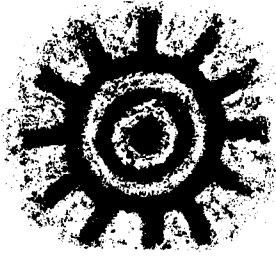


The Colorado River Basin



Arid Lands Resource Information Paper No. 11

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**FEDERAL-STATE WATER USE RELATIONS
IN THE AMERICAN WEST:
An Evolutionary Guide to Future Equilibrium**

by

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C O N T E N T S

The Colorado River Basin	Frontispiece
Foreword	Page i
Abstract	iii
I Introduction and Constitutional Framework	1
Constitutional Framework of the Federal-State Water Rights Debate	2
Political Reality of Federal Predominance	3
II A Model of the Water Policy System	6
Types of Policy	6
Water Policy and Distributive Politics	8
III The Colorado River Basin: A Case Study	12
Reclamation Act of 1902	13
Colorado River Compact and the Boulder Canyon Project Act	14
The Upper Colorado River Compact	21
The Colorado River Basin Project: The Central Arizona Project	26
The 1944 Treaty, Minute 242, and the Colorado River Basin Salinity Control Act: The Mexican Connection	32
Minute 242	35
IV The Carter Administration Proposals	40
Challenging Distributive Water Policy	40
Policy Reform and the West	42
Objectives for Water Policy Reform	42
V Summary, Conclusions, Recommendations	50
Pressures for Change	51
Recommendations for Future Relations in the Water Policy Arena	56

Bibliography	60
Keyword Index	145
Author Index	153

FOREWORD

The Arid Lands Resource Information Paper presented here, another in the series prepared for the Water Resources Scientific Information Center (WRSIC), was supported by the U.S. Department of the Interior, Office of Water Research and Technology Grant No. 14-34-001-7819, to the University of Arizona, Office of Arid Lands Studies, Patricia Paylore, Principal Investigator.

This Paper seeks to review the historic development of regional water agreements, problems arising from conflicting state regulations relating to common waters, and the Federal Government's role in their resolution. We believe it to be a reference tool of currency, importance, and usefulness, one which continues the series' tradition of attention to issues of contemporary concern and interest.

In the states encompassing the arid and semiarid region of the western United States, the competition for scarce water resources has been and will continue to be an important feature in shaping political, economic, and administrative relationships, both among the states and between the states and the Federal Government. The record of attempts to accommodate state allocations to a variety of water uses--including energy production, industrial development, agriculture, and domestic use--is a long repetitive one, the subject of numerous state and Federal regulations. Because

- water does not abide by political boundaries
- regulations by individual states have not dealt with the problem, either historically or adequately
- regional agreements have been tenuous

the Federal Government has traditionally taken an active role in the regulation and development of western water resources.

In exploring the nature and extent of this role, and the responses of the states to it, the historic evolution of relationships among western states and between those states and the Federal Government in the regulation and management of water resources is traced through an examination of the existing literature bearing on the subject, concentrating on

- the history of such evolving Federal-state relations in the Upper and Lower Basins of the Colorado River (Arizona, New Mexico, Nevada, Utah, Colorado, Wyoming, and California)
- recommendations for future relations based on options designed to achieve a dynamic state of balance between these agencies

Even though events appear to be overtaking policy, we believe an informed assessment of the desirability and potential effectiveness of future Federal actions that would impose constraints on state water use must begin with a thorough historical understanding of state-Federal relations. Proposals for a new Federal water policy that includes cost sharing, institutions and institutional arrangements, and Federal "reserved" water rights may alter the fact that the acquisition, use, and disposition of rights to use water within states has historically been a matter of individual state law.

I wish once more to thank the National Science Foundation for its early funding of the development of the computer program that now handles so successfully the Arid Lands Information System (ALIS). While the extensive bibliography accompanying this Paper, 166 citations in all, includes those prepared originally under previous OWRT/WRSIC grants to this Office, as well as others taken from RECON, DOE's Oak Ridge-based information system, the bulk of the citations were identified and processed specifically for this work.

While the authors and I are grateful to OWRT/WRSIC for their support of the Office of Arid Lands Studies in helping maintain it as a U.S. Center of Competence in water-related problems of arid lands, neither the U.S. Department of the Interior nor the University of Arizona is responsible for the views expressed herein.

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Tucson, Arizona

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16. Abstract

Federal-state relations in the field of water resources development in the Colorado River Basin are examined through a review of the literature. The authors set out a framework in which water policy development in the states of the Colorado River Basin (Arizona, Colorado, Wyoming, California, Nevada, Utah, and New Mexico) can be explained. Distributive, redistributive, and regulatory politics are defined as the three arenas in which water policy discussions take place. After this model is explained, development of water projects and policies in the Basin is explored. Beginning with the Reclamation Act of 1902, defined as the basis of Federal water policy, the authors discuss the Colorado River Compact, the Boulder Canyon Project Act, the Colorado River Storage Project, the Central Arizona Project, the Mexican Water Treaty of 1944, and the Colorado River Basin Salinity Control Act. They examine the 1977 Carter administration's proposal to take water politics out of the distributive arena, and conclude that the administration yielded on most of its proposed reforms to avoid a repetition of the 1977 confrontation with the Congress, and because western states' governors were united in the face of possible Federal encroachment. They point out that although the distributive arena is the one most beneficial to the states, the latter must recognize their dependence on Federal financial resources.
(Jamail-Arizona)

17a. Descriptors

Colorado River, Colorado River Basin, Federal-State Water Rights Conflicts, Political Aspects, Political Constraints, Water Resources, Boulder Dam, Water Resources Development, Colorado River Compact, Boulder Canyon Project Act, Federal Project Policy, Mexican Water Treaty, Arizona, Colorado, Utah, Nevada, New Mexico, California, Nevada, Southwest U.S., State Jurisdiction, Federal Jurisdiction, Reservation Doctrine, Water Rights, Federal Reclamation Law, Salinity, Cost Repayment, Regulatory Politics, Distributive Politics, U. S. Bureau of Reclamation, Central Arizona Project, Colorado River Basin Salinity Control Act

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FEDERAL-STATE WATER USE RELATIONS

IN THE AMERICAN WEST :

An Evolutionary Guide to Future Equilibrium

I: INTRODUCTION AND CONSTITUTIONAL FRAMEWORK

Introduction

In the states encompassing the arid and semiarid region of the western United States, the scarcity of water resources has been and will continue to be an important feature shaping the political, economic, and administrative relationships both among the states and between the states and the Federal Government. Water policy in the western United States is not marked by neat divisions of authority between the Federal and state spheres. As with most issues within the framework of federalism, water policy is characterized by overlapping claims which have engendered both conflictual and cooperative behavior between states and between the states and the Federal Government (Thomas, 1970). Advocates for the Federal Government taking an active and predominant role in the regulation and development of water resources in the west have reasoned that because water does not abide by political boundaries, regulation by the individual states and regional agreements have not been able to deal adequately with the problem (Doerksen, 1977). Experience has shown, however, that the impetus for an expanded national role has not been predicated on such reasoning, but has resulted rather from the superior financial and administrative resources of the Federal Government.

In this study we explore the nature and extent of the Federal role in water resources development, and the responses of the states to that role, with the major focus on the historic evolution of those relationships among western states of the Colorado River Basin (Arizona, New Mexico, Nevada, Utah, Colorado, Wyoming, and California) and the Federal government that deal with the development, regulation, and management of water resources. The literature concerned with this subject is immense, and in tracing through the corpus, we found it necessary to impose some limitations on the items identified as relating to this study. Primarily, then, we have relied on secondary sources that provide summaries and explanations of judicial and legislative histories rather than minutely examining court records and legislative hearings.

To facilitate a comprehensive historical understanding of water policy, a conceptual framework that explains the evolving relationships between the state and national governments is presented. We will also examine the recent proposals of the Carter administration for correcting

the deficiencies of traditional water policies. Finally, we will offer some recommendations for future relations based on options designed to achieve an equitable balance between the interests of state and Federal governments.

An historical understanding of the issues involved in Federal-state relations regarding water resources in the Colorado River Basin is particularly important at this time in the light of several recent developments: re-organization of the Department of the Interior and the creation of a new Department of Energy, the emphasis on western coal development for meeting energy demands, recent drought experiences, demands of Indian tribes, and the emergence of environmental considerations as a strong element in natural resources policy. All of these recent developments indicate the potential for the emergence of new political and administrative relationships which could have profound effects upon water resource development in the west. Additionally, proposals for a new Federal water policy concerning cost sharing and institutional arrangements, and Federal "reserved" water rights, among others, may alter the historical fact that acquisition, use, and disposition of rights to use water within states has been a matter of individual state law. An informed assessment of the desirability and potential effectiveness of future Federal actions that would impose constraints on state water use must therefore begin with an historical examination of state-Federal relations.

Constitutional Framework of the Federal-States Water Rights Debate

The constitutional bases of the Federal Government's role in water resources development and management are the following (Davis, 1959; Trelease, 1971):

- 1) the power to regulate interstate commerce
- 2) the war power
- 3) the property clause
- 4) the general welfare clause
- 5) the treaty power

The powers of the states concerning water resources do not stem from express delegations in state constitutions, ". . .but from general residuum of sovereignty and imperium left to the states after the grant of specific powers to the United States" (Trelease, 1966). These include the power to create property rights and the police power to regulate the conduct of its citizens and property rights. Traditionally, state water laws have been directed to allocating water rights to individuals as property. In the western United States, this has primarily taken the form of the law of prior appropriation (Trelease, 1966; Chalmers, 1974; Clark et al, 1973; Patterson, 1955; Harris, Jeffery, and Stewart, 1974).

These constitutional foundations have been variously expanded and restricted by numerous judicial decisions, legislative enactments, and administrative rulings.

Political Reality of Federal Predominance

In the early formative period of state water law, Federal rights to the use of water were thought to be based on state law (U.S. National Water Commission, 1973A). Unlike the eastern states, where there was a uniform adherence to the English common law doctrine of riparian rights, the western states each created and enforced their own systems (Hutchins, 1955; Ely, 1962). In developing this pattern of reliance on state law, the role of Federal law was ~~ignored~~ for many years (Ranquist, 1975). Both the Bureau of Reclamation and the Forest Service explicitly adopted this concept and obtained rights by filing with state water law officials (U.S. National Water Commission, 1973A). In 1908, however, the United States Supreme Court held in Winters v. U.S. that there is a right in the Federal sovereign to reserve water on Indian reservations. This principle, now known as the Winters Doctrine, was affirmed in subsequent decisions and eventually expanded to uphold claims asserted by the United States to waters on other Federal lands (Ranquist, 1975; Nelson, 1977). One of these cases, Arizona v. California (1963), limited the operation of state law as applied to Federal reclamation projects, although prior to this case, Winters was assumed by many to be limited to Indian reservations. In Arizona v. California the concept was more broadly stated to apply to all Federal reservations (U.S. National Water Commission, 1973C). As these doctrines which expand Federal claims and powers have unfolded, the states have been opposed to their development in many areas (Ranquist, 1975).

While a comparison of the relative authority among levels of government in water resources is inevitable, merely to list and contrast state powers and national powers is meaningless (Trelease, 1966).

Ultimately it would be futile for state officials to approach the issues in the water arena with the idea that they are engaged in a deadly conflict, a fight to the finish. Such an approach would be a self-fulfilling prophecy. The Federal Government is predominant in the water policy arena and will remain so in the foreseeable future. Yet the opportunity to contribute to policies that may affect the present and future well-being of their states is a legitimate objective of state officials, though it may not be attainable if disputes are determined on the wrong grounds. "If the decision is cast in terms of power, the result may be winner-take-all. But if the question is not the existence of power but the desirability of its exercise, compromise and accommodation are more likely to be achieved" (Trelease, 1966).

All state powers must give way when the Federal Government chooses to enforce a national policy that does not coincide with state policy. This does not mean that the Federal Government has taken over state water law, or that state agencies have been put out of business. Though the Federal Government is predominant in the water policy arena and may be omnipotent, it has seldom used its resources to exclude state interests (Trelease, 1966).

The Colorado River Basin states must recognize the political reality of Federal predominance, even though they continue attempts to mold Federal policy. Indeed, much of this has been done in the past in the legislative arena (Thomas, 1970). Virtually all Federal water resources legislation has included procedures for consultation and conflict resolution with the states.

The predominance of the Federal Government in Federal-state relationships in the water policy arena require acquiescence and a low-conflict posture, if not fully cooperative behavior on the part of the Basin states. The states do not have the capacity for adopting an independent or antagonistic position vis-a-vis the Federal Government. The source of most decisions affecting water resources has been found traditionally at the Federal level. Although local and state support has always been important, and their agencies are consulted, most often the basic planning and selection of project priorities have come from Federal water construction agencies, in the west, particularly, the Bureau of Reclamation. Evaluation procedures, particularly benefit-cost analysis, have been the duty of Federal agencies. Further, the fact that the authorization and appropriation process takes place on the Federal level in Congress also constrains the ability of states to exert their influence. Although states have some say in project plan formulation, later negotiations among and between Federal participants may be beyond the reach of the states (Pelham, 1978; Allee and Ingram, 1972).

Requests for water development projects often have their genesis at the local level rather than at the state level, with the result that strong bonds have been formed between Federal construction agencies and local interests, while state-level influence has been minimal in the stages of problem identification, agenda setting, and accountability. The major function left for the states has been rather to provide the political support necessary for authorizing water development projects initiated and administered by the Federal Government and local water user associations. The states have been reactors rather than initiators. Among the Colorado River Basin states, only California appears to be a major exception to this theme. California not only has initiated and constructed water development projects within its own borders, but has also avoided typical acquiescence in Federal interests (Mann, 1963; Ingram, 1969; Cortner and Berry, 1977; Thomas, 1970, 1972).

Federal predominance has been the rule for two essential reasons: 1) It has had most of the necessary resources, expertise, and finances. There is much to be said for the cliché, "He who pays the piper calls the tune." Dependence upon Federal financing for water development projects has also discouraged states from developing their own planning capabilities. 2) And perhaps most important, state and local water interests believe they have benefitted from Federal dominance and development. Because water development projects are planned and constructed by Federal agencies and largely financed from the Federal treasury, state officials have perceived water projects as Federal largesse and have not resisted their development. Even though states are secondary partners, essentially they have not resented their subordinate role, perceiving their primary role rather as supportive of proposals on the Federal level (Ingram, 1973; Cortner and Berry, 1977; Thomas, 1970, 1972; Mann, 1975A). The orientation of state water personnel and agencies has been one of cooperation with local interests, Federal agencies, and Congressional delegations in pushing water development packages through the authorization and appropriation process.

In this chapter we have sketched the most important elements found in the relationship between the Federal Government and the states of the Colorado River Basin in the water policy arena. In summary, we have maintained that one must recognize the political reality of Federal predominance vis-a-vis the Basin states. This relationship has resulted in both conflictual and cooperative behavior, but we contend an examination of the essence of Federal-state relationships should focus on cooperation rather than conflict.

In the chapter following we will present a model of public policy in which the decision-making process affecting the development of water resources can be understood.

II: A MODEL OF THE WATER POLICY SYSTEM

Introduction

A description of the basic elements of Federal-state relationships in the water policy arena rarely explains the rationale for its development. What is needed is a framework or model of political behavior and the public policy process that interprets the reality under investigation.

A particularly useful model of public policy has been developed by Theodore J. Lowi (1964), whose essential thesis is that policy causes politics. Politics, he argues, is a relationship, and the different types of political relationships are determined by what individuals and groups hope to gain and/or by what they fear to lose. In politics, expectations are determined by governmental outputs or policies. Thus, Lowi argues, substantive policy is the critical independent variable which determines, to a great extent, the way in which the actors and the political institutions operate. In terms of water policy, issues have been dealt with in a particular way because of the mutual expectations of the various interests about the benefits derived from water resource development legislation.

Types of Policy

Lowi contends there are three fundamental types of policy: Distributive, Regulatory, and Redistributive. These types are distinguishable according to:

- 1) the degree of disaggregation of the perceived benefits or costs the policy in question provides to those groups that have a stake in its outcome,
- 2) whether or not there is a need to operate according to fixed rules of general applicability,
- 3) the characteristics of the groups contesting the issue, and

- 4) whether or not there are perceived winners or losers.

Distributive policies are those perceived to confer direct benefits upon particular groups, localities, or individuals. Decisions are made without regard to limited resources, and are characterized by the ease with which benefits can be disaggregated without regard to any general rule. All interested groups achieve some consideration. Thus there are no perceived winners or losers, all benefit. Typically, conflict takes place not over the passage of the policy itself but rather over the size and share of the benefits to be distributed. In other words, conflict occurs only within a closed system in which parties in a coalition log-roll or bargain for benefits, and within this system, the most powerful interests usually gains the most equitable share. Low conflict and consensual politics is the usual mode of activity.

Water resources development projects and other public works projects have been used as classic examples of distributive politics in the public policy literature (Lowi, 1964; Allee and Ingram, 1972; Ingram, 1969, 1972, 1974; Mann, 1975A, 1975B; Mann, Weatherford, and Nichols, 1974; Cortner and Berry, 1977). Distributive politics has also been widely known as pork-barrel or "subsidy" politics. Requests are met and political problems are solved through the expenditure of Government funds. Direct benefits accrue to interests in the project locale, while the diffuse costs are borne by the Federal taxpayers.

Regulatory policies involve the application of a general rule and thus impose constraints on the behavior of particular groups. The impact is perceived as one of directly raising costs and/or reducing or expanding the alternatives open to groups or individuals. Regulatory policies are legal norms of behavior. Consequently they deny or confirm benefits. There are clear winners and losers. All do not benefit because disaggregation is not possible.

As a result, political conflict is high with extensive lobbying by the interested parties or interest groups. The style of conflict is intense bargaining with each side trying to gain as many concessions as possible. The impact of regulatory policy is generally sectorial as are the battlelines, i.e. environmentalists vs. developmentalists. Conflicts over setting standards for water quality and establishing guidelines, rules, and/or criteria for waste discharge would be the type of political issues typical of the regulatory arena.

Robert Salisbury^(*) has refined Lowi's conception with the addition of a sub-category called self-regulatory. "Self-regulatory policies also

(*) Salisbury, F.H. (1968) The analysis of public policy: A search for theories and roles. In A. Ranney, ed., Political science and public policy, p. 151-175. Markham Publishing Company, Chicago.

impose constraints upon a group, but are perceived only to increase, not decrease, the beneficial options to the group. . . In the self-regulatory policy situation, only a small group, such as lawyers or oil companies, makes demands, and typically there is little or no opposition." An example of self-regulatory policy in the water arena might be seen in the current question of groundwater law reform in Arizona. The Arizona legislature decided upon a structural decision when an Arizona Supreme Court ruling in favor of agriculture threatened an injunction against groundwater pumping by municipal and mining interests. The Arizona legislature established a commission representing all the major water sectors, and provided that its report would become law unless the legislature acted otherwise. While the commission was getting organized, the legislature ratified a compromise worked out by agricultural, mining, and municipal interests.

Redistributive politics concerns the reallocation of wealth and income, goods and services within a nation, or control over resources between the different levels of government. Redistributive policy is like regulatory policy in that there are clear winners and losers. The outcome, however, is not decided so much by the application of a general rule as it is by the victory of one group over another as a result of an intense, almost ideological conflict. Since conflict is often ideological, the lines of cleavage are stable. Conflict is based on the legitimacy of the proposed policy as well as its specific content.

In the water arena, redistributive policies could include the reallocation of water rights in a river between different users. In Federal systems, Federal-state conflict may not involve the water resource itself but the desire by either level of government to secure or expand authority in areas they feel should constitutionally be within their own jurisdiction.

Water Policy and Distributive Politics

It should be noted that a given water policy proposal may not fit neatly into one of these categories, because of the complexity of the proposal itself (Mann, 1975A). Often, as we shall see, distributive, regulatory, and redistributive elements are present and interact with one another to influence the final outcome. Still, it is clear that the distributive mode has dominated the traditional water policy arena (Mann, 1975A; Ingram and McCain, 1977). The dominance of distributive politics strongly suggests a large degree of stability in the water policy arena. A situation in which all perceive benefits argues for the existence of some well-institutionalized norms of behavior that emphasize consensus and cooperation rather than conflict.

Water policy scholars have noted that the consensual nature of politics in the distributive arena is indeed highlighted by a series of behavioral norms that have guided the politics of water resources development (Ingram, 1969):

- 1) local support
- 2) agreement at each state of the decision-making process
- 3) mutual non-interference
- 4) mutual accommodation
- 5) fairness and equity

These norms are directly intended to solidify support, lessen conflict, and increase cooperation among policy makers at the different levels of government: Federal, state, local.

Local support

The first norm is vital to generate planning on a water resource development project, and to facilitate its passage through the congressional authorization and appropriations process. Local support is crucial because a "united front" indicates greater commitment and desire which provides a very significant criterion for deciding which of the many possible water resource development projects should be sponsored by Federal agencies and funded by Congress.

Agreement at each stage of the decision-making process

The second norm necessitates agreement before a water resource development project proceeds from one stage to the next. Not all water projects can be approved or funded in a competitive situation. Controversy about a proposal is often sufficient ground for delay or reconsideration. For example, the Central Arizona Project floundered in Congressional session after session, until Arizona and California were able to settle their dispute over their respective shares to waters from the Colorado River (Thomas, 1970). As a result, there are both strong incentives for and tremendous pressures upon supporters of a project to dampen conflict, compromise their differences and stand united in pushing the proposal forward to the next stage. Unity is a sine qua non for positive Congressional treatment. As Wayne Aspinall (D-Colorado), former Chairman of the House Interior and Insular Affairs Committee, stated:

". . . My Committee and the Congress has been following a policy of not deciding differences within a state, and hesitate to consider a basin water development program when there is serious controversy between or among the states involved. The problems of successfully moving a large reclamation program through the House of Representatives are so great under the best of conditions that the addition of serious interbasin controversy would present a very difficult task." (Ingram, 1969)

Mutual non-interference

The actors in water policy making have traditionally heeded this norm as means to agreement, that is, participants pay heed only to those water development projects which directly affect their primary interests. They refrain from criticizing each other's projects as it might invite retaliatory actions and certainly lessen unity and increase conflict. This is pork-barrel in the purest sense, for a pork-barrel is a container of unrelated items all promising benefits to the various participants. The norm of non-interference is broken only when an interest demands to be included in the coalition. If this interest has the potential to cause severe trouble, its interests are obliged.

Mutual accommodation

This norm is one aspect of non-interference. In the search for agreement and unity, project proposals which have no rational connection are strung together for mutual support. For example, states in the Upper Colorado River Basin have often felt threatened by proposed water development projects in the Lower Basin states which may adversely affect their water supply. To insure unity andampen conflict, Upper Basin states are accommodated by projects within their borders which will put water to beneficial use. Thus the inclusion of a particular project in a larger proposal depends upon its effect on the balance of support and opposition. It does not depend upon the relationship of the project to any aims or goals established for water development. Mutual accommodation is possible because the stakes involved are capable of being divided due to the absence of a general rule delineating winners and losers. This situation results in the perception of mutual benefits and no relative costs. Likewise, this leads to an avoidance of conflict. Conflict is tempered by giving greater benefits, not by changing the basis of the political relationship that exists. End-means analysis would open the door to conflict and delay. Further, the broad question of ultimate goals and priorities are muted.

The distributive norms of mutual non-interference and mutual accommodation are evident in results from research in progress (*). In a study of state senatorial opinion and voting behavior in four of the Colorado River Basin states--Arizona, New Mexico, Colorado, and Utah--state senators showed strong reluctance to change patterns of water allocation in their states. In fact, state senators in aggregate would prefer all major water users to receive the same if not more water in the future. A willingness to see any water user receive less was virtually non-existent.

Fairness and equity

A final norm concerns the principle of fairness and equity. Not all water projects can be funded at any one time. The great number of interests which in any one year fail to receive a water development project must be convinced that those projects authorized are justified. More importantly, they must also be convinced the projects they support will have an open opportunity for authorization and funding if not the next time around, then certainly within the near future.

In the traditional arena of water resources development, these norms of behavior have operated to lessen the cost of decision-making through minimizing potential conflict. A code of mutual accommodation and mutual non-interference and promise of fairness and equity have smoothed relations among the separate and individual interests of the various participants. If a project demonstrates strong and unified support among all affected participants--local, state, Federal--and no serious opposition surfaces, then the political feasibility of the project is enhanced.

In the next chapter, we will apply this model to the major water resources development projects in the Colorado River Basin.

(*) Ingram, Helen; Rusk, Jerrold; McCain, John R.; Laney, Nancy: Southwest policy research project. University of Arizona, Tucson, Institute of Government Research. Forthcoming.

III: THE COLORADO RIVER BASIN, A CASE STUDY

Introduction

The Colorado River forms one of the great river systems in the United States. Not a particularly heavy flowing stream (ranking only about sixth among the nation's major rivers), it is virtually the sole dependable water supply for an area of 244,000 square miles. The river system stretches from the Green River in Wyoming to the Gulf of California in Mexico, and includes parts of seven western states: Wyoming, Utah, Colorado, New Mexico, Arizona, Nevada, and California (Hundley, 1975). The Colorado River is divided by the Colorado River (sometimes referred to as the Santa Fe) Compact of 1922 into two divisions, the Upper Basin and the Lower Basin (Christman, Synder, and Moore, 1976). The Upper Basin, composed of states whose waters drain into the Colorado River above Lee's Ferry, include Wyoming, Utah, Colorado, New Mexico, and part of Arizona. The Lower Basin contains California, Nevada, and most of Arizona (Terrell, 1965, I).

Competing demands for use of the Basin's scarce water resources has engendered much debate and discussion about how authority over water development should be shared and exercised. Much of the language of the debate has been framed in terms of conflict. Norris Hundley describes his book about the Colorado River Compact of 1922 as a description of a peace treaty, "but like most books about peace, it is really an account of war. No bullets were fired in this war, yet the life and death of cities and states in an enormous area were at stake" (Hundley, 1975). John Upton Terrell (1965, I) likewise discusses the beneficial aspects of the 1922 Compact, and adds:

" . . . But as remedial and progressive as the Compact was, it did not bring peace to the Colorado River. Quite to the contrary, it established an arena for the water war that was to rage for the next forty years, and, as this is written, is far from ended."

The "war," if that is what one chooses to call it, has usually taken the following forms:

- intra-state conflict over trans-basin diversion projects
- interstate conflict between Arizona and California
- inter-basin conflict between the Upper and Lower Basin states

Conflict has usually been resolved in the manner of distributive politics, i.e. it has focused upon the size or share of benefits rather than upon alternate goals for development or whether or not there should be any Federal water development at all. For all the talk of conflict, there have been few irreconcilable disputes between the Federal Government and the states over the direction of water resources development. Very seldom has there been direct conflict between the states and the Federal Government on a "you win, I lose" basis, i.e. in the manner of regulatory or redistributive politics. The prospects for a change from the distributive political arena to a regulatory or redistributive arena, such as originally was sought by the Carter administration, face the barrier of a long political tradition that will not easily be overcome.

The Colorado River is perhaps the most overdeveloped river in the world. Our purpose in this chapter is not to make an in-depth analysis of all the events that have shaped the development of the Colorado River Basin, for each event has been investigated in detail--perhaps too much detail--in numerous case studies. These have naturally focused on the idiosyncratic, and thus have slighted commonalities of the historical development of water policy in the Colorado River Basin. Even though history never exactly repeats itself, there are recurrent themes and norms of behavior that can be discerned. What we plan to show is how these recurring themes and norms explain the development of the Colorado River, point out the significant issues of controversy and cooperation, and what these may mean for the future of Federal-state relationships.

Reclamation Act of 1902

A series of Congressional acts in the latter part of the 19th century indicated Federal Government resistance to participate in western water development, and a preference to encourage development by private enterprise, or, if need be, by the states. While this general Federal policy was effective for a time, by the 1890s the limited financial resources of private developers and the states precluded the continuation of this policy approach (Thomas, 1970; Golze, 1961).

By 1890 westerners were in general agreement that a new approach to reclamation was necessary and that Federal financial assistance was

needed. The states, however, strongly argued that Federal Government assistance should not threaten local control and state jurisdiction. It was against this background that the Reclamation Act of 1902, the mainstay of Federal water resources policy, was passed. The Act established the basic principles upon which development projects in the Colorado River Basin were pursued:

- The Federal Government has a responsibility to develop water resources in the Colorado River Basin
- Federal water resources development projects must recognize state interests and be in accordance with state laws
- Water resources should be developed on a coordinated and cooperative basis
- Water users are required to pay capital costs, excluding interest, to the limits of their financial ability
- Certain types of water resource development projects such as flood control, navigation, and recreation are national obligations and the costs are non-reimbursable (Thomas, 1970)

The Colorado River Compact and the Boulder Canyon Project Act

California's quest for federal assistance in the Colorado River Basin

The origins of the relationship between the national government and the states of the Colorado River Basin relating to the large-scale development of Colorado River water can be found in the demand for water and electric power which emanated from southern California prior to World War I. Faced with the need for an adequate water supply to ensure continued growth for the area, agricultural, industrial, and municipal interests looked to development of the Colorado River as a solution. But the extent and scale of development required to control flooding and divert the River's water to California's agricultural and coastal areas promised to be an expensive undertaking, beyond the financial capabilities of potential water users. Given the expense of constructing such water resources development projects, as well as their international and interstate implications, financial involvement by the national government was sought, pursuant to the Reclamation Act of 1902.

A moderate Federal presence, chiefly in the form of isolated studies of the Basin's water resources, can be traced to as early as 1889 with

the establishment by the U.S. Geological Survey of gaging stations on the Gila River, an Arizona tributary of the Colorado. Subsequent studies prior to World War I had also been undertaken by the U.S. Reclamation Service, the Indian Office, the Forest Service, and the Weather Bureau. Limited development by the Bureau of Reclamation in conjunction with local water users had been undertaken in Arizona's Yuma and Salt River Valleys (Thomas, 1970). In 1916 a report was published by the Federal Government which discussed the importance of arriving at some comprehensive plan for River development which would perhaps warrant Federal assistance, not only in construction of projects, but in all important phases of River control as well (LaRue, 1916).

Among the interests in southern California standing to benefit from Federal assistance in developing the water resources of the Colorado were the farmers of the Imperial Valley, original promoters of an expanded growth of agriculture in the Valley for which Federal public works projects were seen as a solution, foremost among them being an inadequate and unreliable supply of irrigation water for satisfying the full agricultural potential of this vast and fertile Valley. In the early years of the twentieth century, agricultural activity was limited in extent and small in scale, its water supply coming from the Colorado River by a diversion project originating near the Mexican-U.S. border and routed through Mexico before turning north to the California lands. Built by American capital under a concession from the Mexican Government, this project provided that at least half of the diverted water would always be available for Mexican lands. Consequently, in the River's low-flow years the California farmers were left to suffer economic losses and face a possible halt to agricultural expansion, despite having borne the financial costs of the diversion project (Hundley, 1966).

As a remedy for this situation, the Imperial Valley Irrigation District proposed that the existing canal be extended, and that a new canal wholly within the United States be built to supply irrigation water from the Colorado River to permit further development of the Valley's agricultural lands. In accordance with a contract between the District and the Secretary of the Interior, a board was appointed to investigate the feasibility of such a project and offer recommendations. The board offered a favorable report on building a new canal which soon led, in 1919, to the introduction of the Kettner Bill in Congress which provided for Federal Government financing of the canal. But because the bill failed to provide for a storage dam on the Colorado River and because of inconclusive data concerning the adequacy of the water supply and the extent of irrigable acreage, it failed to pass (Van Petten, 1942).

Whatever the deficiencies of the Kettner Bill, they were not due to any lack of support for the idea of a storage dam. In addition to providing water storage for irrigation purposes, a dam would also provide flood protection for Imperial Valley farmers. Support for a dam project came not only from agricultural interests, but also from southern

California municipalities, especially Los Angeles, seeking new water supplies to serve and foster the area's burgeoning industrialization and population (Davis, 1929). Electric power companies, led by the Southern California Edison Company, also supported construction of a dam on the condition that the Federal Government not enter the power business, but rather than any power development at the dam be undertaken by existing power companies under regulation by the Federal Power Commission (Aston, 1936; American Academy of Political and Social Science, 1928).

The quest for economic growth with a minimum of economic risk led southern California interests to agitate for the Federal Government to construct both a new canal and a storage dam. Congress and the Department of the Interior promptly responded with the Kincaid Act in 1920, authorizing the Secretary of the Interior to undertake a survey of the irrigable lands in the Imperial Valley and offer recommendations regarding Federal participation in large-scale development of Colorado River water. The study, known as the Fall-Davis Report, was completed in 1922, and recommended to the Congress that the Federal Government construct a large dam at Boulder Canyon. The project could be paid for, the Report advised, from power revenues and by the lands benefitted (Davis, 1929; Van Petten, 1942). The recommendations of the Fall-Davis Report were soon embodied in a bill which became known as the Swing-Johnson Bill, later passed after extensive debate and revision as the Boulder Canyon Project Act.

Emergence of inter-basin conflict

The scale of this proposal had implications for the water supply of the entire Basin, and consequently aroused the suspicions of agricultural interests in Arizona, Colorado, and Utah. Even before the Kincaid Act, the other less rapidly developing states in the Basin realized that the goals sought by interests in California could jeopardize their future development and use of Colorado River water, as yet mostly unplanned. These states opposed the idea of Boulder Dam unless some means could first be devised for circumventing the prior appropriation system of water rights and thereby protect their future water uses against impending water use in the more rapidly developing state of California (Olson, 1928).

Through the League of the Southwest, an organization of the Colorado River Basin states first organized in 1917 as a forum for dealing with common problems, the states, especially those in the Upper Basin, began to express their fears and assert their interests by rejecting resolutions for Federal construction projects on the River. In 1919, at the behest of the Governor of Utah, a conference of the League was called to discuss issues concerning the use of Colorado River water and arrive at some common basis among all the states for planning development of the

River and its tributaries. At this conference, the states of the Upper Basin, encouraged by the Department of the Interior and by Congress, advanced the idea of a compact among the seven Basin states as a prerequisite to planning irrigation, flood control, and power projects which reached beyond the needs of a single state (Parsons, 1947; Kight, 1927).

By 1920, League members, recognizing that Federal funding depended upon Basin agreement, proposed a compact that would acknowledge the needs of California while protecting the rights of the other states, and that would create a commission to formulate a Basin-wide agreement. The following year Congress authorized the states to negotiate such a compact to determine the water rights of each state and assure an equitable division and apportionment of Colorado River water. The state legislatures immediately approved this proposal and appointed commissioners to represent their states in negotiations (Kight, 1927).

The Colorado River Commission was thus formed, and as its first item of business a resolution was formulated requesting the Congress and President Harding to appoint a Federal representative to chair the Commission and facilitate agreement. Over some reservations on the part of California, Commerce Secretary Herbert Hoover was appointed and accepted by the Commission (Parsons, 1947; Kight, 1927).

Following the organizational meeting in Washington, followed in turn by a series of public hearings held throughout the Basin states, the initial resolutions addressing the key questions of the amount of water to be apportioned and the basis for an apportionment were introduced and discussed (Kight, 1927), but because of lack of reliable data both on the amount of water available from the irregularly-flowing River and on the extent of irrigable land, specific apportionments to each of the states soon proved infeasible. Meeting in Santa Fe, New Mexico, in 1922, the Commission abandoned its attempt to divide the water among all of the states and proposed instead an equal division of water between two groups of states as a solution, with specific apportionments to be arrived at later within each group. It was assumed that such a plan would allow the states in the Lower Basin (California, Arizona, and Nevada) to proceed with their development plans, and would allay the fears of the Upper Basin states (Utah, Colorado, Wyoming, and New Mexico) (Parsons, 1947).

Only the Arizona commissioner opined that the plan would not solve the basic problem of achieving an equitable allocation. Arizona wanted a guaranteed allotment for itself, and specifically objected to inclusion of the Gila River which flows entirely within Arizona and empties into the Colorado well below Boulder Canyon, as part of the water to be divided between the Basins. Agricultural interests in central Arizona were dependent upon Gila River water and feared that without a specific allotment to Arizona, and without a guarantee of the state's full rights to the Gila River, existing rights and future use of Colorado River water would be threatened, and ultimately the economic prosperity of Arizona agriculture jeopardized (Houghton, 1951; Parsons, 1947).

Colorado River Compact

Arizona's objections were temporarily overcome by an amendment to the apportionment providing for Lower Basin states to increase their beneficial consumptive use by one million acre-feet, meaning, or so Arizona assumed, that the water of the Gila River would be retained for Arizona's use. The commissioners signed the Santa Fe Compact, better known as the Colorado River Compact, on November 24, 1922, and it was sent to the state legislatures and the Congress for their approval (Parsons, 1947; Houghton, 1951).

The Compact consisted of eleven articles, the most important of which divided the Basin at Lee's Ferry into an Upper Basin (Colorado, Utah, New Mexico, and Wyoming) and a Lower Basin (Arizona, California, Nevada) and allotted a yearly average of 7.5 million acre-feet of water to each Basin, and an additional one million acre-feet for the Lower Basin. Other articles stated the principal purposes of the agreement, defined key terms, established a hierarchy of priority uses of water, urged cooperation of state officials with the Bureau of Reclamation and the U.S. Geological Survey, established administrative techniques for settling disputes while affirming the legal rights of each state to use its own legal mechanisms for doing so, declared the Compact to have no effect on the national government's obligations to Indian tribes, provided that existing perfected rights to the beneficial use of the River's waters were not impaired by the Compact, stated the procedures for terminating the Compact, and stipulated that agreement would take effect only when approved by all the state legislatures and the Congress (Kight, 1927; Parsons, 1947).

Arizona opposes the Compact and the Boulder Canyon Project

The agreement reached at Santa Fe in 1922 and embodied in the Compact was tenuous and short-lived. Rather than establishing a consensus on the legal basis for development of the River upon which Congress could proceed to authorize construction of the dam at Boulder Canyon, the Compact marked the beginning of a new and often heated conflict between Arizona and California. Once signed by the commissioners, the Compact had little difficulty gaining the approval of six of the state legislatures, but the Arizona legislature not only balked at approval but adopted an intransigent stance against the Compact that was to be maintained for the next twenty years. Arizona's opposition was not to River development per se or to development by the Federal Government, but was directed rather to the Upper Basin allotment under the Compact and to the terms of the Swing-Johnson Bill upon which the Boulder Canyon dam would be authorized (Parsons, 1962; Smith, 1929).

Arizona refused to ratify the Compact because the state lacked a developed plan for using water and power from the Colorado River and believed that no major construction project would be undertaken without unanimous ratification of the Compact by all seven Basin states. The state's main concern regarding the Compact was to protect its potential and existing water rights against California and Mexico, and to this end Arizona established as prerequisites to ratification an agreement among the Lower Basin states to an equitable division of water, and a water treaty between the United States and Mexico (Parsons, 1962).

An additional dimension of conflict between California and Arizona surfaced with the progress, especially by 1926, of Congressional consideration of the dam authorization bill. Not only did the Swing-Johnson Bill provide for a division of water in the Lower Basin unacceptable to Arizona, but the provisions of the bill for Federal construction and operation of a hydroelectric power plant at the dam were also opposed by mining companies and private power companies in the state. In their opposition, the mines and power companies in Arizona were joined by private power companies in southern California and supported by a nationwide campaign by the private electric power industry against Federal Government entry into the power business (Aston, 1936).

The conflict which ensued between Arizona and California was particularly intense during the approximately five-year period between the Arizona legislature's refusal to ratify the Colorado River Compact and Congressional authorization of the Boulder Dam Project in 1928. In these years of formal and informal negotiation with California and opposition to the California-initiated Swing-Johnson Bill under consideration in Congress (and later passed as the Boulder Canyon Project Act), Arizona persistently maintained its objections against California's equally persistent proposals for dividing the water within the Lower Basin and for the distribution of benefits to be realized from the generation and marketing of electric power (Johnson, 1977; Griswell, 1930; Smith, 1929; Arizona, Colorado River Commission, 1928).

Efforts to resolve the Arizona-California conflict

The controversial issues raised by the Colorado River Compact and the Boulder Canyon Project Act by California's plans for development were destined to dominate Arizona politics for a long time (Johnson, 1977; Parsons, 1947; Houghton, 1951). The state's basic policies, principles, attitudes, and lines of argument took initial form in the gubernatorial campaign of 1922 and deliberations in the Arizona legislature in 1923 (Parsons, 1962). In these formative years, there was little opportunity for the Arizona legislature to consider all the ramifications of the issue, but generally the main contentions centered upon achieving an equal division of water and power revenues between itself

and California, asserting its right to tax wholesale power sold at the dam, and limiting Mexico's rights to Colorado River water by means of a treaty. To settle these questions, Arizona sought an agreement, a Tri-State Compact, among the Lower Basin states to supplement the Colorado River Compact; but not even by 1925 when California finally agreed formally to participate in negotiations over division of the water could any agreement be reached. Efforts to resolve the differences between California and Arizona were renewed in 1927, and at the initiative of the Upper Basin states, principally Utah, negotiations were resumed at a Conference of Governors in Denver (Colorado River Conference, Denver, 1927A, 1927B, 1927C).

The Conference, attended by all the principals from the Basin states, established an agenda expanded beyond the Colorado River Compact, and called for discussions addressing all four of Arizona's concerns:

- limitation of Mexican rights
- states' rights to the ownership of the bed and banks of navigable streams, to control waters within their borders, and to receive compensation from the Federal Government when state land and water are used in government projects
- water apportionment in the Lower Basin
- division of benefits from Federal development of hydroelectric power

At the conclusion of the discussions, the Governors of the Upper Basin states proposed a basis for resolving the dispute, which Arizona accepted but California rejected. Despite the continued impasse between the two states, Arizona did emerge from the conference satisfied that issues of states' rights and Mexican water rights were resolved, but the key questions regarding tangible benefits remained unsolved (Arizona, Colorado River Commission, 1927). But water apportionment and power benefits were principally concerns of the Swing-Johnson Bill and were beyond the reach of the Conference. California's refusal to agree to the Conference proposals resulted from the fact that it now identified its interests less with a Lower Basin agreement or with a seven-state compact than with the provisions of the Swing-Johnson Bill, finally enacted as the Boulder Canyon Project Act a year later.

