privately, but once the best land was put into cultivation, western farming interests no longer had the financial resources or the technical competence to plan and construct the works necessary for irrigation. The Reclamation Act of 1902 and subsequent legislation provided the institutional and financial support for irrigation agriculture. The financial terms of irrigation projects became increasingly more favorable with low discount rates, longer pay-out periods and revenues from power projects being used to make irrigation projects feasible.

The justification for national financial support for irrigation agriculture was and continues to be found in the need for economic development. To develop this "last frontier" federal funds were considered both desirable and necessary. The aridity of the land made water the crucial element in fostering development so it was natural that the settlers, promoters, and state officials would emphasize water development as the focus of national investment. In addition, there was a vital moral or ethical element in the justification. This moral element emphasized the virtues of farm life, especially the family-sized farm, and the almost religious duty to "make the desert blossom as the rose."³

The political mechanism by which water development projects were authorized took on definite and unique characteristics. Local interests, recognizing opportunities for economic advantage through water developments patronized by the national government, stimulated political action at the local, state, and national levels through administrative and legislative officials who were linked to those areas and to water policy.⁴ The Bureau of Reclamation was recognized as a special patron of water resource development because it had the technical expertise to plan the projects, because its program was considered the legitimate vehicle for development projects, and because it was looked upon by key members of Congress as their instrument for development.

Local interests were frequently in conflict with each other, if not

2. See Lowi, *American Business, Public Policy, Case Studies and Political Theory*, 26 *World Pol.* 677 (1964); Lowi, *Four Systems of Policy, Politics, and Choice*, 32 *Pub. Ad. Rev.* 298 (1972).

3. Kelso, *The Water-Is-Different Syndrome or What Is Wrong With the Water Industry*, Proceedings of the Third Annual Conference of the American Water Works Association 177 (1967); see also J. Hirshleifer, J. De Haven & J. Milliman, *Water Supply: Economics, Technology and Policy* 367 (1960).

4. Ingram, *The Changing Decision Rules in the Politics of Water Development*, 8 *Water Resources Bull.* 1177 (1972).

over specific allocations of water, at least over priorities for development. At the most general level, the states of the Lower Basin of the Colorado River, especially California, were moving ahead rapidly with water development because their population was growing more rapidly. The Colorado River Compact was written to ensure equity between the two basins, and to prevent California and the Lower Basin from monopolizing the waters of the river on the basis of the principle of prior appropriation. There was an implicit assumption that Upper Basin development would come later as needs and opportunities were identified.

Within the basins there were also major disputes—between California and Arizona over their shares of Lower Basin water, and among the Upper Basin states with respect to the manner in which their share of the water of the river would be distributed. These disputes were ultimately settled by the Supreme Court of the United States in the case of *Arizona v. California*⁵ for the Lower Basin States and by the Upper Colorado River Compact⁶ for the Upper Basin States. Within the states there were also major disputes, especially between interests located within the hydrographic basin itself and interests beyond the basin but within the states through which the Colorado River and its tributaries flowed.⁷

To obtain authorization of projects it was essential to establish a united front before national decisionmakers in the Congress. By hard bargaining, these differences were usually resolved, thus making it difficult for non-Western interests opposed to Western water development to capitalize on political disarray in the West itself. Once that unity was obtained, legislative authorization was usually obtained very easily, with the congressional committees playing the principal role in putting the legislation in final form. By a process of “log-rolling”, in which legislative representatives of Western interests made implicit—and sometimes explicit—trades of votes with representatives of non-Western interests, legislative majorities were relatively easily achieved.⁸ Water resource projects, both Western and non-Western

5. 373 U.S. 546 (1963).

6. 63 Stat. 31 (1949), N.M. Stat. Ann. § 75-34-3 (Repl. 1968).

7. These are recounted in some detail in my draft of a lengthy study of the politics of the Upper Basin as part of the Lake Powell Research Project. The most important of these involved the Blue River diversion for Denver; the Fryingpan-Arkansas diversion in Colorado; the San Juan-Chama diversion in New Mexico; and currently the Bonneville Unit of the Central Utah Project. For a briefer treatment see Mann, *Conflict and Coalition: Political Variables Underlying Water Resource Development in the Upper Colorado River Basin*, printed in this issue.