Passage of the Bill was originally made contingent upon a seven-state agreement, a requirement which Arizona counted on to give effect to its failure to ratify the Compact. But at the request of California, the Compact was amended to become effective only with a six-state agreement, a change approved by the other states only on condition that California limit itself to a specific amount of water from the Lower Basin allotment. The California legislature met this requirement in 1929 with legislation limiting the state to its allotment under the Boulder Canyon Project Act, thus permitting the Act to go into effect (Hundley, 1966).

Following passage of the Act, two more formal conferences of the Basin states, chaired by a representative of the Federal Government, were held, in New Mexico in 1929 and in Arizona in 1930. Discussions turned on the correct interpretation and meaning of the Boulder Canyon Project Act and the Colorado River Compact. Proposals and counter proposals were set out regarding legalistic definitions, water apportionment, and the sharing of power benefits. But again, no agreement between Arizona and California could be reached (Arizona, Colorado River Commission, 1929; California, Colorado River Commission, 1930; Smith, 1929).

Having exhausted the possibility of achieving agreement in conference negotiations, Arizona sought other avenues: first by fighting against the Boulder Dam projects in the first appropriations process in the Congress, and second, through the courts. By this time, however, Arizona's support in Congress had dissipated, and Supreme Court decisions of 1931 and 1935 rejected the attempt to have the Colorado River Compact and the Boulder Canyon Project Act declared unconstitutional. The state called for the governors of the Basin States to unite against further Federal developments on the River, but such appeals were in vain as the reality of Boulder Dam was imminent (Arizona, Colorado River Commission, 1932; Parsons, 1947).

These setbacks to Arizona's position eroded the state's will to resist. Furthermore, electric power interests had been placated by an amendment to the Boulder Canyon Project Act providing for development and marketing of the power generated at the dam by the power companies under leasing arrangements with the Federal Government. Central Arizona agriculture remained the only source of opposition in the state, but the drought of 1938-1940 emphasized the danger of being excluded from sharing the benefits of Colorado River development. Consequently, by the late 1930s Arizona adopted a more conciliatory position, and recommended creation of a seven-state advisory commission to serve as a clearinghouse for information, to preserve amicable relations among member states, to promote unity in obtaining appropriations, and in general to work toward the fullest development of Colorado River water (Arizona, Colorado River Commission, 1938; Committee of Fourteen, 1939). Finally, in 1944, the Arizona legislature ratified the Colorado River Compact.

The Upper Colorado River Compact

The Krug Report

In consideration of Upper Basin demands for equitable treatment, the 1928 Boulder Canyon Project Act authorized the Secretary of the Interior to investigate the feasibility of the development of Upper Basin water

resources. Throughout the depression years, planning and investigation proceeded slowly under the leadership of the Bureau of Reclamation. In 1940, the planning effort received further assistance when the passage of the Boulder Canyon Project Adjustment Act authorized additional funds for further feasibility studies in the Upper Basin, as well as funds for a Basin-wide study of all water resource development possibilities for the Colorado River. Throughout the planning process, the Bureau of Reclamation's regional and local offices worked closely with local and state water agencies.

World War II delayed the completion of these studies, but by 1946 the Bureau of Reclamation completed its report on the comprehensive development of and reconnaissance planning in the Colorado River Basin (U.S. Bureau of Reclamation, 1946). The study, referred to as the "Krug Report" after the Secretary of the Interior at that time, was of considerable importance to the Upper Basin because it offered various projects worthy of Congressional authorization. Indeed, it was from the Krug Report that the projects included in the CRSP eventually evolved. The report also concluded, however, that a comprehensive plan for the development of the Colorado River Basin was "seriously handicapped, if not barred, by lack of a determination of the rights of the individual states to utilize the waters of the Colorado River system" (U.S. Bureau of Reclamation, 1946).

Dividing the water in the Upper Basin

This conclusion had an immediate impact on Upper Basin interests for it made clear that approval of possible projects was contingent upon the determination of the water rights of each state in the Upper Basin. Rather than resort to court action, representatives of each Upper Basin state began negotiating a compact to divide Upper Basin water. During negotiations over the Compact, the Bureau of Reclamation examined in greater detail potential projects for Upper Basin water development. Additionally, the Bureau of Reclamation consulted regularly with state and local officials, presented progress reports, and urged the Upper Basin states to agreement (Mann, Weatherford, and Nichols, 1974).

Numerous positions were expressed concerning the proper procedure for determining how much water each state should be allowed to use. Still, all knew that an agreement was necessary before any Federal support was possible. Rather than follow the dangerous precedent of establishing exact amounts of water for each state, as in the Colorado River Compact (Hundley, 1975; Sibley (*)), they decided, instead, upon a percentage distribution of the allotted Upper Basin water. After granting Arizona 50,000 acre-feet annually, the following percentages were allo-

(*) Sibley, George (1977) The desert empire. Harper's 225 (1529):49-68.

cated to each state: Colorado, 51.75; Utah, 23.00; Wyoming, 14.00; and New Mexico, 11.25. The Compact was approved by the Upper Basin states in 1948 and by the Congress in April of the following year (63 Stat. 31, 1949; Anon., 1948; National Research Council, Committee on Water, 1968).

It should be noted, however, that the amount of annual use allowable in the Upper Basin, against which these percentages apply, has become less than 7.5 maf with the declining estimates of average river flow. Water available for Upper Basin use is now estimated to range from 5.25 to 6.5 maf (Weatherford and Jacoby, 1975).

The Compact also authorized the formation of the Upper Colorado River Commission. Its functions were to cooperate with and accommodate the various interests in the Upper Basin and coordinate efforts for the promotion and authorization of CRSP.

While the agreements reached in the Upper Colorado River Compact opened the door to Federal financing, the negotiators also side-stepped issues that could have an important effect on future Federal-state relations in the water policy arena. Specifically, Article XIX(a) of the Compact states, "Nothing in this Compact shall be construed as: (a) Affecting the obligations of the United States of America to Indian tribes. . ." (The wording is identical to that found in Article II of the Colorado River Compact of 1922.) This clause is an excellent example of distributive politics--postpone controversy by setting aside for future resolution the potential conflict in defining and quantifying Indian and Federal reserved water rights. Furthermore, the Compact provides that whatever the amount of water eventually allocated to a Federal reservation, it shall be subtracted from the amount allotted to the state in which the use is made. This provision may become very significant for the Upper Basin. For example, Arizona received 50,000 acre-feet of water for use on that portion of the state within the Upper Basin. It was understood this 50,000 acre-feet was reserved for use by the Navajo because the Navajo Indian Reservation includes, for all practicable purposes, the entire Upper Basin portion in Arizona (*). If it is ever determined, however, that Navajos have rights in excess of 50,000 acre-feet, the effect might be to alter the apportionments of all other Upper Basin states. Indeed, the Upper Colorado River Compact could become irrelevant.

The Colorado River Storage Project Act (CRSP)

The Upper Colorado River Compact had thus met the Secretary of the Interior's stipulation for a determination of water rights. The Upper Basin states and the Upper Colorado River Commission could now begin to

(*) See Minutes of the Navajo Tribal Council, July 28, 1966, and Navajo Tribal Council Resolution, CJY-95-66.

gird themselves for a legislative battle to gain Federal funding for major water development projects in the Upper Basin. In preparation for the coming legislative struggle, the Bureau of Reclamation worked closely with the Upper Colorado River Commission and with water development agencies in the affected states and localities. The Bureau struggled mightily to develop a project proposal that would accommodate Basin and state preferences and project priorities. By late 1949, a draft of the proposed Colorado River Storage Project Act was prepared and presented to the Upper Basin states for comment and public hearings.

As the different proposed projects were strung together in the omnibus bill, the norms of mutual accommodation and mutual non-interference operated to insure agreement and unity. Within the political coalition, each state negotiated to gain facilities to be included in the larger storage project proposal. Colorado expressed reservations about project priorities in the draft report. Colorado felt her interests had not received adequate consideration, and was eventually successful in gaining new studies and projects for the western slope. The support of Congressional representatives from each Basin state was obtained by including project benefits for their state in the larger package or through promises of future fair and equitable consideration of desired projects by Congress. Early in the process, agreement was also reached on the norm of non-interference. Each state had the right to use its allotted water in any manner it so desired.

After much discussion and compromise, unity was formed among the Upper Basin states and they were prepared to approach Congress. Not every state was satisfied completely, but on the whole, disputes between the Upper Basin states were minimal.

The same cannot be said, however, about intra-state conflict over water allocation. The issue of trans-basin diversion was the most troublesome, particularly in Colorado where water conflict between west slope agricultural and east slope municipal and agricultural interests at times had the potential to kill any Colorado River Storage Project bill (Mann, Weatherford, and Nichols, 1974). It is beyond the scope of this study to provide a detailed explanation of the intra-state compromises reached. But it was well understood that resolution of these disputes was essential if the Upper Basin was to gain authorization of the proposed development program. Congress did not look favorably upon reclamation projects on which local support and agreement was in question (Ingram, 1969, 1972).

CRSP bills were introduced in the 82nd Congress (1952) and the 83rd (1953). Hearings before the relevant committees in both houses commenced in 1954, and shortly thereafter the Bureau of the Budget and President Eisenhower announced their endorsement of CRSP. Hearings continued during 1954 but no action was taken because of the opposition of California and the preservationist lobby.

Opposition from California and the preservationists

Throughout the Congressional hearings, California made known her objections to Upper Basin development. Though wide-ranging in scope and legalistic in tone, it was clear that California's objections were motivated by self-interest. The norm of non-interference was contravened because California perceived the use of Upper Basin water as a potential threat to her present and future use of water from the Colorado River.

The importance of the norms of fairness and equity was highlighted when the sponsors of the Colorado River Storage Project strongly denounced California and her representatives for their opposition. Over the years, southern California had obtained more than her share of both water and funds from the Federal treasury, and massive, federally-financed water resource development in the Upper Basin had nowhere reached the level found in the Lower Basin. When the Upper Basin states sought to implement their rights under the 1922 Colorado River Compact, however, California objected. Congressman Wayne Aspinall (D-Colorado), during debate on CRSP, pointed out:

" . . . As the Hoover Dam and the related works was the program to allow the Lower Basin the use of its apportioned share of this vital water, so is the Colorado Storage Project the long-delayed but long-planned and expected program for use by the Upper Basin of its share of the water. We fail to understand why what was sauce for Southern California is not now sauce for the Upper Basin. Yet, on the contrary, they are trying to cook our goose. We must have a program similar in magnitude and concept to this if we are to use our legal allotment of water." (*)

The major extra-Basin obstacle to passage was the uncompromising insistence by preservationists that there be no dam at Echo Park in the Dinosaur National Monument. They felt the construction of the Echo Park Dam would create a precedent for invasions into other parks and monuments. The proposed dam was strongly supported by the Basin states because the dam would provide power revenues to aid in the payment for irrigation facilities. Furthermore, the dam's storage reservoir would supply water for the Central Utah Project (Mann, 1975A). The preservationists exhibited uncompromising opposition only to the violation of Dinosaur National Monument. They made it clear they were not opposed to reclamation policies per se but were prepared if necessary to widen the scope of conflicts.

(*) Congressional Record, February 28, 1956, p. 3506.

New CRSP bills were introduced in the 84th Congress in 1955. No serious opposition was encountered in the Senate, and final passage was achieved in that body in April 1955. Unlike the Senate version, the House version deleted any mention of Echo Park Dam. Preservationist opposition was so powerful that House sponsors of CRSP, particularly Aspinall, knew that any CRSP bill that included the dam at Echo Park would likely fail. In late 1955 Basin interests, recognizing political reality, agreed unconditionally to delete the dam from the House versions of the bill. With this action, preservationists withdrew from opposition to the Colorado River Storage Project (Mann, 1975A). Final House passage was achieved early in March 1956, and the Conference Committee report, with House provisions intact, was accepted later that month. CRSP was enacted on April 11, 1956, with President Eisenhower's signature.

The story of the formation of the coalition to support the Colorado River Storage Project is a textbook example of distributive politics: uncommon efforts within and between the Upper Basin states to achieve agreement and unity through mutual accommodation at all levels in order to gain Federal authorization and appropriation of funds for the proposed storage project. Only California, among the Lower Basin states, remained opposed to the bitter end. Arizona supported CRSP because she knew Upper Basin support would be critical in her battle with California over the Central Arizona Project.

The conflict over Echo Park Dam was an example of Lowi's regulatory politics. The winners and loser were obvious because a general rule was invoked that did not permit disaggregation. Powerful interests were locked in conflict with virtually no chance of agreement through compromise. The other features of the storage project, however, evolved within the distributive arena. Mutual accommodation with publicly financed and subsidized water resource development resulted in the perception of benefits for all. As Mann contends (1975A), "The price of distributive politics was a given outcome on the regulatory side. The price of regulatory politics was acquiescence in distributive politics."

Colorado River Basin Project: Central Arizona Project

The Central Arizona Project (CAP), initially recommended to the Congress in the late 1940s but delayed because of political conflict between the states, was finally authorized on September 30, 1968, after nearly a generation of struggle. Federal officials and the Bureau of Reclamation desirous of building whatever was authorized, waited and prompted the states to an agreement. It was recognized that regional agreement and Basin unity was demanded before authorization was a real possibility (Ingram, 1969; Johnson, 1977; Berkman and Viscusi, 1973).

Droughts and power shortages in central Arizona during the late 1930s led to the suggestion of importing Colorado River water to help save agriculture and insure continued growth and development. In 1942, the Arizona legislature appropriated \$200,000 for a Bureau of Reclamation reconnaissance study of the feasibility of importing water into central Arizona (Mann, 1963), even though no water contracts could be signed with the Secretary of the Interior until Arizona ratified the 1922 Colorado River Compact. Arizona was the only Basin state not to have done so because powerful local interests had argued that Arizona had strong legal claims to the Colorado River which were not subject to Federal laws or the Compact itself. Drought finally forced ratification, and contracts were soon negotiated with the Department of the Interior for the state's share of water, under terms of the Boulder Canyon Project Act.

Although the Bureau of Reclamation found the CAP economically sound and physically possible, they expressed reservations because Arizona had done nothing to control the rapid overdraft of groundwater. The state legislature responded by adopting a groundwater code, whereupon the Bureau of Reclamation recommended the CAP.

A CAP bill passed the Senate in 1950 and 1951 but never received approval from the House Interior and Insular Affairs Committee, the reason being that California and Arizona still could not reach agreement on how the Lower Basin's share of water should be allocated between them. It was spelled out by Congress that until Arizona's and California's differences were settled, there would be no further consideration of the CAP (Ingram, 1969). (*)

This suited California since she had already put more than her allotted share (4.4 maf under terms of the Boulder Canyon Project Act) to beneficial use within her borders. Although some Arizona interests advocated a state project financed by power sales from new dams on the Colorado River, most water interests favored a Federal project if for no other reason than financial. Court action seemed to be the only sure avenue of resolution, and consequently Arizona soon filed suit against California.

Arizona v. California (1963)

Relative to the dispute between Arizona and California, the Supreme Court was asked to decide three essential issues: Arizona desired the Court to limit California's water entitlement to 4.4 maf. Arizona also wished to confirm her right to 2.8 maf under terms of the BCPA. In addi-

(*) It is interesting to note that this tactic was also employed by President Carter. The removal of the CAP from his "hit list" was conditional upon Arizona's moving forcefully to solve the groundwater problem in the state (Kirschten, 1977A).

tion, Arizona argued that waters from her Colorado tributaries, primarily the Gila River, should not be included in her 2.8 maf allotment.

The Court's decision (Arizona v. California, 373 US 546, 1963), after lengthy deliberations, declared that the flow of the Gila River should not be included in Arizona's allocation. In addition, the allocation formula (4.4/2.8) in the Boulder Canyon Project Act should stand --a victory for Arizona. Further, the Supreme Court argued that Congress had delegated to the Secretary of the Interior the power to divide the River in times of shortage, both between and within the states:

" . . . Congress decided that a fair division of the first 7,500,00 acre-feet of such mainstream waters would give 4,400,000 acre-feet to California, 2,800,000 to Arizona, and 300,000 to Nevada; Arizona and California would each get one-half of any surplus . . . Division of the water did not . . . depend on the States' agreeing to a compact, for Congress gave the Secretary of the Interior adequate authority to accomplish the division. Congress did this by giving the Secretary power to make contract for the delivery of water and by providing that no person could have water without a contract." (Arizona v. California 373 US 546, 565 (1963))

The allocation interpretation came as a surprise to most western water scholars (Hundley, 1972, 1975; National Research Council, Committee on Water, 1968; New Republic, 1963). It appeared that Congress could constitutionally allocate the waters of an interstate stream as well as delegate authority to the Secretary of the Interior to do so during times of shortage, whereas previously this power was considered the sole responsibility of the states involved either by means of compact or litigation. In light of this interpretation it is understandable why Basin states are apprehensive about possible Federal usurpation of state water rights.

A final significant feature of Arizona v. California reaffirmed the doctrine of Federal reserved rights. All Federal reservations--national forests, Indian reservations--were to receive enough water to fulfill the purposes for which they were created. These rights are generally paramount, dating from the time the reservation was created and not subject to the law of prior appropriation or the test of beneficial use. As we shall see, water claims under this doctrine are easily perceived as redistributive in nature.

Prior to the final decision, the Special Master's draft report gave every indication that Arizona's principal contentions would be upheld. Consequently water interests in the state once again began to gear up for presentation to Congress. To this end, the Salt River Project (a local water user association), the Central Arizona Project Association (an

umbrella interest group), the Arizona Interstate Stream Commission, and the Bureau of Reclamation coordinated their efforts to achieve their mutual interests. The common perception was that all would benefit. The state would prosper from the economic stimulus and the Bureau of Reclamation would be able to expand its influence and the scope of its activities. What was good for the goose was certainly good for the gander and vice versa.

Protecting Upper-Basin interests

Yet it was clear, even before the final decision in Arizona v. California, that almost all regional or Basin interests would have to reach agreement and accommodate each other's interests before the CAP stood an even chance for authorization in the Federal arena (Ingram, 1969). Norms of fairness and equity demanded that any project in the Lower Basin be balanced by means to protect or beneficially use the Upper Basin allotments. In other words, a political package (an omnibus bill) must be constructed that would accommodate all Basin states and maintain equity in the allocation and use of water from the Colorado River.

The Department of the Interior was requested by Congressman Aspinall to prepare a study of the regional water and power needs of the Southwest in preparation for the expected pressures for authorization of individual state projects as soon as Arizona v. California was decided. The report, the Pacific Southwest Water Plan (PSWWP), was prepared by the Bureau of Reclamation in close consultation with local water users, particularly in Arizona (U.S. Bureau of Reclamation, 1964), and presented to Secretary of the Interior Stewart Udall, himself from Arizona, shortly after the Arizona v. California decision was handed down.

The PSWWP was sent out for review to all water interests in the region. Intense bargaining and mutual accommodation took place, moderated by the Bureau of Reclamation, before a revised PSWWP was submitted to the Secretary for transmission to the Congress. It is from this plan that the major features of the Colorado River Basin Project Act, or as it is sometimes known, the Central Arizona Project Act (PL90-357) evolved.

Arizona water interests knew quite well that political reality did not guarantee that the CAP would be constructed. CAP supporters, recognizing that the favorable ruling in Arizona v. California had to be implemented through legislative action, operated throughout the lengthy legislative process on the premise that CAP depended upon the ability of Arizona interests to link CAP's success to the plans and desires of other influential interests. Furthermore, it will be remembered, the ruling implied that the Congress had authority to allocate water, and this being so Congress conceivably could reallocate more water to California. The CAP presented a real threat to California, already using considerably more water than her allotted 4.4 maf, so agreements had to be struck

between California and Arizona before advances could be made. Interests were accommodated. Arizona received California's support for the CAP. In turn, Arizona agreed that even in times of water shortage--a real possibility--California would be guaranteed the first 4.4 maf. There was to be no shortage-sharing obligation.

Fairness and equity demanded that the interests of the Upper Basin states also be obliged. Investigation of augmentation possibilities, most likely from the Pacific Northwest, were to be authorized. By now there was no question that the Colorado River was indeed overcommitted, and the Upper Basin feared that increased water use in Arizona might hinder its future development, a posture with which California could not have agreed more. In addition, the Upper Basin was eventually granted five water projects to be constructed simultaneously with the CAP. All of these irrigation projects, incidentally, were in the district represented by Congressman Aspinall. The final version of the CAP bill also answered the demands of other states in the Basin, authorizing the construction of Hooker Dam on the Gila River in New Mexico, reauthorizing the Dixie Project in southern Utah, and conditionally authorizing the Uintah unit of the Central Utah Project.

The Colorado River Basin had reached an accord. But, it must be noted, the accord was reached at the expense of some powerful interests outside the region. The Northwest, though willing not to interfere with the proposed water development projects, correctly perceived that any augmentation source for the Colorado River Basin that depended, for instance, upon the Columbia or Snake Rivers, was a redistributive threat. Throughout CAP's legislative history (1965 to 1968), Northwest interests, led effectively by Senator Henry Jackson (D-Washington), Chairman of the Senate Interior and Insular Affairs Committee, battled any mention of augmentation. They were ultimately successful, so much so that any augmentation reconnaissance studies outside the Colorado River Basin were prohibited for a period of ten years.

Preservationists accommodated

The other problem concerned the means to finance the Colorado River Basin Project. A Lower Basin development funds was established to be used to guarantee 7.5 maf to the Lower Basin through augmentation or desalinization and to help finance the CAP. Funds were to be obtained from surplus power revenues from existing dams along the Colorado River and from two new dams, Bridge and Marble Canyon, to be built as part of the Colorado River Basin Project. The new dams were the "pistons" or "cash registers" for the project. And here was the rub: These dams were perceived to violate the sanctity of the Grand Canyon--shades of the Echo Park Dam dispute during the deliberations over the Colorado River Storage Project. Preservation interests were aghast. Under no circumstances were they willing to accept any violation, no matter how minor, of the Grand

Canyon. No compromises were possible, or even seriously considered. The following exchange between Congressman Morris Udall (D-Arizona) and David Brower of the Sierra Club clearly reveals these uncompromising attitudes:

Mr. Udall: One of the things that has troubled many of my colleagues here is what they deem the impossibly adamant non-compromising position of the Sierra Club. We have 104 miles of living river, the longest stretch of national park in the country. We enlarge that to 158 miles. We are willing to enlarge the Grand Canyon to take in Marble Gorge and Vermillion Cliffs and all of that. We are willing to talk about going downstream another 13 miles. What would the Sierra Club accept? If we have a low, low, low Bridge Canyon Dam, maybe 100 feet high, is that too much? Is there any point at which you compromise here?

Mr. Brower: Mr. Udall, you are not giving us anything that God didn't put there in the first place, and I think that is the thing we are not entitled to compromise. That is the primary scenic resource of this country. If there are not other ways to go about getting your water, I would still say that the compromise should not be made--that Arizona should be subsidized with something other than the world's Grand Canyon, or any part of it.

We would not expect you to sacrifice a major part of the Central Arizona aqueduct for the possibility of getting water. You are here for the principle of getting water for Arizona. And although we could question some of the economics of this, we are perfectly willing to compromise there.

The aqueduct is going to damage a great deal of scenery. The new storage reservoirs along the aqueduct will, too. These things we are taking a walk on. On the Grand Canyon, we are not entitled to take a walk. (Mann, 1975A)

The preservationist side, ably led by the Sierra Club, won this regulatory battle with a successful nationwide appeal. A general rule--no dams--triumphed. The dams' replacement was a coal-fired generating station to be built near the Glen Canyon Dam which would furnish the necessary power for the CAP.

Obligations to Mexico

Another important provision of the Colorado River Basin Project had significant implications for future water policy in the Basin. The 1944 Treaty with Mexico obliged the Basin states to deliver 1.5 maf to Mexico annually. The Basin states perceived this obligation potentially to

threaten some or all of the Basin's future development plans. Some sort of an agreement was necessary between Basin interests and the Federal Government on this divisive issue. Consequently a provision was added to the CRBP bill which declared the satisfaction of the Treaty requirements a national obligation to be fulfilled from the first 2.5 maf of any future water augmentation project. This essentially meant that any costs required to meet the obligations of the Basin states to deliver 1.5 maf of water to Mexico would be borne by the Federal Government. Mann (1975B) aptly describes this as distributive politics "with an international hitching post."

CRBP and consensual politics

From the majority of perspectives, the politics of the CRBP evolved in the distributive arena. Support and agreement were gained at each stage of the process through mutual accommodation based on the norms of fairness and equity. Once agreement was reached, interference with others' interests was unnecessary during the final legislative deliberations. Each of the major participants in the coalition perceived benefits for the costs were essentially borne by the Federal Government. Conflict was avoided in this distributive framework through tacit agreements to overlook or set aside contentious issues. As Ingram (1969) argued:

" . . . Some basic matters could not even be considered in this framework. The matter of whether the economic growth of the Southwest should be subsidized by water development built by the nation could not be entertained. To raise such an issue was to threaten the cohesion which made negotiation among different power centers possible at all. Likewise, priorities in the use of water and among different projects could not be set. Attempting this would have been to heighten the competition already existing to some extent because of the shortage in the Basin."

While conflict was present, especially among the states, cooperation was the dominant mode of interaction between the Federal Government and the Basin coalition. Distributive politics is ultimately consensual politics.

The 1944 Treaty, Minute No. 242, and the Colorado River Basin Salinity Control Act: The Mexican Connection

Controversy between Mexico and the United States over the waters of the Colorado has a long history, dating back to the late 1800s. Resolution

of the water issue, however, was favored by both countries. Indeed, Article III(c) of the Colorado River Compact of 1922 recognized that Mexico might have a right to a future allocation of water from the Colorado based on the principle of international comity. Political instability and conflicting regional and national interests, however, delayed serious negotiations until the 1940s (Hundley, 1966; Tilden, 1975).

Several considerations prompted the decision to negotiate a water treaty. For one thing, a treaty would popularize President Roosevelt's "Good Neighbor" policy. Furthermore, it was believed time was working against the interests of the Basin and the United States in the Colorado River. The development of Mexican irrigation projects in the Mexicali Valley was proceeding at a rapid pace. The more water Mexico used, the more she could eventually claim under the doctrine of prior appropriation. The completion of Hoover Dam also aided Mexican agriculture by regulating the flow of the River and thus lessening the potential for flood and silt damage.

The attitude of the Basin states toward a treaty

Initially, the possibility of serious negotiations leading to a treaty invoked considerable opposition from the Basin states. Even though they felt there was no obligation to deliver any water to Mexico, they recognized Mexico had potential rights and feared the United States might give Mexico more Colorado River water than she deserved. The Basin states perceived the issue in redistributive terms--they would receive nothing from any treaty and lose water which could be put to beneficial use within the Basin.

The Basin states were approached by State Department officials through the Committee of Fourteen for their support in negotiations in Mexico. Basin unity meant a treaty without the endorsement of the Basin states was politically infeasible. Most Basin interests agreed, however, on the need for negotiation and for a treaty. Basin interests, with the exception of California, recognized that new conditions bespoke the need for change in attitude. They knew, though opposed, that Mexico might have a strong legal claim to Colorado River water, and feared the possible results of an arbitration tribunal. Increasingly development in Mexico could also curtail future development throughout the entire Basin. It would be better to reach an agreement soon with Mexico to limit her uses before they encroached upon the Basin states' compact allocations (Hundley, 1966; Holburt, 1975).

By 1943 only California remained vehemently opposed. California, it will be recalled, had limited herself to 4.4 maf under the Boulder Canyon Project Act and the California Limitation Act of 1929, yet she had negotiated contracts for delivery of 5,362,000 acre-feet (Hundley, 1966). There was a real possibility that increased use in Arizona and a guaran-

teed delivery to Mexico could limit her development. Arizona stood to be potentially hurt being the least developed Lower Basin user. But her hostility toward California led her to support negotiations favored especially by the Upper Basin states. Some argue Arizona agreed to support negotiations for a treaty in exchange for Upper Basin assistance in the continuing struggle with California (Hundley, 1966).

With change in attitudes on the part of six Basin states, and pressures resulting from international considerations--the wartime "Good Neighbor" policy and the upcoming Dumbarton Oaks Conference on the formulation of the United Nations--California's opposition was overridden. In 1944 a water treaty with Mexico was signed and ratified, giving Mexico 1.5 maf from the Colorado River. The water quantity issue was solved, but other issues were left for future resolution (Hundley, 1966; Mann, 1975B; Tilden, 1975).

Water quality

Though the subject of water quality was not explicitly addressed in the Treaty, it was nonetheless an issue of potential discussion. It seems that the water quality problem was shunted aside to avoid introducing unnecessary conflict into the more important issue of water quantity (Hundley, 1966; Tilden, 1975; Mann, 1975B; Holburt, 1975).

All waters from surface streams and groundwater aquifers contain dissolved substances known chemically as salts, a condition especially true of the Colorado River. Salinity levels at any point in the Colorado River are the result of two physical processes occurring in any river system:

- salt loading resulting from the dissolving of salts by water
- concentrating effects which result from the natural or human use of water leaving residual salts in a smaller volume of water

Both of these processes influence salinity levels within the Colorado River and explain the increase in salinity levels as one moves downstream. As each state in the Basin develops its allotted share of water, salinity levels will naturally increase unless corrective action is taken (Weatherford and Jacoby, 1975; Chrisman, Snyder, and Moore, 1976).

Minute No. 242

While salinity has always been the major water pollution problem in the Colorado River Basin, the salinity problem reached serious international proportions in the early 1960s when highly saline return flows from the Wellton-Mohawk Irrigation and Drainage District in southwestern Arizona began to impact severely upon Mexican irrigated agriculture. Mexico protested the increased salinity, and after several interim agreements and a great deal of negotiation, Minute No. 242, entitled the Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River, was signed on August 30, 1973 (Gantz, 1972; Sepulveda, 1972; Friedkin, 1972; Sobarzo, 1972; Holburt, 1975; Tilden, 1975).

The essential component of Minute No. 242 was the requirement of the United States to deliver 1.5 maf of usable (not highly saline) water to Mexico annually. To meet this obligation, Minute No. 242 provided for:

- 1) reduction of salinity levels to that comparable to the last diversion point in the U.S.--
Imperial Dam
- 2) lining the first 50 miles of the Coachella Canal in California with concrete to improve conservation
- 3) building a desalinization complex to treat Wellton-Mohawk drainage near Yuma, Arizona
- 4) constructing a canal to carry extremely saline water to the Gulf of California
- 5) financing land rehabilitation near Mexicali, Mexico

The Minute was ratified with the passage of PL93-320, the Colorado River Basin Salinity Control Act, which authorized funding needed to meet the United States' obligations to Mexico.

During negotiations with Mexico that led up to Minute No. 242, it was clear that the executive branch was operating under some domestic political constraints, let alone the problem of trying to satisfy Mexico. Basin states were particularly unhappy because they realized the flow of the Colorado was less than the amount thought available when the waters were divided between the Upper and Lower Basin states in 1922. The average flow is now considered to be about 14 maf (Weatherford and Jacoby, 1975; National Research Council, Committee on Water, 1968). The waters apportioned under the 1922 Colorado River Compact and the 1944 Treaty with Mexico totaled 17.5 maf. A guarantee of 1.5 maf of quality water

to Mexico was perceived potentially to have the impact of curtailing Upper and Lower Basin future development.

Throughout the negotiations, the Basin states and their representatives made their positions well-known. They were concerned that additional water in excess of 1.5 maf would be delivered to Mexico to reduce or dilute salinity to an acceptable level. As a temporary solution, this had been implemented but the Basin states strongly opposed any permanent commitment to Mexico of water deliveries beyond that required by the Treaty of 1944. They argued this would give away the water assets of the Colorado River Basin. Any additional water allotment would be perceived as a redistributive threat that could limit Basin development. It should also be noted that the states' position was supported by the Bureau of Reclamation and other Federal agencies with close constituent ties in the Basin (Mann, 1975B).

The Nixon administration realized there could be no permanent acceptable solution based on increased water deliveries to Mexico for the purpose of lowering salinity levels if that water came from the Basin states' shares. Not only did the states perceive this in redistributive terms, under section 202 of the Colorado River Basin Project Act, satisfaction of the 1944 Treaty requirements was considered a national obligation, not a state or Basin responsibility. The Colorado River Basin states contended that any agreement would be signed on the basis of international comity and therefore the Basin states should not be burdened to any greater extent than the rest of the country (Holburt, 1975; Mann, 1975A, 1975B). In simple terms, this implied that the Federal Government would bear the cost for anything relevant to Mexico's claim--a classic distributive solution.

Herbert Brownell, the special negotiator appointed to reach an agreement with Mexico, made the following statement after the signing of Minute No. 242:

" . . . 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."
(Mann, 1975B, from U.S. State Department Bulletin 395-96, September 24, 1974)

Colorado River Basin Salinity Control Act, PL93-320, 88 Stat. 226 (1974)

Federal dollars also played an important role in another water quality issue in the Basin. As a result of PL92-500 (1972 Amendments to the Federal Water Pollution Control Act), the Environmental Protection Agency argued that salinity standards were mandatory for the Colorado River and that salinity levels should be maintained at or below present levels, a constraint that threatened to curtail development in the Basin because increased water use also increases salinity levels. Imposition of a general rule (regulatory politics) of this nature not surprisingly generated opposition (Ingram and McCain, 1977; Reynolds, 1972). Representatives of the Basin states, Bureau of Reclamation, and EPA met to discuss the general salinity problem of the Colorado River. After much debate, they recommended the construction of salinity control projects on the Colorado River and its tributaries. These recommendations were largely similar to a Bureau of Reclamation study prepared in the previous year that argued an engineering solution was needed to desalinize return flow or drainage water (Reynolds, 1972).

Basin interests formed a united front and offered a Basin-wide salinity control program in which 75 percent of the costs would be paid directly by the Federal Government and the remaining 25 percent would be paid out of development funds gained from revenues produced by hydroelectric dams on the Colorado River. In other words, they sought a structural solution funded by the Federal treasury that would not require water users to cut back substantially or radically change their patterns of use (Ingram and McCain, 1977).

Every participant appeared to gain by this program. EPA standards were met and therefore there were no obvious grounds for objection by the Agency. Also, the proposed legislation contained some provisions for retiring especially saline land from irrigation and improving irrigation efficiency which EPA could view as partial compensation for its support. In addition, the salinity control program would have the fortuitous impact of extending the Bureau of Reclamation's influence in the region. Basin states benefitting from the enhancement of water quality would pay little of the cost even though they and allied Federal agencies largely created the salinity problem in the first place (Ingram and McCain, 1977).

To accomplish these aims, a bill entitled the Colorado River Salinity Control Act was introduced in 1973. The bill was enthusiastically supported by the Basin states and many Federal agencies. The Nixon administration was opposed because of its \$121 million price tag. Though the bill could have passed the Congressional authorization stage and appropriation process, there was every indication that President Nixon would either have vetoed the bill or impounded its funds. Supporters of the salinity control project, however, had an important bargaining chip to play. Only Congress could implement the agreements contained in Minute 242. It was clear that the Nixon administration's desires would

depend heavily on what the Federal Government would do to protect the perceived interests of Colorado River Basin states. Basin interests argued that the salinity control program was necessary to assuage their fears. Implementation of Minute No. 242 and the salinity control projects would require some log-rolling between Congressional and state interests on the one hand, and the President on the other.

Within the distributive mode, the results were predictable: An omnibus bill that included the provisions of Minute No. 242 as well as the Basin-wide salinity control projects. This was the price for Basin support for Minute No. 242. The key to this agreement was the unity of the Basin states in the face of water quality standards required by Minute No. 242 and the EPA (Mann, 1975B). The position of the Basin states was enhanced because there were no conflicts among them to be settled first. Mutual agreement was a political given. The political package received support from the Bureau of Reclamation and the EPA as well as from the Department of State.

Within the context of Washington politics, it is easy to understand why there was no effective tough opposition to the salinity control program. It is hardly an exaggeration to argue that the Office of Management and Budget and the administration were forced to "log-roll" and accept the large authorization of Federal funds as the price of avoiding international conflict with Mexico over the problem of water quality (Ingram and McCain, 1977).

The desalinization facility and the other construction facilities in the Basin authorized under PL93-320 had no essential relationship other than political feasibility and necessity. Attitudes of non-interference on the part of both the Upper Basin and Lower Basin states toward the problem created by the Wellton-Mohawk project betrayed the determination to maintain unity within the Basin and to avoid sacrificing the interest of one for the benefit of all. Any effort to modify substantially or retire Wellton-Mohawk was considered politically infeasible. Note the following statement of Rafael Moses, Counsel to the Colorado Water Conservation Board, 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" (Mann, 1975B).

It appears that salinity control, like water resource development in general, prefers structural solutions--desalinization facilities. Non-structural remedies, such as modifications of development plans in the Basin or the elimination of the Wellton-Mohawk project, would have invoked conflict and delayed the implementation of Minute No. 242 and the Basin-wide salinity control program.

Even though the problem of salinity control is a relatively new issue in the water policy arena, its resolution did not appear to be substantially different from historical water resource development issues. Local and regional support and agreement were fostered through the norms of mutual accommodation and non-interference. Cooperation with Federal agencies was the rule rather than the exception. There were no clear winners or losers, all could perceive benefits. And the glue that held all interests together--Federal, state, and local--was the availability of Federal financing. The only thing that changed was what was distributed, desalinization projects rather than dams and irrigation works. The water development ethic of "dam, ditch, and divert" may now be "dam, ditch, divert, and desalinate."

IV: CARTER ADMINISTRATION PROPOSALS

Challenging Distributive Water Policy

In his Environmental Message of May 23, 1977, President Carter declared the commitment of his administration to change substantially the Federal government's traditionally uncoordinated approach to the management of the nation's water resources. He announced that efforts toward the establishment of a comprehensive and unified Federal water management policy would commence with a review of current policies to be conducted by a task force composed of the Office of Management and Budget (OMB), the Council on Environmental Quality (CEQ), and Water Resources Commission (WRC) under the headship of the Secretary of the Interior Cecil Andrus. The task force was given six months to undertake its study and generate specific recommendations for reforming national water policy. Additionally, as his first practical step toward reorienting Federal policy, the President directed the water agencies to end their support for any new construction projects in floodplains unless it can be determined that no feasible alternative exists.

Actually, this initiative toward reform by the administration had been anticipated several weeks earlier with the abrupt announcement that 32 Federal water projects, many already under construction, would be reviewed for possible cutbacks or elimination. Subsequently, 18 projects were marked for elimination and the appropriations for five others pared. Ultimately, nine projects were defeated and no funds for new water projects were included in the 1979 budget, pending completion of the water policy review (Kirschten, 1977A, 1977B).

These actions were an explicit rebuke to the long-time patronizing pork-barrel approach to water resources management characteristics of the kindred relationships among the Federal water agencies, the states, and congress. The administration faulted this well-established policy tradition as well as present policies for not treating water as a finite resource, inequitably imposing the costs of projects among beneficiaries, adversely affecting water quality and the environment, and placing construction projects as the cornerstone of Federal policy (Ibid.). Interior Secretary Andrus, the administration's principal spokesman for reform, decried the proliferation of water projects in a speech to the National Conference on Water, meeting in St. Louis. He criticized many

projects as "unsafe, environmentally unsound, or economically unjustifiable," declared an end to the days of the free-spending massive construction approach to water management, and echoed the President's proclamation of conservation as the new cornerstone of Federal water policy (Andrus, 1977).

Some influential senators and congressmen, however, are convinced, given Carter's success in eliminating only nine of the 32 projects originally targeted, that if a cohesive opposition can be maintained they can successfully appropriate money to start new projects and perhaps also revive one or more of the eliminated projects. Prospects for the strength of congressional opposition are certainly enhanced by the fact that the chairmen of both the House and Senate subcommittees responsible for public works appropriations, as well as the House Majority leader all favor new projects (Anon., 1978B; Kirschten, 1977B).

The absence of a comprehensive and coordinated management approach has long been a feature of Federal water policies, indeed, of natural resources policies generally, as well as the primary target for would-be reformers. In its most basic form the problem can be understood as two-fold:

- On the one hand there is the dearth of coordination among Federal agencies. Twenty years ago Grant McConnell in his Private Power and American Democracy (Vintage, New York, 1966 , p. 212-213) observed that "the most startling fact about the history of water projects in the United States is the degree to which their short-comings have been associated with administrative failures," a fact which in McConnell's estimation has "emphasized with remarkable consistency the need for coordination among the agencies dealing with water."
- On the other hand is the equally important problem of the lack of a comprehensive outlook and coordination exhibited in the relationship of the national government with the state governments (U.S. National Water Commission, 1973A). The need for large quantities of water for energy projects, increased emphasis on environmental quality, interstate conflicts, and the demands of Indian tribes for recognition of their water rights have been major catalysts for focusing on the problem of coordinating state and Federal water policies.

Policy Reform and the West

These problems have particular salience for water policies in the western states. As a report issuing from the National Conference on Water explained:

"The West, with its long experience and traditions in regard to water rights, has certainly given far more attention (than the East) to the problem; but the West has also become locked into inflexible water right formulas and public attitudes that are difficult to adjust to such changes in national priorities as those being made for energy purposes. A highly significant development is the increased social value now being attributed to instream uses . . . Additional complications have been created by questions concerning Indian rights and Federal land rights (Winters doctrine). Major issues turn on how such rights should be measured, to what lands the water may be applied, whether the rights may be transferred, and many other questions." (National Water Conference, Current Water Problems and the Water Assessment Process, May 25, 1977, p. 7).