8. See, for example, the relative ease with which the Fryingpan-Arkansas, San Juan-Chama, Savery-Pot Hook, Bostwick Park, and Fruitland Mesa projects were authorized during the 1960's as elements in the Colorado River Storage Project. All bills passed both

became a kind of "currency" or medium of exchange. Because of the strength of this system of decisionmaking, sometimes referred to as a "subgovernment", the President and his aides seldom actively interfered to oppose water resource projects because they recognized that they were likely to be defeated.

It is accurate and fair to say that those who paid the bulk of the cost for these projects—the federal taxpayers—were seldom effectively represented in this process. In fact, every effort was made to make the projects appear to be self-supporting and economically beneficial, not only to the region but to the nation as a whole. Because of the broadly shared view of the ethical imperatives of development and virtue in irrigation agriculture, these efforts were usually successful.

The most significant challenges to water resource development along the above lines have come from conservationists or, as they are now called, environmentalists. For the most part, they did not challenge the ethical imperatives nor did they criticize the financial arrangements. Rather, they challenged the specific intention of promoters of projects to develop a given site that had unique natural, aesthetic, or historic qualities. Thus, the conservationists challenged the promoters of dams at Echo Park in the Dinosaur National Monument and above and below the Grand Canyon National Park and Monument. And they won, after mobilizing nationwide movements that generated sufficient adverse publicity to convince legislators that approval of those elements of development projects would be contrary to the majority will and interest.⁹

In recent years, as water resource development has become more costly, and the competition for water among its various uses more intense, other challenges have been raised. The fiscal impact of irrigation and power project packages that have exceeded \$1 billion have caused some national decisionmakers to question the wisdom of such investments.¹⁰ In effect, they challenged such public investments because of the contribution they make to the total size of the national budget and because they considered alternative investments more productive of public benefit. Others tended to believe that the income redistribution consequences often ran in the wrong direc-

houses by voice votes after very little struggle, once the informal state and regional conflicts were resolved.

9. See O. Stratton & P. Sirotkin, *The Echo Park Controversy* (The Inter-University Case Program, 1959); H. Ingram, *Patterns of Politics in Water Resource Development: A Case Study of New Mexico's Role in the Colorado River Basin Bill* (1969); R. Nash, *Wilderness and the American Mind* 161-181 (1967); E. Richardson, *Dams, Parks and Politics* (1973).

10. For a summary statement of critical views on traditional economic analysis, see National Water Commission, *Water Policies for the Future* (1973).

tions. The spokesmen for such opposition often were found in the President's budget office, the Bureau of the Budget, now the Office of Management and Budget.

Another significant change in the context in which the traditional mode of political decisionmaking takes place has arisen out of international issues that concern not water policy alone but the whole range of issues between the nations. It is clear, for example, that the Mexican Water Treaty of 1944 was agreed to by the United States not only on the basis of the merits with respect to the waters of the Rio Grande and Colorado Rivers but also because of the desire on the part of Americans to maintain and encourage friendly relations with Mexico, especially during a time of war.¹¹ It is not clear what the net effects of these challenges will be in terms of the traditional way of dealing with water resource policy in the West. The experience with the salinity question, however, appears to confirm the traditional mode of behavior.

TRADITIONAL WATER POLITICS AND THE SALINITY PROBLEM

One of the important decisions that frames the background for discussion of the present agreement on the salinity problem was made as part of the legislation known as the Colorado River Basin Project Act of 1968.¹² In the complex process of bargaining that involved conflicts between the basins, among states within basins, conflicts between the Southwestern states and the Northwestern states, conflicts between the basin states and the conservationists, and conflicts between basin states interests and the national government, it was agreed that the supply of water guaranteed by the Mexican Water Treaty would become an obligation of the national government.¹³ This provision of the legislation, in effect, relieved the Colorado River Basin states of the obligation of supplying this water and, at least by inference, suggested that the United States would supply an additional quantity of water beyond that already allocated by the Colorado River Compact.

The United States is therefore required to seek additional sources of water to meet this obligation. The Southwest has long looked enviously at the waters of the Columbia River in the Northwest as a source of water since the average flow of that river is in the general magnitude of ten times the average flow of the Colorado River. But as part of this same bargaining process, the Department of the

11. N. Hundley, *Dividing the Waters: A Century of Controversy Between the United States and Mexico* (1966).

12. Pub. L. No. 90-537, 82 Stat. 885 (codified in scattered sections of 43 U.S.C.).

13. 43 U.S.C. § 1512 (1971).

Interior was forbidden even to investigate the possibility of transferring waters of the Columbia River system to the Colorado River system for a period of ten years. Moreover, the costs and the principles which would form the basis of such transfers of water have led some observers to doubt that such transfers would ever prove feasible for purposes of ensuring an irrigation water supply for the Southwest.¹⁴ It may be argued, however, that the commitment made to the Southwestern states and now to Mexico will create sufficient incentive for the United States actively to propagate an arrangement for an interbasin transfer of sufficient magnitude and which is attractive enough to both the Northwest and the Southwest that it might be accomplished. If one broadens one's vision somewhat, it is possible that such a transfer might be made politically feasible as part of a continental water policy which would involve truly gigantic transfers of water from Northwest Canada to various parts of Canada and the United States.¹⁵ Thus, taxpayers from other parts of the United States might discover some interest in paying the costs of such a transfer project. Still another possibility is development of greater capability to modify the weather to increase precipitation in the upper reaches of the Colorado River Basin. There is experimental and pilot project experience to indicate that sizeable amounts—in the neighborhood of two million acre-feet—might be produced at reasonable cost.¹⁶ But local public opposition and environmental consequences might make such projects infeasible.

A second important facet of the problem of managing the river is the increasing recognition that the basic agreement on the Colorado River—the Colorado River Compact—was based on faulty technical information. The Compact negotiators appeared to believe that there was an average annual flow considerably in excess of 15 million acre-feet. The historical evidence for such a conclusion was inadequate and at least some of the record was based on memories of pioneers regarding lake shoreline levels in another basin.¹⁷ A more adequate record kept since the signing of the Compact indicates that the moving average virgin flow from 1922 to 1968 was only 13.8 million acre-feet. And more recent evidence leads to the conclusion that the

14. R. Johnson, *Law of Interbasin Transfers* (Nat'l Technical Information Serv. Accession No. PB 202619, 1971).

15. D. Mann, *Interbasin Water Transfers: A Political and Institutional Analysis* (Nat'l Technical Information Serv. Accession No. PB 208303, 1972).

16. I. L. Weisbecker, *Technology Assessment of Winter Orographic Snowpack Augmentation in the Upper Colorado River Basin* (1972).

17. P. Perkins, *Scientific Information in the Decision to Dam Glen Canyon* (paper presented at the annual meeting of the American Ass'n for the Advancement of Science, California, February 25, 1974).

unmodified flow of the Upper Basin is only 13 million acre-feet.¹⁸ Virtually everyone agrees that the water resource is overextended and that hopes for future water development—particularly for irrigation purposes—are not likely to be realized.

A third factor is the increasing strength of the environmental movement in the United States. This movement imposes direct pressure on the Colorado River in the form of efforts to improve the quality of its water and to ensure consideration for uses of water other than for developmental purposes: aesthetic, recreational, and historic. This leads directly to the salinity problem. The essential immediate goal of such efforts is to prevent further degradation of the quality of the river's waters, while the long-range goal is to improve its quality. As required by the Federal Water Pollution Control Act of 1972 the states must set water quality standards and establish a plan of implementation or else the Environmental Protection Agency will do it for them.¹⁹ On June 13, 1974, the Environmental Protection Agency published in the Federal Register its proposed salinity control policy and standards procedures.²⁰ The proposed policy is to maintain the flow weighted average annual salinity of the lower main stem of the Colorado River system at or below the average value found during 1972. The basin states would be required to adopt and submit for approval to EPA by October 18, 1975 water quality standards for salinity including numeric criteria consistent with the above policy and a plan to achieve compliance with these standards. The states would be required to recognize that the salinity problem was basinwide in nature and that the goal was to achieve compliance by July 1, 1983.