Furthermore, serious water shortages, aggravated by drought, have hit the western states particularly hard. But water policy reform will be particularly important to the western states not only because they are the driest and fastest growing in the country, but also because they are the greatest wasters of water as well. Waste is due in part to the climate, but state water laws and Federal irrigation projects both operate to discourage conservation (Hornblower, 1977). Perhaps in no other area of the west, if not the entire country, have these problems appeared more dramatically than in the Colorado River Basin where the water supply problem has engendered conflict among farmers, energy companies, municipalities, and Indian tribes, as well as between Mexico and the United States (Hornblower, 1977; Blundell, 1975). In what follows in this section, the major features of the Carter administration's reform proposals which address this second management problem of Federal-state relations will be described and explicated with emphasis on those issues most relevant to the states of the Colorado River Basin.

Objectives for Water Policy Reform

Interior Secretary Andrus, in his St. Louis speech, proposed and summarized nine objectives he felt must be included in a new comprehensive water policy, three of which were directly relevant to the relationship of the Federal Government and the states of the Colorado River Basin:

- 1) increased cost-sharing by states and non-Federal entities for water projects

- 2) elimination of laws, rules, and institutions which hamper cooperation between states and the Federal Government
- 3) quantification of reserved rights for Indian reservations and other Federal lands.

Cost-Sharing

In maintaining that reforms must require the states and other non-Federal interests to bear a greater share of the financial burden of construction projects, Andrus elaborated on the first objective, as follows:

" . . . The availability of Federal money provided under very favorable conditions has led to the construction of projects that would not have been built if greater local cost-sharing were required. Present policy provides an irresistible temptation to request projects that would otherwise never be considered. The results too often may be poor planning, unwise and unneeded construction, and inequitable distribution of benefits.

"The system of financing Federal projects is sadly out of proportion and out of date. Individual project purposes vary in their requirements for repayment by direct beneficiaries from 100 percent to zero, with the largest Federal subsidy going to such uses as flood control and navigation. While irrigation pays part of its cost, in terms of dollars spent there is a tremendous subsidy. Consequently there are obvious inequities and the impact on the Federal budget is too large . . . And the system encourages waste where the price of water is below the actual cost.

"A new system of financing must be proposed that will rely on non-Federal sources to pay considerably more of the costs than at present through water rates, capital contributions and other means." (Andrus, 1977)

Federal financial contributions to Colorado River Basin development have been substantial. Yet, despite the billions of dollars spent, from Boulder Dam at a cost of \$3 million to the still incomplete \$1.7 billion Central Arizona Project, water shortages are acute due to drought, over allocation, and rapidly increasing demands. Most importantly, from the Federal Government's point of view, agriculture continues to consume and

benefit to the detriment of more economically favorable alternatives consonant with urbanization and energy development (Kirschten, 1977; Hornblower, 1977; Blundell, 1977).

State reforms

A second objective of comprehensive reform relevant to Federal-state relations which Secretary Andrus proposed was the elimination of state barriers to Federal-state cooperation. The Secretary's most pointed comments toward the states came when he chided them for their part in impeding cooperation with the Federal Government. First, noting generally the difficulties inherent in the widely varying laws, regulations, and practices governing water resources management for achieving efficiency and conservation, he added:

" . . . As for the states, I would hope that they could begin cooperative efforts to bring laws, rules, and institutions governing water into the 20th century. If this does not occur, eventually the Federal Government will be encouraged to step in, and another area of state prerogatives will be lost." (Andrus, 1977)

Despite Andrus' disclaimer that he did "not propose any such drastic expansion of Federal influence at this time," the initial statement of the water resources policy task force noted that the extent to which the administration's reform goals could be realized would be strongly affected by the legal and economic institutions of the states. The review team's policy paper explained that acquiring, using, and disposing of water rights has been a concern of each state, but as the demands on water resources increase, a national perspective on both water quantity and water quality may have to be developed (Water Resources Council, 1977A). Five institutional problems were identified by the task force:

1) Subsidy policies have favored irrigation, navigation, and recreation over the goals of conservation, economic efficiency, and environmental quality. Consequently, subsidy policies have resulted in degraded water quality due to overuse and inequitable benefits realized by individuals. The policy review team offered as options for reform the reduction of subsidies by changing interest rates and repayment obligations, the establishment of user charges to recover the full costs of projects, the subsidization of social and environmental water functions, and allowing as free as possible operation of the market system.

2) Laws and management practices such as "beneficial use" and "diversion," riparian laws, inadequate coordination and inadequate compliance with Federal environmental planning on the part of Federal agencies, and Federal contracting practices all impair the recognition of environmental values. Options for reform in this area included a Federal

agency review of practices for the purpose of identifying and legislating necessary changes, a grant of authority to the Environmental Protection Agency, CEQ, or WRC to require Federal agency observance of environmental quality needs, development of procedures to insure greater recognition for instream uses of water, or require state and local governments to adopt strategies through state law for instream flow needs.

3) A third problem identified concerned the timing and the quality of opportunities for public participation in water resources planning.

The final two problems identified by the task force pointed even more explicitly to the states as a source of difficulty:

4) A fourth problem noted by the policy review team was that water rights systems in many states have developed without recognizing the relationships between water quantity and water quality, and between surface water and groundwater. The options offered for reform stressed the need for a stronger Federal role relative to the states:

- The Federal Government could exercise its existing legal authority under the "commerce clause" and the "property clause" of the Constitution to ensure that the states take account of these relationships.
- A comprehensive model water code developed by the Federal Government and the Council of State Governments was offered as a second option.
- The recognition of these relationships between quantity and quality, and surface and groundwater, could be attached as conditions to water quality grants and expenditures for flood control and reclamation.
- The Federal Government could review licenses, contracts, and permits to ensure their consistency with a comprehensive and integrated approach to water management.

5) The policy review team argued that the inflexibility of institutional arrangements which have resulted from water rights systems may lead to inefficiency and inequity in water use. While this problem is almost entirely the result of state law over which there is no direct Federal control, the Federal government has an interest in seeing that its many water rights are not infringed or preempted by inadequate state laws. Additionally, many water rights under state laws have been developed as a result of Federal projects and programs. More specifically, the potential problems of present water rights systems were identified as follows:

- interstate and regional programs and plans may be more difficult to attain because water rights are generally established, exercised, and transferred under the laws of a single state
- water rights transfers within a state are difficult because there is frequently inadequate information about the extent of the right and its effect on other water users
- legal concepts such as "forfeiture," "beneficial use," and "reasonable use" are often poorly defined, rarely enforced, and discourage efficient use of water

The review team's reform options included:

- adoption by the states of statutes pertaining to the adjudication, quantification, and public recording of water use rights so as to provide greater knowledge and certainty about water rights and possibly result in a greater ability to transfer rights and a greater degree of public control over water allocation
- development by the Federal government of a data bank of rights established under state laws
- a review of state water laws by the Federal government to determine their consistency with Federal policy and the attachment of conditions on Federal programs, projects, and assistance requiring states to meet Federal standards of equity, efficiency, and environmental quality
- purchase of water rights by the Federal government through eminent domain or voluntary sales and the reallocation of water right to the most desirable and productive use.

Western governors and congressional opponents of the administration seized upon this theme of an increased Federal role advanced by Secretary Andrus and by the water policy review team as a threat to the states' desires to preserve traditional western water rights and the right to adjudicate water claims. A typical response came from Arizona's Governor Castro who maintained that there was no need for an overriding Federal water rights system, arguing that regional and state variations in hydrology and water use patterns dictate against national policies in many areas of water resources management. The Governor called for more time

to review the numerous policy options and the opportunity for the states to assist in the further consideration of options, and in the selection of policies that reflect the differences among regions (Castro, 1977).

In an attempt to allay such fears, President Carter told a meeting on western water policy in Denver that the Federal Government would not preempt state and local prerogatives in water use. He later met with western governors and asked that they prepare a list of their most important water policy questions (Anon., 1977A). Despite this attempt to assuage the western states, subsequent Federal actions such as threatening to enforce the acreage limitations of the 1902 Reclamation Act, warning Arizona that it must pass strict groundwater conservation laws before receiving Colorado River water from the Central Arizona Project, and opposing as "growth generating" a dam project in Denver, perhaps belie state hopes for fully retaining their traditional role (Hornblower, 1977).

Quantification of reserved rights

The third objective Secretary Andrus proposed to the National Conference on Water for a comprehensive reform of Federal water policy is one fraught with issues that could potentially engender conflict between the water rights of the Colorado River Basin states and the rights of the Federal Government, namely the quantification of reserved rights for Indian reservations and other Federal lands. Secretary Andrus stated that federally-secured Indian water rights have largely been ignored in the development of water resources policy, but, he continued:

" . . . Today, the legal entitlement of Indian tribes to the use of water from the systems serving their reservations can no longer be overlooked or discounted. The Nation faces a conflict between the legitimate rights of Indians to develop their resources and the impairment of enormous capital investments already made by non-Indians in the same water supply.

"Quantification of 'reserved rights' for Indian reservation and other Federal lands is essential to rational planning for the future. The more we continue to plan and use our water resources without regard to determination of Indian and reserved water rights, the more we compound the problem." (Andrus, 1977)

Indian water rights are created under the judicial doctrine of Federal reserved water rights which holds that sufficient quantities of unappropriated water be reserved to fulfill the purpose of Federal land reservations. The legal foundation of Indian water rights was established by the Supreme Court in Winters v. United States (1908) when the Court ruled that appropriative rights created by water law in the western

states are not superior to reservation rights created by Federal law. The question of the nature and extent of Indian water rights was addressed by the Supreme Court for the second time in Arizona v. California (1963). The Court reaffirmed the Winters doctrine and clarified the question of quantification of Indian water rights by defining the quantity of water intended to be reserved as the amount needed for all "practically irrigable" reservation land, and thus rejected Arizona's contention that the amount of water reserved should be measured by the Indians' "reasonably foreseeable needs," i.e., the number of Indians. Indian reservations created for occupations other than farming and ranching may, the Court ruled, have their water rights measured by different formulas (U.S. National Water Commission, 1973C).

According to the water policy review study, a basic problem with the doctrine of Federal reserved water rights is that the amounts of water for the various purposes of Federal land reservations have not been quantified. This deficiency is particularly problematic because it conflicts with the appropriation doctrine which developed with the creation of the western states from the public domain. This state doctrine, which predominates among the states of the Colorado River Basin and is also sanctioned by Congressional statute in the Desert Land Act, is based on "the one first in time is first in right, and the measure of the appropriation right is the amount of water which is actually applied to a beneficial use." Subsequently, states have regulated the use of water in the public domain, and since there is no Federal statute establishing criteria for determining the amount of surplus water subject to state appropriation and the amount available for serving the purposes of Federal reservations consequently, rights have been subjected to long and costly litigation. The complexity of the problem is compounded by the fact that under present law the jurisdiction of the state courts may be concurrent with the Federal courts when controversies involving Federal water use rights are involved. Given the finite water supply and the desire to maximize its use, as well as the water required for new energy developments, it is imperative according to the review team, that the institutional problems of court jurisdiction and lack of Federal-state agreement on procedures for quantifying "surplus water" be resolved by Federal initiative.

To this end, four policy options were proposed:

- 1) retain the status quo and continue to clarify the law and quantify Federal reserved water rights in the courts
- 2) resolve the problem by Congressional adoption of procedures and criteria for quantifying rights
- 3) continue to resolve disputes through the courts but eliminate barriers to rapid adjudication by

modifying the McCarran Amendment to allow adjudication of Federal water rights only in Federal courts, permitting states to represent their citizens as *parens patriae*, and creating a Federal water court

- 4) obtain Congressional authorization to negotiate Federal-state compacts and expedite the investigation and construction of projects that will develop Federal reserved rights to water (Water Resources Council, 1977B).

In this chapter, the basic features of a new national water policy as sought by the Carter administration (but at this writing still far from being attained) which potentially have direct relevance to the states of the Colorado River Basin have been set out. The problems addressed in the initial efforts of the present administration to achieve water policy reform are, for the most part, not new ones. Problems such as equity, cost-sharing, competing uses, Indian water rights, water for energy, and a host of others have been persistent issues shaping the politics of water in the Colorado River Basin for over fifty years.

V: SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

Water has traditionally been perceived as different from other resources like coal or copper which are recognized as finite and the costs of which are accepted as a function of supply and demand. Rhetoric and polemics aside, there has been little institutional action that recognizes the finite nature of the water supply in the Colorado River Basin. Indeed, water is still considered limitless and not amenable to the usual operations of the market, as beautifully evidenced by Carter's retreat from his "hit list" in the face of the "Western Water Mafia."

Our examination of several major water resource development projects in the Colorado River Basin clearly shows that the predominance of the Federal presence has been the rule for two essential reasons. First, the Federal Government has had most of the necessary resources: expertise and money. Second, and perhaps most important, state and local water interests believed they have benefitted from Federal water resource development. Opportunities for federally-financed water development projects have also led the basin states to reach agreement and cooperate where there had been differences and conflict. The Colorado River Compact (1922) laid the foundation for the Boulder Canyon Project Act (1928). The Upper Colorado River Compact (1948) was largely motivated by anticipation of the Colorado River Storage Project (1956). Arizona knew that funding for the Central Arizona Project was impossible until the water rights dispute with California was settled.

Decision making at the Federal level, however, in no way negates the possibility of non-conflictual, cooperative modes of behavior nor does it mean Federal interests will always prevail. The persistence of cooperative relationships reflects the distributive pattern of politics in the water policy arena, that is, cooperative behavior is perceived as increasing the likelihood of benefits all interests desire from water resources development. State and local interests perceive water resource development not only as necessary for life in an arid land but as critical to economic development. Federal representatives see water projects as tangible examples of "bringing home the bacon." Federal construction agencies perceive water resources development projects as means to widen the scope of their activity and increase their influence and prestige.

Reclamation projects financed by the Federal treasury were seen by beneficiaries as "just desserts" rewarded by the political system. Other areas received Federal subsidies in flood control projects and other public works while the west received its rewards in the currency of irrigation projects. Non-Basin legislators in Washington also knew their support for water resource development projects could be traded or log-rolled for projects they desired whether in the water policy arena or not. Consequently, an attack on one project could be perceived as an attack on all, a battle in which there would be no winners, only losers. With perceptions of mutual benefits dominating the traditional water policy arena, it is not hard to understand why cooperative means are used for goal attainment. Even though priorities among different water resources development projects have shifted, the habit of distribution has not. Recently, water development for energy, waste treatment, and salinity control have received more emphasis than reclamation projects in the game of distributing the Federal largesse.

Pressures for Change

Distributive policy arenas are inherently stable. All of the interests which perceive a stake and are important to majority building receive a share of the benefits. Stress can occur in the arena, however, in two ways:

- If a limit, physical or political, is placed on the distribution of benefits, the policy arena is likely to change.
- If interests emerge which cannot be satisfied by the distribution of benefits, or which insist that a victory for themselves implies the defeat of others, relations of non-interference and mutual accommodation cannot persist.

Water resources policy making has experienced both types of pressures toward change (Ingram and McCain, 1977).

Colorado River Basin water resources are in fact limited, and prevailing patterns of use may have reached physical limits which the pattern of politics heretofore has refused to acknowledge. When water supplies of sufficient quantity and quality for a desired use become short, the basic operating assumption of the endless distribution of benefits is called into question. The finite nature of water in the Colorado River Basin has been highlighted by the emergence of relatively new users as well as established users who demand more and more water. Nuclear and fossil-fuel electrical generating plants require large amounts of water for cooling purposes. The development of the Basin's

oil shale reserves will also require large amounts of water (Weatherford and Jacoby, 1975). Demands that greater attention be paid to instream uses are widespread. Water for recreation, fish and wildlife, and esthetic purposes implies stretches of free-flowing streams (Doerksen, 1977). The exploding population of the Basin states also demands more water for municipal purposes.

Limited supply coupled with demands for more water has potent redistributive or regulatory implications. In the case of the Colorado River Basin this means redistribution from agriculture since it consumes, far and away, the largest percentage of water used in the Basin (*). However, redistributive implications do not necessarily mean redistributive solutions. Even though nearly all physically feasible and economically justifiable dam and reservoir sites have been developed, supply augmentation possibilities exist. Weather modification, more efficient irrigation practices, and various water harvesting techniques come immediately to mind. Even towing icebergs to southern California municipal areas to replace water diverted from the Colorado River is not beyond the realm of imagination. If these options prove feasible, i.e., worthy of Government subsidy, then the resilience of the distributive arena will be enhanced.

Environmental interests

A new group of interests, broadly characterized as "environmental," is also insisting on participating in water resources development decisions. Environmental interests threaten to be much more difficult, if not impossible, to accommodate within the distributive arena. When no development is what environmentalists truly want, it is difficult to purchase their consent, in the distributive mode, with a project feature or an additional project. As we have seen, uncompromising attitudes and national pressures on the part of preservationists were instrumental in deleting the Echo Park Dam and the Bridge and Marble Canyon Dams from the CRSP and CAP respectively. We can expect any further attempts to construct dams on what few good sites remain on the Colorado River or its tributaries to invoke serious opposition with conflict over the issue developing in the regulatory arena. To environmentalists, one dam is one damn too many.

Environmentalism was given institutional expression within the Executive Branch by the creation of the Environmental Protection Agency in 1970. One of the many missions of the EPA is to improve the general quality of the nation's waters through the imposition of general rules

(*) U.S. Department of the Interior (1975) Westwide study report on critical water problems facing the eleven western states, p. 47.

upon water polluters -- a regulatory mandate. As we have seen in the case of the Colorado River Basin Salinity Control Act, however, regulatory issues can mean distributive solutions. The EPA is authorized to distribute Federal subsidies to states and municipalities for improving and constructing facilities to meet water quality standards. A recent report from the Council on Environmental Quality estimates a total of \$51.7 billion will be spent for such facilities by 1985 (Ingram and McCain, 1977). The administration of these subsidies makes EPA the sponsor of the largest public works program in the country. Pork-barrels this large are few and far between.

The EPA, we feel, has perhaps recognized the political realities within which it must operate. The water policy arena is extremely fragmented, with a multitude of diffuse interests pressing their demands from within as well as without the decision-making system. As a result, successful policy is dependent upon a good deal of cooperation and log-rolling behavior. Because the EPA must depend upon the cooperation of states for implementing its standards, it is no surprise that it plays distributive politics as a means of goal attainment in water quality.

The Carter administration's water policy

Politically, demands for change will arise from outside the traditional distributive arena. According to many water scholars, these demands will probably be formulated by the President, who, in defiance of traditional water development interests, will endeavor to redefine water policy issues and thus move them into the regulatory or redistributive arenas (Lowi, 1964; Mann, 1975A). But the apparent fate of the reform proposals by the Carter administration has shown that presidential initiatives have little force against the institutional strength of traditional water development interests.

On April 17, 1978, the Carter administration's water policy study team submitted its long-delayed recommendations for the reform of Federal water policy. The study team's proposals are considerably weaker than the preliminary proposals offered in 1977. The new policy reform recommendations provide for neither a comprehensive Federal water policy emphasizing conservation, which the President had promised, nor does it appear that they would significantly alter the status quo in Federal-state relations in the water policy area (Hornblower, 1978; Hume, 1978). From what can thus far be discerned, it appears that the new proposals will not significantly change the traditional distributive mode of policy characteristics of the relationship between the Federal Government and the states of the Colorado River Basin.

The proposals reflect the administration's desires to avoid the kind of confrontation with the Congress that occurred last year, and to assuage the fears of state governors, especially the western governors, overcoming inter-regional and intra-regional rivalries, united behind a set of water policy proposals calling for a wider distribution of Federal water funds, stronger state involvement in project planning, and the establishment of original jurisdiction for state courts in cases involving water claims by Indian reservations. The governors also indicated a willingness to consider changes in present cost-sharing and cost-recovery arrangements (Kirschten, 1978B).

In many important areas the task force's proposals indicate the administration has backed away from its original pledges for reform. For instance, the proposals call for no changes in the formula used by the Congress and the Federal agencies to determine the economic costs and benefits of water projects (Pelham, 1978; Hume, 1978). The recommendations provide for retaining an artificially low interest rate on Federal loans at $3\frac{1}{2}$ percent, about five percent below the prime interest rate. Furthermore, cost-sharing arrangements are left unresolved. Instead, the proposals suggest that the states pay 10 percent front money for projects, or that private interests should pay back 25 percent of the costs over the lifetime of the project. The task force proposals also suggest that conservation and environmental standards be included in the cost-sharing formula by which the feasibility of projects is determined and in the consideration of project alternatives. Finally, an earlier administration position that states should be required to reform groundwater management and adopt more efficient irrigation practices has been abandoned (Hornblower, 1978).

While the task force's recommendations do represent some change in present practices, they by no means constitute a comprehensive water policy reform. Moreover, it appears likely that the incremental changes suggested will be applied only to new Federal actions, and not to projects already authorized by the Congress or to existing contracts between water users and the Department of the Interior. Presently the major Federal water project construction agencies have about 1280 authorized projects in various stages of planning and construction, and any policy changes, therefore, would have little effect for at least the next twenty years. Also, most water contracts are for forty years and so it could be a long time before water prices are renegotiated (Hornblower, 1978; Hume, 1978).

Environmental and conservationist organizations which strongly supported the administration's initial moves toward policy reform correctly perceived the most recent proposals as an abandonment of the philosophy symbolized by the water projects "hit list" of 1977, and as a reaffirmation of traditional pork-barrel water policy. From their point of view, the new proposals are not only objectionable for their deficiencies in providing for clear and mandatory conditions to be attached to Federal grant programs, but also for their failure to recommend cutbacks on current

projects. In fact, far from recommending cutbacks, the task force urges approval of three additional projects (Hornblower, 1978).

Any hope for the administration to pursue a new strong comprehensive Federal water policy has been seriously diminished. The political strength of the Federal water project construction complex (an alliance among state and local economic interests and governments, the Congress, and the Federal construction agencies) has been reaffirmed (Pelham, 1978). Environmentalist and other reform interests have once again failed in their attempt to achieve a legislative change in water policy from the distributive mode to the regulative or redistributive.

Although the states, including those of the Colorado River Basin, have won a victory in the outcome of the recommendations offered by the administration's task force, they do recognize one area that may pose a threat. As the governors' policy statement of last March pointed out, the determination of water rights for Indian reservations may be a time-bomb for Federal-state relationships in water policy. The single most important principle set forth in the governors' statement asserts that state courts, rather than Federal courts, should have original jurisdiction over all water claims.

Federal "reserved" water rights

The area of greatest potential Federal-state conflict, especially in light of limited water resources, concerns Federal reserved rights, in particular American Indian water rights (Nelson, 1977; Kirschten, 1978B). Indian water rights stem from a series of United States Supreme Court decisions. The initial case resulted in the ruling known as the Winters Doctrine (Winters v. United States 207 US 564, 1908), one which states that Indian tribes have prior paramount and reserved rights to waters originating from, flowing through, or adjacent to their reservations. These rights date from the time the reservation was established, continue to exist whether used or not, and would thus supersede almost all non-Indian claims to Colorado River water. Winters also stated that the amount of water involved is not unlimited but is an amount sufficient to accomplish the purposes for which the reservation was created. Subsequent judicial decisions, particularly Arizona v. California, held that water consumed would be charged against the state in which the use was made, and extended the Winters Doctrine to include not just Indian but all Federal reservations (U.S. National Water Commission, 1973C). Arizona v. California also ruled that the amount of water involved in a claim is equal to the number of acre-feet of water it would take to irrigate all practicably irrigable lands on the reservation. Furthermore, the Winters Doctrine now appears applicable to groundwater and surface waters not adjacent to, but within the same basin as the Indian reservation (Nelson, 1977).

The adjudication of Indian water rights could potentially play havoc with existing patterns of water use throughout the Colorado Basin. On the basis of Winters, the City of Tucson, Arizona, is being sued by the Papago Indians over excessive municipal pumping of groundwater which, it is claimed, has harmed the Papago Reservation. Five central Arizona Indian tribes are involved in disputes over waters from the Central Arizona Project. The Central Utah Project, a major component of the Colorado River Storage Project, is also being threatened by Indian claims. Knowledge of the fact that there are 28 Indian tribes in the Colorado River Basin only serves to heighten the apprehensions of non-Indian users especially since, as one author puts it, "The Colorado River is about 120 percent committed and 85 percent used ..." (*). The development of the Basin's energy reserves, much of it on Indian reservations, will also consume large amounts of water resulting in water rights disputes (Jacoby, 1975).

The Basin states have no direct authority to limit Indian water rights, as these were not created in accordance with state laws. Federal courts have held, however, that the Federal Government's trusteeship of Indian water rights was ownership within the meaning of the McCarran Amendment (43 USC 666), and thus state courts could properly adjudicate such rights in a proceeding involving a general adjudication of a river system. This decision was welcomed by non-Indian Basin interests, as state courts have tended to rule against the claims of Indian tribes (Veeder, 1974; Nelson, 1977).

The issue, however, is not settled (Veeder, 1974). Earlier judicial documents seem to argue that Winters Doctrine rights are qualitatively different from Federal reserved rights held for other purposes (U.S. National Water Commission, 1973C). Further suits are likely, including legal actions initiated by tribal governments. A recent case involving Pueblo Indians in New Mexico concluded that the fiduciary obligation of the United States does not diminish the rights of the Pueblos to sue on their own behalf (O'Brien, 1977). The redistributive threat posed by Winters promises an increase in litigation. Legal action of some sort has often been the prelude to a distributive solution in the Congress (Mann, 1963; Ingram, 1969). The cost of any augmentation facilities or compensation for water rights transfers, many have argued, should be borne by the Federal Government (Carver, 1970; Kirschten, 1978B). It probably will (**).

Recommendations for Future Relations in the Water Policy Arena

There have been many proposed reforms for altering the relationship between the Federal Government and the states in the field of water

(*) Sibley, George (1977) The desert empire. Harper's 225(1529):49-68.

(**) Sylvester, E. J. (1978) Talks may end Papago water suit. Arizona Daily Star, January 14, B-1.

resources development, most of which can be classified into three broad groupings:

- those favoring more emphasis upon the states
- those suggesting a regional approach
- those calling for a national water policy

While it would not be possible within the limits of this paper to list all the various calls for reform, suffice it to say here that there are almost as many recommendations for change as there are articles on water resources development. Those who suggest a stronger role for the states often cite the complex problems of water resources that require specialized practical local solutions. They suggest that the "Federal Government too often sticks to principles that make no sense at all because the individuals involved do not have the practical knowledge that local problems demand " (Mosk, 1962).

Since it is obvious that water is not bound by political boundaries, there have been many suggestions for handling water resources development on a regional basis (Bingham, 1969; Ranquist, 1975). Regional interstate compacts are often offered as an alternative to Federal dominance in the field of water resources research and development (Allott, 1963; Doerksen, 1972). Yet the performance of multistate regional organizations has been disappointing, largely due to the restraints imposed by political viability. Regional organizations have had to tailor their actions to build support. These support-building activities thus compromise their ability to approach water problems in a comprehensive, coordinated, regional manner (Ingram, 1973).

The proponents for a strong national water policy with an increased role for the Federal Government cite the need for an overall plan that takes into consideration national needs in water resources planning. Only such a Federal policy will be able to reallocate water among states and satisfy demands of new users in consideration of national goals (Clark, 1965; U. S. National Water Commission, 1973A).

Implicit in almost all reform proposals is an argument against the duplication of functions in the planning and administration of water programs. Consolidation or centralization of function has been suggested either on the state, regional, or Federal levels. Supporters of administrative solutions, we feel, are putting the cart before the horse. An "administrative fix" implies that changes in organization will directly affect water policy outputs. In other words, they view policy as a dependent variable relative to administrative relationships. Policy, however, is more fruitfully viewed as an independent variable; it is only when policy relationships change that one is likely to see corresponding changes in administrative arrangements. In short, the character of water resources decisions and the prevailing political and administrative relations among participants are a function of distributive politics -- not vice versa.

Maintenance of the traditional distributive approach to water policy is in the interests of the states of the Colorado River Basin because it is the policy mode in which the states have the greatest actual and potential impact. If the Colorado River Basin states are to retain their advantage, they must above all maintain inter-Basin unity in the face of threats of Federal encroachment. Unity is of the utmost importance when the Basin presents itself in Washington. The Basin states must maximize their political strength in dealing with Washington because of their dependence upon the Federal treasury in water resources development.

The Congress, especially its committee system, is the central national arena for distributive policy. Unified Colorado River Basin states have a considerable voting block of 14 senators and 58 representatives, which, when considered together with the log-rolling practices which predominate in dealing with public works projects and western control of the major water committees, only increases their influence beyond their actual numbers. Also, examinations of congressional overrides of presidential vetoes indicate that the vast majority concern distributive issues, particularly Federal construction projects (Lowi, 1964). States must continue to define water issues in distributive terms if they are to succeed in avoiding further Federal intrusion upon their authority.

It may also be in the interest of Indian tribes to retain policy in the distributive arena, to seek legislative rather than adjudicative solutions to their water rights problems. Adjudication of water rights if it can provide a solution at all, is too long-term a strategy to provide for immediate Indian needs, and would only increase conflicts and ill-feelings within the states of the Colorado River Basin. Good policy increases harmony and consensus within the Basin, rather than imposing national criteria of economic efficiency on the states.

Though distributive politics in water resources is in the interest of the Colorado River Basin states, the states must recognize that their dependence on Federal financial resources, rather than their own, is also their principal source of potential weakness. Failure to achieve funding in the future could damage if not destroy the unity that presently exists. The states must also attempt to deal with the physical reality that the Colorado River water is over-subscribed and that reallocations will take place. Reallocation decisions are redistributive solutions, and they must be made within the Basin and on the principle that the best solution is the one which causes the least conflict, and not on the standards of economic efficiency. Distributive politics still exhibits vitality, but without complete assurance of future stability.

BIBLIOGRAPHY

0001

ALLEE, D.J./INGRAM, H.M.

1972

AUTHORIZATION AND APPROPRIATION PROCESS FOR WATER RESOURCES DEVELOPMENT.

NATIONAL WATER COMMISSION, ARLINGTON, VIRGINIA. 252 P.

THIS REPORT EXAMINES THE COMPLEX PROCEDURAL STEPS INVOLVED IN GETTING WATER RESOURCES DEVELOPMENT PROJECTS AND PROGRAMS AUTHORIZED AND FINANCED BY THE FEDERAL GOVERNMENT. EMPHASIS IS PLACED MORE ON WHAT ACTUALLY TAKES PLACE, RATHER THAN OFFICIAL STATEMENTS OR PROCEDURES. THE REPORT DISCUSSES WHO IS INVOLVED IN THE PROCEDURES, HOW THEY OPERATE, AND WHAT IS GAINED BY THEIR INVOLVEMENT. THE CONCLUSION IS REACHED THAT DECISION-MAKING CAPACITY IS A MORE LIMITING RESOURCE THAN INVESTMENT CAPITAL IN WATER RESOURCE DEVELOPMENT. A NUMBER OF POSSIBLE RECOMMENDATIONS ARE PRESENTED AND DISCUSSED.

WATER RESOURCES/WATER RESOURCES DEVELOPMENT/FEDERAL GOVERNMENT/POLITICAL ASPECTS/POLITICAL CONSTRAINTS/INSTITUTIONAL CONSTRAINTS/GOVERNMENTAL INTERRELATIONS/FEDERAL PROJECT POLICY

0002

ALLOTT, G.L.

1963

GOVERNMENT ROLES IN BASIC WATER RESEARCH. IN WATER DEVELOPMENT UTILIZATION, CONSERVATION, P. 3-8.

WESTERN RESOURCES CONFERENCE, 5TH, BOULDER, COLORADO, 1963, [PROCEEDINGS].
SWRA W69-09329.

OFFERED IS AN ALTERNATIVE TO FEDERAL DOMINANCE IN THE FIELD OF WATER RESOURCES RESEARCH. THE AUTHOR SUGGESTS THE USE OF INTERSTATE COMPACTS AS BASES FOR RESEARCH AND DEVELOPMENT. WHILE THESE COMPACTS HAVE SO FAR LARGELY BEEN CONCERNED WITH DIVISION OF THE WATERS IN INTERSTATE STREAMS, THE AUTHOR CONTENDS THAT THE MECHANISM OF AN INTERSTATE COMPACT CAN BE USED FOR PLANNING AND ADMINISTERING COMPREHENSIVE DEVELOPMENT OF AN INTERSTATE STREAM. AN INTERSTATE RIVER COMMISSION IS SEEN AS BEING A MORE APPROPRIATE AGENCY TO PLAN AND ADMINISTER RIVER BASIN DEVELOPMENT THAN AN ALL-FEDERAL AGENCY BECAUSE IT MAINTAINS THE DECISION-MAKING PROCESS WITHIN THE AREA WHERE THE DECISION MUST BE MADE AND BECAUSE EACH STATE'S WATER PROBLEMS IS SOMEWHAT DIFFERENT FROM THE OTHER STATE'S WATER PROBLEMS.

INTERSTATE COMMISSIONS/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RESOURCES DEVELOPMENT/STATE JURISDICTION/RESEARCH AND DEVELOPMENT

0003

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE

1928

BOULDER DAM. IN GREAT INLAND WATER-WAY PROJECTS IN THE UNITED STATES, PT. 3.

SAME AS AUTHOR, ANNALS 135:97-156.

THE NINE ARTICLES IN THIS SECTION COVER GEOGRAPHICAL, LEGAL, POLITICAL, ENGINEERING, AND ECONOMIC FEATURES OF THE PROPOSED DAM: 1) SALIENT GEOGRAPHIC FEATURES OF THE COLORADO RIVER AND BASIN, BY H.F. JAMES, 2) LEGAL PROBLEMS IN COLORADO RIVER DEVELOPMENT, BY R.L. OLSON, 3) ENGINEERING AND ECONOMIC FEATURES OF BOULDER DAM, BY E.F. SCATTERGOOD, 4) PROBLEMS OF THE COLORADO RIVER, BY A.P. DAVIS, 5) WHAT THE BOULDER DAM PROJECT MEANS TO CALIFORNIA AND THE NATION, BY C.L. SEAVY, 6) MY OBJECTIONS TO THE BOULDER DAM PROJECTS, BY E.O. LEATHERWOOD, 7) THE COMPANY POINT OF VIEW REGARDING BOULDER DAM, BY C.E. KOINER, 8) FEDERAL WATER RIGHTS IN THE COLORADO RIVER, BY O. HAMELE, AND 9) THE BOULDER CANYON PROJECT, BY H.W. JOHNSON.

COLORADO RIVER BASIN/BOULDER CANYON PROJECT ACT/WATER RESOURCES DEVELOPMENT/
LEGAL ASPECTS/POLITICAL ASPECTS/DAMS/ECONOMICS/CALIFORNIA/WATER RIGHTS/
FEDERAL GOVERNMENT/FEDERAL PROJECT POLICY/FEDERAL-STATE WATER RIGHTS
CONFLICTS/ELECTRIC POWER INDUSTRY/LEGISLATION/BOULDER DAM/GEOGRAPHICAL
REGIONS

0004

AMERICAN BAR ASSOCIATION, COMMITTEE ON NATURAL RESOURCES

1965

REPORT, P. 136-166.

SAME AS AUTHOR, CHICAGO, SECTION OF MINERAL AND NATURAL RESOURCES LAW.
SWRA W69-00299.

THE REPORT IS DIVIDED INTO THREE PARTS, THE FIRST DEALING WITH LEGAL DEVELOPMENTS IN THE FIELD OF WATER RESOURCES IN VARIOUS STATES AND THE FEDERAL GOVERNMENT FOR THE PERIOD MAY 1964 THROUGH APRIL 1965. THESE DEVELOPMENTS ARE DISCUSSED UNDER THE HEADINGS OF LEGISLATION, JUDICIAL DECISIONS AND ADMINISTRATIVE ACTION. ALTHOUGH THE STATES REPORTING ARE PRIMARILY IN THE WESTERN U.S., MINNESOTA IS INCLUDED. FEDERAL DEVELOPMENTS IN THE LEGISLATIVE AREA INCLUDE ENACTMENT OF THE WATER RESOURCES RESEARCH ACT AND THE LAND AND WATER CONSERVATION FUND. AMONG MATTERS PENDING IN THE 89TH CONGRESS ARE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS, RIVER BASIN PLANNING PROPOSALS, AND THE FEDERAL WATER PROJECTS RECREATION ACT. ADMINISTRATIVE ACTION TAKEN BY THE INTERIOR DEPARTMENT AND THE FEDERAL POWER COMMISSION IS SET FORTH. THE SECOND PART CONSISTS OF THE REPORT OF THE GROUNDWATER MANAGEMENT SUBCOMMITTEE, AND THE THIRD TREATS FEDERAL-STATE WATER RIGHTS ACTION.

WATER LAW/LEGISLATION/JUDICIAL DECISIONS/ADMINISTRATIVE DECISIONS/WATER
RESOURCES/MINNESOTA/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL GOVERNMENT/
STATE GOVERNMENTS/WATER MANAGEMENT(APPLIED)

0005

AMERICAN BAR ASSOCIATION, COMMITTEE ON WATER RESOURCES

1963

REPORT, P. 158-186.

SAME AS AUTHOR, CHICAGO, SECTION OF MINERAL AND NATURAL RESOURCES LAW.
SWRA W69-00298.

THE REPORT IS DIVIDED INTO THREE PARTS, THE FIRST DEALING WITH LEGAL DEVELOPMENTS IN THE FIELD OF WATER RESOURCES IN VARIOUS STATES AND THE FEDERAL GOVERNMENT FOR THE PERIOD MAY 1962 THROUGH APRIL 1963. THESE DEVELOPMENTS ARE DISCUSSED UNDER THE HEADINGS OF LEGISLATION, JUDICIAL DECISIONS AND ADMINISTRATIVE ACTION. AMONG THE STATES REPORTING ARE GEORGIA AND MINNESOTA. SIGNIFICANT FEDERAL DEVELOPMENTS INCLUDE LEGISLATION AFFECTING RECLAMATION PROJECTS, COORDINATED WATERSHED INVESTIGATIONS AND JURISDICTION OVER INTERSTATE RIVER POLLUTION DISPUTES. THE SECOND PART CONSISTS OF THE FIRST REPORT OF THE GROUNDWATER MANAGEMENT SUBCOMMITTEE POINTING OUT AREAS OF CONCERN THAT WILL BE MORE FULLY DEVELOPED IN SUBSEQUENT REPORTS. THIRDLY, A BRIEF REPORT OF LEGISLATION RELATING TO FEDERAL-STATE JURISDICTIONAL CONFLICTS IN WATER RESOURCES DEVELOPMENT IS GIVEN.

WATER LAW/JUDICIAL DECISIONS/ADMINISTRATIVE DECISIONS/GEORGIA/
MINNESOTA/WATER RESOURCES/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL
GOVERNMENT/STATE GOVERNMENTS/WATER MANAGEMENT (APPLIED)

0006

AMERICAN BAR ASSOCIATION, COMMITTEE ON WATER RESOURCES

1964

REPORT, P. 186-210.

SAME AS AUTHOR, CHICAGO, SECTION OF MINERAL AND NATURAL RESOURCES LAW.
SWRA W69-05783.

THE REPORT IS DIVIDED INTO THREE PARTS, THE FIRST DEALING WITH LEGAL DEVELOPMENTS IN THE FIELD OF WATER RESOURCES IN VARIOUS STATES AND THE FEDERAL GOVERNMENT FOR THE PERIOD MAY 1963 THROUGH APRIL 1964. THESE DEVELOPMENTS ARE DISCUSSED UNDER THE HEADINGS OF LEGISLATION, JUDICIAL DECISIONS AND ADMINISTRATIVE ACTION. ALTHOUGH THE STATES REPORTING ARE PRIMARILY IN THE WESTERN U.S., MINNESOTA IS INCLUDED. FEDERAL DEVELOPMENTS IN THE LEGISLATIVE AREA INCLUDE PENDING MATTERS SUCH AS THE PACIFIC SOUTHWEST WATER PLAN, THE PACIFIC NORTHWEST-PACIFIC SOUTHWEST INTERTIE, FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS, RECREATION PROPOSALS, SMALL RECLAMATION PROJECT ACT AMENDMENTS, RIVER BASIN PLANNING PROJECTS, AND A WATER RESOURCES RESEARCH PROJECT. SIGNIFICANT FEDERAL CASES, AND ADMINISTRATIVE ACTIONS ON COLORADO RIVER SALINITY AND THE U.S.-CANADA COLUMBIA RIVER TREATY, ARE ALSO SET FORTH. THE SECOND PART CONSISTS OF THE REPORT OF THE GROUNDWATER MANAGEMENT SUBCOMMITTEE, AND THE THIRD ANNOUNCES AMERICAN BAR ASSOCIATION AND CONGRESSIONAL ACTION RELATING TO FEDERAL-STATE JURISDICTIONAL CONFLICTS IN WATER RESOURCES DEVELOPMENT.

WATER LAW/LEGISLATION/JUDICIAL DECISIONS/ADMINISTRATIVE DECISIONS/MINNESOTA/
WATER RESOURCES/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL GOVERNMENT/STATE
GOVERNMENTS/RIVER BASIN DEVELOPMENT/WATER MANAGEMENT (APPLIED)

0007

ANDERSON, J.C./KEITH, J.E.

1977

ENERGY AND THE COLORADO RIVER.

NATURAL RESOURCES JOURNAL 17 (2) : 157-168.

THE USE OF COLORADO RIVER WATER FOR THE DEVELOPMENT OF ENERGY RESOURCES IN THE BASIN HAS FOUR COMPONENTS: 1) MAINTENANCE OF STREAMFLOW IN LOCAL REACHES OF THE RIVER, 2) MAINTENANCE OF WATER QUALITY IN LOCAL REACHES, 3) SHORTAGE OF WATER IN THE WHOLE RIVER SYSTEM, AND 4) WATER QUALITY PROBLEMS IN THE LOWER COLORADO. THE AUTHORS CONCLUDE THAT ENERGY MAY HAVE SIGNIFICANT IMPACTS ON LOCAL AND REGIONAL WATER ALLOCATION AND QUALITY. UPON WHOM THE IMPACTS FALL WILL DEPEND TO A GREAT EXTENT ON THE INSTITUTIONAL AND ECONOMIC CONSTRAINTS AND INCENTIVES WHICH ARE IMPOSED, EITHER AS A RESULT OF HISTORICAL DEVELOPMENT OR FUTURE POLICY DIRECTIONS. IT IS NOT SO CLEAR THAT ENERGY DEVELOPMENT WILL BE A DETRIMENT TO EITHER UPSTREAM OR DOWNSTREAM USERS OF THE COLORADO RIVER. THE SETTING FOR THE PROBLEM IS PRESENTED IN THE FOLLOWING TERMS: THE RIVER'S PHYSICAL CHARACTERISTICS, INCLUDING THE BASIN'S GEOGRAPHY, QUANTITY/QUALITY OF WATER, GENERAL WATER USES, POPULATION WITHIN THE BASIN, POPULATION SERVED BY THE RIVER'S WATER, AND LAND USE; ECONOMIC CONSIDERATIONS, INCLUDING WATER FOR INDUSTRIAL USES SUCH AS ENERGY AS BEING MORE PRODUCTIVE THAN AGRICULTURAL USE, AND EXTERNAL EFFECTS, PRIMARILY IN THE FORM OF WATER QUALITY DEGRADATION, OF UPSTREAM USES BEING BORNE AS COSTS BY DOWNSTREAM USERS; AND LEGAL-INSTITUTIONAL REVIEWS INDICATING DIFFICULTIES FOR ENERGY DEVELOPMENT DUE TO 'BENEFICIAL USE' AND 'APPROPRIATION' DOCTRINES IN STATE WATER RIGHTS LAW WHICH GIVE PRIORITY TO MUNICIPAL AND AGRICULTURAL USE, AS WELL AS REQUIRING TOO LIMITED TIME TO PLACE WATER INTO BENEFICIAL USE. ADDITIONALLY THE OPERATION OF THE ALLOCATION SYSTEM AT INTERNATIONAL, INTERREGIONAL, INTERSTATE, AND INTRASTATE LEVELS IS SUMMARIZED AND THE LEGAL IMPLICATIONS OF THE 'APPURTENANCY RULE' ARE NOTED. THE AUTHORS REPORT ON WATER DEMANDS FOR PROJECTS WHICH MAY ENTAIL TRANSFER OF IRRIGATION WATER OR REDUCTION OF AGRICULTURAL RIGHTS. EFFECTS OF AN ENERGY DEVELOPMENT ACQUIRING WATER RIGHTS ARE SUMMARIZED, AND APPEAR TO ACHIEVE PARETO OPTIMALITY (WITH THE EXCEPTION OF 'CERTAIN CONSUMERS OF RECREATION AND AESTHETICS'). RESULTS OF A MODEL IN WHICH SCENARIOS FOR THE RELATIVE USE LEVELS FOR AGRICULTURE, ENERGY, AND EXPORT, AND PROJECTED WATER FLOWS AT LEE'S FERRY FOR 1977, 1983, AND 1990 ARE REPORTED.

COLORADO RIVER/WATER RESOURCES DEVELOPMENT/ENERGY/STREAMFLOW/
WATER QUALITY/WATER SHORTAGE/WATER RIGHTS/ALTERNATIVE WATER USE/INSTITUTIONAL
CONSTRAINTS/ECONOMICS/WATER POLICY/LEGAL ASPECTS/ECONOMIC EFFICIENCY/POLITICAL
ASPECTS/AGRICULTURE/WATER DEMAND/IRRIGATION WATER/DOWNSTREAM/MODEL STUDIES/
COLORADO RIVER BASIN/WATER TRANSFER/WATER ALLOCATION(POLICY)

0008

ANDRUS, C.D.

1977

REMARKS OF SECRETARY OF THE INTERIOR...BEFORE THE NATIONAL CONFERENCE ON WATER,
ST. LOUIS, MISSOURI, MAY 24.

U.S. DEPARTMENT OF THE INTERIOR, NEWS RELEASE.

(ANDRUS ADDRESSED THE CONFERENCE ON THE DAY AFTER CARTER'S ANNOUNCEMENT IN HIS ENVIRONMENTAL MESSAGE THAT 'A REVIEW OF THE PRESENT WATER RESOURCE POLICY' OF THE FEDERAL GOVERNMENT WOULD BE UNDERTAKEN BY OMB, CEQ AND WRC.) A COMPREHENSIVE NATIONAL WATER POLICY EMPHASIZING CONSERVATION, ENVIRONMENTAL QUALITY, COST REDUCTIONS, AND THE COORDINATION OF FEDERAL, STATE, AND LOCAL WATER RESOURCES PROGRAMS MUST ADDRESS THE FOLLOWING NINE POINTS: 1) 'SUNSET LEGISLATION' TO PROVIDE FOR AUTOMATIC DEAUTHORIZATION OF WATER PROJECTS UNFUNDED OR NOT UNDER CONSTRUCTION BY EIGHT YEARS FOLLOWING AUTHORIZATION, 2) INCREASED COST SHARING BY STATES AND NON-FEDERAL ENTITIES FOR WATER PROJECTS, 3) ELIMINATION OF 'LAWS, RULES, AND INSTITUTIONS WHICH HAMPER COOPERATION BETWEEN STATES AND THE FEDERAL GOVERNMENT', 4) SEEK NEW WAYS TO ENCOURAGE WATER CONSERVATION IN FEDERAL PROGRAMS (E.G., METERING, WATER EFFICIENCY REQUIREMENTS FOR IRRIGATION AND CONSTRUCTION PROJECTS), 5) QUANTIFICATION OF FEDERAL RESERVE RIGHTS, 6) SAFETY, 7) WASTE WATER RE-USE, ARTIFICIAL GROUNDWATER RECHARGE, MINIMUM STREAMFLOWS, AND SAFE DRINKING WATER, 8) A REVISED FORM OF THE 1973 WATER RESOURCES COUNCIL'S 'PRINCIPLES AND STANDARDS' SHOULD SERVE AS A FRAMEWORK FOR REVIEWING AND PROPOSING WATER POLICY, AND 9) CONSERVATION AND EFFICIENT USE OF WATER. (ULLERY-ARIZONA)

WATER POLICY/WATER RESOURCES DEVELOPMENT/WATER QUALITY/WATER RIGHTS/POLITICAL ASPECTS/GOVERNMENTS/INSTITUTIONS/WATER QUALITY/CONSERVATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL RESERVATIONS/NATIONAL WATER COMMISSION/ADMINISTRATIVE AGENCIES/EFFICIENCIES/WASTE WATER (POLLUTION)/WATER CONSERVATION/FEDERAL PROJECT POLICY/COST SHARING/COST REPAYMENT/COMPREHENSIVE NATIONAL WATER POLICY

0009

ANONYMOUS

1947A

GOVERNMENT TECHNIQUES FOR THE CONSERVATION AND UTILIZATION OF WATER RESOURCES: AN ANALYSIS AND PROPOSAL.

YALE LAW JOURNAL 56 (2):276-288. SWRA W70-00934.

THE SCARCITY OF WATER IN THE ARID AND SEMIARID REGIONS OF THE UNITED STATES, COUPLED WITH THE INTERSTATE CHARACTER OF DRAINAGE BASIN PROBLEMS, HAS PRODUCED A DEMAND FOR EFFECTIVE FEDERAL-STATE WATER CONTROL AND REGIONAL DEVELOPMENT, FEDERAL ADMINISTRATIVE TECHNIQUES HAVE LED TO THE DISPERSAL OF WATER PROBLEMS AMONG DIFFERENT DEPARTMENTS LEADING TO JURISDICTIONAL DISPUTES AND DUPLICATION OF FUNCTIONS. INTERSTATE COMPACTS ARE ALSO INHIBITED BY JURISDICTIONAL DISPUTES, STATE CONSTITUTIONAL LIMITATIONS, LACK OF FUNDING, AND LACK OF COERCIVE AUTHORITY. THE SUCCESS OF THE TENNESSEE VALLEY AUTHORITY AND THE PORT OF NEW YORK AUTHORITY ILLUSTRATES THAT PROPER DELEGATION OF FEDERAL AND STATE POWER CAN BE EFFECTIVELY MERGED. THE NATION REQUIRES A NATIONAL CORPORATION CREATED BY CONGRESS AND THE NEGOTIATION OF INTERSTATE COMPACTS DELAGATING IMPORTANT STATE POWERS OVER WATER RESOURCES TO THE CORPORATION. THE CORPORATION WILL OPERATE ON A REGIONAL BASIS COOPERATING WITH AND COORDINATING FEDERAL AND STATE AUTHORITY TO DEVELOP AN EFFECTIVE DRAINAGE BASIN PROGRAM.

WATER RESOURCES/DEVELOPMENT/WATER CONSERVATION/WATER UTILIZATION/FEDERAL GOVERNMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATERSHEDS (BASINS) /STATE GOVERNMENTS/INTERSTATE COMMISSIONS/INTERSTATE COMPACTS/INTERSTATE RIVERS/ RIVER BASINS/DRAINAGE/WATERSHED MANAGEMENT/PORT AUTHORITY OF NEW YORK/TENNESSEE VALLEY AUTHORITY/ADMINISTRATIVE AGENCIES/LEGISLATION/WATER CONTROL

0010

ANONYMOUS

1947B

GOVERNMENTAL TECHNIQUES FOR THE CONSERVATION AND UTILIZATION OF WATER RESOURCES: AN ANALYSIS AND PROPOSAL.

YALE LAW JOURNAL 56 (2):289-303. SWRA W70-00936.

MANY STATES FEAR FEDERAL ENCROACHMENT BY CONSENTING TO REGIONAL AUTHORITIES AND PREFER TO USE INTERSTATE PLANNING COMMISSIONS, INTERSTATE COMPACTS, AND INTERSTATE PUBLIC AUTHORITIES. THE INTERSTATE PLANNING COMMISSION LACKS COERCIVE AUTHORITY, FUNDS, AND MAY BE FOILED BY THE RECALCITRANCE OF A SINGLE STATE. INTERSTATE COMPACTS HAVE THE INHERENT LIMITATIONS OF FEDERAL AND STATE CONSTITUTIONS AND STRESS POLITICAL COMPROMISE OVER EFFECTIVE WATER PLANNING. THE INTERSTATE PUBLIC AUTHORITIES CLOSELY RESEMBLE THE REGIONAL VALLEY CONCEPT IN THAT THE STATES AGREE TO VEST AUTHORITY INTO ONE CORPORATE BODY FOR CONTINUOUS ADMINISTRATIVE SUPERVISION. THIS SYSTEM IS SUBJECT TO THE VETO BY THE GOVERNOR OF EACH PARTICIPATING STATE, AND ALL NEW MAJOR PROJECTS MUST BE AUTHORIZED BY THE STATE LEGISLATURES INVOLVED. THE SOLUTION IS THE CREATION

BY CONGRESS OF A NATIONAL CORPORATION AND THE NEGOTIATION OF INTERSTATE COMPACTS GIVING THE CORPORATION A DELEGATION OF IMPORTANT STATE POWERS OVER WATER RESOURCES. THE FUSION OF NATIONAL AND LOCAL POWER INTO A SINGLE AGENCY AND THE PASSING OF STATE ENABLING LEGISLATION WILL PROVIDE AN EFFECTIVE MEANS OF SOLVING THE PROBLEM OF RIVER BASIN DRAINAGE.

WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/RIVER BASIN DEVELOPMENT/WATERSHEDS (BASINS)/INTERSTATE COMMISSIONS/INTERSTATE COMPACTS/LEGISLATION/ADMINISTRATIVE AGENCIES/FEDERAL JURISDICTION/STATE JURISDICTION/WATERSHED MANAGEMENT/INTERSTATE RIVERS/DRAINAGE/FEDERAL GOVERNMENT

0011

ANONYMOUS

1948

UPPER COLORADO RIVER BASIN COMPACT: ENTERED INTO BY ARIZONA, COLORADO, NEW MEXICO, UTAH, AND WYOMING.

N.P., SANTA FE, NEW MEXICO. 28 P.

THE MAJOR PURPOSES OF THIS COMPACT ARE TO PROVIDE FOR THE EQUITABLE DIVISION AND APPORTIONMENT OF THE USE OF THE WATERS OF THE COLORADO RIVER SYSTEM. THE DIVISIONS OF THE BASIN INTO THE UPPER AND LOWER DIVISIONS AND UPPER AND LOWER BASINS ARE DESCRIBED IN DETAILED LEGAL TERMS, AS WELL AS THE FEDERAL GOVERNMENT'S RIGHTS IN THE BASIN CONCERNING PROJECT DEVELOPMENT. THE COMPACT STATES THAT NOTHING CONTAINED IN IT SHOULD BE CONSTRUED AS 1) AFFECTING THE OBLIGATIONS OF THE UNITED STATES OF AMERICA TO INDIAN TRIBES, 2) AFFECTING THE OBLIGATIONS OF THE UNITED STATES OF AMERICA UNDER THE TREATY WITH MEXICO, OR 3) THE RIGHTS OF THE UNITED STATES GOVERNMENT TO BUILD PROJECTS.

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/MEXICAN WATER TREATY/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER POLICY/FEDERAL PROJECT POLICY/UTAH/NEW MEXICO/WYOMING/ARIZONA/COLORADO/INTERSTATE COMPACTS

0012

ANONYMOUS

1975A

CERTIFICATION OF CONFORMANCE WITH WATER QUALITY STANDARDS.

BNA ENVIRONMENTAL REPORT 721:0530-0532.

ALL APPLICANTS FOR FEDERAL LICENSES OR PERMITS, AND OTHER PERSONS WHO ARE REQUIRED BY FEDERAL LAW TO OBTAIN STATE CERTIFICATION THAT ANY DISCHARGE INTO NAVIGABLE WATERS OF THE UNITED STATES COMPLIES WITH APPLICABLE PROVISIONS OF THE FEDERAL WATER POLLUTION CONTROL ACT, AS AMENDED, SHALL SUBMIT THEIR REQUESTS FOR CERTIFICATION TO A CALIFORNIA STATE WATER QUALITY CONTROL BOARD REGIONAL OFFICE. THE APPLICATION MUST CONTAIN ALL NECESSARY INFORMATION UPON WHICH A DECISION COULD BE MADE PLUS ANY ADDITIONAL WASTE DISCHARGE INFORMATION REQUESTED BY THE REGIONAL OFFICE. THE REGIONAL RECOMMENDATION, ALONG WITH THE INFORMATION, MUST THEN BE FORWARDED TO THE STATE BOARD WHERE A PUBLIC HEARING WILL BE HELD IF ANY ACTIVITY POSES A SIGNIFICANT THREAT TO THE QUALITY OF NAVIGABLE WATERS OR WHERE REQUESTED BY THE APPLICANT. THE EXECUTIVE OFFICER OF THE STATE BOARD WILL ACT UPON THE CERTIFICATION AND PROVIDE A COPY OF THE APPLICATION AND HIS RECOMMENDATION TO THE REGIONAL OFFICE OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA). FURTHERMORE, ANY APPLICATION FOR CERTIFICATION BY TAXPAYERS WHO ELECT TO TAKE THE DEDUCTION FOR AMORTIZATION OF WATER POLLUTION CONTROL FACILITIES UNDER SECTION 169 OF THE INTERNAL REVENUE CODE OF 1954, AS AMENDED, SHALL LIKEWISE BE SUBMITTED TO THE REGIONAL EPA OFFICE THROUGH THE STATE BOARD.

PERMITS/CALIFORNIA/WATER QUALITY STANDARDS/INTER-AGENCY COOPERATION/NAVIGABLE
WATERS/WATER QUALITY CONTROL/WATER QUALITY/ENVIRONMENTAL CONTROL/REGULATION/
ADMINISTRATIVE AGENCIES/FEDERAL WATER POLLUTION CONTROL ACT/WASTE DISPOSAL/WATER
RESOURCES/LEGAL ASPECTS/PERMITS/TAXES/WASTE WATER(POLLUTION)/FEDERAL-STATE WATER
RIGHTS CONFLICTS

0013

ANONYMOUS

1975B

ADJUDICATION OF INDIAN AND FEDERAL WATER RIGHTS IN THE FEDERAL COURTS: UNITED
STATES V AKIN.

UNIVERSITY OF COLORADO LAW REVIEW 46(4):555-585. SWRA W76-11978.

A RECENT FEDERAL APPELLATE DECISION ALLOWS FEDERAL COURT JURISDICTION OVER
WATER RIGHTS ADJUDICATIONS WHEN THE UNITED STATES ASSERTS PROPRIETARY INTERESTS
AS PLAINTIFF. EXAMINED HERE IS THE RELATIONSHIP OF THE MCCARRAN AMENDMENT TO
FEDERAL JURISDICTION. THE AMENDMENT REMOVES FEDERAL SOVEREIGN IMMUNITY IN
WATER ADJUDICATIONS. THE AUTHOR CONCLUDES THAT THE FEDERAL COURTS SHOULD NOT
RELY ON THE ABSTENTION DOCTRINE WHEN STATE QUESTIONS CANNOT DISPOSE OF
CONSTITUTIONAL ISSUES. FURTHERMORE, LIMITED FEDERAL JURISDICTION IS PREFERRED
TO PREVENT UNDUE INTERFERENCE WITH STATE INSTITUTIONS AND FOR PROTECTION OF
LEGITIMATE STATE INTERESTS. WHEN THE UNITED STATES FILES AS PLAINTIFF FOR
DETERMINATION OF FEDERAL RIGHTS THE CHOICE OF FEDERAL FORUM SHOULD BE SERIOUSLY
CONSIDERED BUT PRIORITY OF SUIT MAY NOT ALWAYS BE AN APPROPRIATE DETERMINATION
WHEN AN ONGOING STATE PROCEDURE IS PRESENT. WITH REGARD TO DETERMINATION OF
INDIAN WATER RIGHTS THE AUTHOR DETERMINES THAT STATE COURTS ARE WITHOUT
JURISDICTION.

INDIAN RESERVATIONS/FEDERAL RESERVATIONS/FEDERAL-STATE WATER RIGHTS CONFLICTS/
FEDERAL JURISDICTION/RESERVATION DOCTRINE/STATE JURISDICTION/WATER RIGHTS/
COLORADO/JUDICIAL DECISIONS/NATIONAL PARKS/NATIONAL HISTORIC SITES/NATIONAL
RECREATION AREAS/MCCARRAN AMENDMENT

0014

ANONYMOUS

1977A

CARTER BACKS STATE WATER RIGHTS.

ARIZONA DAILY STAR (TUCSON) [AP], OCTOBER 23.

ADDRESSING A MEETING ON WESTERN WATER POLICY IN DENVER, PRESIDENT CARTER SAID
THE FEDERAL GOVERNMENT WILL NOT PREEMPT STATE AND LOCAL PREROGATIVES IN WATER
USE. HE SAID, HOWEVER, THAT NEITHER THE FEDERAL NOR STATE GOVERNMENTS HAVE
ADEQUATELY ADDRESSED WATER CONSERVATION. CARTER LATER MET WITH WESTERN STATE
GOVERNORS AND ASKED THEM TO PREPARE A LIST OF THE MOST CONTROVERSIAL AND
IMPORTANT WATER QUESTIONS. WESTERN GOVERNORS WANT TO PRESERVE TRADITIONAL
WESTERN WATER RIGHTS AND MAINTAIN THE RIGHT OF STATES TO ADJUDICATE WATER
CLAIMS. SOME MEMBERS OF CONGRESS HAVE OPPOSED CARTER'S EFFORTS TO CUT A
NUMBER OF WATER PROJECTS FROM THE FEDERAL BUDGET. CARTER SAID CREATING A
NEW WATER POLICY IS COMPLICATED BY INCREASING URBAN DEMANDS FOR WATER,
INTERSTATE RIVALRIES, RIVALRIES BETWEEN THE U.S. AND MEXICO, AND THE FACT THAT
PRESENT POLICIES BARELY ADDRESS THE ISSUE OF INDIAN WATER RIGHTS.

FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RIGHTS/FEDERAL PROJECT POLICY/
PROJECT PLANNING/PROJECT PURPOSES/WATER POLICY/WATER CONSERVATION/STATE
GOVERNMENTS/WATER DEMAND

0015

ANONYMOUS

1977B

STEINER WARNS OF FEDERAL GRAB OF STATE'S WATER.

ARIZONA FARMER-RANCHMAN 56 (9) :15-18, 47.

ARIZONA WATER COMMISSION DIRECTOR STEINER WARNED THAT A NEW FEDERAL WATER POLICY MIGHT SUPERSEDE STATE WATER POLICIES. IN A SPEECH BEFORE THE FARM BUREAU LEADERSHIP CONFERENCE IN FLAGSTAFF ON JULY 27, 1977, STEINER READ AND COMMENTED ON PASSAGES FROM OPTION PAPERS PREPARED BY A FEDERAL TASK FORCE AND PUBLISHED IN THE 'FEDERAL REGISTER' WHICH DEMONSTRATED THE INTENT OF THE FEDERAL GOVERNMENT TO ESTABLISH A NATIONAL WATER POLICY, SOUGHT TO LINK POOR CONSERVATION PRACTICES TO PARTICIPANTS IN FEDERAL IRRIGATION PROJECTS WHO MIGHT NOT BE PAYING FULL MARKET VALUE FOR THEIR WATER, AND PROPOSED OPTIONS FOR HOW THE FEDERAL GOVERNMENT MIGHT ACHIEVE A NATIONAL WATER POLICY. [IN TESTIMONY GIVEN THE FOLLOWING DAY AT A LOS ANGELES HEARING STEINER, ON BEHALF OF GOV. CASTRO (Q.V.), EXPRESSED THE BELIEFS THAT CURRENT POLICIES ADEQUATELY RECOGNIZE ENVIRONMENTAL VALUES AND THAT PROBLEMS IN THE STATE ADMINISTRATION OF WATER RIGHTS DO NOT REQUIRE IMPOSITION OF AN OVERRIDING FEDERAL WATER RIGHTS SYSTEM.] IN HIS SPEECH TO THE CONFERENCE, STEINER REPORTED THAT DESPITE THE PRESIDENT'S CHALLENGE TO THE CENTRAL ARIZONA PROJECT (CAP), 25% OF THE ANTICIPATED COSTS HAVE BEEN APPROPRIATED AND CONSTRUCTION IS PROCEEDING WELL. HE DESCRIBED THE PROGRESS OF SEVERAL APPURTENANT WORKS AND SAID INITIAL WATER DELIVERIES WILL BE MADE TO PHOENIX IN 1985 AND TO TUCSON IN 1987. STEINER REPORTED CITIES, WATER COMPANIES, AND INDUSTRIES HAVE FILED LETTERS OF COMMITMENT WITH THE ARIZONA WATER COMMISSION FOR WATER FROM THE CAP AND THE COMMISSION HAS TRANSMITTED ITS RECOMMENDATIONS ON THE ALLOCATION OF MUNICIPAL AND INDUSTRIAL SUPPLIES TO THE SECRETARY OF THE INTERIOR. HE CONCLUDED BY ANNOUNCING THE COMMISSION'S SCHEDULE FOR FORMULATING AND TRANSMITTING RECOMMENDATIONS REGARDING THE ALLOCATION OF AGRICULTURAL WATER FROM THE CAP SUPPLY.

FEDERAL-STATE WATER RIGHTS CONFLICTS/ARIZONA/FEDERAL PROJECT POLICY/CENTRAL ARIZONA PROJECT/WATER POLICY/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER CONSERVATION/WATER DEMAND/COMPETING USES

0016

ANONYMOUS

1978A

ARIZONA JOINS 6 STATES IN SUIT ON RIVER SALINITY.

TUCSON CITIZEN, JANUARY 16 [UPI, PHOENIX].

REPORT STATES THAT ARIZONA HAS JOINED THE OTHER SIX COLORADO RIVER BASIN STATES IN SEEKING TO INTERVENE IN A LAWSUIT FILED BY THE ENVIRONMENTAL DEFENSE FUND, INC. AGAINST THE EPA, INTERIOR DEPARTMENT, AND THE BUREAU OF RECLAMATION. THE SUIT SEEKS NEW SALINITY CONTROL STANDARDS BASED ON THE PLAINTIFFS' CLAIM THAT PRESENT SALINITY LEVELS OF THE COLORADO RIVER CAUSE AN ESTIMATED 53 MILLION DOLLARS DAMAGE ANNUALLY TO THE SEVEN BASIN STATES. ARIZONA CLAIMS NEW SALINITY STANDARDS COULD ADVERSELY AFFECT THE STATE'S ECONOMY BY POSSIBLY RESULTING IN SEVERE CURTAILMENT OF THE OPERATION OF THE NAVAJO GENERATING STATION. THE PRESENT SALINITY CONTROL STANDARDS WERE ADOPTED THROUGH COOPERATIVE EFFORTS OF THE BASIN STATES AND APPROVED BY EPA.

COLORADO RIVER/COLORADO RIVER BASIN/ARIZONA/CALIFORNIA/COLORADO/NEVADA/NEW MEXICO/UTAH/WYOMING/FEDERAL-STATE WATER RIGHTS CONFLICTS/INTERSTATE/SALINITY/ENVIRONMENTAL EFFECTS

0017

ANONYMOUS

1978B

NEW FIGHT EXPECTED ON WATER PROJECTS.

ARIZONA DAILY STAR (TUCSON) [COPYRIGHT NEW YORK TIMES], FEBRUARY 27.

INFLUENTIAL U.S. SENATORS AND CONGRESSMEN FAVOR APPORTIONING MONEY TO START NEW WATER PROJECTS AND RESTART ONE OR MORE OF THE NINE PROJECTS DEFEATED BY PRESIDENT CARTER LAST YEAR. CARTER INCLUDED NO FUNDS IN THE 1979 BUDGET FOR NEW WATER PROJECTS, PENDING COMPLETION OF A BROAD WATER POLICY STUDY. THE CHAIRMEN OF THE HOUSE PUBLIC WORKS APPROPRIATIONS SUBCOMMITTEE AND THE EQUIVALENT SENATE SUBCOMMITTEE, AS WELL AS THE HOUSE MAJORITY LEADER ARE ALL QUOTED AS FAVORING NEW PROJECTS. LAST YEAR CARTER SUCCEEDED IN GETTING ONLY NINE OF THIRTY-TWO PROJECTS HE DISAPPROVED KILLED, THUS CONVINCING CONGRESSIONAL OPPONENTS THEY COULD SUCCEED IF THEY STUCK TOGETHER.

FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL PROJECT POLICY/WATER POLICY/
LEGISLATION/ENVIRONMENTAL EFFECTS/PROJECT PLANNING

0018

ANONYMOUS

1978C

KEEP WATER FIGHT IN STATE, INDIANS TOLD.

ARIZONA DAILY STAR [AP], APRIL 22.

INDIAN TRIBES SHOULD LOOK TO ARIZONA AND CALIFORNIA SUPREME COURT DECISIONS IN PURSUING THEIR RIGHTS TO GROUNDWATER. AN ATTORNEY FOR THE NATIVE AMERICAN RIGHTS FUND SAYS THAT INDIANS HAVE GONE TO FEDERAL COURTS AND WILL DO SO AGAIN BECAUSE THAT HAS BEEN THE BEST ROUTE TO GETTING THEIR RIGHTS. INDIANS ARE MAKING A MISTAKE IF THEY LOOK TO THE STATE COURTS. THE WATER USE DISPUTE BETWEEN THE PAPAGO INDIAN TRIBE AND THE CITY OF TUCSON, ARIZONA, IS BRIEFLY DISCUSSED. ANY SETTLEMENT WITH THE PAPAGOS SHOULD RESTRICT THE USE OF NON-INDIAN GROUNDWATER TO SAFE YIELD. SAFE YIELD WOULD LIMIT PUMPING TO THE AMOUNT OF WATER RE-ENTERING THE BASIN.

ARIZONA/CALIFORNIA/FEDERAL-STATE WATER RIGHTS CONFLICTS/JUDICIAL DECISIONS/
INDIAN WATER RIGHTS/GROUNDWATER/COMPETING USES/WATER RIGHTS/LEGAL ASPECTS/
WATER ALLOCATION(POLICY)

0019

ARIZONA, COLORADO RIVER COMMISSION

1927

REPORT, 1ST.

ARIZONA STATE LEGISLATURE, 8TH, 4TH SPECIAL SESSION, SENATE DOCUMENT 1. 14 P.

THE COMMISSION WAS CREATED BY THE STATE LEGISLATURE MARCH 7, 1927, FOR THE PURPOSE OF ENCOURAGING AND PROMOTING THE DEVELOPMENT OF THE COLORADO RIVER, AND OF PROTECTING THE RIGHTS AND INTERESTS OF THE STATE OF ARIZONA IN SAID RIVER AND ITS TRIBUTARIES. THE REPORT DESCRIBES THE COMPOSITION AND MEMBERSHIP OF THE COMMISSION AND ITS GENERAL ACTIVITIES. BRIEF DISCUSSIONS OF THE FOLLOWING

TOPICS ARE PROVIDED: THE ATTITUDE OF THE COMMISSION TOWARD ITS RESPONSIBILITIES, THE FUNDAMENTAL PRINCIPLES WHICH SHOULD GUIDE THE COMMISSION'S EFFORTS, THE DENVER CONFERENCE OF GOVERNORS, THE QUESTION OF MEXICAN WATER RIGHTS, STATES RIGHTS, DIVISION OF WATER, THE CALIFORNIA PROPOSAL REGARDING THE DIVISION OF WATER, ARIZONA'S PROPOSAL, THE PROPOSAL OF UPPER BASIN GOVERNORS, POWER BENEFITS, ARIZONA'S FINAL STATEMENT TO THE CONFERENCE. THE TEXT OF THE 'SENATE CONCURRENT RESOLUTION NO. 1' ENDORSING THE WORKING PRINCIPLES AND ACTIVITIES OF THE COMMISSION IS PROVIDED IN AN APPENDIX.

WATER RESOURCES DEVELOPMENT/COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/HOOVER DAM/BOULDER CANYON PROJECT ACT/MEXICAN WATER TREATY/ARIZONA/FEDERAL-STATE WATER RIGHTS CONFLICTS/HYDROELECTRIC POWER/WATER ALLOCATION(POLICY)/PREFERENCES(WATER RIGHTS)/WATER RIGHTS/WATER POLICY/EQUITABLE APPORTIONMENT/POLITICAL ASPECTS

0020

ARIZONA, COLORADO RIVER COMMISSION

1928B

THE MATTER OF THE COLORADO RIVER. A BRIEF BY JOHN F. STEVENS, CONSULTING ENGINEER FOR THE COMMISSION.

SAME AS AUTHOR, PHOENIX, ARIZONA. 30 P.

THIS ESSAY ARGUES FROM THE PERSPECTIVE OF THE STATE OF ARIZONA AGAINST THE AUTHORITY AND THE WISDOM OF FEDERAL GOVERNMENT PROPOSALS FOR DEVELOPING AND REGULATING THE COLORADO RIVER. SPECIFIC CRITICISMS ARE DIRECTED PRIMARILY AT ECONOMIC AND ENGINEERING ASPECTS OF THE PROPOSED BOULDER CANYON DAM: 1) THE PRIORITY GIVEN TO POWER DEVELOPMENT OVER FLOOD CONTROL AND AGRICULTURE, 2) THE DAM SITE, 3) CONSTRUCTION PROBLEMS, 4) THE COST OF THE DAM, 5) OPERATING EFFICIENCY OF THE ELECTRIC POWER PLANT, 6) FEDERAL FINANCING OF THE DAM AND REPAYMENT THROUGH REVENUE FROM THE SALE OF ELECTRIC POWER, 7) CONSTRUCTION OF AN ALL AMERICAN CANAL. THE AUTHOR CONCLUDES THAT 'THE PROPOSED BOULDER DAM IS WORTHY ONLY OF CONDEMNATION' NOT ONLY FOR ECONOMIC AND ENGINEERING REASONS BUT ALSO BECAUSE THE CONSTRUCTION AND OPERATION OF THE DAM BY THE FEDERAL GOVERNMENT WOULD IN EFFECT BE AN UNJUST CONFISCATION OF WATER RIGHTFULLY BELONGING TO THE STATE OF ARIZONA.

FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE JURISDICTION/ARIZONA/FEDERAL JURISDICTION/LEGISLATION/COLORADO RIVER/BOULDER CANYON PROJECT ACT/MEXICAN WATER TREATY/COLORADO RIVER COMPACT/COLORADO RIVER BASIN/RIVER REGULATION/RESERVOIR STORAGE/WATER RIGHTS/PROJECT PLANNING/PROJECT BENEFITS/PROJECT FEASIBILITY/PROJECT PURPOSES/GOVERNMENTS/ENGINEERING STRUCTURES/HYDROELECTRIC PLANTS/ECONOMICS/FLOOD CONTROL/DAMS/COSTS/ELECTRIC POWER/ALL-AMERICAN CANAL

0021

ARIZONA, COLORADO RIVER COMMISSION

1929

ARIZONA'S RIGHTS IN THE COLORADO RIVER. PROPOSALS OF ARIZONA AND THE COUNTER PROPOSALS OF CALIFORNIA SUBMITTED TO THE TRI-STATE CONFERENCE NOW IN PROGRESS, BY SENATOR A.H. FAVOUR.

PRESCOTT COURIER, PRESCOTT, ARIZONA. 38 P.

ARIZONA'S DESIRE TO NEGOTIATE AN AGREEMENT ON THE DIVISION OF COLORADO RIVER WATER ALLOCATED TO THE LOWER BASIN STATES BY THE COLORADO RIVER COMPACT PRIOR TO RATIFYING THE COMPACT IS EXPLAINED, AND ATTEMPTS TO NEGOTIATE AN AGREEMENT

IN FORMAL AND INFORMAL CONFERENCES ARE SUMMARIZED. THE PAMPHLET DISCUSSES ARIZONA'S PROPOSED DEFINITIONS FOR APPORTIONED WATER, SURPLUS WATER, AND TRIBUTARIES; THE STATE'S FIVE WATER DIVISION PROPOSALS, AND CALIFORNIA'S COUNTER-PROPOSALS. ARIZONA'S PROPOSALS CONCERNING THE INTERPRETATION OF REVENUE PROVISIONS IN THE BOULDER CANYON PROJECT ACT ARE ALSO PRESENTED AND DISCUSSED.

COLORADO RIVER COMPACT/BOULDER CANYON PROJECT ACT/ARIZONA/COLORADO RIVER BASIN/
COLORADO RIVER/GOVERNMENTS/LEGAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/
MEXICAN WATER TREATY/WATER RIGHTS/LEGISLATION/ALL-AMERICAN CANAL/SANTA FE
COMPACT

0022

ARIZONA, COLORADO RIVER COMMISSION

1932

ARIZONA'S RIGHTS IN THE COLORADO RIVER.

SAME AS AUTHOR, PHOENIX, ARIZONA. 42 P.

THE PURPOSE OF THE REPORT IS TO ANSWER QUESTIONS ABOUT THE FEASIBILITY OF IRRIGATION OF ARIZONA'S LANDS BY THE USE OF COLORADO RIVER WATER. 'WE HAVE ALSO ENDEAVORED TO EXPLAIN THE GROWTH AND EVIL EFFECT OF FEDERAL BUREAUCRATIC CONTROL OF THE GREATER PART OF THIS STATE, THE MENACE IN THE IMPENDING MEXICAN TREATY, THE INJUSTICE DONE ARIZONA BY THE NATIONAL GOVERNMENT AND OUR HOPE OF A NEW DEAL' (P. 2). IT CALLS FOR THE GOVERNORS OF THE WESTERN STATE TO UNITE IN OPPOSITION TO FURTHER FEDERAL GOVERNMENT ENCROACHMENT. HOOVER DAM AND THE MEXICAN TREATY ARE ALSO DISCUSSED.

COLORADO RIVER/COLORADO RIVER BASIN/WATER RESOURCES/WATER RESOURCES
DEVELOPMENT/IRRIGATION/IRRIGATION WATER/HOOVER DAM/ARIZONA/CALIFORNIA/MEXICAN
WATER TREATY/WATER RIGHTS/WATER LAW/FEDERAL GOVERNMENT/FEDERAL PROJECT POLICY/
FEDERAL-STATE WATER RIGHTS CONFLICTS

0023

ARIZONA, COLORADO RIVER COMMISSION

1938

COLORADO RIVER INTERNATIONAL PROBLEM.

SAME AS AUTHOR, PHOENIX, ARIZONA. 36 P.

A REPORT WHICH FOCUSES UPON THE INTERNATIONAL ASPECTS OF COLORADO RIVER WATER. THE TREATY WITH MEXICO PROVIDES THE BULK OF THE REPORT, ALTHOUGH THERE IS SOME DISCUSSION OF A REGIONAL APPROACH TO COLORADO RIVER DEVELOPMENT. THE REPORT RECOMMENDS THE CREATION OF A COMMISSION COMPOSED OF ONE MEMBER FROM EACH OF THE SEVEN BASIN STATES TO SERVE IN AN ADVISORY CAPACITY, TO SERVE AS A CLEARING HOUSE FOR INFORMATION, TO PRESERVE AMICABLE RELATIONS AMONG MEMBER STATES, TO UNITE IN SECURING APPROPRIATIONS, AND IN GENERAL TO WORK TOWARD THE FULLEST DEVELOPMENT OF COLORADO RIVER WATERS.

COLORADO RIVER/COLORADO RIVER BASIN/MEXICAN WATER TREATY/NEW MEXICO/ARIZONA/
UTAH/WYOMING/COLORADO/NEVADA/CALIFORNIA/WATER RESOURCES/WATER RESOURCES
DEVELOPMENT/REGIONAL DEVELOPMENT/REGIONAL ANALYSIS/WATER POLICY/INTERSTATE
COMPACTS

0024

ARIZONA, COLORADO RIVER COMMISSION

1928A

THE COLORADO RIVER QUESTION: SHALL NATURAL RESOURCES CREATE LOCAL OR ENLARGE DISTANT DEVELOPMENT?

SAME AS AUTHOR. 16 P.

THIS PAMPHLET BRIEFLY DESCRIBES MAJOR POINTS OF CONTROVERSY ON DIVISION OF WATER IN THE LOWER BASIN, TAXATION OF HYDRO-ELECTRIC PROPERTIES, AND THE BOULDER CANYON DAM. THE DIVISION OF WATER AS PROPOSED BY ARIZONA IS SUMMARIZED. ALSO INCLUDED IN THE PAMPHLET ARE THE FOLLOWING RESOLUTIONS AND STATEMENTS WHICH ISSUED FROM THE CONFERENCE OF GOVERNORS AT DENVER: PRINCIPLES PROPOSED BY THE COLORADO RIVER COMMISSION OF ARIZONA AS A BASIS FOR SETTLING THE CONTROVERSY, A RESOLUTION ADDRESSED TO PRESIDENT COOLIDGE AND SECRETARY OF STATE FRANK B. KELLOGG CALLING FOR THE FEDERAL GOVERNMENT TO INFORM THE MEXICAN GOVERNMENT THAT MEXICO HAS NO LEGAL RIGHT TO COLORADO RIVER WATER WITHOUT A TREATY, THE 'PITTMAN RESOLUTION' DEALING WITH THE RIGHTS OF STATES WITH REFERENCE TO HYDRO-ELECTRIC POWER, THE COMPROMISE DIVISION OF WATER ACCEPTED BY ARIZONA, AND A SUMMARY OF ARIZONA'S REASONS FOR OPPOSING THE JOHNSON BOULDER DAM BILL. ILLUSTRATIONS SHOW THE DRAINAGE AREA OF THE COLORADO RIVER BASIN, THE LOW LANDS OF ARIZONA, CALIFORNIA, AND MEXICO IRRIGABLE FROM THE COLORADO RIVER, CHARACTERISTICS OF THE BOULDER AND GLEN RESERVOIRS, AND THE RIVER'S CROSS-SECTIONS RESERVOIR CAPACITIES AT SEVEN DAM SITES.

COLORADO RIVER BASIN/COLORADO RIVER/ARIZONA/BOULDER CANYON PROJECT ACT/
COLORADO RIVER COMPACT/MEXICAN WATER TREATY/WATER RIGHTS/WATER POLICY/EQUITABLE
APPORTIONMENT/POLITICAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER
ALLOCATION(POLICY)/CALIFORNIA/HYDROELECTRIC POWER/SWING-JOHNSON BILL/GLEN
CANYON RESERVOIR/PITTMAN RESOLUTION

0025

ASTON, R.F.

1936

BOULDER DAM AND THE PUBLIC UTILITIES.

UNIVERSITY OF ARIZONA, TUCSON (M.A. THESIS). 298 P.

A DETAILED ACCOUNT OF THE ORGANIZED OPPOSITION OF THE ELECTRIC POWER COMPANIES TO THE BOULDER CANYON PROJECT ACT, FROM THE INTRODUCTION OF THE SWING-JOHNSON BILL IN CONGRESS IN 1922 TO THE PASSAGE OF THE ACT IN 1928. A GEOGRAPHIC-HISTORIC SURVEY OF THE COLORADO RIVER FOLLOWS, TOGETHER WITH THE EVOLUTION OF PROPOSALS IN THE SWING-JOHNSON BILL FOR AN ALL-AMERICAN CANAL UP TO 1933. THE AUTHOR THEN TAKES UP EARLY POWER COMPANIES' ACTIVITIES AGAINST THE LEGISLATION, AND THEIR ATTITUDES TOWARD DEVELOPMENT OF THE COLORADO RIVER, INCLUDING THE FEDERAL TRADE COMMISSION'S INVESTIGATIONS OF THE ELECTRIC UTILITY INDUSTRY, THE UTILITIES' FIGHT TO AVOID IT, AND THE RELATION OF THE INVESTIGATION TO THE BOULDER DAM CONTROVERSY. INDUSTRY PROPAGANDA ACTIVITIES ARE DESCRIBED, AT BOTH NATIONAL AND STATE LEVELS, AS WELL AS THROUGH THE PRESS, LOBBYING ACTIVITIES AGAINST THE BOULDER DAM BILL, DESCRIPTIONS OF PAMPHLETS AND BOOKS DISTRIBUTED AS PART OF THE CAMPAIGN, AND THEIR USE OF FACT-FINDING COMMITTEES AND APPEALS TO ECONOMIC GROUPS TO STRENGTHEN THEIR HAND IN OPPOSITION TO THE BOULDER DAM BILL. FINALLY, THE SUCCESSFUL EFFORTS OF THE BILL'S PROPONENTS ARE DETAILED.