The result of extended negotiations among the states, the Environmental Protection Agency, and the Bureau of Reclamation has been an agreement on an approach to the solution of the salinity problem and the effective adoption of the Bureau's Colorado River Water Quality Improvement Program of 1972.²¹ The objective of this program was to maintain salinity concentrations at or below levels then found in the lower main stem of the Colorado River. The problem

18. G. Jacoby & C. Stockton, *Water Budget at Lake Powell and Its Relation to Surface-Water Supply in the Upper Colorado River Basin* (paper presented at the annual meeting of the American Ass'n for the Advancement of Science, California, February 25, 1974).

19. 33 U.S.C. § 1313 (Supp. III, 1974).

20. 39 Fed. Reg. 20703 (1974).

21. See U.S. Environmental Protection Agency, *Proceedings of the Seventh Session Reconvened of the Conference in the Matter of Pollution of the Interstate Waters of the Colorado River and Its Tributaries—Colorado, New Mexico, Arizona, California, Nevada, Wyoming, Utah* (April 26-27); Bureau of Reclamation, U.S. Dep't of the Interior, *Colorado River Water Quality Improvement Program* (1972).

was viewed from a basinwide perspective and the solution was similarly conceived. The control structures contemplated in the Bureau's study would accomplish its 405ppm reduction in the year 2000 by means of point and diffuse source control projects accounting for 100ppm and costing \$150 to \$200 million; irrigation and water management improvements programs would account for a reduction of 60ppm and would cost \$240 to \$300 million. The remaining 245ppm reduction would come from vegetation management and channelization, desalination, and weather modification at undetermined costs. Construction activities, assuming a time frame of 1972 through 1981 would cost between \$400 and \$500 million.²² As stated by an economist who reviewed the program, "Investments, economic sanctions, standards and rules, educational programs, legislation and other institutional arrangements would be extensive and complex."²³

A fourth condition which affects the decisions with respect to management of the Colorado River is the changing character of the economy in the Colorado River Basin. The energy crisis is perhaps the most notable evidence of the changing economy, with increasing interest being shown in the construction of coal-fired steam plants, coal gasification, and the development of oil shale. Each of these uses requires large quantities of water either for cooling or for processing. It is estimated that, by 1985-1990, 155,000 acre-feet of water will be required per year to produce one million barrels of crude oil daily from oil shale.²⁴ A National Academy of Sciences report indicates that strip mining and strip mining reclamation of land do not require large quantities of water but that water required for conversion of coal to oil by liquefaction or to pipeline gas would require a great deal of water: 65,000 acre-feet of water per year to produce 100,000 barrels per day of synthetic crude oil and 20,000 to 30,000 acre-feet of water per year in a plant producing 250 million standard cubic feet per year of synthetic gas.²⁵ Water used for those purposes will either foreclose future irrigation developments or require transfer of water rights from a "lower" economic use to a "higher" economic use. And utilization of water for those purposes will presumably add a pollution burden to the river unless controls are carefully contrived and supervised to prevent a further reduction in quality. Myron

22. *Id.*, at 31, 45.

23. B. Gardner & C. Stewart, *Agriculture and Salinity Problems in the Colorado River Basin* 25 (paper presented at the annual meeting of the American Ass'n for the Advancement of Science, February 28, 1974).