BOULDER CANYON PROJECT ACT/COLORADO RIVER COMPACT/UTILITIES/POLITICAL ASPECTS/
HYDROELECTRIC POWER/FEDERAL GOVERNMENT/STATE GOVERNMENTS/LEGISLATION/FEDERAL
PROJECT POLICY/INTERSTATE COMMISSIONS/COLORADO RIVER BASIN/SWING-JOHNSON BILL/
ALL-AMERICAN CANAL

0026

BARBAROSSA, N.L.

1968

A STATE VIEWPOINT ON RIVER BASIN PLANNING.

AMERICAN SOCIETY OF CIVIL ENGINEERS, WATERWAYS AND HARBORS DIVISION, JOURNAL
94(2):217-238. SWRA W69-05209.

ADMINISTRATIVE AND POLICY IMPLICATIONS OF WATER RESOURCES PLANNING AND DEVELOPMENT ARE DISCUSSED WITH REGARD TO PLANNING CONCEPTS, FEDERAL-STATE-LOCAL RELATIONSHIPS, IMPLEMENTATION AND MANAGEMENT, AND NEW TRENDS. INCONSISTENT NATIONAL WATER POLICIES, OVERLAPPING NEW PROGRAMS, AND THE MYRIAD OF FEDERAL AGENCIES WITH DIVIDED JURISDICTIONS DICTATE THE NEED TO STRENGTHEN THE ROLE OF THE STATES AS PARTNERS WITH FEDERAL AND LOCAL GOVERNMENTS. RECENT FEDERAL LEGISLATION (APPALACHIA AND WATER RESOURCES PLANNING ACTS, ESPECIALLY) WILL HELP THE STATES IN THIS RESPECT. THE NEWLY CREATED WATER RESOURCES COUNCIL CAN PROVIDE TOP-LEVEL COORDINATION AND MAY ULTIMATELY RESOLVE COMPETITIVE SITUATIONS AT THE FEDERAL LEVEL. STATES GENERALLY HAVE NOT TAKEN ADVANTAGE IN THE PAST OF AVAILABLE OPPORTUNITIES, BECAUSE THEY FAILED TO PROVIDE THE MEANS AND MOTIVATION FOR PARTNERSHIP PLANNING AND DEVELOPMENT. CURRENT TRENDS INDICATE THAT MUTUAL INTERDEPENDENCE AMONG ALL LEVELS OF GOVERNMENT WILL INCREASE. NEW YORK STATE POLICIES, ORGANIZATION, AND PROGRAMS ARE DESCRIBED TO ILLUSTRATE GROWING STATE RESPONSIBILITIES. GUIDELINES FOR THE STATES IN DEVELOPING POLICIES AND ORGANIZATIONS ARE PRESENTED.

RIVER BASIN DEVELOPMENT/PLANNING/WATER RESOURCES DEVELOPMENT/WATER RESOURCES PLANNING ACT/GOVERNMENTS/MANAGEMENT/WATER MANAGEMENT(APPLIED)/WATER POLICY/ APPALACHIAN MOUNTAIN REGION/NEW YORK/POLITICAL ASPECTS/LEGAL ASPECTS/SOCIAL ASPECTS/STATE GOVERNMENTS/INTERSTATE/FEDERAL-STATE WATER RIGHTS CONFLICTS

0027

BERKMAN, R.L./VISCUSI, W.K.

1973

DAMMING THE WEST: RALPH NADER'S STUDY GROUP REPORT ON THE BUREAU OF RECLAMATION.

GROSSMAN, NEW YORK. 272 P.

THIS BOOK TRACES THE HISTORY OF THE BUREAU OF RECLAMATION AND DESCRIBES HOW ITS FUNCTIONS HAVE DEVELOPED OVER THE YEARS SINCE IT WAS CREATED IN 1902. IN THE BEGINNING IT WAS CONCERNED ONLY WITH RECLAIMING LAND AND SLOWLY EVOLVED INTO DEVELOPING WATER SUPPLIES FOR MUNICIPAL AND INDUSTRIAL USE AND BEING CONCERNED WITH HYDROELECTRIC POWER, FLOOD CONTROL, NAVIGATION, RIVER REGULATION, WATER QUALITY CONTROL, RECREATION, AND FISH AND WILDLIFE. THIS REPORT EVALUATES THE BUREAU OF RECLAMATION BY REVIEWING ITS BASIC BENEFIT-COST PROCEDURES. THE CENTRAL ARIZONA PROJECT IS REVIEWED AND IT IS CONCLUDED THAT BUREAUCRATS AND POLITICIANS ARE ITS PRIME BENEFICIARIES.

SOUTHWEST U.S./CENTRAL ARIZONA PROJECT/COLORADO RIVER/COLORADO RIVER BASIN/ WATER RESOURCES/WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER SUPPLY/COST-BENEFIT ANALYSIS/U.S. BUREAU OF RECLAMATION/FEDERAL GOVERNMENT/FEDERAL PROJECT POLICY

0028

BINGHAM, J.R.

1969

THE REGIONAL INTEREST IN WATERSHED MANAGEMENT.

ARIZONA WATERSHED SYMPOSIUM, 13TH, PHOENIX, ARIZONA, 1969, PROCEEDINGS, P. 29-32. SWRA W70-04913.

THE WESTERN STATES WATER COUNCIL WAS CREATED IN 1965 TO EFFECT COOPERATION AMONG THE WESTERN STATES IN THE DEVELOPMENT OF WATER RESOURCES. THE COUNCIL HAS WORKED TO ESTABLISH PRINCIPLES, STANDARDS, AND GUIDELINES FOR DEVELOPING REGIONAL WATER PROGRAMS AND HAS COMPLETED A REVIEW OF LARGE-SCALE WATER TRANSFER PROPOSALS. THE COUNCIL HAS ALSO BROUGHT TOGETHER THE HEADS OF THE PACIFIC SOUTHWEST INTER-AGENCY COMMITTEE AND THE PACIFIC NORTHWEST RIVER BASINS COMMISSION IN AN EFFORT TO COORDINATE THE WORK OF THESE TWO GROUPS. THE WORK OF THE PUBLIC LAND LAW REVIEW COMMISSION IS OF GREAT IMPORTANCE TO THE COUNCIL AND IT ATTEMPTS TO MAKE THE COMMISSION AWARE OF THE NEEDS OF THE WESTERN STATES. INFORMATION GAINED THROUGH WATERSHED MANAGEMENT PROGRAMS IS USEFUL TO ALL OF THESE COUNCIL ACTIVITIES.

WATER RESOURCES DEVELOPMENT/WATERSHED MANAGEMENT/WATER TRANSFER/PLANNING/COORDINATION/WATER LAW/INTERSTATE COMPACTS/REGIONAL ANALYSIS/STATE GOVERNMENTS/FEDERAL GOVERNMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/PUBLIC LANDS

0029

BLUNDELL, W.E.

1977

AS WATER SUPPLY EBBS, ARIZONANS ARE FRETTEING OVER ECONOMIC EFFECTS.

WALL STREET JOURNAL, DECEMBER 28, P. 1, 15.

THIS ARTICLE REVIEWS THE WATER SUPPLY SITUATION IN ARIZONA AND REPORTS THAT GROUNDWATER OVERDRAFTS, WASTE, AND UNCERTAINTY OF FUTURE SUPPLIES FROM THE COLORADO RIVER HAVE EMPHASIZED THE REALITY OF THE NATION'S FASTEST GROWING STATE GRADUALLY RUNNING OUT OF WATER. IN THE SIX STATES OF THE SOUTHWEST THE STRAIN ON THE WATER SUPPLY HAS RESULTED FROM A 40% INCREASE IN POPULATION IN THE LAST 15 YEARS, COUPLED WITH THE NEEDS OF IRRIGATED AGRICULTURE. THE WATER SHORTAGE HAS LED TO INCREASED CONFLICT AMONG URBAN AND INDUSTRIAL, AGRICULTURAL, AND INDIAN WATER USERS. FOR ECONOMIC AND POLITICAL REASONS AGRICULTURE IS LOSING. OVERPUMPING OF GROUNDWATER BY FARMERS IS DROPPING WELL-DEPTHS AN AVERAGE OF 5 TO 10 FEET ANNUALLY STATE-WIDE. SOME FARMERS HAVE FOUND PUMPING FROM INCREASED DEPTHS TOO COSTLY AND HAVE SOLD OUT, MOVED, OR SWITCHED TO FINANCIALLY RISKY SPECIALTY CROPS. CITIES, HOWEVER, CAN PUMP FROM ANY DEPTH AND PASS THE COSTS ALONG TO RESIDENTS. NO CITY HAS YET IMPOSED MANDATORY CONSERVATION, ALTHOUGH TUCSON HAS HAD A SUCCESSFUL VOLUNTARY CONSERVATION PROGRAM. MORE EVIDENT THAN CONSERVATION IS WASTE BY DEVELOPERS, MUNICIPALITIES, AND AGRICULTURE, ENCOURAGED BY STATE WATER LEGISLATION. THE STATE GROUNDWATER LAW PERMITS UNREGULATED WELL DRILLING AND UNLIMITED WATER PRODUCTION FOR 'BENEFICIAL' PURPOSES. MANY ARIZONANS RECOGNIZE THE WASTE BUT BELIEVE WATER FROM THE COLORADO RIVER TO BE DELIVERED BY THE CENTRAL ARIZONA PROJECT (CAP) IN 1985 WILL ALLEVIATE THE WATER PROBLEMS. HOWEVER, INDIAN WATER CLAIMS AND A LOWER THAN ANTICIPATED RIVER FLOW VOLUME HAVE INTRODUCED LONG-TERM UNCERTAINTIES AND SPAWNED BITTERNESS AMONG WHITES. BECAUSE INDIAN CLAIMS ARE A LONG WAY FROM SETTLEMENT, AGRICULTURE HAS BORNE THE IMMEDIATE WEIGHT OF CUTBACKS, WITH CONCOMITANT DECLINE OF ITS ECONOMIC AND POLITICAL POWER AS FARMLAND IS TAKEN OVER BY MINES AND MUNICIPALITIES. NO CAP WATER CAN BE USED TO OPEN NEW FARMLAND, ALTHOUGH THE PROJECT WAS ORIGINALLY CONCEIVED AS AN AGRICULTURAL ONE, AND STATE GROUNDWATER LEGISLATION WILL LIKELY REQUIRE REDUCTION OF GROUNDWATER PUMPING FOR AGRICULTURE. DESPITE THE BUILT-IN CEILING ON SURFACE WATER SUPPLIES AND GROUNDWATER OVERDRAFTS, NO ECONOMIC OR GROWTH POLICY CHANGES ARE LIKELY.

ARIZONA/SOUTHWEST U.S./WATER SUPPLY/WATER SOURCES/WATER USERS/GROUNDWATER
MINING/GROUNDWATER AVAILABILITY/AGRICULTURE/IRRIGATION/MINING/MUNICIPAL WATER/
COLORADO RIVER/CONSERVATION/LEGISLATION/INDIAN RESERVATIONS/ECONOMICS/POLITICAL
ASPECTS/CENTRAL ARIZONA PROJECT/TUCSON/PHOENIX/ECONOMIC GROWTH/STATE WATER
MANAGEMENT PLANS

0030

BOULDER DAM ASSOCIATION

1927

THE FEDERAL GOVERNMENT'S COLORADO RIVER PROJECT.

SAME AS AUTHOR, LOS ANGELES, CALIFORNIA. 21 P.

THIS IS AN OUTLINE OF THE FEDERAL GOVERNMENT'S PLANS AND THE LEGISLATION WHICH PROVIDED FOR A SELF-FINANCING PROJECT FOR THE CONTROL AND USE OF THE FLOOD WATERS OF THE COLORADO RIVER. THE BOULDER CANYON PROJECT IS OUTLINED AND ALTERNATIVE PLANS FOR WATER RESOURCES DEVELOPMENT ARE DISCUSSED. THE COLORADO RIVER COMPACT, ARIZONA'S REFUSAL TO SIGN AND THE CONTROVERSIAL CALIFORNIA WATER STORAGE PROVISIONS ARE DISCUSSED. ON JANUARY 18, 1926 THE SECRETARY OF THE INTERIOR EXPLAINED WHY THE FEDERAL GOVERNMENT IS THE ONLY PROPER AGENCY TO DEVELOP THE COLORADO RIVER: 'THE INTERSTATE AND INTERNATIONAL RIGHTS AND INTERESTS INVOLVED, THE DIVERSIFIED BENEFITS FROM THE CONSTRUCTION OF THESE WORKS, THE WAITING NECESSITIES FOR CITIES FOR INCREASED WATER SUPPLIES, THE LARGE DEVELOPMENT OF LATENT AGRICULTURAL RESOURCES, THE PROTECTION OF THESE LARGE DEVELOPED AND THE IMMENSE INDUSTRIAL BENEFITS WHICH MAY COME FROM THE PRODUCTION OF CHEAP POWER, WHICH TOGETHER APPEAR TO RENDER THE CONSTRUCTION AND SUBSEQUENT CONTROL OF THESE WORKS OF SUCH ECONOMIC AND SOCIAL IMPORTANCE, THAT NO AGENCY BUT THE FEDERAL GOVERNMENT SHOULD BE INTRUSTED WITH THE PROTECTION OF RIGHTS OR DISTRIBUTION OF ITS OPPORTUNITIES. ALL USES CAN BE CO-ORDINATED AND THE FULLEST BENEFITS REALIZED ONLY BY THEIR CENTRALIZED CONTROL'

COLORADO RIVER COMPACT/COLORADO RIVER/COLORADO RIVER BASIN/BOULDER CANYON
PROJECT ACT/ARIZONA/CALIFORNIA/INTERSTATE COMPACTS/FEDERAL-STATE WATER RIGHTS
CONFLICTS/WATER RIGHTS/FEDERAL JURISDICTION/FEDERAL GOVERNMENT/WATER RESOURCES/
WATER RESOURCES DEVELOPMENT/WATER SUPPLY

0031

BUIE, E.C.

1973

FUTURE WATER POLICIES [A COMMENTARY ON THE NATIONAL WATER COMMISSION REPORT].

JOURNAL OF SOIL AND WATER CONSERVATION 28(5):211-213. SWRA W77-11160.

THE NATIONAL WATER COMMISSION REPORT TO CONGRESS CONTAINS RECOMMENDATIONS AND CONCLUSIONS COVERING ALMOST EVERY ASPECT OF THE NATION'S FUTURE WATER RESOURCE PROBLEMS. THE REPORT INCLUDES HIGHLY CONTROVERSIAL SUGGESTIONS AND RECOMMENDATIONS THAT COULD SERIOUSLY DISRUPT ESTABLISHED PROGRAMS. IT GIVES CONSIDERABLE ATTENTION TO: 1) THE PROBLEM OF WATER USE IN FOOD AND FIBER PRODUCTION; 2) PROGRAMS FOR REDUCING FLOOD LOSSES; 3) EROSION AND SEDIMENTATION CONTROL PROGRAMS; AND 4) FUNDING FOR RECREATIONAL DEVELOPMENT. THE COMMISSION ALSO RECOMMENDS MAJOR ADJUSTMENTS IN THE ENGINEERING RESPONSIBILITIES OF THE SOIL CONSERVATION SERVICE, THE ARMY CORPS OF ENGINEERS, AND THE BUREAU OF RECLAMATION. THE REPORT SUFFERS SOME INCONSISTENCIES WHEN DEALING WITH PROBLEMS RELATING TO RURAL WATER SUPPLY. THE AUTHOR OF THIS COMMENTARY ON THE REPORT CONCLUDES THAT THE FEDERAL GOVERNMENT'S ROLE IN WATER RESOURCES DEVELOPMENT

SHOULD BE INFLUENCED SIGNIFICANTLY BY THE REPORT. THIS THOUGHT IS EVIDENT IN THE REPORT'S RECOMMENDATIONS THAT STATE AND LOCAL AGENCIES ASSUME FULL RESPONSIBILITY FOR CONVENTIONAL DEVELOPMENTS SUCH AS FLOOD CONTROL, IRRIGATION, DRAINAGE, WATER SUPPLY AND NAVIGATION.

OPTIMUM DEVELOPMENT PLANS/PROJECT PLANNING/WATER RESOURCES DEVELOPMENT/WATER POLICY/COMPREHENSIVE PLANNING/PLANNING/WATER RESOURCES/RURAL AREAS/WATER SUPPLY/ADMINISTRATIVE AGENCIES/FLOOD CONTROL/IRRIGATION DRAINAGE/NAVIGATION/RECREATION/SEDIMENTATION/EROSION CONTROL/AGRICULTURE/LAND RECLAMATION/FLOOD PLAIN ZONING

0032

BURKE, W.J.

1956

THE ORIGIN, GROWTH AND FUNCTION OF THE LAW OF WATER USE.

WYOMING LAW REVIEW 10(2):95-111. SWRA W68-00450.

A DICHOTOMY OF WATER LAW HAS EVOLVED AS THE EASTERN AND WESTERN STATES DEVELOPED DIFFERENT PRINCIPLES CONCERNING WATER USE. THE EASTERN STATES ADHERE TO A MODIFIED RIPARIAN THEORY. HOWEVER, THEY TEND TO CONSIDER WATER A VENDIBLE PRODUCT AND ACCOMPLISH THIS END THROUGH GOVERNMENT ACQUISITION OF LANDS CONTIGUOUS TO WATERCOURSES AND BY MAKING RIPARIAN RIGHTS IN THE WATER SUBJECT TO EMINENT DOMAIN. THE WESTERN STATES APPLY THE THEORY OF PRIOR APPROPRIATION. WHILE A TREND TOWARD REGARDING WATER AS VENDIBLE HAS NOT DEVELOPED TO THE DEGREE THAT IT HAS IN THE EASTERN STATES, THERE ARE CERTAIN INSTANCES, SUCH AS HYDROELECTRICITY, AS VENDIBLE EVEN WHERE THE WATER HAS NOT BEEN SO REGARDED. IN SOME CASES WATER IN EXCESS OF THE NEEDS OF THE PARTICULAR PROJECT HAS BEEN TREATED AS VENDIBLE. THE FAILURE OF WESTERN STATES TO DEVELOP WATER VENDIBILITY HAS CREATED CONFLICT WITH WATER ALLOCATION UNDER FEDERAL PROJECTS WITH THE EFFECT THAT WATER RIGHTS UNDER FEDERAL PROGRAMS ARE GRANTED BY FEDERAL NOT STATE LAW.

PREFERENCES (WATER RIGHTS)/RIPARIAN RIGHTS/PRIOR APPROPRIATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/NAVIGABLE WATERS/RIPARIAN WATERS/SOCIAL CHANGE/SOCIAL FUNCTION/SOCIAL NEEDS/STATE GOVERNMENTS/EMINENT DOMAIN

0033

CALDWELL, L.K.

1947

INTERSTATE COOPERATION IN RIVER BASIN DEVELOPMENT.

IOWA LAW REVIEW 32(2):232-243. SWRA W70-00784.

ALTHOUGH JURISDICTION OVER THE NAVIGABLE WATERS OF THE NATION HAS BEEN ASSUMED BY THE FEDERAL GOVERNMENT UNDER THE DOCTRINE OF IMPLIED POWERS, THE EXTENT OF THIS FEDERAL AUTHORITY REMAINS INDETERMINATE. THE STATES HAVE ALWAYS EXERCISED CERTAIN POWERS OVER RIVERS AND LAKES WITHIN THEIR BOUNDARIES AND CONGRESS, THROUGH APPROVAL OF INTERSTATE COMPACTS, HAS RECOGNIZED THIS INTEREST. AFTER EARLY EFFORTS AT INTERSTATE COOPERATION, THE FEDERAL GOVERNMENT BEGAN IN 1879 TO EXERCISE AND EXPAND ITS JURISDICTION OVER NAVIGABLE WATERS. GROWING POPULATION AND THE EXPANSION OF MACHINE TECHNOLOGY INTENSIFIED THE PRESSURE ON ALL NATIONAL RESOURCES BETWEEN 1910 AND 1940. GOVERNMENTAL ACTION WAS NEEDED TO IMPROVE NAVIGATION, TO PROTECT WATER FOR HUMAN CONSUMPTION, TO MAKE WATER AVAILABLE FOR INDUSTRY, TO IRRIGATE LAND, TO ABATE POLLUTION, TO DRAIN LAND, TO PREVENT FLOODS, TO CONSERVE FISHERIES, AND TO PROVIDE FOR RECREATIONAL USES.

THE FEDERAL GOVERNMENT, ABLE TO CUT ACROSS STATE LINES, POSSESSING GREATER FISCAL AND TECHNICAL FACILITIES, AND UNHAMPERED BY CONSTITUTIONAL PROHIBITIONS, WAS ABLE TO MOVE MORE RAPIDLY THAN THE STATES. MORE RECENTLY, HOWEVER, STATES ARE DEMONSTRATING THAT THE COOPERATIVE SOLUTION OF REGIONAL PROBLEMS CAN BE SUCCESSFULLY UNDERTAKEN. THUS, NEW FORMS OF INTER-GOVERNMENTAL ORGANIZATION, INVOLVING INTERSTATE-FEDERAL COOPERATION, ARE EMERGING TO MEET CURRENT NEEDS.

INTERSTATE/FEDERAL JURISDICTION/STATE JURISDICTION/WATER RESOURCES DEVELOPMENT/
RIVER BASIN DEVELOPMENT/HISTORY/LEGISLATION/CONSERVATION/INTERSTATE COMMISSIONS/
INTERSTATE COMPACTS/INTERSTATE RIVERS/NAVIGABLE WATERS/JUDICIAL DECISIONS/
NAVIGATION/INLAND WATERWAYS/POLLUTION ABATEMENT/IRRIGATION/INDUSTRIAL WATER/
ADMINISTRATIVE DECISIONS/COMMUNITY DEVELOPMENT/FEDERAL-STATE WATER RIGHTS
CONFLICTS/SOCIAL NEEDS/POLITICAL ASPECTS/REGIONAL DEVELOPMENT

0034

CALIFORNIA, COLORADO RIVER COMMISSION

1930

COLORADO RIVER AND THE BOULDER CANYON PROJECT.

SAME AS AUTHOR, SAN DIEGO, CALIFORNIA. 400 P.

THIS STUDY TAKES UP THE HISTORICAL AND PHYSICAL BACKGROUND OF COLORADO RIVER LOWER BASIN DEVELOPMENT, INCLUDING THE COLORADO RIVER COMPACT, BOULDER CANYON PROJECT, MEXICAN WATER CLAIMS, AND INDIAN WATER RIGHTS, AS WELL AS COMPREHENSIVE CHRONOLOGY OF THE USE OF THE COLORADO RIVER FROM 1539 TO 1930. ALSO INCLUDED ARE DETAILED ACCOUNTS OF THE BACKGROUND TO THE COLORADO RIVER WATER USE AGREEMENTS. THE CALIFORNIA-ARIZONA DISPUTE IS EXPLORED IN DETAIL WITH A CALIFORNIA FOCUS AND BIAS. WHEN THE COLORADO RIVER COMPACT WAS DRAWN UP NO SURVEYS REGARDING ACTUAL AMOUNTS OF WATER AVAILABLE HAD BEEN TAKEN. THE GENERAL IMPRESSION WAS THAT THERE WAS MORE WATER IN THE BASIN THAN COULD BE USED. THIS FACT IS EXAMINED IN REGARD TO THE ARIZONA-CALIFORNIA CONFLICT. IT IS POINTED OUT THAT ARIZONA CONTENDS THAT THE FEDERAL GOVERNMENT HAS ATTEMPTED TO TAKE AWAY SOME OF ITS WATER RIGHTS.

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/BOULDER CANYON
PROJECT ACT/INTERSTATE COMPACTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/MEXICAN
WATER TREATY/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/ARIZONA/CALIFORNIA/
NEVADA/BIBLIOGRAPHIES

0035

CAMPBELL, S.M.

1974

A PROPOSAL FOR THE QUANTIFICATION OF RESERVED INDIAN WATER RIGHTS.

COLUMBIA LAW REVIEW 74(7):1299-1321. SWRA W75-12249.

THE INDEFINITE NATURE OF INDIAN RESERVED RIGHTS HAS MADE STATE WATER RESOURCE PLANNING DIFFICULT. WHILE COURTS HAVE RECOGNIZED THAT INDIAN RESERVATIONS HAVE RESERVED WATER RIGHTS PARAMOUNT TO EVEN NON-INDIAN PRIOR APPROPRIATIONS, THERE HAS BEEN NO ATTEMPT TO QUANTIFY THOSE RIGHTS. THE LEADING CASE RECOGNIZING INDIAN RIGHTS REFERRED TO SUFFICIENT FUTURE REQUIREMENTS. THE FEDERAL GOVERNMENT HAS PROVED TO BE AN UNSATISFACTORY IF NOT ARBITRARY, ADVOCATE OF INDIAN INTERESTS. FIXING INDIAN WATER RIGHTS AT PRESENT REQUIREMENT LEVELS WITH PERIODIC REVIEW OF CHANGING NEEDS IS THE BEST SOLUTION. THE BASIS FOR ALLOCATION SHOULD BE BENEFICIAL USE RATHER THAN ONLY AGRICULTURAL USE. THE

SALE OR LEASE OF INDIAN WATER RIGHTS IS PRACTICABLE WHEN WATER CANNOT BE PUT TO USE ON RESERVATION LAND. THE MOST DIFFICULT PART OF A QUANTIFICATION PLAN IS DEALING WITH CHANGES IN THE PLACE AND NATURE OF WATER USE. RESTRICTED, REASONABLE CHANGES IN THE NATURE OF USE SHOULD BE PERMITTED WHEN THERE IS NO UNDULY ADVERSE EFFECT ON THE RIGHTS OF NON-INDIAN APPROPRIATORS. A PERIODIC REVIEW OF INDIAN NEEDS AND PREDICTABLE USES CAN ACCOMPLISH THIS OBJECTIVE. INVENTORY AND QUANTIFICATION OF INDIAN WATER RIGHTS SHOULD BE CONDUCTED BY A NEUTRAL FEDERAL BODY DIVORCED FROM THE JUSTICE DEPARTMENT AND THE DEPARTMENT OF THE INTERIOR.

INDIAN RESERVATIONS/WATER RIGHTS/WATER LAW/APPROPRIATION/TREATIES/WATER ALLOCATION(POLICY)/LEGAL ASPECTS/WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER MEASUREMENT/WATER POLICY/PUEBLO WATER RIGHTS/WATER SUPPLY/WATER USERS/RESERVATION DOCTRINE/FEDERAL JURISDICTION

0036

CAPPAERT V. UNITED STATES

1976

[RESERVATION OF UNAPPROPRIATED APPURTENANT WATER RIGHTS WHEN FEDERAL GOVERNMENT WITHDRAWS LAND FROM PUBLIC DOMAIN]

96 S CT 2062-74. SWRA W77-05066.

THE UNITED STATES BROUGHT ACTION AGAINST DEFENDANT LANDOWNERS FOR A DECLARATION OF RIGHTS, SEEKING TO LIMIT DEFENDANTS' PUMPING GROUNDWATER ON THEIR RANCH SINCE THE SOURCE OF THE WATER WAS AN UNDERGROUND BASIN WHICH IS ALSO THE SOURCE OF THE WATER IN DEVIL'S HOLE DEATH VALLEY NATIONAL MONUMENT. DEFENDANTS' PUMPING CAUSED THE WATER LEVEL IN DEVIL'S HOLE TO DROP, THEREBY DECREASING THE ABILITY OF A CERTAIN SPECIES OF FISH TO SPAWN IN SUFFICIENT QUANTITIES TO PREVENT EXTINCTION. PLAINTIFF CONTENDS THAT A 1952 PRESIDENTIAL PROCLAMATION RESERVING DEVIL'S HOLE AS A NATIONAL MONUMENT ALSO RESERVED WATER RIGHTS IN UNAPPROPRIATED APPURTENANT WATER SUFFICIENT TO MAINTAIN THE LEVEL OF THE UNDERGROUND POOL. THE SUPREME COURT HELD THAT DETERMINATION OF RESERVED WATER RIGHTS WAS NOT GOVERNED BY STATE LAW. SINCE THE PROCLAMATION EXPRESSED AN INTENTION TO RESERVE UNAPPROPRIATED WATER, AND AT TIME THE WATER WAS UNAPPROPRIATED, THE UNITED STATES COULD PROTECT ITS WATER FROM SUBSEQUENT DIVERSION BY ADJACENT LANDOWNERS. THE COURT RELIED ON THE IMPLIED RESERVATION OF WATER DOCTRINE SINCE IT IS BASED ON THE NECESSITY OF WATER FOR THE PURPOSE OF THE FEDERAL RESERVATION. THEREFORE THE POOL NEED ONLY BE PRESERVED, CONSISTENT WITH THE INTENTION EXPRESSED IN THE 1952 PROCLAMATION, TO THE EXTENT NECESSARY TO PRESERVE ITS SCIENTIFIC INTEREST IN THE FISH.

WATER LEVELS/RESERVATION DOCTRINE/UNAPPROPRIATED WATER/PUBLIC LANDS/ADJACENT LAND OWNERS/FEDERAL JURISDICTION/FEDERAL RESERVATIONS/FEDERAL-STATE WATER RIGHTS CONFLICTS/JURISDICTION/WATER RIGHTS/LEGAL ASPECTS/JUDICIAL DECISIONS/PRIOR APPROPRIATION/WATER LEVEL FLUCTUATIONS/WATER WELLS/WATER MANAGEMENT(APPLIED)/ NATIONAL SCIENTIFIC RESERVES/CONSTITUTIONAL LAW/WATER LAW

0037

CARVER, J.A., JR.

1970

THE IMPLIED RESERVATION DOCTRINE: POLICY OR LAW.

LAND AND WATER LAW REVIEW 6(1):117-122. SWRA W71-06622.

COMPENSATION FOR VESTED WATER RIGHTS TAKEN BY THE FEDERAL GOVERNMENT PURSUANT TO THE IMPLIED RESERVATION DOCTRINE IS EVALUATED IN THIS ARTICLE. THE AUTHOR CONSIDERS THAT PORTION OF THE REPORT OF THE PUBLIC LAND LAW REVIEW COMMISSION DEALING WITH THE IMPLIED RESERVATION DOCTRINE AND THE JUDICIAL BACKGROUND OF THE DOCTRINE. THE AUTHOR CONTENDS THAT THE COMMISSION'S PROPOSAL THAT THE FEDERAL GOVERNMENT SHOULD DETERMINE ITS WATER REQUIREMENTS 40 YEARS IN ADVANCE IS IMPRACTICAL. HE ALSO FEELS THAT A SENSIBLE SYSTEM OF WATER RIGHTS OUGHT TO INCLUDE SECURITY, AND THAT THERE SHOULD BE NO UNCOMPENSATED TRANSFER OF WATER RIGHTS FROM ONE USER TO ANOTHER. BECAUSE OF THE BUREAUCRATIC TENDENCY TO AVOID THE CHARGE OF HAVING GIVEN AWAY FEDERAL RIGHTS, THE AUTHOR RECOMMENDS THAT CONGRESS PROVIDE SPECIFIC GUIDELINES FOR COMPENSATION, THE COMMISSION SEEMS TO REGARD COURT-MADE LAW AS LESS SUSCEPTIBLE TO CONGRESSIONAL AMENDMENT THAN STATUTORY LAW, BUT THE AUTHOR CONCLUDES THAT THIS MAY BE IRRELEVANT, SINCE THE FLOOD CONTROL ACT OF 1944 PROVIDES FOR COMPENSATION FOR THE TAKING OF A WATER RIGHT VESTED BY THE LAWS OF THE CONCERNED STATE.

RESERVATION DOCTRINE/COMPENSATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER SUPPLY/FEDERAL JURISDICTION/FEDERAL RESERVATIONS/JURISDICTION/STATE JURISDICTION/WATER RIGHTS/FEDERAL GOVERNMENT/STATE GOVERNMENTS/ADMINISTRATION/ADMINISTRATIVE AGENCIES/LEGAL ASPECTS/WATER DEMAND/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER SHORTAGE/PLANNING/ECONOMIC IMPACT/CONDEMNATION VALUE/WATER UTILIZATION

0038

CASTRO, R.H.

1977

STATEMENT OF GOVERNOR RAUL H. CASTRO TO THE WATER RESOURCE POLICY STUDY HEARING, LOS ANGELES, CALIFORNIA, JULY 29, 1977.

N.P. Mimeo. 2 P.

WESLEY STEINER, STATE WATER ENGINEER AND EXECUTIVE DIRECTOR OF THE ARIZONA STATE WATER COMMISSION PRESENTED THIS STATEMENT CONCERNING FEDERAL WATER RESOURCE POLICY. WHILE AGREEING THAT THERE IS A NEED FOR REVIEW OF EXISTING WATER RESOURCE POLICIES, CASTRO SAYS THERE IS NO NECESSITY FOR AN OVERRIDING FEDERAL WATER RIGHTS SYSTEM. REGIONAL AND STATE-BY-STATE VARIATIONS IN HYDROLOGY AND WATER USE PATTERNS DICTATE AGAINST NATIONAL POLICIES IN MANY POLICY AREAS. HE CALLED FOR MORE TIME TO REVIEW THE POLICY OPTIONS AND THE OPPORTUNITY FOR THE STATES TO ASSIST IN THE CONSIDERATION OF OPTIONS AND IN THE SELECTION OF POLICIES THAT REFLECT REGIONAL DIFFERENCES.

FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER POLICY/WATER RIGHTS/STATE JURISDICTION/STATE GOVERNMENTS/ARIZONA/WATER QUALITY STANDARDS/FEDERAL PROJECT POLICY/REGIONAL DEVELOPMENT

0039

CHALMERS, J.R.

1974

SOUTHWESTERN GROUNDWATER LAW: A TEXTUAL AND BIBLIOGRAPHIC INTERPRETATION.
UNIVERSITY OF ARIZONA, TUCSON, OFFICE OF ARID LANDS STUDIES, ARID LANDS RESOURCE INFORMATION PAPER 4. 229 P.

THIS PAPER ATTEMPTS TO BRING TOGETHER UP-TO-DATE INFORMATION ON THE INTERPRETATION OF GROUNDWATER LAW DOCTRINES AND APPLIED WATER MANAGEMENT POLICIES IN THE SOUTHWESTERN STATES OF ARIZONA, CALIFORNIA, COLORADO, NEVADA, NEW MEXICO, TEXAS, AND UTAH, WHERE NONE IS ABLE TO MEET PRESENT WATER DEMAND FROM SURFACE SUPPLIES. THE RESULTING MINING OF GROUNDWATER, LARGELY TO MEET IRRIGATION NEEDS, IS CREATING A CRITICAL SITUATION THAT EACH OF THE STATES COVERED SEEKS TO MEET IN A VARIETY OF WAYS. THE DOCTRINES OF CORRELATIVE RIGHTS, THE ENGLISH COMMON LAW, PRIOR APPROPRIATION AND ITS CONTEMPORARY MODIFICATIONS, ARE ALL DISCUSSED, STATE BY STATE. WHILE ARIZONA HAS BEEN SELECTED TO SERVE AS A CASE STUDY TO PUT THE PROBLEM OF A DIMINISHING GROUNDWATER SUPPLY IN PERSPECTIVE, THERE IS ALSO A CHRONOLOGICAL SURVEY OF THE DEVELOPMENT OF GROUNDWATER RIGHTS LAW FOR EACH OF THE STATES. A FINAL CHAPTER DEALS WITH THE AUTHOR'S CONCEPT OF A STATUTORY REVISION OF ARIZONA'S CODE, WITH A MODIFIED PRIOR APPROPRIATION DOCTRINE RECOMMENDED. APPENDED IS A 180-ITEM COMPUTERIZED ANNOTATED BIBLIOGRAPHY.

GROUNDWATER/JUDICIAL DECISIONS/LEGAL ASPECTS/SOUTHWEST U.S./WATER LAW/ARIZONA/CALIFORNIA/COLORADO/NEVADA/NEW MEXICO/TEXAS/UTAH/BIBLIOGRAPHIES/CONJUNCTIVE USE/GROUNDWATER MINING/INSTITUTIONAL CONSTRAINTS/IRRIGATION WATER/OVERDRAFT/PUMPING/PRIOR APPROPRIATION/REASONABLE USE/SURFACE-GROUNDWATER RELATIONSHIPS/WATER RIGHTS/WATER ALLOCATION(POLICY)/WATER MANAGEMENT(APPLIED)/WATER RESOURCES DEVELOPMENT/CORRELATIVE RIGHTS/ENGLISH RULE/AGRICULTURAL USE OF WATER/CRITICAL GROUNDWATER AREAS

0040

CHRISMAN, J., JR./SNYDER, J.H./MOORE, C.V.

1976

WATER PROBLEMS IN THE COLORADO RIVER BASIN: LEGAL AND INSTITUTIONAL FRAMEWORK.

U.S. DEPARTMENT OF AGRICULTURE, ECONOMIC RESEARCH SERVICE, WASHINGTON, D.C.
AVAILABLE NTIS AS PB-263 033. SWRA W77-03830.

A COMPREHENSIVE REVIEW IS PRESENTED OF STATE, INTERSTATE, AND INTERNATIONAL ARRANGEMENTS, AGREEMENTS, CONTRACTS AND LEGAL DECISIONS THAT HAVE GOVERNED OR NOW DICTATE MANAGEMENT OF THE WATERS IN THE COLORADO RIVER. EMPHASIS IS PLACED ON LEGAL AND INSTITUTIONAL ARRANGEMENTS AS THEY RELATE TO WATER QUALITY MANAGEMENT PROBLEMS. IMPLICATIONS OF RECENT DECISIONS GOVERNING CONSTRUCTION OF A DESALTING PLANT ARE INCLUDED.

WATER QUALITY CONTROL/INTERSTATE/FEDERAL-STATE WATER RIGHTS CONFLICTS/LEGAL ASPECTS/ORDINANCES/COLORADO RIVER BASIN/CALIFORNIA/ARIZONA/LEGAL ASPECTS/INSTITUTIONS/WATER RIGHTS/INTERNATIONAL WATERS/DESALINATION PLANTS

0041

CLARK, C.D.

1965

WATER LAW, POLITICS, AND ECONOMICS: FEDERAL CONTROL OF WATER RESOURCES.

OREGON STATE UNIVERSITY, CORVALLIS, WATER RESOURCES RESEARCH INSTITUTE. 21 P.
SWRA W69-05297.

THE REPORT DISCUSSES THE CONSTITUTIONAL SOURCES OF THE FEDERAL GOVERNMENT'S AUTHORITY TO DEVELOP, UTILIZE, AND CONSERVE WATER RESOURCES AND CERTAIN LANDMARK DECISIONS OF THE U.S. SUPREME COURT. POWER OVER THE NATION'S WATER RESOURCES IS FOUNDED UPON THE GENERAL POWERS EXPRESSLY DELEGATED TO CONGRESS, E.G., UNDER

THE COMMERCE CLAUSE AND THE PROPERTY CLAUSE OF THE CONSTITUTION. THE REPORT RELATES THE HISTORY OF CONGRESS' COMMERCE POWER. CONSTITUTIONAL DICTATES AND SUPREME COURT CASES ARE USED TO EXTENSIVELY DISCUSS FEDERAL CONTROL OF NAVIGABLE AND NON-NAVIGABLE WATERS, THE EXPANDING CONCEPT OF NAVIGABILITY, THE EFFECT OF EXERCISING COMMERCE POWER UPON NON-FEDERAL INTERESTS, AND THE PROPRIETARY POWER OF CONGRESS. CONSTITUTIONAL SOURCES OF AUTHORITY FOR WATER LEGISLATION OTHER THAN THE COMMERCE AND PROPERTY CLAUSES INCLUDE THE WAR POWER, TREATY-MAKING POWER, AND THE GENERAL WELFARE CLAUSE. THE DISCUSSION REVEALS A 19TH CENTURY LEGACY OF NAVIGATION SERVITUDE OF PRIVATE INTERESTS TO THE NATION AND STATE LAWS GOVERNING PRIVATE WATER RIGHTS. IT ILLUSTRATES 20TH CENTURY RESOURCE MATTERS. THE REPORT POINTS TO THE FACT THAT OUR LEGAL STRUCTURE IS INADEQUATE FOR TODAY'S PROBLEMS.

FEDERAL JURISDICTION/JUDICIAL DECISIONS/WATER RESOURCES/NAVIGABLE WATERS/
NON-NAVIGABLE WATERS/FEDERAL-STATE WATER RIGHTS CONFLICTS/PROPRIETARY POWER/
STATE JURISDICTION/LEGAL ASPECTS/COMMERCE CLAUSE/NAVIGATION SERVITUDE

0042

CLARK, R.E. ET AL

1973

WATERS AND WATER RIGHTS. 7 VOLS.

ALLEN SMITH CO., INDIANAPOLIS, INDIANA.

AN EXHAUSTIVE ANNOTATED ANALYSIS OF THE COMPLETE CORPUS OF THE LAW OF WATER. INCLUDED IS A CHAPTER ON WESTERN GROUNDWATER LAW BY CLARK HIMSELF, AN AUTHORITY IN THE FIELD OF LEGAL MANAGEMENT OF NATURAL RESOURCES, AS WELL AS OTHER PAPERS BY RECOGNIZED EXPERTS.

WATER LAW/JUDICIAL DECISIONS/WATER POLICY/LEGAL ASPECTS/GROUNDWATER/WATER RIGHTS/PUBLIC RIGHTS/LEGISLATION/COMMON LAW/PRIOR APPROPRIATION/REASONABLE USE/GROUNDWATER MINING/WEST U.S./CORRELATIVE RIGHTS/ENGLISH RULE/MUTUAL PRESCRIPTION

0043

CLYDE, E.W. ET AL

1967

FEDERAL-STATE RIGHTS AND RELATIONS: THE SPENDING POWER, SECTION 103. IN R.E. CLARK, ED., WATERS AND WATER RIGHTS, V. 2, P. 83-109.

ALLEN SMITH COMPANY, INDIANAPOLIS, INDIANA. 7V. SWRA W68-01301.

THE SPENDING POWER OFFERS A BASIS FOR VAST FEDERAL RESERVATION OF WATER RESOURCES. INJUNCTIVE RELIEF AGAINST FEDERAL OFFICIALS INVOLVED IN FEDERAL WATER-RESOURCES PROJECTS IS UNAVAILABLE EXCEPT WHERE SUCH OFFICES ACT BEYOND THEIR STATUTORY AUTHORITY OR WHERE, THOUGH ACTING WITHIN THEIR AUTHORITY, SUCH AUTHORITY OR MANNER IN WHICH IT IS EXERCISED IS CONSTITUTIONALLY VOID. THE MCCARRAN AMENDMENT PURPORTS TO WAIVE FEDERAL SOVEREIGN IMMUNITY IN WATER-RIGHTS LITIGATION. HOWEVER, IT HAS BEEN CONSTRUED TO APPLY ONLY TO SUITS IN WHICH PLAINTIFFS SEEK TO SETTLE THEIR RIGHTS AGAINST ALL OTHERS ASSERTING RIGHTS IN THE SAME WATER, THEREBY GREATLY REDUCING THE EFFECT OF THE STATUTE. FEDERAL COURTS HAVE NO JURISDICTION UNDER THE AMENDMENT. FULL OF AMBIGUITIES AND CONFLICTS, THE ACT NEEDS REVISION AND THE ENTIRE ISSUE OF SOVEREIGN IMMUNITY VIS-A-VIS WATER RIGHTS NEEDS REAPPRAISAL RESPONSIVE TO RECENT CRITICISM OF THAT DOCTRINE. THE SCOPE OF FEDERAL WATER LEGISLATION LEAVES NO DOUBT AS TO CONGRESS'S AUTHORITY. A NATIONAL WATER POLICY IS NEEDED FOR A TIME WHEN EXTENSIVE FEDERAL POWERS WILL BE REQUIRED TO REALLOCATE WATER AMONG THE STATES. THE STATES SHOULD ADOPT A MASTER PLAN CO-ORDINATING WATER USE AMONG THEMSELVES.

APPROPRIATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL JURISDICTION/
POLITICAL ASPECTS/JUDICIAL DECISIONS/WATER ALLOCATION (POLICY)/STATE
JURISDICTION/MCCARRAN AMENDMENT

0044

COLORADO RIVER CONFERENCE, DENVER, 1927

1927A

PARTIAL PROCEEDINGS OF CONFERENCE OF GOVERNORS ON THE COLORADO RIVER, AUGUST
22-SEPTEMBER 1.

ARIZONA COMMISSION ON THE COLORADO RIVER, PHOENIX. 23 P.

THIS PUBLICATION INCLUDES SPEECHES OF UTAH GOVERNOR GEORGE H. DERN AND U.S. SENATOR KEY PITTMAN OF NEVADA AS WELL AS A RESOLUTION ADOPTED BY THE CONFERENCE CONCERNING POTENTIAL CLAIMS BY MEXICO TO COLORADO RIVER WATER. GOVERNOR DERN URGES COOPERATION AMONG ALL STATES THROUGHOUT THE BASIN IN SOLVING COLORADO RIVER PROBLEMS AND ARGUES IN FAVOR OF THE ABSOLUTE JURISDICTION OF THE STATES OVER THEIR STREAMS AND AGAINST THE AUTHORITY OF THE FEDERAL GOVERNMENT TO CONTROL THE LAND AND WATER OF THE STATES. DERN ALSO ADDRESSES THE PROBLEM OF DIVIDING COLORADO RIVER WATER AMONG THE STATES IN AN EQUITABLE AND JUST MANNER, AND CONCLUDES WITH AN EXPLANATION OF THE ATTITUDES OF THE UPPER BASIN STATES WHICH UNDERLIE THEIR POSITIONS RELATING TO PROBLEMS OF ATTAINING AGREEMENT ON THE RIGHTS TO AND USES OF THE COLORADO RIVER. SENATOR PITTMAN EXPLAINS HIS POSITION ON THE SWING-JOHNSON BILL AND THE DISPOSAL OF HYDRO-ELECTRIC POWER AND ARGUES FOR THE NEED TO AMEND THE BILL TO MAINTAIN THE SOVEREIGN RIGHTS OF THE STATES TO CONTROL THEIR WATER AND PREVENT VIOLATION OF STATES' RIGHTS BY THE UNITED STATES GOVERNMENT. PITTMAN CONCLUDES BY OFFERING A RESOLUTION OF BEHALF OF NEVADA TO THE CONFERENCE OF GOVERNORS REGARDING STATES' RIGHTS TO COLORADO RIVER WATER AND THE ELECTRICITY GENERATED AND HYDRO-ELECTRIC DAMS ON THE RIVER. FINALLY, A RESOLUTION ('MEMORIAL CONCERNING INTERNATIONAL RELATIONS RESPECTING THE COLORADO RIVER') CALLING FOR THE U.S. GOVERNMENT TO INFORM MEXICO THAT WITHOUT A TREATY IT HAS NO LEGAL RIGHT TO A CONTINUANCE OF THE RIVER'S FLOW NOR TO WATER MADE AVAILABLE BY STORAGE PROJECTS. THE RESOLUTION FURTHER SUGGESTS A SPECIAL COMMISSION BE CREATED BY CONGRESS. (ULLERY-ARIZONA)

COLORADO RIVER BASIN/COLORADO RIVER/ARIZONA/BOULDER CANYON PROJECT ACT/
COLORADO RIVER COMPACT/MEXICAN WATER TREATY/WATER RIGHTS/WATER POLICY/EQUITABLE
APPORTIONMENT/POLITICAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER
ALLOCATION (POLICY)/CALIFORNIA/HYDROELECTRIC POWER

0045

COLORADO RIVER CONFERENCE, DENVER, 1927

1927B

PARTIAL PROCEEDINGS OF CONFERENCE OF GOVERNORS ON THE COLORADO RIVER, AUGUST
22-SEPTEMBER 1.

ARIZONA COMMISSION ON THE COLORADO RIVER, PHOENIX. 80 P.

SEVEN SPEECHES ADDRESSING THE ISSUES INVOLVED IN THE DISPUTE BETWEEN ARIZONA AND CALIFORNIA OVER COLORADO RIVER WATER DELIVERED AT A CONFERENCE OF GOVERNORS, COMMISSIONERS, AND ADVISORS FROM BOTH THE UPPER AND LOWER BASIN STATES BY ADVOCATES OF THE STATE OF ARIZONA INCLUDING GOVERNOR HUNT, THREE MEMBERS OF THE ARIZONA COMMISSION ON THE COLORADO RIVER (H.S. M'CLUSKEY, THOMAS MADDOCK, AND SEN. A.H. FAVOUR), AND THE COMMISSION'S SECRETARY (SEN. MULFORD WINSOR).

TWO REBUTTAL SPEECHES TO TESTIMONY GIVEN BY CALIFORNIA OFFICIALS ARE ALSO INCLUDED IN THIS PAMPHLET. GOV. HUNT CRITICIZES A MENACING PROVISION IN THE PROPOSED BOULDER CANYON DAM ACT FOR CONTROL OF COLORADO RIVER WATER BY THE SECRETARY OF INTERIOR; PRESENTS ELEVEN REASONS FOR ARIZONA'S INTEREST IN THE COLORADO RIVER; AND OFFERS EIGHT PROPOSALS AS A BASIS FOR PREPARING A COMPACT BETWEEN ARIZONA, CALIFORNIA, AND NEVADA AS A SUPPLEMENT TO THE COLORADO RIVER COMPACT. SEN. WINSOR DISCUSSES ARIZONA'S RIGHTS TO THE RIVER'S WATER; THE STATE'S INTERESTS IN USING THE WATER; THE REASONS FOR ARIZONA'S REFUSAL TO RATIFY THE COLORADO RIVER COMPACT; AND THE STATE'S DESIRE TO REACH AN AGREEMENT. M'CLUSKEY ADDRESSES ARIZONA'S CONTRIBUTION TO AND STAKE IN THE RIVER'S WATER; THE CLAIMS OF UPPER BASIN STATES; ARIZONA'S OPPOSITION TO THE COMPACT; AND THE POTENTIAL VIOLATION OF STATE'S RIGHTS BY PROPOSALS OF CALIFORNIA AND THE FEDERAL GOVERNMENT. MADDOCK ELABORATES ON ARIZONA'S PROPOSALS REGARDING THE STATE'S TRIBUTARIES AND ITS POSITION ON THE BOULDER CANYON DAM. HE FURTHER ADDRESSES THE ISSUES OF MEXICAN WATER; OF WHO SHOULD SETTLE DISAGREEMENTS; CALIFORNIA'S POWER REVENUE; AND WATER STORAGE FOR POWER GENERATION AND AGRICULTURE. SEN. FAVOUR EXPLAINS ARIZONA'S FIVE PROPOSALS REGARDING A SUPPLEMENTARY COMPACT AMONG THE STATES OF THE LOWER BASIN AND WATER FOR MEXICO; THE RIGHT OF STATES TO CONTROL WATER WITHIN THEIR BOUNDARIES; TRIBUTARY STREAMS IN ARIZONA; AND THE ALLOCATION OF WATER IN THE LOWER BASIN. FAVOUR ALSO CRITICALLY ADDRESSES CALIFORNIA'S PROPOSALS FOR PLACING A TIME LIMITATION ON ALLOCATION; ITS CLAIM TO MORE ECONOMICAL USE THAN ARIZONA; UNALLOCATED WATER; AND ARBITRATION PROPOSALS. IN A REBUTTAL SPEECH WINSOR DISCUSSES THE POINTS OF CONTENTION BETWEEN ARIZONA AND CALIFORNIA OVER MANY OF THE FACETS OF WATER STORAGE IN THE PROPOSED BOULDER CANYON RESERVOIR. A REBUTTAL ADDRESS BY MADDOCK PERTAINS TO SOME OF THE EXCEPTIONS TAKEN BY CALIFORNIA TO ARIZONA'S POSITIONS. (ULLERY-ARIZONA)

COLORADO RIVER BASIN/COLORADO RIVER/ARIZONA/BOULDER CANYON PROJECT ACT/COLORADO RIVER COMPACT/MEXICAN WATER TREATY/WATER RIGHTS/WATER POLICY/EQUITABLE APPORTIONMENT/POLITICAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER ALLOCATION(POLICY)/CALIFORNIA/HYDROELECTRIC POWER

0046

COLORADO RIVER CONFERENCE, DENVER, 1927

1927C

PARTIAL PROCEEDINGS OF CONFERENCE OF GOVERNORS ON THE COLORADO RIVER.
2D SESSION, SEPTEMBER 19-OCTOBER 4.

ARIZONA COMMISSION ON THE COLORADO RIVER, PHOENIX. 32 P.

INCLUDED IN THIS PUBLICATION ARE AN ADDRESS OF UTAH GOVERNOR GEORGE H. DERN, CHAIRMAN OF THE CONFERENCE; ARIZONA'S REPLY TO THE UPPER BASIN GOVERNORS' PROPOSAL ON WATER DIVISION; A SPEECH OF CLIFTON MATHEWS, LEGAL ADVISOR OF THE ARIZONA COMMISSION; AND THE PITTMAN RESOLUTION. GOVERNOR DERN STATES THE PURPOSE OF THE CONFERENCE TO ACHIEVE RATIFICATION OF THE SANTA FE COMPACT BY ALL SEVEN COLORADO RIVER BASIN STATES REQUIRES THAT DISCUSSION GO BEYOND THE DIVISION OF WATER ALLOCATED TO THE LOWER BASIN AND INCLUDE ALL ASPECTS OF THE DISPUTE IN THE LOWER BASIN. DERN REVIEWS THE SITUATION IN EACH OF THE LOWER BASIN STATES NECESSARY FOR RATIFICATION. HE CHARACTERIZES CALIFORNIA'S CENTRAL CONCERN AS BEING A GUARANTEE THAT LARGE STORAGE FACILITIES WILL BE BUILT AND CALIFORNIA'S RIGHTS TO THE WATER WILL BE ASSURED, THUS SAFEGUARDING THE IMPERIAL VALLEY FROM DESTRUCTION BY FLOODS, DROUGHT, AND SILT, AS WELL AS PROVIDING WATER FOR LAND RECLAMATION AND TO AUGMENT THE SUPPLY FOR LOS ANGELES AND OTHER SOUTHERN CALIFORNIA CITIES. IN THE CASE OF ARIZONA A CENTRAL CONCERN IS THE RECOGNITION OF ITS RIGHT TO OBTAIN REVENUE FROM AND CONTROL DEVELOPMENT OF HYDRO-ELECTRICITY. PROTECTION AGAINST MEXICAN CLAIMS TO COLORADO RIVER WATER IS ALSO A CONDITION FOR RATIFICATION BY ARIZONA. NEVADA ACCEPTS THE COMPACT BUT THREATENS TO RESCIND UNLESS THE RIGHT OF STATES TO DEMAND AND RECEIVE COMPENSATION FOR THE USE OF THEIR LANDS AND WATERS IS RECOGNIZED, A POSITION IDENTICAL TO ARIZONA'S. DERN ALSO REVIEWS THE POSITION OF UTAH AND PRESENTS THAT STATE'S FIVE ESSENTIAL REQUIREMENTS IN THE SOLUTION OF THE COLORADO RIVER PROBLEM. (ULLERY-ARIZONA)

COLORADO RIVER BASIN/COLORADO RIVER/ARIZONA/BOULDER CANYON PROJECT ACT/COLORADO RIVER COMPACT/MEXICAN WATER TREATY/WATER RIGHTS/WATER POLICY/EQUITABLE APPORTIONMENT/POLITICAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER ALLOCATION(POLICY)/CALIFORNIA/HYDROELECTRIC POWER

0047

COLORADO, COLORADO RIVER WATER CONSERVATION DISTRICT

1950

THE STATUS OF THE COLORADO RIVER: A MEMORANDUM PREPARED FOR THE PRESIDENT'S WATER RESOURCES POLICY COMMISSION.

N.P., DENVER. 26 P.

THE STATE OF COLORADO'S ROLE IN COLORADO RIVER WATER RESOURCE DEVELOPMENT IS EXPLAINED. ALTHOUGH BASICALLY CONCERNED WITH UPPER BASIN STATES, THERE IS DISCUSSION OF CALIFORNIA'S CLAIMS TO COLORADO RIVER WATER. THE WASTE OF COLORADO RIVER WATER FLOW INTO THE OCEAN IS CITED. IT IS RECOMMENDED THAT MORE MONEY BE GIVEN TO THE BUREAU OF RECLAMATION TO LOOK INTO BASIN-WIDE PROJECTS AND THAT A GENERAL PLAN OF WATER USE IN BOTH UPPER AND LOWER BASINS BE FORMULATED. A STRONG ANTI-CALIFORNIA POSITION ON WATER USE IS PRESENTED. 'IT MIGHT FAIRLY BE CONSIDERED GREAT PRESUMPTION FOR CALIFORNIA, AS SHE HAS, TO DECLARE HERSELF IN ON THE DIVISION OF THE WATER OF COLORADO RIVER AND IT IS CERTAINLY AN UNFAIR PRESUMPTION FOR HER TO CLAIM, AS SHE DOES, THE LION'S SHARE OF THE WATER OF THAT RIVER MERELY BECAUSE SHE FEELS THAT SHE MIGHT HAVE NEED FOR SO MUCH OF IT.' COLORADO FEELS THAT IT HAS BEEN BURNED BY THE 1922 AND 1948 COMPACTS WHICH REQUIRES DELIVERY OF TOO MUCH WATER TO OTHER COLORADO RIVER BASIN STATES. CONCERN IS ALSO EXPRESSED THAT THE UNCERTAINTIES OF THE 1922 COMPACT HAVE NOT BEEN RESOLVED.

COLORADO/COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/CALIFORNIA/ WATER RESOURCES/INTERSTATE COMPACTS/WATER RESOURCES DEVELOPMENT/U.S. BUREAU OF RECLAMATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER UTILIZATION/WATER SUPPLY

0048

COLORADO, COLORADO RIVER WATER CONSERVATION DISTRICT V. UNITED STATES

1976

[THE DOCTRINE OF PRIOR APPROPRIATION AS APPLIED TO INDIAN WATER RIGHTS ON RESERVATIONS]

96 S. CT. 1236-51. SWRA W77-04933.

PLAINTIFF UNITED STATES BROUGHT SUIT SEEKING A DECLARATION OF ITS RIGHTS TO WATERS IN THE COLORADO RIVER WATER DISTRICT. THE FEDERAL DISTRICT COURT DISMISSED ON THE BASIS THAT THE STATE COURT SHOULD HAVE PRIOR JURISDICTION. THE APPELLATE COURT REVERSED AND THE UNITED STATES SUPREME COURT AFFIRMED THE REVERSAL BUT UPHELD THE DISMISSAL ON OTHER GROUNDS. SPECIFICALLY, THE MCCARRAN AMENDMENT DOES NOT DIVEST FEDERAL COURTS OF JURISDICTION IN MATTERS OF WATER RIGHTS ADJUDICATION. THE MCCARRAN AMENDMENT, HOWEVER, ESTABLISHES A POLICY OF FURTHERING UNIFIED WATER RIGHTS ADJUDICATION. IN THIS CASE, THE STATE OF COLORADO HAD AVAILABLE A SYSTEM FOR ADJUDICATION AND MANAGEMENT OF WATER USE RIGHTS. UNDER COLORADO LEGISLATION, A SINGLE CONTINUOUS PROCEEDING WHICH REACHES ALL CLAIMS IS ESTABLISHED AND THE PROCEEDING ANTEDATES THIS SUIT. FACTORS WEIGHING IN FAVOR OF STATE ADJUDICATION INCLUDE THE FOLLOWING: RESPONSIBILITY FOR ALLOCATION MANAGEMENT IS GIVEN TO THE STATE/THE SUIT INVOLVES OVER A THOUSAND DEFENDANTS, MOST OF WHOM ARE IN COLORADO/AND THERE IS AN ABSENCE OF ANY EXTENDED PROCEEDINGS IN FEDERAL COURTS. THE INDIAN RIGHTS INVOLVED CAN THUS BE DETERMINED IN STATE COURT UNDER THE MCCARRAN AMENDMENT.

WATER DISTRICTS/COLORADO/ADJUDICATION PROCEDURE/PREFERENCES (WATER RIGHTS) /
WATER RIGHTS/APPROPRIATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE
JURISDICTION/FEDERAL JURISDICTION/RESERVATION DOCTRINE/INDIAN RESERVATIONS/
FEDERAL RESERVATIONS/JUDICIAL DECISIONS/LEGAL REVIEW/WATER LAW/COLORADO RIVER/
MCCARRAN AMENDMENT

0049

COMMITTEE OF FOURTEEN OF THE SEVEN STATES OF THE COLORADO RIVER BASIN

1939

PROCEEDINGS OF THE COMMITTEE OF THE STATES.

SAME AS AUTHOR, LOS ANGELES, CALIFORNIA. 106 P.

BASICALLY A TRANSCRIPT OF THE MEETING OF THE COLORADO RIVER BASIN STATES AT WHICH VARIOUS PROJECTS ARE DISCUSSED. IT IS MORE CONCERNED WITH WATER RIGHTS BETWEEN AND AMONG BASIN STATES THAN BETWEEN THE BASIN STATES AND THE FEDERAL GOVERNMENT. THERE IS DISCUSSION OF A POSSIBLE TRI-STATE COMPACT INVOLVING CALIFORNIA, NEVADA, AND ARIZONA, 'TO PROVIDE FOR THE EQUITABLE DIVISION AND APPORTIONMENT OF THE USE OF THE WATERS OF THE COLORADO RIVER SYSTEM APPORTIONED TO THE LOWER BASIN UNDER THE COLORADO RIVER COMPACT.' THERE IS SOME DISCUSSION OF THE OBJECTIONS TO TAKING WATER OUT OF THE BASIN. ARIZONA'S REPRESENTATIVE COMMENTED THAT THE GRAVEST QUESTION FACING THE COLORADO RIVER BASIN STATES WAS THIS QUESTION OF REMOVING WATER FROM THE BASIN. THROUGHOUT THE PROCEEDINGS THE FEDERAL GOVERNMENT IS LOOKED UPON AS BASICALLY A SUPPLIER OF FINANCING TO PROJECTS THE STATES DECIDE THEY WANT.

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/WATER RESOURCES/
WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/INTERSTATE
COMPACTS/ARIZONA/NEVADA/CALIFORNIA/NEW MEXICO/UTAH/WYOMING/COLORADO/WATER
POLICY/WATER TRANSFER

0050

CONFERENCE OF STATE AND FEDERAL WATER OFFICIALS

1970

LAND AND WATER ISSUES OF THE SEVENTIES. ANNUAL CONFERENCE... 4TH, CHARLESTON, SOUTH CAROLINA, 1970.

WATER RESOURCES COUNCIL, WASHINGTON, D.C. 191 P. AVAILABLE NTIS AS
PB-209 155. SWRA W73-03571.

THE OPENING REMARKS TO THE CONFERENCE DISCUSSED THE NEED FOR COMBINED FEDERAL AND STATE GOVERNMENT ACTION IN THE SOLUTION OF WATER-RELATED PROBLEMS. SEVERAL PROGRAMS AND RECOMMENDATIONS OF THE WATER RESOURCES COUNCIL WERE REVIEWED. CONFERENCE PANELISTS DISCUSSED THE QUESTION, 'WATER AS PROPERTY: PRIVATE, STATE OR FEDERAL'. IN THIS CONTEXT, AN ANALYSIS WAS MADE OF THE RESERVATION DOCTRINE, THE APPROPRIATION DOCTRINE AND THE NAVIGATIONAL SERVITUDE DOCTRINE. OTHER TOPICS DISCUSSED BY PANELISTS WERE FLOODPLAIN AND COASTAL ZONE MANAGEMENT AND EFFECTIVE STATE AND FEDERAL PARTNERSHIPS IN WATER AND RELATED LAND RESOURCE PLANNING. PANELISTS DETAILED THE REACTIONS OF THE GEOGRAPHICAL UNITS OF THE UNITED STATES TO THESE ISSUES. THE ORGANIZATION AND PROGRAMS OF THE NEW ENGLAND RIVER BASIN COMMISSION WERE ALSO DESCRIBED. THE ROLE OF THE UNITED STATES DEPARTMENT OF AGRICULTURE IN WATER AND RELATED LAND RESOURCES PLANNING AND DEVELOPMENT WAS DISCUSSED, AS WAS THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969. ALSO INCLUDED IS AN ADDRESS ON WATER POLLUTION.

RESERVATION DOCTRINE/WATER LAW/WATER POLLUTION CONTROL/U.S. WATER RESOURCES
COUNCIL/STATE GOVERNMENTS

0051

CORKER, C.E.

1970

LET THERE BE NO NAGGING DOUBTS: NOR SHALL PRIVATE PROPERTY, INCLUDING WATER RIGHTS, BE TAKEN FOR PUBLIC USE WITHOUT JUST COMPENSATION.

LAND AND WATER LAW REVIEW 6 (1):109-115. SWRA W71-06621.

THE AUTHOR OF THIS ARTICLE CONTENDS THAT WHEN THE UNITED STATES EXERCISES THE RESERVATION DOCTRINE AND UTILIZES WATER FORMERLY USED BY PRIVATE CITIZENS, IT SHOULD PAY FOR IT. THE PUBLIC LAND LAW REVIEW COMMISSION MADE FOUR PROPOSALS DEALING WITH THE RESERVATION DOCTRINE: 1) FEDERAL AGENCIES SHOULD ASCERTAIN AND GIVE PUBLIC NOTICE OF THE PROJECTED WATER REQUIREMENTS FOR RESERVED AREAS FOR THE NEXT FORTY YEARS, 2) PROCEDURES FOR CONTESTING EVERY CLAIM SHOULD BE ESTABLISHED, 3) FUTURE RESERVATIONS OF PUBLIC LANDS SHOULD BE ACCOMPANIED BY A STATEMENT OF PROSPECTIVE WATER REQUIREMENTS AND AN EXPRESS RESERVATION OF SUCH QUANTITY OF WATER, AND 4) COMPENSATION SHOULD BE AWARDED WHERE SUCH RESERVATION RESULTS IN INTERFERENCE WITH CLAIMS VALID UNDER STATE LAW PRIOR TO ARIZONA V. CALIFORNIA, 373 U.S. 546 (1963). THE AUTHOR CONTENDS THAT IT WOULD BE IMPOSSIBLE TO DETERMINE THE PROJECTED WATER REQUIREMENTS FOR THE NEXT FORTY YEARS AND THAT IT IS IMPRACTICAL TO ATTEMPT TO DETERMINE PROSPECTIVE WATER REQUIREMENTS FOR FUTURE RESERVATIONS OF PUBLIC LAND. HE BELIEVES THAT JUDGES UNSPECIALIZED IN WATER ADMINISTRATION ARE NOT EQUIPPED TO HANDLE WATER RIGHTS CASES. THE AUTHOR ALSO FEELS THAT THERE IS NO VALID REASON FOR DISTINGUISHING BETWEEN APPROPRIATIONS OF WATER BEFORE AND AFTER 1963.

RESERVATION DOCTRINE/COMPENSATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER SUPPLY/FEDERAL RESERVATIONS/ADMINISTRATION/ADMINISTRATIVE AGENCIES/LEGAL ASPECTS/WATER LAW/FEDERAL GOVERNMENT/STATE GOVERNMENTS/PRIOR APPROPRIATION/WATER RIGHTS/FEDERAL JURISDICTION/STATE JURISDICTION/WATER DEMAND/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER SHORTAGE/PLANNING/WATER UTILIZATION/ECONOMIC IMPACT

0052

CORTNER, H.J./BERRY, M.P.

1977

ARIZONA WATER POLICY: CHANGING DECISION AGENDAS AND POLICY STYLES. IN HYDROLOGY AND WATER RESOURCES IN ARIZONA AND THE SOUTHWEST, VOL. 7.

AMERICAN WATER RESOURCES ASSOCIATION, ARIZONA SECTION/ARIZONA ACADEMY OF SCIENCE, HYDROLOGY SECTION, PROCEEDINGS OF THE 1977 MEETINGS, LAS VEGAS, NEVADA, P. 7-14.

THIS PAPER CONTENDS THAT THE CONVENTIONAL STYLE OF WATER POLITICS IN ARIZONA IS OUTMODDED. NEW POLITICAL DEMANDS AND PRESSURES REQUIRE THAT STATE GOVERNMENTS DEVELOP THE DECISION-MAKING CAPABILITIES FOR GREATER INVOLVEMENT IN WATER POLICY FORMULATION, IMPLEMENTATION AND COORDINATION. THE TRADITIONAL POLITICS OF WATER POLICY-MAKING IN ARIZONA REVEALS A POLITICAL STYLE IN WHICH FEDERAL, PRIVATE AND LOCAL INTERESTS DOMINATE, WHILE THE STATE'S FRAGMENTED ADMINISTRATIVE ORGANIZATIONS PLAY THE LIMITED AND SUBORDINATE ROLE OF A REACTOR RATHER THAN AN INITIATOR.

POLITICAL ASPECTS/POLITICAL CONSTRAINTS/WATER POLICY/WATER RESOURCES DEVELOPMENT/ARIZONA/STATE JURISDICTION/STATE GOVERNMENTS/GOVERNMENTAL INTERRELATIONS/FEDERAL-STATE WATER RIGHTS CONFLICTS

0053

CRAIG, L.B.

1972

LIMITING FEDERAL RESERVED WATER RIGHTS THROUGH THE STATE COURTS.

UTAH LAW REVIEW 1972(1):48-59. SWRA W73-07991.

MUCH OF THE SURFACE WATER CURRENTLY BEING APPROPRIATED BY PRIVATE INDIVIDUALS IN THE ARID WESTERN STATES IS SUBJECT TO SUPERIOR FEDERAL RIGHTS BASED ON THE RESERVATION DOCTRINE. THE POSSIBILITY THAT THE GOVERNMENT COULD ASSERT ITS SUPERIOR RIGHTS TO DIVERT PRIVATE APPROPRIATORS HAS DISCOURAGED DEVELOPMENT OF WATER RESOURCES IN THIS REGION. A TRACING OF THE HISTORICAL DEVELOPMENT OF THE RESERVATION DOCTRINE IS FOLLOWED BY A DISCUSSION OF LEGISLATION INTRODUCED TO INITIATE CHANGE. THE ROLE OF THE COURTS IS ALSO DISCUSSED. THE COURTS MUST DETERMINE WHETHER JUSTICE REQUIRES THE PRIVATE APPROPRIATOR WHO HAS ACQUIRED WATER RIGHTS PURSUANT TO STATE LAW WITHOUT KNOWLEDGE OF THE FEDERAL GOVERNMENT'S PRIOR RESERVED RIGHTS TO PAY THE COST OF DIVERSION OF WATER TO FEDERAL RESERVED LANDS OR WHETHER THE COST WOULD MORE PROPERLY BE BORNE BY THE PUBLIC GENERALLY. THE DOCTRINE OF EQUITABLE ESTOPPEL IS EXAMINED IN RELATIONSHIP TO THIS PROBLEM. CONDEMNATION AND COMPENSATION FOR PRIVATE WATER RIGHTS ARE ALSO DISCUSSED.

RESERVATION DOCTRINE/WATER RIGHTS/PRIOR APPROPRIATION/PRIORITIES/LEGAL ASPECTS/
FEDERAL JURISDICTION/FEDERAL-STATE WATER RIGHTS CONFLICTS/JURISDICTION/REMEDIES/
JUDICIAL DECISIONS/LEGISLATION/APPROPRIATION/DIVERSION/WATER UTILIZATION/
EMINENT DOMAIN/COMPENSATION/CONDEMNATION

0054

DAVIS, A.P.

1929

DEVELOPMENT OF THE COLORADO RIVER: THE JUSTIFICATION OF BOULDER DAM.

ATLANTIC MONTHLY 143(2):254-263.

IN THIS ARTICLE THE AUTHOR ARGUES FOR THE NEED TO BUILD THE BOULDER CANYON DAM IN ORDER TO MEET THE IRRIGATION AND FLOOD CONTROL NEEDS OF CALIFORNIA'S IMPERIAL VALLEY, REALIZE THE ELECTRIC POWER ASSETS OF THE DAM, AND PROVIDE A WATER SUPPLY FOR THE CITIES OF SOUTHERN CALIFORNIA. BENEFITS TO THE UPPER BASIN STATES ARE ALSO DISCUSSED. OBJECTIONS TO THE DAM WHICH RAISE ISSUES CONCERNING THE DAM SITE, THE DEMAND FOR AND COST OF THE HYDRO-ELECTRIC POWER TO BE GENERATED, EVAPORATION LOSSES, SILT ACCUMULATION, THE SUITABILITY OF THE WATER FOR IRRIGATION, AND AN ALTERNATIVE PROJECT AT GLEN CANYON ARE DEALT WITH AND REJECTED BY THE AUTHOR. TO CARRY OUT CONSTRUCTION OF THE DAM REQUIRES THAT CERTAIN APPROPRIATION RIGHTS BE WAIVED, A SITUATION DEALT WITH BY A COMPACT CONCERNING THE DIVISION OF THE RIVER WATER AGREED TO BY THE STATES OF THE COLORADO RIVER BASIN AND THE FEDERAL GOVERNMENT.

COLORADO RIVER/COLORADO RIVER BASIN/WATER RESOURCES DEVELOPMENT/COLORADO RIVER
COMPACT/IRRIGATION PROGRAMS/WATER POLICY/WATER ALLOCATION (APPLIED)/ELECTRIC
POWER/MUNICIPAL WATER/FLOOD CONTROL/CALIFORNIA/ARIZONA/MEXICO/PROJECT BENEFITS/
BOULDER DAM/GLEN CANYON PROJECT/COLORADO RIVER COMMISSION/UPPER COLORADO RIVER
BASIN/LOWER COLORADO RIVER BASIN/IMPERIAL VALLEY/APPROPRIATION

0055

DAVIS, C.A.

1958

WATER AND THE LAW. IN WATER RESOURCES AND THE LAW, P. 39-48.

UNIVERSITY OF MICHIGAN, ANN ARBOR, LAW SCHOOL. SWRA W68-00584.

BROAD OVER-ALL ASPECTS OF PROBLEMS FACING WATER RESOURCES AND THE LAW ARE EXAMINED WITH THE THOUGHT THAT AN ERA IS APPROACHING IN WHICH MANY OF OUR CONCEPTS REGARDING THE LAW OF WATERS WILL OF NECESSITY BE REVISED. MANY QUESTIONS ARE POSED REGARDING LEGAL PROBLEMS IN THE FIELD OF WATER RESOURCES, AND THE IMPORTANCE OF POWER OF WATER CONTROL IS EMPHASIZED. SOLUTION TO WATER RESOURCE PROBLEMS WILL REQUIRE MUCH FURTHER RESEARCH AND THE COURAGE TO ACT UPON THE FACTS RESEARCH DISCLOSES. THE ARTICLE ASSERTS THAT ONLY ECONOMIC NECESSITY WILL GAIN THE CONSENT OF THE PEOPLE TO REGULATORY WATER RESOURCES LEGISLATION. THE MOST FUNDAMENTAL LEGAL PROBLEM IN THE FIELD OF WATER RESOURCES IS THOUGHT TO BE THE DELINEATION OF FEDERAL AND LOCAL ACTIVITY AND THE DETERMINATION OF FEDERAL CONSTITUTIONAL POWER. THE ARTICLE CONCLUDES THAT SCARCITY CREATES ALL WATER PROBLEMS. THREE POSSIBILITIES FOR ALLEVIATING SCARCITY ARE REUSE, DEMINERALIZATION OF BRACKISH AND SALT WATER, AND WEATHER MODIFICATION.

COMPETING USES/WATER REQUIREMENTS/WATER STORAGE/LONG-TERM PLANNING/WATER LAW/
WATER POLICY/WATER RIGHTS/WATER RESOURCES/WEATHER MODIFICATION/DESALINATION/
FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER REUSE

0056

DAVIS, C.A.

1959

FEDERAL ENCROACHMENT ON STATE WATER RIGHTS.

AMERICAN BAR ASSOCIATION, SECTION OF MINERAL AND NATURAL RESOURCES LAW, 1959
PROCEEDINGS, P. 80-92. SWRA W70-00549.

FEDERAL ENCROACHMENT ON STATE WATER RIGHTS IS DISCUSSED IN RELATION TO FEDERAL CONSTITUTIONAL LAW. RATHER THAN UNDERTAKING A DETAILED ANALYSIS OF THE CASES, THE AUTHOR CONFINES HIMSELF TO THE CONSEQUENCES THAT FLOW FROM THE VARIOUS LEGAL THEORIES UPON WHICH THE FEDERAL GOVERNMENT BASES ITS POWER. THESE INCLUDE THE POWER TO REGULATE INTERSTATE COMMERCE, THE WAR POWER, THE PROPERTY CLAUSE, THE GENERAL WELFARE CLAUSE, AND THE TREATY POWER. FOCUSING ON STATE WATER RIGHTS IN THE WEST, THE AUTHOR REVEALS HOW THESE CONSTITUTIONAL POWERS HAVE BEEN EXTENDED THROUGH FEDERAL LEGISLATION AND COURT INTERPRETATION TO PLACE WATER RESOURCES UNDER FEDERAL CONTROL. IN RELATION TO THE POSSIBLE UNCONSTITUTIONAL DELEGATION OF POWER OVER FEDERAL WATER RIGHTS, SEVENTEEN INSTANCES OF CONGRESSIONAL LEGISLATION RECOGNIZING THE SUPREMACY OF STATE LAWS ARE DISCUSSED. RATHER THAN DRAWING ANY CONCLUSIONS, THE AUTHOR POINTS OUT THE LEGAL PROBLEMS AND CLAIMS OF THE CONTENDING FORCES AND LEAVES THE CONCLUSIONS TO THE READER. AN APPENDIX, OUTLINING PROVISIONS OF FEDERAL STATUTES IN RECOGNITION OF STATE LAW AS GOVERNING WATER RIGHTS, IS INCLUDED.

FEDERAL JURISDICTION/FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE JURISDICTION/
LEGISLATION/PROPRIETARY POWER/WATER LAW/TREATIES/POLITICAL ASPECTS/JUDICIAL
DECISIONS/RIPARIAN RIGHTS/APPROPRIATION/MEXICAN WATER TREATY/SUBMERGED LANDS
ACT/DESERT LAND ACT/FEDERAL POWER ACT/BOULDER CANYON PROJECT ACT/FEDERAL
GOVERNMENT/WATER RIGHTS/STATE GOVERNMENTS/LEGAL ASPECTS

0057

DE WEEIDT, J.L./GLICK, P.M. EDS.

1973

A SUMMARY DIGEST OF FEDERAL WATER LAWS AND PROGRAMS.

NATIONAL WATER COMMISSION, ARLINGTON, VIRGINIA. 205 P. [FOR SALE BY U.S. GPO, WASHINGTON, D.C. 20402] SWRA W74-09318.

SUMMARIES ARE PRESENTED OF WATER AND WATER RELATED PROGRAMS AND LAWS ADMINISTERED BY THE FEDERAL GOVERNMENT. SUCH PROGRAMS INCLUDE RELATED LAND USE PLANNING, RESEARCH AND DATA COLLECTION, NAVIGATION, MAINTENANCE OF CHANNELS AND OTHER STRUCTURAL IMPROVEMENTS, AND WATERSHED MANAGEMENT. THEY ALSO ENCOMPASS STRUCTURAL MEASURES TO CONTAIN FLOOD FLOWS, LAND TREATMENT MEASURES TO RETARD RUNOFF, AND DISASTER ASSISTANCE. ALSO THERE ARE WATER SUPPLY PROGRAMS TO MAKE WATER AVAILABLE FOR AGRICULTURAL, INDUSTRIAL AND DOMESTIC USES, AS WELL AS MEASURES FOR CONSERVING AND INCREASING WATER SUPPLIES. WATER QUALITY, THE PREVENTION OF POLLUTION, MANAGEMENT AND DEVELOPMENT OF FISH RESOURCES, AND RECREATION ARE STILL OTHER AIMS OF FEDERAL AGENCIES AND PROGRAMS. THIS VOLUME IS A SUMMARY OF THE LAWS PROVIDING FOR ALL THESE PROGRAMS AS WELL AS LEGAL DOCTRINES AND THEIR JUDICIAL DEVELOPMENT CONCERNING NAVIGABILITY AND NAVIGABLE WATERS, APPORTIONMENT OF INTERSTATE WATER, AND RESERVED WATER RIGHTS.

WATER RESOURCES DEVELOPMENT/WATER CONSERVATION/WATERSHED MANAGEMENT/WATER QUALITY CONTROL/FLOOD PLAIN ZONING/WATER SUPPLY/LAND DEVELOPMENT/COMPETING USES/WATER YIELD IMPROVEMENT/CONSUMPTIVE USE/RECREATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER POLLUTION CONTROL/WATER RIGHTS/NAVIGATION

0058

DOERKSEN, H.R.

1972

COLUMBIA RIVER INTERSTATE COMPACT, POLITICS OF NEGOTIATION.

WASHINGTON (STATE) WATER RESEARCH CENTER CENTER, PULLMAN, REPORT 11. 208 P. AVAILABLE NTIS AS PB-213 456. SWRA W73-02614.

THE COLUMBIA INTERSTATE COMPACT REPRESENTED AN ATTEMPT TO ESTABLISH A REGIONAL INSTITUTIONAL STRUCTURE FOR RIVER BASIN DEVELOPMENT AS AN ALTERNATIVE TO FURTHER DEVELOPMENT BY THE FEDERAL GOVERNMENT. AFTER 18 YEARS OF NEGOTIATION, AND SEVERAL ATTEMPTS TO RATIFY THE COMPACT IN THE STATE LEGISLATURE, OREGON AND WASHINGTON HAD NOT RATIFIED. THE OTHER FIVE COMPACTING STATES--IDAHO, MONTANA, NEVADA, UTAH, AND WYOMING--ALL RATIFIED THE COMPACT. ON THE BASIS OF DATA OBTAINED, THE FOLLOWING HYPOTHESES WERE ADVANCED WHICH OFFER A REASONABLE EXPLANATION FOR FAILURE OF THE COMPACT ATTEMPT. THE COMPACT ATTEMPT BECAME EMBROILED IN THE EXISTING CONFLICT REGARDING POWER GENERATION AND MARKETING (PUBLIC VS. PRIVATE) IN WASHINGTON. ROLE PERCEPTIONS OF NEGOTIATORS WERE SUFFICIENTLY DIFFERENT FROM STATE TO STATE AND WITHIN STATES TO MAKE CONSENSUS VERY DIFFICULT. PROVISIONS OF THE COMPACT WERE ADVERSE TO VESTED INTERESTS OF CERTAIN FEDERAL AGENCIES. IN ORDER FURTHER TO SUBSTANTIATE THE CONCLUSIONS AND TO EXPAND KNOWLEDGE OF THE COMPACT NEGOTIATING PROCESS, FURTHER ANALYSIS WAS RECOMMENDED: TO PROVIDE INSIGHTS INTO THE NATURE OF LEGISLATOR PRECONCEPTIONS AS BASES FOR VOTING BEHAVIOR ON COMPACT RATIFICATION/TO DETERMINE THE EXTENT TO WHICH THE PERCEIVED ROLE OF NEGOTIATORS, AS RELATED TO THE METHOD OF APPOINTMENT, INFLUENCES THEIR NEGOTIATING BEHAVIOR / AND, TO EXAMINE THE HISTORICAL ROLES OF STATES AND FEDERAL AGENCIES IN WATER RESOURCES DEVELOPMENT IN THE CONTEXT OF COMPACT NEGOTIATIONS.