24. Colorado River Association [California] Newsletter, January/February, 1974, at 2.

25. National Academy of Sciences, *Rehabilitation Potential of Western Coal Lands* 9, 101 (1974).

Holburt of California's Colorado River Board estimates an addition of 3 ppm salinity increase for each 100,000 acre-feet of water diverted for oil shale production.²⁶

POLITICAL RESPONSE TO MINUTE 242 AND TO EPA PRESSURE

The agreement arrived at by Herbert Brownwell for the United States and the negotiators for Mexico was not well received by spokesmen for the interests in the Southwestern states. Ival Goslin, the Executive Director of the Upper Colorado River Commission, charged that Brownwell ignored "the most pertinent and important points of advice of the Committee of 14 representing the seven Colorado River Basin States."²⁷ He asserted that the Department of State, in supporting legislation authorizing the works called for by the agreement, was attempting to give away the water assets of the Colorado River Basin and millions of dollars of the nation's money in immediate capital costs and perpetual operation and maintenance obligations. He further asserted that the agreement constituted a major alteration of a treaty and therefore should be considered by the U.S. Senate. He claimed:

It incorporates ground water which is not covered in the original treaty. It changes, at least for an indefinite period, the amount of water to be delivered to Mexico, and would cause the Secretary of the Interior to violate the reservoir operating criteria of the Colorado River Basin Project Act of 1968. It gives a water quality (salinity) guarantee to Mexico which was specifically omitted from the Treaty, and for all practical purposes precluded by the inclusion of the language saying that the water to be delivered to Mexico shall be made up of the waters of said river, whatever their origin.²⁸

The Basin States concluded that the following steps had to be taken to prevent damage to their interests:²⁹

1. Simultaneous authorization of the salinity control program and the works specifically required for Mexico.
2. Prompt construction of the works under the agreement in order to avoid delivery of 118,000 acre-feet/year over and above that required by the Mexican Water Treaty.
3. Assumption by the United States of the obligation to replace 43,000 acre-feet annually lost as reject water from the desalination plant.

26. Newsletter, *supra* note 24, at 2.

27. I. Goslin, Outline History of Colorado River Development 50 (paper presented at the annual meeting of the American Ass'n for the Advancement of Science, February 28, 1974).

28. *Id.*, at 52.

29. *Id.*, at 52-53.

4. Additional power provided for the desalination plant and not taken from existing Southwest power users.
5. Protection of U.S. groundwater resources near the Mexican border.
6. Confirmation by the Nixon Administration that the Agreement would not impair the rights of the Basin states to continue to utilize their water rights in accordance with the "Law of the River."

The Nixon Administration recommended implementation of the proposals contained in the agreement but opposed inclusion of the salinity control program recommended by the seven basin states, EPA, and the Bureau of Reclamation in its legislative recommendation. For their part, the representatives in Congress from the Southwestern states introduced legislation which incorporated both projects to implement the agreement with Mexico and projects to carry out the domestic salinity control program.³⁰ Goslin asserted in early 1974 that "Whether the Administration's Bill can be supported by the Colorado River Basin States will probably depend to a large extent upon the measures the Federal government is willing to take to protect interests within those States."³¹

Thus, the stage was set for another battle involving the waters of the Colorado River. But there were powerful incentives operating on all of the parties which would lead to agreement. The United States was obviously anxious to come to an agreement with Mexico, not only on the issues of equity that are raised by the specific salinity question on the Colorado River, but on general grounds of comity among nations. As Weinberg states, "That the United States has been willing to go this far amounts to a recognition, however reluctant and however costly, that there is a strong national interest in resolving this dispute by agreement rather than by some form of arbitration or international judicial action."³²

Within the United States, however, there were powerful interests that had to be accommodated. The traditional mode of accommodation was to guarantee, by some financial device, that no interests within the United States would suffer any negative effects as a result of a particular agreement. The only negative effects would be imposed on the general taxpayers who would have no effective voice in

30. Southwestern representatives in 1973 introduced salinity control legislation along the lines of the EPA-BuRec-Southwestern States agreement. S. 1807, H.R. 7774, 93d Cong., 1st Sess. (1973). The 1974 House bill was H.R. 12165, 93d Cong., 2d Sess. (1974).

31. Goslin, *supra* note 27, at 52-53.

32. E. Weinberg, "Salt Talks" United States and Mexico Style: A Case Study of the Lower Colorado River Salinity Dispute 45, May 23, 1972 (draft of a case study to appear in a publication of the American Society of International Law tentatively entitled *International Responsibility for Environmental Quality*).

the proceedings. To some extent the Office of Management and Budget, the chief budgetary agency for the President, might be expected to consider their welfare but that office naturally accedes to presidential determination that some accommodation must be made.

The results of the bargaining between the Administration and the Southwestern interests were therefore fairly predictable: approval in general outline of the Administration's program as incorporated in Minute 242 and the Southwestern states' program for salinity control projects and programs along the main stem and tributaries of the Colorado River.³³ The key to this agreement was the unity of the Southwestern states. Perhaps for the first time since 1922, the states of the basin discovered a mutuality of interest that allowed them to present a united front to the Congress. Wesley Steiner, State Water Engineer of Arizona and Chairman of the Committee of Fourteen, testified for the Southwestern states and represented the collective views of these states. The traditional conflicts of interest between California and Arizona and between the Lower and Upper Basin states were suppressed under the urgent necessity of meeting imminent water quality standards required by U.S. law and the Mexican Water Treaty.

At the outset of the 1974 hearings, the Administration opposed the salinity control program features of the legislation on the grounds that such projects were premature because the EPA and the states had not yet reached agreement on water quality standards because there were no feasibility studies completed for the projects and because of uncertainty with respect to financing arrangements for the projects. On the latter point, the Administration noted that the 75 percent federal obligation of the proposed legislation was based on the financing arrangements for municipal waste treatment plants under the Federal Water Pollution Control Act Amendments of 1972 and that no consideration had been given to the applicability of that formula to salinity control projects.³⁴ Finally, since the Administration preferred only the program for dealing with the Mexican Water Treaty problem, it preferred the Secretary of State to be the responsible official in meeting the Treaty obligations.

Administration eagerness to obtain its Mexican Water Treaty projects—and it was clear that the United States was not obligated to carry out many key features of the Minute 242 until those features

33. Pub. L. No. 93-320, 88 Stat. 266 (1974).

34. Letter from Russel E. Train, Administrator of the Environmental Protection Agency, to Hon. James A. Haley, Chairman, House Committee on Interior and Insular Affairs, March 11, 1974, in *Hearings on H.R. 12165 and Related Bills Before the Subcomm. on Water & Power Resources of the House Comm. on Interior & Insular Affairs*, 93d Cong., 2d Sess. 57-59 (1974).

were authorized for appropriation—made it amenable to inclusion of the salinity control features in the legislation. The legislation passed both houses of Congress with almost lightning speed—at least for Congress—and became law with President Nixon's signature on June 26, 1974. The principal features of that legislation were the following:

1. Construction of a 129 million gallon per day desalting complex for treatment of the heavily saline draw-water from the Wellton-Mohawk Project, plus additional features such as pumping plants and extension of a bypass drain; the desalting plant would reduce the dissolved solids in the feed water 90 per cent; all costs would be nonreimbursable.

2. Acceleration of a program to improve irrigation efficiency in the Wellton-Mohawk Project, with the District bearing a portion of the cost.

3. Acquisition by the Secretary of the Interior of an initial 10,000 acres of the 75,000 acres in the Project for the purpose of reducing returned flows; reduction in repayment obligation and an offset for any increased operating costs.

4. Acquisition of additional lands above Painted Rock Dam for temporary flood storage.

5. Construction of a new canal or lining of the Coachella Canal for a length of 45 miles for the purposes of conserving water presently lost to seepage; cost of this construction to be repaid by the Coachella Valley County Water District in 40 years, except that the payment period would not begin until the Central Arizona Project becomes operative.

6. Construction and operation by the Secretary of the Interior of a well-field near the Mexican border, the water to be delivered to Mexico under the Treaty obligation; the cost of the well-field is nonreimbursable.

7. Authorization to construct four salinity control projects as an initial stage in the overall salinity control program. They are (1) Paradox Valley, Colorado; (2) The Grand Valley Basin, Colorado; (3) Crystal Geyser, Utah; and (4) Las Vegas Wash, Nevada.