ADMINISTRATIVE AGENCIES/COLUMBIA RIVER/INTERSTATE COMPACTS/REGIONAL ANALYSIS/ LEGAL ASPECTS/SOCIAL ASPECTS/INTERSTATE RIVERS/WATER LAW/FEDERAL-STATE WATER RIGHTS CONFLICTS

0059

DOERKSEN, H.R.

1977

WATER, POLITICS, AND IDEOLOGY: AN OVERVIEW OF WATER RESOURCES MANAGEMENT.

PUBLIC ADMINISTRATION REVIEW 37(5):444-448.

THIS ARTICLE ARGUES THAT THE PHYSICAL CHARACTER OF WATER CREATES SUBSTANTIAL UNCERTAINTIES FOR THE DECISION MAKER THAT ARE ONLY PARTIALLY REDUCED BY TECHNOLOGICAL ADVANCES. THE HIGHLY DIVERSE POLITICAL AND LEGAL SYSTEMS FOR MANAGING WATER RESOURCES CREATE UNCERTAINTIES WHICH DEFY COMPREHENSIVE MANAGEMENT. THE MANAGERS THEMSELVES ALSO BRING TO THE DECISION-MAKING ARENA PRECONCEIVED NOTIONS OF PUBLIC INTEREST AND IDEOLOGICAL FRAMEWORKS. ALL THESE FACTORS WORK AGAINST ATTEMPTS AT MEANINGFUL COORDINATION AND COOPERATIVE DECISION MAKING. IT SHOULD BE NOTED, HOWEVER, THAT STATE-FEDERAL ANATAGONISM IS SELECTIVE, BECAUSE SOME TRADITIONAL ALLIANCES TRANSCEND LEVELS OF GOVERNMENT.

ADMINISTRATION/WATER RESOURCES/LEGAL ASPECTS/POLITICAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RIGHTS/WATER POLICY/WATER ALLOCATION (POLICY) / WATER MANAGEMENT (APPLIED)

0060

DWORSKY, L.B.

1964

MAKING THE STATE AN EFFECTIVE PARTNER IN WATER DEVELOPMENT. IN ILLINOIS CONFERENCE ON WATER RESOURCES DEVELOPMENT: WATER RESOURCES PLANNING IN ILLINOIS, P. 16-21.

ILLINOIS BOARD OF ECONOMIC DEVELOPMENT, SPRINGFIELD. SWRA W70-00513.

THE HISTORY OF THE ROLE OF THE STATES IN WATER RESOURCE DEVELOPMENT IS PRESENTED. AREAS OF INVOLVEMENT IN THE PAST INCLUDED: 1) CANALS AND INTERNAL IMPROVEMENTS; 2) LAND RECLAMATION, DRAINAGE AND IMPROVEMENT OF WATER COURSES; 3) WATER SUPPLY; AND 4) WATER LAW. TODAY STATES PLAY A BROAD ROLE WITHIN THE FEDERAL SYSTEM IN CONNECTION WITH MANY ASPECTS OF WATER RESOURCES PLANNING, ALTHOUGH THIS ROLE HAS BEEN LARGELY OVERSHADOWED BY FEDERAL WATER RESOURCE DEVELOPMENT EFFORTS. THE AREAS OF INVOLVEMENT TODAY INCLUDE: 1) MUNICIPAL AND INDUSTRIAL WATER SUPPLIES; 2) AGRICULTURAL WATER SUPPLIES; 3) WATER POLLUTION CONTROL; 4) SOIL AND WATER CONSERVATION; 5) WATERSHED DEVELOPMENT AND RECREATIONAL DEVELOPMENT; 6) BASIC DATA COLLECTION; 7) LEGISLATIVE PROVISION FOR WATER AND RELATED LAND DEVELOPMENTS AT LOCAL AND REGIONAL LEVELS; AND 8) INTERSTATE COOPERATION ON WATER ALLOCATION, WATER SUPPLY AND POLLUTION CONTROL. MOST OF THESE ROLES HAVE BEEN ENACTED, FOR THE MOST PART, LARGELY WITHIN STATE BOUNDARIES, OFTEN WITH INADEQUATE COORDINATION BETWEEN STATE AGENCIES, AND WITH UNCLEAR OBJECTIVES. RECOMMENDATIONS ARE MADE FOR STRENGTHENING STATE WATER RESOURCE PROGRAMS. A STRONG STATE PROGRAM IS SEEN AS REFLECTING THREE ASPECTS: 1) THE DESIRES AND NEEDS OF ITS CITIZENS; 2) A GREATER RESPONSIBILITY TO INSURE THAT LOCAL GOVERNMENT EFFORT IS TIMELY AND CONSISTENT WITH THE STATE DEVELOPMENT PROGRAM; AND 3) A RELATING OF THE STATE NEEDS TO LONGER REGIONAL AND NATIONAL NEEDS.

FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE JURISDICTION/STATE GOVERNMENTS/ LOCAL GOVERNMENTS/WATER RESOURCES DEVELOPMENT

0061

DYKSTRA, C.A. ED.

1930

COLORADO RIVER DEVELOPMENT AND RELATED PROBLEMS.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE, ANNALS 148(2). 42 P.

THIS VOLUME, A SUPPLEMENT TO THE JANUARY 1928 ISSUE OF THE ACADEMY'S ANNALS, CONTAINS SIX ESSAYS ADDRESSING VARIOUS ASPECTS OF THE DEVELOPMENT OF THE COLORADO RIVER: 1) COMMUNITY DEVELOPMENT IN THE SOUTHWEST AS INFLUENCED BY THE BOULDER CANYON PROJECT, BY E.F. SCATTERGOOD, 2) METROPOLITAN WATER DISTRIBUTION IN THE LOS ANGELES AREA, BY F. THOMAS, 3) COLORADO RIVER CONFERENCES AND THEIR IMPLICATIONS, BY R.L. GRISWELL, 4) MAJOR ENGINEERING PROBLEMS: COLORADO RIVER DEVELOPMENT, BY F.E. WEYMOUTH, 5) THE FINANCIAL AND TOPOGRAPHICAL PROBLEMS OF THE COLORADO RIVER AQUEDUCT PROJECT, BY E.A. BAYLEY, AND 6) THE STATUS OF BOULDER CANYON POWER ALLOCATIONS, BY E.F. SCATTERGOOD. IN A FOREWORD BY THE EDITOR, THE VIEWS OF CALIFORNIA ON THE ENGINEERING, LEGAL, AND POLITICAL PROBLEMS ASSOCIATED WITH THE DEVELOPMENT OF THE COLORADO RIVER ARE BRIEFLY INTRODUCED.

COLORADO RIVER/COLORADO RIVER BASIN/WATER RESOURCES DEVELOPMENT/COLORADO RIVER COMPACT/BOULDER CANYON PROJECT ACT/POLITICAL ASPECTS/LEGAL ASPECTS/WATER POLICY/FEDERAL PROJECT POLICY/ECONOMICS/ELECTRIC POWER/IRRIGATION/CALIFORNIA

0062

ECLAVEA, R.P.

1976

VALIDITY, CONSTRUCTION, AND APPLICATION OF S[EC.] 5 OF RECLAMATION LAW OF 1902 (43 USCS S 431).

27 ALF FED 831-42. SWRA W77-03712.

SECTION 5 OF THE RECLAMATION ACT OF 1902 PROHIBITS THE SALE OF THE RIGHT TO USE WATER FOR LAND IN PRIVATE OWNERSHIP IF THE PLOT EXCEEDS 160 ACRES. THE ACT ALSO REQUIRES THAT THE OWNER OF SUCH LAND BE A BONA FIDE RESIDENT OF SUCH LAND, OR LIVE IN THE NEIGHBORHOOD. THIS ACT HAS BEEN STRICTLY CONSTRUED IN LITIGATION. IT HAS BEEN HELD THAT THE LANGUAGE OF THE ACT IS MANDATORY AND NOT DISCRETIONARY. LITIGANTS HAVE CHALLENGED THE ACREAGE REQUIREMENT ON EQUAL PROTECTION AND DUE PROCESS GROUNDS OF THE FIFTH AND FOURTEENTH AMENDMENTS TO NO AVAIL. THE COURTS HAVE REASONED THAT THE FEDERAL RECLAMATION PROJECTS WERE ESTABLISHED AS A SUBSIDY TO AGRICULTURE, AND THAT SINCE SUCH PROJECTS WERE SUBSIDIES, CONGRESS COULD DECIDE WHO SHOULD BE SUBSIDIZED. IN UPHOLDING THE RESIDENCY REQUIREMENT, COURTS HAVE STATED THAT WHILE DISCRIMINATION BETWEEN NEW AND OLD RESIDENTS IS NOT ALLOWED, DISCRIMINATION BETWEEN RESIDENTS AND NON-RESIDENTS IS PERMISSIBLE. COURTS HAVE GRANTED STANDING TO ENFORCE THE ACT TO ANY RESIDENT OF PROPERTY IN THE VICINITY OF A TRACT ACQUIRING WATER IN VIOLATION OF THE ACT'S PROVISIONS.

RECLAMATION/WATER UTILIZATION/WATER USERS/FEDERAL RECLAMATION LAW/LEGAL ASPECTS/LEGISLATION/FEDERAL GOVERNMENT/JUDICIAL DECISIONS/LEGAL REVIEW/SOCIAL ASPECTS/WATER RIGHTS/EQUITABLE APPORTIONMENT/EQUITY/FEDERAL-STATE WATER RIGHTS CONFLICTS/IRRIGATED LAND/WATER ALLOCATION (POLICY)/WATER CONTRACTS/CONSTITUTIONAL LAW/PUBLIC RIGHTS/WATER LAW/AGRICULTURE

0063

ELY, N.

1962

THE RELATIONSHIP BETWEEN THE LAWS GOVERNING WATER RIGHTS AND THOSE GOVERNING OTHER NATURAL RESOURCES.

AMERICAN BAR ASSOCIATION, SECTION OF MINERAL AND NATURAL RESOURCES LAW, 1962 PROCEEDINGS, P. 106-112. SWRA W69-04041.

WHILE THE MAIN CONCERN OF THE AUTHOR IS DEMONSTRATING THE PARALLEL DEVELOPMENT OF THE LAW RELATIVE TO WATER RIGHTS AND OIL, GAS, AND HARD MINERALS, RESPECTIVELY, HE PLACES GREAT EMPHASIS ON THE DEVELOPMENT OF WATER RIGHTS CONTROL IN THIS COUNTRY. PAYING PARTICULAR ATTENTION TO THE WESTERN STATES, THE AUTHOR POINTS OUT HOW EARLY CONFLICTS CONCERNING SURFACE WATER CONTROL REVOLVED AROUND THE RIPARIAN DOCTRINE (THAT OF REASONABLE USE AND CORRELATIVE RIGHTS IN WATER) AS OPPOSED TO THE APPROPRIATION DOCTRINE ('FIRST IN TIME, FIRST IN RIGHT'). STRANGELY ENOUGH, THE APPROPRIATION DOCTRINE BECAME COMMONPLACE FOR SURFACE WATERS IN DRY, ARID REGIONS WHILE THE RIPARIAN DOCTRINE WAS USED IN MORE HUMID REGIONS AND FOR SUBSURFACE WATERS. THIS IS NO LONGER THE IMPORTANT CONFLICT. THE CONFLICT BETWEEN THE POLICE POWERS OF THE STATES AND THE POWER OF THE FEDERAL GOVERNMENT OVER INTERSTATE COMMERCE HAS NOW COME TO THE FORE. TODAY THE ARENA OF DISPUTE IS NOT MERELY THE COURTS BUT THE FLOOR OF THE LEGISLATURE; THE PARTIES IN INTEREST ARE NO LONGER PRIVATE LITIGANTS BUT ELEMENTS OF OUR FEDERAL CONSTITUTIONAL SYSTEM; AND THE ISSUES TO BE DETERMINED ARE SUCH AS WILL AFFECT THE DESTINY OF ENTIRE WATERSHEDS.

WATER RIGHTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/RIPARIAN RIGHTS/PRIOR APPROPRIATION/STATE GOVERNMENTS/FEDERAL GOVERNMENT/SURFACE WATERS/SUBSURFACE WATERS/DESERT LAND ACT/LEGAL ASPECTS/WATERSHEDS(BASINS)/WATER LAW/NAVIGABLE WATERS/NON-NAVIGABLE WATERS

0064

FRIEDKIN, J.F.

1972

THE COLORADO RIVER: INTERNATIONAL ASPECTS.

NATURAL RESOURCES JOURNAL 12(4):515-519. SWRA W77-11172.

IN 1971 THE UNITED STATES DELIVERED 1,562,000 ACRE-FEET OF WATER FROM THE COLORADO RIVER TO MEXICO. SIXTY-FIVE PERCENT OF THIS WATER CAME FROM THE IMPERIAL DAM AND THE REMAINING THIRTY-FIVE PERCENT CAME FROM RETURN FLOWS TO THE RIVER BELOW THE DAM. UNDER THE OPTION PROVIDED IN MINUTE 218, MEXICO CHOSE TO RECEIVE NO DELIVERIES FROM THE ALL-AMERICAN CANAL. MINUTE 218 IS AN ATTEMPT BY THE UNITED STATES AND MEXICO TO SOLVE THE SALINITY PROBLEM OF THE COLORADO RIVER. THIS AGREEMENT CONSISTS OF TWO OPERATIONS WHICH SERVE TO REDUCE THE SALINITY OF THE WATER DELIVERED TO MEXICO. THE FIRST OPERATION IS THE BY-PASSING OF A PART OF THE WELTON-MOHAWK DRAINAGE RETURN WATERS. THE SECOND OPERATION IS SELECTIVE PUMPING OF THE DRAINAGE WELLS TO MINIMIZE THE CONCENTRATION OF SALTS IN DELIVERIES TO MEXICO. SINCE MINUTE 218 BECAME EFFECTIVE IN 1965, THE AVERAGE ANNUAL SALINITY OF WATER DELIVERED TO MEXICO HAS BEEN REDUCED FROM 1375 PPM TO 1245 PPM. SOME PROGRESS HAS THEREFORE BEEN MADE TOWARD A SOLUTION TO THE SALINITY PROBLEM ALTHOUGH NEW ALTERNATIVES ARE STILL BEING EXAMINED BY BOTH COUNTRIES.

MEXICAN WATER TREATY/COLORADO RIVER/SALINITY/GOVERNMENTAL INTERRELATIONS/ INTERNATIONAL LAW/DRAINAGE WATER/WATER QUALITY/TREATIES/CANALS/LEGAL ASPECTS/ PUMPING/DRAINAGE WELLS/WATER ALLOCATION(POLICY)/SALTS/WATER POLICY/WATER POLLUTION/MEXICO/RETURN FLOW

0065

GANTZ, D.A.

1972

UNITED STATES APPROACHES TO THE SALINITY PROBLEM ON THE COLORADO RIVER.

NATURAL RESOURCES JOURNAL 12(4):496-509. SWRA W77-11170.

THE 1944 WATER TREATY BETWEEN THE UNITED STATES AND MEXICO CONCERNS THE EQUITABLE SHARING OF THE WATERS OF THE COLORADO, TIJUANA, AND RIO GRANDE RIVERS. THIS TREATY, WITHOUT REGARD TO WATER QUALITY, GUARANTEES MEXICO 1,500,000 ACRE- FEET ANNUALLY OF WATER FROM THE COLORADO RIVER. UNTIL 1960, THE SALINITY OF THIS WATER REMAINED STABLE. HOWEVER IN 1961, THE COMPLETION OF WELLTON-MOHAWK PROJECT COUPLED WITH THE FACT THAT THE UNITED STATES REDUCED ITS WATER DELIVERIES TO A LEVEL NEAR THE GUARANTEED ALLOTMENT CAUSED AN INCREASE IN SALINITY IN THE WATER RECEIVED BY MEXICO. THE TWO GOVERNMENTS REACHED A TEMPORARY SOLUTION TO THIS PROBLEM WITH THE ENACTMENT OF MINUTE 218 IN 1965. IN 1972, IN AN ATTEMPT TO REACH A PERMANENT SOLUTION, MINUTE 241 WAS ENACTED. THIS RESOLUTION STATED THAT THE UNITED STATES WAS PREPARED TO UNDERTAKE CERTAIN ACTIONS TO IMPROVE THE QUALITY OF WATER GOING TO MEXICO. IN KEEPING WITH THIS ASSURANCE THE UNITED STATES HAS BEGUN WORK ON A SALINITY CONTROL PROGRAM. ALTHOUGH THE AUTHOR FEELS THAT UNITED STATES USE OF THE COLORADO RIVER CAN NOT BE CHARACTERIZED AS UNREASONABLE, FROM AN INTERNATIONAL LEGAL STANDPOINT, HE RECOGNIZES THE NEED FOR SALINITY CONTROL MEASURES.

MEXICAN WATER TREATY/COLORADO RIVER/SALINITY/EQUITABLE APPORTIONMENT/
WATER QUALITY/WATER QUALITY STANDARDS/INTERNATIONAL LAW/LEGAL ASPECTS/
REASONABLE USE/RIO GRANDE RIVER/INTERSTATE RIVERS/WATER POLICY/WATER
ALLOCATION(POLICY)/TREATIES/COLORADO RIVER BASIN/IRRIGATION

0066

GOLZE, A.R.

1961

RECLAMATION IN THE UNITED STATES.

CAXTON PRINTERS, LTD., CALDWELL, IDAHO. 486 P. SWRA W71-04306.

EMPHASIZING BOTH HISTORICAL BACKGROUND AND CURRENT DATA, THIS STUDY EXAMINES RECLAMATION IN THE UNITED STATES--AS DICTATED BY LAW AND ADMINISTERED BY FEDERAL, STATE, AND PRIVATE AGENCIES. THE SCOPE OF THIS STUDY IS LIMITED TO THE PROCESS OF RECLAIMING WESTERN DESERT LAND THROUGH IRRIGATED AGRICULTURE, SUPPORTED BY COORDINATED DEVELOPMENT OF HYDROELECTRIC POWER. THE FOLLOWING AREAS ARE EXAMINED: 1) THE HISTORY OF RECLAMATION, 2) THE ECONOMICS OF RECLAMATION, 3) RECLAMATION LAW, 4) PARTICIPATING AGENCIES, 5) INVESTIGATION AND AUTHORIZATION OF PROPOSED PROJECTS, 6) SINGLE-PURPOSE PROJECTS, 7) MULTIPLE-PURPOSE PROJECTS, 8) RIVER BASIN DEVELOPMENT, 9) ALLOCATIONS OF COST, 10) REPAYMENT BY WATER USERS, 11) REPAYMENT BY POWER AND OTHER USERS, 12) FINANCING RECLAMATION PROGRAMS, 13) COST ESTIMATING, 14) PROGRAMMING AND ACCOUNTING, 15) SETTLEMENT, 16) OPERATIONS AND MAINTENANCE, AND 17) RECLAMATION IN THE PERIOD FROM 1951 TO 1960. WITHIN THE AREA OF RECLAMATION LAW, PERTINENT CONSTITUTIONAL AND LEGISLATIVE PROVISIONS CONTROLLING STATE AND FEDERAL RECLAMATION ACTIVITY ARE DISCUSSED. THE DOCTRINES OF PRIOR APPROPRIATION AND RIPARIAN LAW ARE CONTRASTED IN AN EXAMINATION OF THE CONTROL, DISTRIBUTION, AND USE OF WATER IN THE 17 WESTERN STATES. THE FEDERAL RECLAMATION ACT OF 1902 AND OTHER FEDERAL LEGISLATION IS CONSIDERED IN TERMS OF FEDERAL AUTHORITY AND ITS RELATIONSHIP TO STATE AUTHORITY.

HYDROELECTRIC POWER/WATER ALLOCATION(POLICY)/FEDERAL GOVERNMENT/STATE GOVERNMENTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/LEGISLATION/ADMINISTRATIVE AGENCIES/AREA REDEVELOPMENT/IRRIGATION PROGRAMS/ECONOMIC JUSTIFICATION/LEGAL ASPECTS/RIPARIAN RIGHTS/PRIOR APPROPRIATION/RIVER BASIN DEVELOPMENT/COST ALLOCATION/COST REPAYMENT/FINANCING/FEDERAL PROJECT POLICY/OPERATION AND MAINTENANCE/MULTIPLE-PURPOSE PROJECTS

0067

GOODCELL, R.B., JR.

1963

PROPOSALS FOR STUDYING THE FEDERAL-STATE WATER RIGHTS PROBLEM.

AMERICAN WATER WORKS, JOURNAL 55(8):957-961. SWRA W69-01981.

IF THE CLAIMS OF THOSE SUPPORTING THE FEDERAL VIEW ARE SUSTAINED, AND WATER ORIGINATING ON FEDERAL LANDS WHICH CONSTITUTE THE MAJOR WATERSHEDS OF THE WESTERN STATES IS OWNED AND UNDER THE CONTROL OF THE FEDERAL GOVERNMENT, THEN MOST OF THE SO-CALLED EXISTING WATER RIGHTS AND THE WATER RIGHTS UNDER STATE LAWS TO APPROPRIATE AND DEVELOP UNAPPROPRIATED WATERS WILL BE SUBORDINATE TO FEDERAL DEVELOPMENT AND USE OF WATER. AS LONG AS THERE ARE LEGAL QUESTIONS AS TO WATER RIGHTS, SUCH QUESTIONS WILL RESULT IN COSTLY LITIGATION, AND NEEDED WATER DEVELOPMENT BY LOCAL, STATE, AND FEDERAL AUTHORITIES WILL BE UNNECESSARILY BURDENED. IF NEEDED WATER DEVELOPMENT IS TO PROCEED THERE MUST BE MAXIMUM COOPERATION BETWEEN FEDERAL, STATE, AND LOCAL WATER INTEREST. THERE MUST BE A CLARIFICATION OF STATES RIGHTS OVER FEDERAL RIGHTS AND THE PROVISION FOR EXISTING WATER RIGHTS UNDER STATE LAWS AND PROTECTION OF RECOGNITION OF STATE LAW TO DEVELOP WATER FOR BENEFICIAL USE.

FEDERAL JURISDICTION/WATER LAW/WATER RESOURCES DEVELOPMENT/STATE GOVERNMENTS/WATER RIGHTS/LEGAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/APPROPRIATION/LOCAL GOVERNMENTS/INTER-AGENCY COOPERATION/JURISDICTION/LEGISLATION

0068

GRISWELL, R.L.

1930

COLORADO RIVER CONFERENCES AND THEIR IMPLICATIONS. IN C.A. DYKSTRA, ED., COLORADO RIVER DEVELOPMENT AND RELATED PROBLEMS, P. 12-19.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE, ANNALS 148(2).

THIS ARTICLE PRESENTS A DESCRIPTIVE OVERVIEW OF THE MAJOR POLITICAL AND GOVERNMENTAL DEVELOPMENTS DURING THE 1920'S RELATING TO THE BUILDING OF A DAM ON THE COLORADO RIVER. SPECIAL EMPHASIS IS GIVEN TO THE CONFERENCES HELD DURING THESE YEARS TO DISCUSS CONFLICTING CLAIMS OF THE STATES AND INTERESTED PARTIES REGARDING THE DEVELOPMENT OF THE RIVER'S WATER RESOURCES. THE MAJOR TOPICS COVERED INCLUDE THE FALL-DAVIS REPORT, THE SWING-JOHNSON BILL, THE COLORADO RIVER COMMISSION, THE COLORADO RIVER COMPACT, THE POSITIONS ADVANCED BY THE UPPER AND LOWER BASIN STATES, THE CONFLICT BETWEEN CALIFORNIA AND ARIZONA, THE BENEFITS OF A DAM TO ARIZONA, THE ISSUE OF POWER REVENUE FROM THE DAM, AND THE DENVER CONFERENCE. THE AUTHOR CONCLUDES BY STATING THAT THE FEDERAL GOVERNMENT HAS THE RIGHT TO BUILD THE DAM WITHOUT THE CONSENT OF ANY STATE BUT THAT ARIZONA SHOULD NEVERTHELESS RATIFY THE COLORADO RIVER COMPACT TO PERMIT THE DAM'S CONSTRUCTION WITH THE APPROVAL OF ALL THE PARTIES WHICH STAND TO BENEFIT.

COLORADO RIVER/WATER RESOURCES DEVELOPMENT/COLORADO RIVER COMPACT/BOULDER DAM/
COLORADO RIVER BASIN/BOULDER CANYON PROJECT ACT/ARIZONA/POLITICAL ASPECTS/
STATE GOVERNMENTS/IRRIGATION PROGRAMS/WATER POLICY/FEDERAL PROJECT POLICY/
WATER ALLOCATION(POLICY)/CALIFORNIA/LEGAL ASPECTS/FALL-DAVIS REPORT/
SWING-JOHNSON BILL/COLORADO RIVER COMMISSION/UPPER COLORADO RIVER BASIN/LOWER
COLORADO RIVER BASIN/COLORADO RIVER CONFERENCE, DENVER, 1927

0069

GUADNOLA, J.C.

1970

ADJUDICATION OF FEDERAL RESERVED WATER RIGHTS.

UNIVERSITY OF COLORADO LAW REVIEW 42(2):161-172. SWRA W71-07210.

RECENTLY, THE SUPREME COURT OF COLORADO IN UNITED STATES V. DISTRICT COURT (458 P 2D 760, CERT. GRANTED, 38 U.S.L.W. 3379 (U.S. MAR. 30, 1970, NO. 1178) ASSERTED JURISDICTION TO ADJUDICATE FEDERAL RESERVED WATER RIGHTS. THIS NOTE DISCUSSES THE COLORADO DECISION, OFFERING SUPPORT FOR ITS HOLDING ON THE JURISDICTION ISSUE AND SUGGESTING A WAY IN WHICH ANY DECISION ON THE MERITS CAN ACCOMMODATE THE INTERESTS OF PRIVATE APPROPRIATORS AND THE FEDERAL GOVERNMENT. THE PRINCIPAL OBSTACLE TO JURISDICTION OVER FEDERAL WATER RIGHTS IS SOVEREIGN IMMUNITY. THE ONLY FEDERAL LEGISLATION WAIVING SUCH IMMUNITY IS THE MCCARRAN AMENDMENT (43 U.S.C. S 666, 1964), OF RIGHTS TO WATERS OF RIVER SYSTEMS OR OTHER SOURCES, OR WHERE THE UNITED STATES OWNS OR IS IN THE PROCESS OF ACQUIRING WATER RIGHTS BY ONE OF SEVERAL ENUMERATED METHODS AND IS A NECESSARY PARTY. THE NOTE FIRST CONSIDERS THE COLORADO COURT'S REASONING IN FINDING JURISDICTION AND FINDS IT INADEQUATE. THE AUTHOR THEN PUTS FORWARD HIS OWN THEORY, ARGUING CHIEFLY THAT SINCE RESERVED RIGHTS ARE OPEN-ENDED, PRIVATE APPROPRIATORS SHOULD HAVE RECOURSE TO STATE ADJUDICATION CONCERNING THE FUTURE AVAILABILITY OF WATER. NEVERTHELESS, STATE COURTS MUST BE CAREFUL TO PROTECT FEDERAL INTERESTS. THE NOTE CONCLUDES WITH A DISCUSSION ON HOW THIS CAN BE ACCOMPLISHED.

FEDERAL-STATE WATER RIGHTS CONFLICTS/RESERVATION DOCTRINE/FEDERAL JURISDICTION/
STATE JURISDICTION/WATER RIGHTS/COLORADO/LEGISLATION/WATER SUPPLY/LEGAL
ASPECTS/JUDICIAL DECISIONS/CONSERVATION/APPROPRIATION/PRIOR APPROPRIATION/
PREFERENCES(WATER RIGHTS)/PRIORITIES/ADJUDICATION PROCEDURE/WATER UTILIZATION/
CONSUMPTIVE USE/MCCARRAN AMENDMENT

0070

HARRIS, R.W./JEFFERY, W.D./STEWART, B.W., JR.

1974

WATER ALLOCATION. IN STATE ENVIRONMENTAL PROBLEM, P. 34-56.

STANFORD LAW SCHOOL, STANFORD, CALIFORNIA. SWRA W76-03920.

THIS ARTICLE EXAMINES THREE PRINCIPAL SYSTEMS OF WATER ALLOCATION IN THE UNITED STATES: THE RIPARIAN SYSTEM OF THE HUMID EAST, THE APPROPRIATION SYSTEM OF THE ARID WEST, AND THE OFTEN CONFLICTING FEDERAL WATER LAW SYSTEM. UNDER THE RIPARIAN SYSTEM, ONLY THE OWNER OF LAND ALONG A WATERCOURSE HAS THE RIGHT TO REASONABLE USE OF WATER AS IT PASSES OR CROSSES HIS PROPERTY. THIS RIGHT IS SHARED EQUALLY WITH OTHER RIPARIAN OWNERS. AS WATER DEMAND HAS INCREASED WITH URBAN AND INDUSTRIAL GROWTH, MORE STATES ARE ADOPTING THE APPROPRIATION SYSTEM. APPROPRIATED WATER RIGHTS ARE OBTAINED BY DIVERSION TO A BENEFICIAL USE. AS A PREREQUISITE TO DIVERTING WATER, MOST WESTERN STATES REQUIRE PERMITS.

HOWEVER, ALL STATE SYSTEMS MUST YIELD WHEN IN CONFLICT WITH FEDERAL WATER LAW, WHICH IS LARGELY COURT CREATED AND WIDELY DIVERSE. TWO FEDERAL DOCTRINES ALLOW THE UNITED STATES TO SEIZE OR IMPAIR WATER RIGHTS WITHOUT PAYING COMPENSATION: THESE ARE THE NAVIGATION SERVITUDE DOCTRINE AND THE RESERVATION DOCTRINE. BOTH DOCTRINES GIVE FEDERAL COURTS GREAT DISCRETIONARY POWER IN DECIDING WATER ALLOCATION. THIS IS ILLUSTRATED BY AN EXAMINATION OF FEDERAL DECISIONS ALLOCATING WATER TO INDIAN RESERVATIONS.

WATER ALLOCATION(POLICY)/RIPARIAN RIGHTS/APPROPRIATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/SURFACE WATERS/PERMITS/SURFACE WATER AVAILABILITY/URBANIZATION/PREScriptive RIGHTS/WATER LAW/RIPARIAN WATERS/FEDERAL GOVERNMENT/INDUSTRIAL WATER/NAVIGATION/RESERVATION DOCTRINE/HISTORY/INDIAN RESERVATIONS/CALIFORNIA/GROUNDWATER/STATE GOVERNMENTS/WATER UTILIZATION/DIVERSION/NAVIGATION SERVITUDE

0071

HART, H.C.

1957

CRISIS, COMMUNITY AND CONSENT IN WATER POLITICS.

LAW AND CONTEMPORARY PROBLEMS 22(3):510-537. SWRA W69-00279.

THIS IS A TIME, AS THIS SYMPOSIUM SHOWS, WHEN MANY OF US CAN BE DRAWN INTO A RE-EXAMINATION OF OUR APPROACH TO THE GOVERNMENT OF WATER RESOURCES. WE HAVE FAILED TO FIND VIABLE ANSWERS TO THE PROBLEMS OF GOVERNING OUR WATER RESOURCES BECAUSE WE HAVE BEEN LOOKING IN THE WRONG PLACES. WE HAVE LOOKED TO NATIONAL DEPARTMENTALIZATION AND EXECUTIVE ORGANIZATION, WHILE THE PROBLEM IS BASICALLY ONE OF PUBLIC ATTENTION AND INTEREST. WE HAVE LOOKED FOR ASSERTIONS OF POLICY, BUT THE PROBLEM IS ONE OF DISCOVERING PEOPLE'S CONSCIOUS NEEDS. WE HAVE CONCEIVED OF TECHNIQUES AS DECISIVE AND OF THE NATURAL FLOW OF WATER AS EMBODYING SOME HUMAN IMPERATIVE, WHEN ITS TRUE HUMAN MEANING IS VARIETY AND DIVERSITY OF POTENTIAL. THE WATER POTENTIALS WHICH ENLIST HUMAN ENTERPRISE AND DECISION OVER THE YEARS DO NOT COINCIDE, SAVE BY REMOTE CHANCE OR BY THE MOST PAINSTAKING INSTITUTIONAL ARRANGEMENTS, WITH STATES, CITIES OR THE NATION. THE AUTHOR THEN PROPOSES TWO ALTERNATIVE PLANS OF FUTURE ACTION TO SOLVE THE ABOVE PROBLEM.

WATER RESOURCES DEVELOPMENT/ADMINISTRATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/POLITICAL ASPECTS/FEDERAL GOVERNMENT/GOVERNMENT FINANCE/RIVER BASIN DEVELOPMENT/PLANNING/STATE GOVERNMENTS/LOCAL GOVERNMENTS/COST SHARING/COORDINATION/MULTIPLE-PURPOSE PROJECTS/FLOOD CONTROL/DAMS/WATER POLICY/RESERVOIRS

0072

HARZA ENGINEERING COMPANY, CHICAGO, ILLINOIS

1958

COLORADO RIVER PROJECTS: COLORADO RIVER DEVELOPMENT WITH THE STATE OF ARIZONA, PRELIMINARY PLANNING REPORT.

SAME AS AUTHOR. 300 P.

A DISCUSSION OF THE COLORADO RIVER IN ARIZONA, GUIDING PRINCIPLES REGARDING ITS USE, AND A DESCRIPTION OF PROJECTS THAT WERE CONTEMPLATED BY 1958, INCLUDING THE BRIDGE CANYON, MARBLE CANYON, PROSPECT, AND COCONINO PROJECTS. HYDROELECTRIC POWER AND ENERGY AND POWER USES OF THE RIVER ARE ALSO PRESENTED. THE REPORT WAS MADE FOR THE ARIZONA POWER AUTHORITY CONCERNING THE GLEN CANYON DAM SITE. THERE IS SOME DISCUSSION OF OTHER PLANS FOR COLORADO RIVER WATER USE. IT IS POINTED OUT THAT THE BUREAU OF RECLAMATION HAS PLANNED AND CONSTRUCTED ALL MAJOR EXISTING COLORADO RIVER PROJECTS. (JAMAIL-ARIZONA)

COLORADO RIVER/ARIZONA/FEDERAL PROJECT POLICY/WATER RESOURCES/WATER RESOURCES
DEVELOPMENT/WATER POLICY/WATER ALLOCATION (POLICY)/PROJECT PLANNING/ELECTRIC
POWER/U.S. BUREAU OF RECLAMATION

0073

HILLHOUSE, W.A., II

1974

WATER RIGHTS.

ANNUAL SURVEY OF AMERICAN LAW 1973-74:255-264. SWRA W76:00974.

SINCE 1961, THERE HAVE BEEN MAJOR DEVELOPMENTS IN WATER LAW REGARDING FEDERAL-
STATE RELATIONS, GROUNDWATER USE AND REGULATION, AND ENVIRONMENTAL RESTRICTIONS
ON FEDERAL WATER PROJECTS. THE CALIFORNIA SUPREME COURT APPLIED THE DOCTRINE
OF IMPLIED RESERVATION IN HOLDING THAT THE FEDERAL GOVERNMENT HAS WATER RIGHTS
WHERE LAND UNDER ITS JURISDICTION REQUIRES OUTSIDE WATER SOURCES. THE PROBLEM
OF ADJUDICATING FEDERAL RIGHTS IN STATE COURTS HAS BEEN EASED BY A 1971 SUPREME
COURT DECISION WHICH HELD THAT THE FEDERAL GOVERNMENT MAY BE JOINED AS A
DEFENDANT TO DETERMINE RESERVED AS WELL AS APPROPRIATED WATER RIGHTS. SECTION
III OF THE RIVERS AND HARBORS ACT OF 1970 ALLEVIATES THE NO-COMPENSATION OF
NAVIGATIONAL SERVITUDES JUDICIAL DOCTRINE BY PROVIDING THAT A LANDOWNER SHOULD
BE COMPENSATED FOR THE HIGHEST AND BEST USE OF HIS PROPERTY, INCLUDING THE
VALUE OF SUCH NAVIGABLE WATERS. LITIGATION CONCERNING THE RIGHTS OF GROUNDWATER
USERS INTER SE HAS ATTEMPTED TO MITIGATE THE COMMON LAW RULE THAT THE OVERLYING
LAND-OWNER HAS EXCLUSIVE RIGHTS TO SUBSURFACE WATER WITH A REASONABLE USE RULE.
COLORADO HAS ENACTED SEVERAL STATUTES DEALING WITH GROUNDWATER RIGHTS. ONE
REQUIRES A PERMIT BEFORE APPROPRIATING WATER FROM A DESIGNATED GROUNDWATER
BASIN. WHEN PUMPING OR INSTALLATION OF WELLS POSES A THREAT TO APPROPRIATE
FROM RELATED SURFACE WATERS, ITS USE WILL BE REGULATED. SEVERAL WATER
CONSERVATION ACTS ENACTED IN THE 1960'S HAVE BEEN APPLIED BY COURTS TO REQUIRE
STUDIES OF ADVERSE EFFECTS OF WATER CONTROL PROJECTS, AND REGULATIONS ISSUED
BY THE WATER RESOURCES COUNCIL IN 1973 SHOULD HAVE A SUBSTANTIAL EFFECT ON
STATE AND LOCAL PLANNING IN THIS AREA.

GROUNDWATER RESOURCES/SURFACE-GROUNDWATER RELATIONSHIPS/FEDERAL-STATE WATER
RIGHTS CONFLICTS/RIVERS AND HARBORS ACT/WELL REGULATIONS/FEDERAL JURISDICTION/
STATE JURISDICTION/JUDICIAL DECISIONS/WATER LAW/REGIONAL DEVELOPMENT/MONITORING/
ADMINISTRATIVE AGENCIES/PREScriptive RIGHTS/REASONABLE USE/APPROPRIATION

0074

HOLBURT, M.B.

1975

INTERNATIONAL PROBLEMS OF THE COLORADO RIVER.

NATURAL RESOURCES JOURNAL 15:11-25.

THIS ARTICLE TRACES THE DEVELOPMENT OF THE RELATIONS BETWEEN THE UNITED STATES
AND MEXICO OVER THE WATER QUALITY AND WATER QUANTITY ISSUES IN THE COLORADO
RIVER. IT DISCUSSES THE EVENTS LEADING TO THE 1944 MEXICAN WATER TREATY, ITS
RATIFICATION, THE IMPACT OF WELTON-MOHAWK ON SALINITY LEVELS, AND THE SEVERAL
INTERIM SALINITY AGREEMENTS SIGNED BETWEEN THE UNITED STATES AND MEXICO.
EXTENSIVE DISCUSSION IS DEVOTED TO MINUTE NO. 242, UNRESOLVED ISSUES THEREIN,
AND THE POSITIONS OF THE BASIN STATES.

COLORADO RIVER/COLORADO RIVER BASIN/MEXICAN WATER TREATY/SALINITY/WATER
QUALITY/COMPETING USES

0075

HORNBLOWER, M.

1977

SHORTAGES: FIRST OIL AND NOW WATER.

WASHINGTON POST, DECEMBER 12, P. A1-A2.