8. Authorization of investigation of 13 other identified sources of salinity, including irrigation, point and diffuse source controls; reports to be sent to the states for comment and thereafter to the President, Congress and other federal agencies.

9. Creation of a Colorado River Basin Salinity Control Advisory Council composed of no more than three representatives of each state for purposes of advising on the salinity control program.

10. Seventy-five percent of the costs of each project to be non-reimbursable in view of the federal responsibility for an interstate stream and for international comity with Mexico, and because of

federal ownership of most of the lands from which the dissolved solids originate; 25 percent of the costs to be borne by the Upper Colorado River Basin Fund and the Lower Colorado River Development Fund, with allocation on the basis of several criteria.

11. Authorization to increase power rates charged under contracts administered by the Secretary of the Interior under the Colorado River Storage Project Act for purposes of paying the allocated costs of the salinity control projects.

12. Authorization of expenditures of \$155 million for the construction of the works in support of the Mexican agreement; authorization of \$125 million for the construction of the salinity control projects above Hoover Dam.

It should be noted that the environmentalists took almost no part in the discussion of this legislation. Only the Environmental Policy Center and the Sierra Club provided token opposition in the House Interior Committee hearings. They urged consideration of alternatives such as shutting down entirely the Wellton-Mohawk project and reducing irrigation usage in the Upper Basin.³⁵ There was almost no discussion of the financial features of the legislation except for Administration opposition to the salinity control program until more study had been given to the matter.³⁶ As indicated above, that opposition was easily overcome.

Thus, important policy decisions have been made for dealing with the salinity problem of the Colorado River. These policy decisions deal with such fundamental issues as the level of development assumed for the basin, whether to emphasize structural or nonstructural approaches to the solution of the salinity problem, and responsibilities of the various levels of government and associated interests for the accomplishment of water quality goals.

Bureau of Reclamation studies are based on full development of authorized projects and it is clear that both Upper and Lower Basin interests are anxious to ensure full development, assuming that cor-

35. *Hearings, supra* note 34, at 306-312. On the question of shutting down the Wellton-Mohawk project, the testimony seems to be conflicting with respect to costs. Herbert Brownell testified that that alternative had been explored and that he was convinced that the dollar costs, in addition to political and social costs, would have equalled or exceeded the dollar costs of the program he recommended. *See id.*, at 85. On the other hand, Rafael Moses, Counsel to Colorado Water Conservation Board, reported to the Upper Colorado River Commission, "We could have bought up the Wellton-Mohawk project and retired the whole thing for a lot less than this is going to cost but politically, of course, it is not feasible." Upper Colorado River Commission Official Record for meeting of September 17, 1973, at 142.

36. Congressman Craig Hosmer questioned the formula for dividing Upper and Lower Basin responsibility for financing the 25% of the costs not assumed by the Federal Government. With the Lower Basin contributing 85% of the total, he expressed concern that that formula might provide the basis for financing future basinwide projects. Committee of 14 and Upper Basin representatives assured him it did not. *Hearings, supra* note 34, at 216-218.

rective measures will be taken to deal with increased salinity caused by full development. The Office of Management of Budget, however, has required reexamination of all authorized but yet unconstructed projects to determine their impact on the salinity problem. As outlined by Ival Goslin of the Upper Colorado River Commission, further irrigation development is hampered by the attacks of environmentalists on projects and by federal agency policies, including the Department of the Interior policy to downgrade water development programs relative to other programs, adoption of the Water Resources Council principles and standards and discount rates that make projects less economically feasible, and studies such as that emanating from the National Water Commission.³⁷ Whether presently authorized projects will be fully developed and new ones authorized remains to be seen, and much will depend on both the water quality standards finally adopted and demands for water in industries other than irrigation.

The initial emphasis in salinity control appears to emphasize structural approaches rather strongly. Desalination, point and diffuse source control projects, and lining of canals all have received attention in the salinity control legislation. Rejected have been nonstructural approaches such as alterations in the plans for present and future development, or elimination of such major contributors to the salinity problem as the Wellton-Mohawk project. By its failure to impose serious financial burdens on the beneficiaries of salinity control measures and by failure to consider other options in the form of subsidies to reduce water use or changes in the pricing system, Congress has not created important incentives to alter practices or to change water uses to reduce the salinity problem.³⁸ Either not considered or rejected were such innovations of an economic-institutional character as a water rights purchase program,³⁹ a cost-sharing formula that would have local interests pay a substantial share of the salinity control program,⁴⁰ or an institutional arrangement that would stress state, regional or river-basin responsibility for salinity control.⁴¹ The Bureau of Reclamation, in its 1974 report on the

37. Upper Colorado River Commission, *supra* note 35, *passim*.

38. See, e.g., Martin, *Economic Magnitudes and Economic Alternatives in Lower Basin Use of Colorado River Water*, printed in this issue.

39. Howe & Orr, *Economic Incentives for Salinity Reduction and Water Conservation in the Colorado River Basin*, in *Salinity in Water Resources* 120 (J. Flack & C. Howe eds. 1974) (Proceedings of the 15th Annual Western Resources Conference, Boulder, Colorado).

40. Marshall, *Cost-Sharing and Efficiency in Salinity Control*, in Flack & Howe, *supra* note 38, at 139.

41. Freeman, *Impacts of the Federal Water Pollution Control Act of 1972 on Water Quality Management*, in Flack & Howe, *supra* note 38, at 160.

salinity control program, indicates that improved irrigation efficiencies and water systems management are the most promising near-term measures for salinity control.⁴² These require no major structural features but rather training costs for personnel, and education of the irrigator. Whether these programs will be adequately carried out or will be effective without economic incentives remains to be seen.

Finally, it is clear that the salinity control program will be largely a federal program carried out by the Bureau of Reclamation, largely financed by the federal taxpayer, and monitored by federal agencies such as the Environmental Protection Agency. State involvement and influence will be ensured by means of advisory mechanisms such as the Colorado River Basin Salinity Control Advisory Council composed of representatives of all of the Colorado River Basin states and designed to provide liaison between federal agencies and the states with respect to the salinity problem, and the Colorado River Basin Salinity Control Forum to work with the EPA in the development and adoption of numeric criteria by October 18, 1975. Federal involvement is imperative given the basinwide, interstate nature of the problem. But other options with respect to financial, administrative and technical options were not seriously explored.

Thus, to return to the theme of this paper, traditional water politics appears to be leading to solutions congruent with the output of previous water politics, *i.e.*, formation of a strong local or regional coalition by a process of bargaining and accommodation, leadership provided by federal bureaus, an ability to find a basis for bargaining with other interests—in this case, the national Administration—and an avoidance of issues that might make clear the winner and losers in the political battle. The achievement of unity within the entire basin has made the salinity control coalition a powerful one indeed. It has been successful thus far in achieving an approach to the solution of the salinity problem that promises extensive benefits to traditional beneficiaries of such an approach with very little cost.

One might agree with the National Academy of Sciences in their view that water management on the Colorado River should reflect comprehensive assessments of alternatives and explicit recognition of trade-offs in the uses to which the river's water is put and the investments that make those investments possible.⁴³ But the existing political arrangements and practices—based on complex constitutional, legal, administrative, and financial arrangements—make such analysis

42. Bureau of Reclamation, U.S. Dep't of the Interior, Colorado River Water Quality Improvement Program, Status Report, I-3 (Jan. 1974).

43. National Academy of Science, *Water and Choice in the Colorado Basin* (1968).

difficult. The consequence is planning by bargaining and decisions that are made possible because there is little or no sacrifice by any important interest within the region. Thus, intraregional trade-offs of costs and benefits are ignored while the general taxpayer pays the bill. Unfortunately, at the national level there is seldom a careful assessment of whether paying that bill compares favorably with paying other bills that might realize greater national welfare in return for the investment.