SERIOUS WATER SHORTAGES, AGGRAVATED BY DROUGHTS, ARE OCCURRING IN MANY PARTS OF THE U.S., ESPECIALLY IN THE WEST. THE CARTER ADMINISTRATION HAS INITIATED THE FORMULATION OF A NATIONAL WATER POLICY, WITH CONSERVATION AS ITS CORNERSTONE. THE NEW POLICY COULD HAVE FAR-REACHING AND CONTROVERSIAL ECONOMIC AND POLITICAL EFFECTS, ESPECIALLY REGARDING THE 10 BILLION DOLLARS A YEAR SPENT BY THE FEDERAL GOVERNMENT ON WATER PROJECTS. ALSO, INTERIOR SECRETARY ANDRUS SAID IN A MAY SPEECH THAT IF THE STATES DO NOT REFORM THEIR WATER POLICIES THE FEDERAL GOVERNMENT WILL BE ENCOURAGED TO PRE-EMPT STATE PREROGATIVES IN ALLOCATING WATER. BUT FOLLOWING THE NEGATIVE REACTION OF WESTERN POLITICIANS TO ANDRUS' STATEMENT, PRESIDENT CARTER SAID THERE WOULD NOT BE FEDERAL PRE-EMPTION OF STATE OR PRIVATE PREROGATIVES IN THE USE OR MANAGEMENT OF WATER. A NEW WATER POLICY WILL BE OF PARTICULAR IMPORTANCE TO THE WEST BECAUSE THE WESTERN STATES ARE THE DRIEST AND THE FASTEST GROWING IN THE COUNTRY, AND ARE OFTEN THE GREATEST WASTERS OF WATER AS WELL, NOT ONLY BECAUSE OF THE CLIMATE BUT ALSO BECAUSE STATE WATER LAWS, SUCH AS ARIZONA'S GROUNDWATER LAW, AND FEDERAL IRRIGATION PROJECTS DISCOURAGE CONSERVATION. THE WATER SUPPLY PROBLEM IN THE WEST HAS ENGENDERED CONFLICT AMONG FARMERS, ENERGY COMPANIES, MUNICIPALITIES, AND INDIAN TRIBES, AS WELL AS BETWEEN NORTHERN AND SOUTHERN CALIFORNIA, EASTERN AND WESTERN COLORADO, AND MEXICO AND THE U.S. THE COLORADO RIVER DOES NOT HAVE ENOUGH WATER FOR ALL THAT WANT TO USE IT, AND UNDER STATE LAWS IN THE WEST WATER IS ALLOCATED ON THE BASIS OF 'FIRST COME, FIRST SERVED.' BECAUSE ECONOMICS OFTEN DETERMINES WATER USE, CITIES AND ENERGY COMPANIES ARE OFTEN WILLING TO PAY MUCH MORE FOR WATER THAN ARE FARMERS. AGRICULTURAL WATER USE IS BASED ON CHEAP WATER AND IS ALSO WASTEFUL: ACCORDING TO GAO OVER HALF OF FEDERAL IRRIGATION WATER IS LOST THROUGH SEEPAGE AND OVER-WATERING. A QUESTION FOR NEW FEDERAL WATER POLICY IS HOW MUCH THE FEDERAL GOVERNMENT SHOULD PAY TO GET CONSERVATION AND TO WHAT EXTENT IT SHOULD RELY ON THE 'CARROT' OR THE 'STICK'. ONE ALTERNATIVE COULD BE FOR THE FEDERAL GOVERNMENT TO PAY FARMERS TO LINE IRRIGATION DITCHES AND INSTALL WATER-EFFICIENT IRRIGATION SYSTEMS. BECAUSE OF THE RESISTANCE OF THE STATES, FEDERAL POLICY HAS TO RELY ON POLICIES SUCH AS THIS RATHER THAN 'THE STICK'. BUT IN SOME INSTANCES 'THE STICK' IS ALREADY IN USE: THE FEDERAL GOVERNMENT HAS WARNED ARIZONA THAT IT MUST PASS STRICT GROUNDWATER CONSERVATION LAWS BEFORE RECEIVING COLORADO RIVER WATER FROM THE CENTRAL ARIZONA PROJECT. ALSO, THE EPA HAS OPPOSED A DAM AND RESERVOIR PROJECT IN DENVER AS 'GROWTH GENERATING' AND THE AGENCY IS ADVOCATING INSTEAD A PROGRAM TO CHANGE WATER USE HABITS OF AREA RESIDENTS. IF A NEW FEDERAL POLICY EMPHASIZING CONSERVATION IS ADOPTED IT WOULD BE A SIGNIFICANT DEPARTURE FROM PAST POLICY IN THAT MANAGEMENT SCHEMES WOULD REPLACE CONSTRUCTION PROJECTS, AND THE FEDERAL WATER BUREAUCRACY WOULD LIKELY BE CUT BACK.

WATER POLICY/FEDERAL GOVERNMENT/FEDERAL PROJECT POLICY/COMPETING USES/
IRRIGATION PRACTICES/COLORADO RIVER/WATER CONSERVATION/SOUTHWEST U.S./WATER
DEMAND/WATER COSTS/GROUNDWATER AVAILABILITY/STATE GOVERNMENTS/CENTRAL ARIZONA
PROJECT

0076

HORNBLOWER, M.

1978

DRAFT PROPOSES NO FUNDAMENTAL CHANGES IN U.S. WATER POLICY.

WASHINGTON POST, APRIL 13, P. A 2.

THE CARTER ADMINISTRATION'S TASK FORCE HAS ABANDONED ANY ATTEMPT TO FUNDAMENTALLY CHANGE THE WAY WATER PROJECTS ARE FINANCED OR ADMINISTERED. THE DRAFT REFLECTS A CLEAR DESIRE ON THE PART OF ADMINISTRATION OFFICIALS TO AVOID THE KIND OF POLITICAL CONFRONTATION OVER WATER PROJECTS IT ENDURED WITH CONGRESS IN 1977. THE ARTICLE DISCUSSES THE VARIOUS POINTS OF THE DRAFT AND CONCLUDES THAT THERE ARE NO FUNDAMENTAL CHANGES PROPOSED. IN FACT FAR FROM CUTTING BACK ON CURRENT PROJECTS THE TASK FORCE URGES CARTER TO APPROVE SOME NEW PROJECTS.

FEDERAL PROJECT POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER POLICY/
POLITICAL CONSTRAINTS/POLITICAL ASPECTS/WATER RESOURCES DEVELOPMENT

0077

HOUGHTON, N.D.

1951

PROBLEMS OF THE COLORADO RIVER AS REFLECTED IN ARIZONA POLITICS.

WESTERN POLITICAL QUARTERLY 4(4):634-643.

POLITICAL CONTROVERSIES BOTH AMONG AND WITHIN THE STATES OF THE COLORADO RIVER BASIN ARE CLOSELY RELATED TO CONTROVERSIES SURROUNDING THE COLORADO RIVER COMPACT. THE COMPACT DIVIDED THE RIVER'S WATER BETWEEN THE UPPER AND LOWER BASINS, BUT IT PROVED IMPRACTICAL TO ACHIEVE A DIVISION OF THE WATER ALLOTTED THE LOWER BASIN AMONG THE INDIVIDUAL STATES. THIS SITUATION BREED CONTROVERSY, ESPECIALLY BETWEEN ARIZONA AND CALIFORNIA, AND CAUSED APPREHENSION ON THE PART OF GROUPS WITHIN THE STATES. ARIZONA WAS THE ONLY STATE NOT TO RATIFY THE COMPACT, AND ITS OPPOSITION WAS DICTATED PRIMARILY BY FARMERS IN CENTRAL ARIZONA, PRIVATE POWER COMPANIES, AND MINING COMPANIES WHO FEARED SOUTHERN CALIFORNIA'S INTEREST IN COLORADO RIVER WATER TO SUPPORT ITS AGRICULTURE AND URBAN GROWTH WOULD JEOPARDIZE THE FUTURE DEVELOPMENT OF ARIZONA. OPPOSITION TO THE COMPACT AND THE POLITICAL MANEUVERS OF SPECIAL INTEREST GROUPS TO DETERMINE STATE POLICY ARE DESCRIBED AND DISCUSSED. THE WANING INFLUENCE OF SUCH GROUPS, FOLLOWING TWO DECADES OF DOMINATION OF ARIZONA POLITICS AND THE SUBSEQUENT RATIFICATION OF THE COMPACT BY THE ARIZONA LEGISLATURE IN 1944 ARE ATTRIBUTED TO A CHANGE IN PUBLIC SENTIMENT TRIGGERED BY THE DROUGHT OF 1938-1940, THE ELECTION OF A NEW GOVERNOR WHO FAVORED RATIFICATION, THE URGENT NEED FOR WATER BY CENTRAL ARIZONA FARMERS, THE DISAPPEARANCE OF MINING OPPOSITION, AND THE POWER COMPANIES' EMPHASIS ON ELECTRIC POWER RATHER THAN WATER. HAVING RATIFIED THE COMPACT, CURRENT EFFORTS TO ACHIEVE CONGRESSIONAL APPROVAL FOR THE CENTRAL ARIZONA PROJECT ARE BEING LED BY CENTRAL ARIZONA FARMERS. IN ORDER TO ASSURE ENOUGH WATER FOR THE PROJECT, HOWEVER, ARIZONA WILL CHALLENGE CALIFORNIA'S RIGHT TO EXCEED THE MAXIMUM STIPULATED BY THE BOULDER CANYON PROJECT ACT. EVEN IF ARIZONA WINS ITS LEGAL CONTROVERSY WITH CALIFORNIA OVER THIS 'SURPLUS' WATER, CONGRESSIONAL APPROVAL FOR THE PROJECT WILL BE DIFFICULT TO OBTAIN.

COLORADO RIVER/WATER RESOURCES DEVELOPMENT/COLORADO RIVER COMPACT/COLORADO RIVER BASIN/BOULDER CANYON PROJECT ACT/ARIZONA/POLITICAL ASPECTS/MEXICAN WATER TREATY/POLITICAL CONSTRAINTS/STATE GOVERNMENTS/AGRICULTURE/IRRIGATION PROGRAMS/WATER POLICY/FEDERAL PROJECT POLICY/WATER ALLOCATION (POLICY)/CALIFORNIA/MINING/ELECTRIC POWER INDUSTRY/LEGAL ASPECTS/SANTA FE CONFERENCE/INTERSTATE STREAM COMMISSION/CENTRAL ARIZONA PROJECT/CENTRAL ARIZONA PROJECT ASSOCIATION/INTEREST GROUPS/ARIZONA POWER AUTHORITY

0078

HUME, E.

1978

NEW FEDERAL WATER PROPOSALS IN WORKS.

LOS ANGELES TIMES, APRIL 28, PART 1, P. 23.

CARTER ADMINISTRATION OFFICIALS ARE MOVING TO DEFUSE ONE OF THEIR BIGGEST POLITICAL PROBLEMS IN THE WEST--FEDERAL WATER POLICY--BY DRAFTING PROPOSALS THAT WOULD BACK OFF FROM THE EARLIER HARD-LINE REFORM. INSTEAD OF TREATING TOUGH NEW ECONOMIC STANDARDS FOR THE BACKLOG OF 828 AUTHORIZED NEW WATER PROJECTS, THE NEW PROPOSALS WOULD PROVIDE ONLY 'A LITTLE NUDGING' TO STATES TO VOLUNTARILY ELIMINATE UNESSENTIAL PROJECTS. THE STATES, WHICH NOW HAVE LITTLE OR NO FINANCIAL RESPONSIBILITY FOR FEDERAL WATER PROJECTS, WOULD BE ASKED TO VOLUNTARILY PROVIDE 10% TO 25% OF THE FRONT-END FINANCING FOR EACH AUTHORIZED DAM, IRRIGATION, OR OTHER WATER PROJECT. THE PROPOSALS RECOMMEND NO CHANGE IN THE FORMULA USED TO DETERMINE THE ECONOMIC FEASIBILITY OF A PROJECT. THE NEW POLICY WILL EMPHASIZE WATER CONSERVATION AND CONFORMITY WITH CONSERVATION LAWS. THE PROPOSAL INCLUDES NO 'HIT-LIST', BUT MORE SUBTLE WAYS WILL BE USED TO STOP THE CONSTRUCTION OF SOME PROJECTS.

FEDERAL PROJECT POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER POLICY/
POLITICAL CONSTRAINTS/POLITICAL ASPECTS/WATER RESOURCES DEVELOPMENT/FEDERAL
GOVERNMENT

0079

HUNDLEY, N.

1972

CLIO NODS: ARIZONA V. CALIFORNIA AND THE BOULDER CANYON ACT. A REASSESSMENT.
WESTERN HISTORICAL QUARTERLY 3(1):17-51. SWRA W75-03801.

THE BOULDER CANYON PROJECT ACT OF 1928 IS REVIEWED IN THE LIGHT OF IMPLICATIONS OF THE DECISION IN ARIZONA V. CALIFORNIA, 373 U.S. 546 (1963). THE DECISION INCREASED THE POWER OF THE FEDERAL GOVERNMENT BY DECLARING THAT CONGRESS COULD DIVIDE THE WATERS OF INTERSTATE STREAMS. THE IMPLICATIONS OF THIS EFFECT--AND THE POSSIBLE MISINTERPRETATIONS THAT MIGHT HAVE LED TO WHAT MAY BE A FAULTY CONCLUSION--ARE REVIEWED. WHEREAS IT HAS BEEN GENERALLY BELIEVED THAT ARIZONA V. CALIFORNIA HAS RESOLVED AND SETTLED MOST OF THE CONFLICT ISSUES, IT IS SUGGESTED THAT POSSIBLE MISINTERPRETATIONS OF THE ORIGINAL 1928 ACT MAY LEAD TO CONTINUED CONFLICT AND COURT ACTIONS.

WATER RIGHTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/LEGAL ASPECTS/STREAMFLOW/
ARIZONA/CALIFORNIA/INTERSTATE RIVERS/BOULDER CANYON PROJECT ACT/ARIZONA V.
CALIFORNIA

0080

HUNDLEY, N.

1975

WATER AND THE WEST.

UNIVERSITY OF CALIFORNIA PRESS, BERKELEY, 395 P.

THIS BOOK IS ABOUT ONE OF THE GREATEST CONFLICTS OVER WATER IN THE AMERICAN WEST, SPECIFICALLY, THE HISTORICAL EVENTS LEADING UP TO AND INCLUDING THE SIGNING OF THE COLORADO RIVER COMPACT OF 1922. THE AUTHOR TRACES THE MOVEMENT FOR THE COMPACT AND THE COMPLEX LEGAL AND POLITICAL BATTLES THAT SPAWNED IT AND CONTINUE TO INFLUENCE WESTERN WATER POLICY. THE BOOK ALSO INCLUDES CHAPTERS ON ARIZONA V. CALIFORNIA AND THE CENTRAL ARIZONA PROJECT AND OTHER CURRENT DEVELOPMENTAL PRESSURES IN THE COLORADO RIVER BASIN. A MAJOR THEME OF THE STUDY IS FEDERALISM: THE CONCEPT EMBRACING THE ONGOING ATTEMPT TO ACCOMMODATE LOCAL AUTONOMY TO NATIONAL UNITY AND THE RIGHTS OF THE STATES WITH THE RIGHTS OF THE CENTRAL GOVERNMENT.

FEDERAL-STATE WATER RIGHTS CONFLICTS/COLORADO RIVER/COLORADO RIVER BASIN/
COLORADO RIVER COMPACT/ARIZONA/CALIFORNIA/FEDERAL PROJECT POLICY/WATER RIGHTS/
LEGAL ASPECTS/JURISDICTION/CENTRAL ARIZONA PROJECT/WATER POLICY/POLITICAL
ASPECTS/ARIZONA V. CALIFORNIA

0081

HUNDLEY, N.

1966

DIVIDING THE WATERS: A CENTURY OF CONTROVERSY BETWEEN THE UNITED STATES
AND MEXICO.

UNIVERSITY OF CALIFORNIA PRESS, LOS ANGELES AND BERKELEY. 266 P.

THIS BOOK DEALS BASICALLY WITH PROBLEMS OF THREE SHARED RIVER BASINS ON THE UNITED STATES-MEXICO BORDER: THE RIO GRANDE, THE COLORADO, AND THE TIJUANA. HUNDLEY PRESENTS A DETAILED ACCOUNT OF THE INTERNATIONAL ASPECTS OF WATER RESOURCES DEVELOPMENT. SINCE THE FEDERAL GOVERNMENT WAS THE ONLY AGENCY THAT COULD DEAL WITH MEXICO, IT ASSUMED COMPLETE CONTROL IN THE REGULATION OF WATER BETWEEN THE TWO COUNTRIES. THE VARIOUS WESTERN STATES WERE CONCERNED THAT THE FEDERAL GOVERNMENT WAS GIVING THEIR WATER TO MEXICO. MEXICO'S OPPOSITION TO THE BOULDER CANYON PROJECT IS EXPLAINED. THE NEGOTIATIONS LEADING TO AND THE PROVISIONS OF THE MEXICAN WATER TREATY OF 1944 ARE DISCUSSED.

MEXICAN WATER TREATY/TREATIES/MEXICO/COLORADO RIVER/COMPETING USES/COLORADO
RIVER BASIN/INTERNATIONAL BOUND. AND WATER COMM./RIO GRANDE RIVER/INTERNATIONAL
WATERS

0082

HUTCHINS, W.A.

1955

THE DEVELOPMENT AND PRESENT STATUS OF WATER RIGHTS AND WATER POLICY IN THE U.S.

JOURNAL OF FARM ECONOMICS 37(5):866-874. SWRA W69-00766.

IN THE EAST THE RIPARIAN DOCTRINE PREVAILS. SOME WESTERN STATES RECOGNIZE BOTH RIPARIAN AND APPROPRIATIVE RIGHTS, OTHERS APPROPRIATIVE ONLY. BOTH DOCTRINES SHOW WEAKNESSES. IN RIPARIAN STATES A DIFFICULT PROBLEM IS THAT OF THE UNUSED RIPARIAN RIGHT. THE APPROPRIATIVE DOCTRINE IS PLAGUED WITH THE PERPETUATION OF RIGHTS TO SPECIFIC QUANTITIES OF WATER REGARDLESS OF SUBSEQUENT ECONOMIC CHANGES. COURTS ARE RELUCTANT TO ORDER PRIOR APPROPRIATORS TO MAKE EXTENSIVE CHANGES IN LONG-USED METHODS OF DIVERTING, CONVEYING, AND APPLYING WATER. A NEW AREA OF DEVELOPMENT IS THE ENACTMENT OF GROUNDWATER LEGISLATION.

MORE EXPERIENCE WITH SUCH STATUTES IS NEEDED BEFORE APPRAISING THEIR WORKABILITY. FEDERAL WATER POLICIES ARE DERIVED FROM THE COMMERCE POWER. IN SOME RESPECTS FEDERAL AND STATE WATER POLICIES CONFLICT. EXAMPLES OF COORDINATION, HOWEVER, INCLUDE STATE CONTROL OVER NAVIGABILITY ONLY IN THE ABSENCE OF PARAMOUNT FEDERAL CONTROL, AND CONSTRUCTION OF RECLAMATION PROJECTS WITH FEDERAL FUNDS UNDER WATER RIGHTS ACQUIRED PURSUANT TO STATE LAWS.

RIPARIAN RIGHTS/PRIOR APPROPRIATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/
NAVIGABLE RIVERS/INTERSTATE COMPACTS/GROUNDWATER/PERCOLATING WATER/LEGISLATION/
STATE GOVERNMENTS/FEDERAL JURISDICTION/HISTORY/WATER LAW

0083

INGRAM, H.M.

1969

PATTERNS OF POLITICS IN WATER RESOURCE DEVELOPMENT: A CASE STUDY OF NEW MEXICO'S ROLE IN THE COLORADO RIVER BASIN BILL.

UNIVERSITY OF NEW MEXICO, ALBUQUERQUE, INSTITUTE FOR SOCIAL RESEARCH AND DEVELOPMENT. 96 P.

IN SIX CHAPTERS THIS STUDY EXAMINES AND EXPLAINS THE INCLUSION OF THE ANIMAS-LA PLATA PROJECT AND HOOKER DAM IN THE COLORADO RIVER BASIN BILL (1968). CHAPTER 1 NOTES THAT THE CENTRAL FEATURE OF THE BILL AUTHORIZED THE CENTRAL ARIZONA PROJECT, BUT TWO UNRELATED PROJECTS IN NEW MEXICO WERE INCLUDED AS WELL. THE BASIS FOR THESE TWO PROJECTS WAS NOT THE LOGIC OF ECONOMICS OR ENGINEERING, BUT IS EXPLAINED ON THE BASIS OF POLITICAL FEASIBILITY. A MODEL OF POLITICS IN WATER RESOURCE POLICY IS DEVELOPED IN CHAPTER 2. THE MODEL ASSUMES THAT THE NATURE OF WATER AS A POLITICAL ISSUE SHAPES THE POLITICAL ACTORS' PERCEPTION OF RISK AND REWARDS, WHICH IN TURN DETERMINES HOW AND WHERE POLITICAL ACTORS WILL BECOME INVOLVED IN THE POLICY-MAKING PROCESS. CHAPTER 3 DESCRIBES THE INITIATION, FORMULATION, AND PASSAGE OF THE COLORADO RIVER BASIN BILL. THE MAJOR ACTORS AND THEIR PERSPECTIVES ARE DISCUSSED; THE RELATIONSHIPS AMONG THESE ACTORS IN BUILDING AND BLOCKING SUPPORT FOR VARIOUS PORTIONS OF THE BILL ARE EXAMINED; AND THE CONDITIONS ACHIEVED FOR PASSAGE OF THE BILL ARE DESCRIBED. THE ROLE OF NEW MEXICO IN THE BILL'S PASSAGE IS THE FOCUS OF THE FINAL THREE CHAPTERS. IN CHAPTER 4 THE ANIMAS-LA PLATA PROJECT IS TREATED AS AN EXAMPLE OF TYPICAL RECLAMATION POLITICS. INCLUSION OF THE PROJECT IN THE BILL PROVIDES INSIGHTS INTO THE APPLICATION OF LEVERAGE AND THE IMPORTANCE OF TIMING IN THE POLICY-MAKING PROCESS. THE AUTHORIZATION OF HOOKER DAM IS DESCRIBED AND ANALYZED IN CHAPTERS 5 AND 6 AND NEGOTIATIONS BETWEEN NEW MEXICO AND ARIZONA LEADING TO NEW WATER FOR NEW MEXICO, AND THE CONSERVATIONIST CHALLENGE TO THE DAM ARE EXAMINED. IN CHAPTER 7 THE MODEL OF POLITICS USED IN THE STUDY IS EVALUATED AND POTENTIAL LEVERAGE POINTS FOR CHANGE IN WATER POLITICS ARE IDENTIFIED AND EXPLAINED.

WATER RESOURCES DEVELOPMENT/COLORADO RIVER/LEGISLATION/POLITICAL ASPECTS/
COLORADO RIVER/RECLAMATION STATES/NEW MEXICO/ARIZONA/FEDERAL GOVERNMENT/FEDERAL
PROJECT POLICY/DAMS/WATER ALLOCATION(POLICY)/COLORADO/MODEL STUDIES/COLORADO
RIVER BASIN BILL/HOOKER DAM/CENTRAL ARIZONA PROJECT/ANIMAS-LA PLATA PROJECT/
POLITICAL FEASIBILITY/GILA RIVER

0084

INGRAM, H.M.

1972

THE CHANGING DECISION RULES IN THE POLITICS OF WATER DEVELOPMENT.

WATER RESOURCES BULLETIN 8(6):1177-1188.

A COMMON SET OF DECISION RULES HAS GOVERNED THE TRADITIONAL POLITICS OF WATER DEVELOPMENT: 1) LOCAL SUPPORT, 2) AGREEMENT, 3) MUTUAL NON INTERFERENCE, 4) MUTUAL ACCOMMODATION, AND 5) FAIRNESS AND EQUITY. THESE RULES ARE INTENDED TO DETERMINE WHICH PROJECTS ARE AUTHORIZED AND FUNDED FOR CONSTRUCTION, INSURE SUPPORT, LESSEN CONFLICT, AND PROTECT THE REPUTATION OF WATER DEVELOPMENT AS A WORTHWHILE FEDERAL INVESTMENT. CURRENTLY THERE ARE INDICATIONS THAT THE TRADITIONAL RULES MAY NO LONGER APPLY. NEW PARTICIPANTS HAVE ASSERTED A DIFFERENT CODE AND MORE ESTABLISHED PARTICIPANTS ARE CHANGING THEIR PERSPECTIVES AND BEHAVIOR. PRESENTLY, LOCAL SUPPORT FOR WATER DEVELOPMENT PROJECTS HAS LESSEMED AND CONFLICT HAS INCREASED AT THE EXPENSE OF AGREEMENT. MUTUAL ACCOMMODATION AND NONINTERFERENCE HAVE DECLINED IN IMPORTANCE WITH THE RISE IN CONFLICT OVER INCOMPATIBLE INTERESTS AND THE NATIONALIZATION OF WATER POLICY. FAIRNESS AND EQUITY HAS TAKEN ON A NEW MEANING AS THOSE WHO DEMAND ENVIRONMENTAL CONSIDERATIONS DEMAND INCLUSION IN THE DECISION PROCESS. WATER DEVELOPMENT POLICIES WILL TAKE NEW DIRECTION AS IT IS UNLIKELY THAT A CONSENSUS IN BEHALF OF A WATER DEVELOPMENT PROGRAM OF PAST MAGNITUDE WILL DEVELOP.

WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER POLICY/FEDERAL GOVERNMENT/
WATER ALLOCATION (POLICY)/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL PROJECT
POLICY/POLITICAL CONSTRAINTS/POLITICAL ASPECTS/GOVERNMENTAL INTERRELATIONS

0085

INGRAM, H.M.

1973

THE POLITICAL ECONOMY OF REGIONAL WATER INSTITUTIONS.

AMERICAN JOURNAL OF AGRICULTURAL ECONOMICS 55(1):10-18.

WATER EXPERTS TYPICALLY SUGGEST A UNIFIED REGIONAL ORGANIZATION AS THE APPROPRIATE INSTITUTIONAL APPROACH TO AN ENTIRE RANGE OF PROBLEMS. YET THE PERFORMANCE OF MULTISTATE REGIONAL ORGANIZATIONS HAS BEEN DISAPPOINTING. IT IS ARGUED THAT THE FAILURE OF REGIONAL INSTITUTIONS TO INNOVATE IS LARGELY DETERMINED BY THE RESTRAINTS IMPOSED BY POLITICAL VIABILITY. REGIONAL AGENCIES HAVE HAD TO TAILOR THEIR ACTIONS TO BUILD SUPPORT THUS COMPROMISING THEIR ABILITY TO APPROACH WATER PROBLEMS IN A COMPREHENSIVE, COORDINATED, REGIONAL MANNER. AT THE SAME TIME, IT IS RECOGNIZED THAT IF A REGIONAL AGENCY IS TO GROW AND SURVIVE IT MUST BUILD A POSITIVE BALANCE OF SUPPORT AMONG THE PREDOMINANT INTERESTS IN THE REGION. VARIOUS POSSIBLE STRATEGIES WHEREBY A REGIONAL ORGANIZATION CAN BUILD SUPPORT ARE OUTLINED.

WATER POLICY/WATER RESOURCES DEVELOPMENT/POLITICAL ASPECTS/FEDERAL-STATE WATER
RIGHTS CONFLICTS/REGIONAL DEVELOPMENT/PLANNING/REGIONAL ANALYSIS/GOVERNMENTAL
INTERRELATIONS/POLITICAL CONSTRAINTS/INSTITUTIONAL CONSTRAINTS

0086

INGRAM, H.M.

1974

THE POLITICS OF WATER ALLOCATION. PAPER PRESENTED AT THE CONVENTION OF THE
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, SAN FRANCISCO, FEBRUARY
28, 1974.

SINCE THE PASSAGE OF THE BOULDER CANYON PROJECT ACT OF 1928, THE LOCUS OF AND IMPETUS FOR DECISIONS ON THE ALLOCATION OF WATER IN THE COLORADO RIVER BASIN HAVE BEEN IN WASHINGTON. THE AUTHOR ARGUES THAT FEDERAL DOMINATION OF DECISIONS ON WATER ALLOCATION HAS IMPOSED COSTS UPON THE BASIN IN TERMS OF THE QUALITY OF THE DECISION-MAKING PROCESS AND THE RATIONALITY OF WATER POLICY. SUCH COSTS INCLUDE LIMITED INFORMATION, NARROWING OF ALTERNATIVES, OPPORTUNITY COSTS, LACK OF INCENTIVES FOR STATE PLANNING, AND ENVIRONMENTAL COSTS. HOWEVER, THERE IS EVIDENCE THAT THE INFLUENCE OF WASHINGTON ON WATER POLITICS IN THE COLORADO RIVER BASIN IS WANING. WESTERN WATER DEVELOPMENT PROJECTS ARE LOSING FAVOR. A STRONG ENVIRONMENTAL MOVEMENT AND INCREASED CAPABILITY AND INDEPENDENCE OF STATE WATER PLANNING AGENCIES IS EVIDENT. HOWEVER, PROJECTS SUCH AS OIL SHALE DEVELOPMENT AND SALINITY PLANTS MAY INVOLVE FEDERAL INTERVENTION IN A NEW ARENA. THE AUTHOR CONCLUDES WITH A PLEA FOR BASIN-WIDE SETTING OF FUTURE GOALS AND OBJECTIVES SO THAT PROPOSED RESOURCE PROJECTS COULD BE EVALUATED IN LIGHT OF THE KIND OF FUTURE THE COLORADO RIVER BASIN ENVISIONS FOR ITSELF.

COLORADO RIVER/COLORADO RIVER BASIN/BOULDER CANYON PROJECT ACT/WATER QUALITY/
WATER ALLOCATION(POLICY)/WATER POLICY/ENVIRONMENTAL EFFECTS/FEDERAL-STATE
WATER RIGHTS CONFLICTS/FEDERAL GOVERNMENT/FEDERAL PROJECT POLICY/SOUTHWEST U.S./
SALINITY/RIVER BASINS/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/DISTRIBUTIVE
POLITICS

0087

INGRAM, H.M./MCCAIN, J.R.

1977

FEDERAL WATER RESOURCES MANAGEMENT: THE ADMINISTRATIVE SETTING.

PUBLIC ADMINISTRATION REVIEW 37(5):448-455. SWRA W78-01499.

THE LONG-STANDING TRADITIONAL ADMINISTRATIVE STRUCTURE AND POLICY ARENA OF WATER RESOURCES IS DESCRIBED, THE FORCES FOR CHANGE ARE EXAMINED, AND THE CURRENT ADMINISTRATIVE SETTING AND OPPORTUNITIES FOR FUTURE MODIFICATION OF WATER POLICY ASSESSED. THE TRADITIONAL POLICY-MAKING PROCESS HAS CLOSELY ASSOCIATED WATER RESOURCES WITH THE VARIOUS BENEFITS (BUT RARELY THE COSTS) OF ECONOMIC DEVELOPMENT AND HAS PROCEEDED ON A PERCEPTION OF WATER AS AN UNLIMITED BIRTHRIGHT. WATER POLICIES HAVE TRADITIONALLY CONSIDERED WATER TO BE INFINITELY DIVISIBLE, AND POLICY DEMANDS FROM GROUPS AND INDIVIDUALS HAVE BEEN HIGHLY FRAGMENTED. THE ACTIVE PARTICIPATION OF DIFFERENT LEVELS OF GOVERNMENT, ESPECIALLY STATES, HAS FURTHER FRAGMENTED WATER POLICY-MAKING. THE RESULTING POLICIES BIND TOGETHER A LARGE NUMBER OF DIVERSE INTERESTS SO THAT PROGRAMS WILL ACHIEVE WIDE CONSENT AND LEGITIMIZATION. THESE SAME 'LOG-ROLLING' PRACTICES HAVE ALSO GOVERNED INTERAGENCY RELATIONSHIPS. THIS APPROACH HAS, HOWEVER, BECOME SUBJECT TO TWO MAJOR PRESSURES TOWARD CHANGE: 1) PREVAILING PATTERNS OF WATER USE HAVE REACHED HERETOFORE UNACKNOWLEDGED PHYSICAL LIMITS, AND 2) GROUPS WITH ENVIRONMENTAL INTERESTS ARE INSISTING ON PARTICIPATING IN DECISIONS AND MAY BE DIFFICULT TO ACCOMMODATE WITHIN THE TRADITIONAL POLICY APPROACH. AGENCIES INVOLVED IN WATER RESOURCES MANAGEMENT HAVE ATTEMPTED TO ADAPT TO THESE NEW STRESSES WITHIN THE TRADITIONAL APPROACH. WHILE THE REGULATORY AUTHORITY OF THE ENVIRONMENTAL PROTECTION AGENCY SIGNALS A POTENTIAL BASIS FOR ALTERING THE TRADITIONAL APPROACH, IN PRACTICE THE AGENCY HAS NOT SIGNIFICANTLY ALTERED THE ON-GOING PATTERN OF INTERAGENCY RELATIONSHIPS. OPPORTUNITIES FOR FUTURE MODIFICATIONS MAY REST UPON THE PHYSICAL LIMITS OF WATER BECOMING MORE OBVIOUS, AS WELL AS UPON BUDGETARY LIMITATIONS.

WATER POLICY/FEDERAL GOVERNMENT/WATER RESOURCES DEVELOPMENT/ADMINISTRATIVE
AGENCIES/ENVIRONMENTAL ADMINISTRATION/FEDERAL PROJECT POLICY/INSTITUTIONAL
CONSTRAINTS/INSTITUTIONS/MULTIPLE-PURPOSE PROJECTS/PROJECT PURPOSES/WATER
DEMAND/SOUTHWEST U.S./GOVERNMENTS/GOVERNMENTAL INTERRELATIONS/COLORADO
RIVER BASIN/ARIZONA/NEW MEXICO/WATER POLLUTION/POLITICAL ASPECTS/POLITICAL
CONSTRAINTS/PUBLIC BENEFITS/WATER USERS/U.S. WATER RESOURCES COUNCIL

0088

JACOBY, G.C.

1975

AN OVERVIEW OF THE EFFECT OF LAKE POWELL ON COLORADO RIVER BASIN WATER SUPPLY AND ENVIRONMENT.

NATIONAL SCIENCE FOUNDATION/RANN, LAKE POWELL RESEARCH PROJECT BULLETIN 14.
34 P.

LAKE POWELL WAS CREATED BY THE CONSTRUCTION OF GLEN CANYON DAM AS PART OF THE COLORADO RIVER STORAGE PROJECT ACT OF 1956. THE STORAGE OF WATER IN LAKE POWELL ALLOWED MAJOR CONTROL OVER THE UPPER BASIN SURFACE WATER RESOURCES. DEVELOPMENT OF THE UPPER BASIN AND PRESSURES FOR EXPORTABLE WATER, FOOD, AND ENERGY WILL INCREASE CONSUMPTIVE USE. AFTER A TIME (WITHIN TWO DECADES), WATER SUPPLY AND CONSUMPTIVE USE WILL BALANCE. THIS WILL CAUSE THE UPPER BASIN TO REDUCE RELEASES OF WATER FROM LAKE POWELL TO THE LOWER BASIN TO THE LEGAL MINIMUM. HOWEVER, LOWER BASIN CONSUMPTIVE USE ALREADY EXCEEDS RENEWABLE ANNUAL SUPPLY OF BOTH SURFACE AND GROUNDWATER, THUS ANY CONTINUED AGRICULTURAL, INDUSTRIAL, OR POPULATION GROWTH IN THE LOWER BASIN WILL BE AFFECTED. SOLUTIONS FOR INCREASING USABLE WATER SUPPLY INVOLVE INCREASED EFFICIENCIES IN USE OF PRESENT SUPPLIES AND/OR NEW OR AUGMENTED SUPPLY. BOTH, HOWEVER, PRESENT THEIR OWN DIFFICULTIES.

COLORADO RIVER/COLORADO RIVER BASIN/WATER SUPPLY/WATER MANAGEMENT (APPLIED)/ ENVIRONMENTAL EFFECTS/WATER STORAGE/CONSUMPTIVE USE/COMPETING USES/SURFACE WATERS/GROUNDWATER/WATER SUPPLY DEVELOPMENT/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER DISTRIBUTION (APPLIED)/COLORADO RIVER STORAGE PROJECT ACT/ LAKE POWELL/GLEN CANYON DAM

0089

JOHNSON, R.

1977

THE CENTRAL ARIZONA PROJECT: 1918-1968.

UNIVERSITY OF ARIZONA PRESS, TUCSON. 242 P. SERA W77-11999.

THE PLAN TO BRING WATER FROM THE COLORADO RIVER MAINSTREAM INTO CENTRAL ARIZONA IS DISCUSSED IN DETAIL. CONTROVERSIAL WATER PROBLEMS AND ISSUES FACING ARIZONA AND OTHER INVOLVED WESTERN STATES ARE EXAMINED, LEGAL AND POLITICAL EVENTS FROM 1919 TO 1968 ARE CLARIFIED, AND THE BATTLE WITHIN ARIZONA OVER THE PROJECT DESCRIBED. COMPROMISES MADE TO SATISFY CONFLICTS AMONG THE SEVEN CONCERNED STATES ARE EXPLAINED AND THE PASSAGE OF THE CENTRAL ARIZONA PROJECT ACT IS DESCRIBED. WATER ISSUES AND PROBLEMS SINCE 1968 ARE BRIEFLY EXAMINED. (JEWKES-ARIZONA)

ARIZONA/COLORADO RIVER/WATER RESOURCES DEVELOPMENT/POLITICAL ASPECTS/WATER TRANSFER/COLORADO RIVER COMPACT/MEXICAN WATER TREATY/CALIFORNIA/DAMS/SOUTHWEST U.S./LEGAL ASPECTS/LEGISLATION/COMPETING USES/WATER RIGHTS/WATER UTILIZATION/ WATER ALLOCATION (POLICY)/CENTRAL ARIZONA PROJECT

KERWIN, J.G.

1968

FEDERAL WATER-POWER LEGISLATION.

AMS PRESS, INC. NEW YORK. 396 P. SWRA W71-04307.

DETAILED IN THIS STUDY ARE THE LEGAL, ECONOMIC, AND HISTORICAL ASPECTS OF THE BATTLE FOR FEDERAL WATER-POWER LEGISLATION, CULMINATING IN THE FEDERAL WATER POWER ACT OF 1920. THE COMPARATIVE ECONOMIC ADVANTAGES OF WATER POWER, ITS HISTORIC USES, AND ITS POTENTIAL FOR FUTURE DEVELOPMENT ARE DISCUSSED IN CHAPTER I. THE LEGAL AND CONSTITUTIONAL ASPECTS OF FEDERAL WATER POWER ARE PRESENTED IN CHAPTER II. RIGHTS IN RUNNING WATER UNDER BOTH RIPARIAN RIGHTS AND PRIOR APPROPRIATION DOCTRINES ARE DISCUSSED. CONSTITUTIONAL ISSUES EXAMINED BY THE AUTHOR INCLUDE: 1) THE EXTENT OF STATE WATER POWER, 2) THE FEDERAL GOVERNMENT'S RIGHT TO LEASE WATER RIGHTS IN THE PUBLIC DOMAIN, 3) THE TREATY-MAKING POWER AS A SOURCE OF FEDERAL WATER POWER, 4) FEDERAL POWER OVER NAVIGABLE STREAMS, AND 5) THE EXTENT OF FEDERAL ADMINISTRATIVE POWER AND DISCRETION. IN CHAPTERS III AND IV CONGRESSIONAL BATTLES OVER WATER-POWER LEGISLATION BEFORE 1920 ARE EXAMINED. THE ENACTMENT OF THE FEDERAL WATER-POWER ACT OF 1920, WITH FULL TEXT PROVIDED IN AN APPENDIX, IS DISCUSSED IN CHAPTER V. PROGRESS UNDER THE ACT, ITS WEAKNESSES, LEGAL CHALLENGES TO THE ACT, AND THE EXTENT OF ACTIVITY UNDERTAKEN PURSUANT TO THE ACT ARE CONSIDERED IN CHAPTER VII.

FEDERAL POWER ACT/WATER ALLOCATION(POLICY)/FEDERAL GOVERNMENT/LEGISLATION/
WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL
JURISDICTION/STATE JURISDICTION/LEGAL ASPECTS/JUDICIAL DECISIONS/PUBLIC
UTILITIES/ECONOMIC IMPACT/POLITICAL ASPECTS/POLITICAL CONSTRAINTS/WATER
UTILIZATION/HYDROELECTRIC PLANTS/RIPARIAN RIGHTS/ADMINISTRATION/NAVIGABLE
RIVERS/WATER RESOURCES/PRIOR APPROPRIATION/POWER MARKETING/ECONOMIC EFFICIENCY/
ELECTRIC POWER/INDUSTRY

0091

KIECHEL, W.J.

1976

WATER LAWS OF THE UNITED STATES: THE DEFICIENCIES AND DEGREE OF EFFECTIVENESS. IN INTERNATIONAL CONFERENCE ON WATER LAW AND ADMINISTRATION, 1976, CARACAS, VENEZUELA, PROCEEDINGS, P. 158-168.

COMMISSION FOR THE NATIONAL WATER RESOURCES DEVELOPMENT PLAN, CARACAS.
SWRA W77-04355.

WATER LAW IN THE UNITED STATES IS A DUAL SYSTEM WITH THE AUTHORITY AND JURISDICTION OVER WATER RESOURCES DIVIDED BETWEEN FEDERAL AND STATE GOVERNMENTS. THE WATER LAW OF THE STATES IS BASICALLY EITHER THE RIPARIAN DOCTRINE OR THE DOCTRINE OF PRIOR APPROPRIATION. A CONFERENCE ON WATER LAW RECOMMENDED MODIFICATION OF STATE LAWS TO : 1) PROVIDE A SIMPLE METHOD FOR A CHANGE IN PERMITTED USE OF WATER, 2) RECOGNIZE A WATER RIGHT FOR ENVIRONMENTAL PURPOSES, 3) REGULATE GROUNDWATER AS WELL AS SURFACE WATER, AND 4) ENCOURAGE WATER CONSERVATION. THE BASIS OF FEDERAL WATER LAW IS THE RESERVATION DOCTRINE. THE FEDERAL GOVERNMENT OWNS APPROXIMATELY ONE-THIRD OF THE LAND AREA OF THE FIFTY STATES AND CONTROLS THE WATERS ARISING ON THESE LANDS. CURRENTLY, INFORMATION ABOUT THE EXTENT OF THESE RESERVED RIGHTS IS DIFFICULT TO OBTAIN. THE AUTHOR SUGGESTS A NEED FOR LEGISLATION REQUIRING AN INVENTORY AND QUANTIFICATION OF FEDERAL WATER RIGHTS SO THAT STATES MAY DETERMINE THE IMPACT OF FEDERAL WATER RIGHTS ON STATE LAW.

FEDERAL-STATE WATER RIGHTS CONFLICTS/JURISDICTION/RESERVATION DOCTRINE/
RIPARIAN RIGHTS/PRIOR APPROPRIATION/FEDERAL GOVERNMENT/STATE GOVERNMENTS/
REGULATION/GROUNDWATER/LEGISLATION/JUDICIAL DECISIONS/LEGAL REVIEW/FEDERAL
JURISDICTION/SURFACE WATERS/LEGAL ASPECTS/WATER RIGHTS/WATER LAW

0092

KIGHT, G.

1927

HISTORY OF THE SANTA FE COMPACT.

UNIVERSITY OF ARIZONA, TUCSON (M.A. THESIS). 111 P.

CHAPTER 1, THE COLORADO RIVER SYSTEM AND ITS PROBLEMS, SUMMARIZES THE GEOGRAPHIC AND ECONOMIC FEATURES AND PROBLEMS OF THE RIVER, CHAPTER 2, FEDERAL AND STATE ACTION WITH REFERENCE TO THE COLORADO RIVER, ADDRESSES GOVERNMENT ACTIVITIES REGARDING THE RIVER FROM THE EARLY EFFORTS OF JOHN WESLEY POWELL TO THE FORMATION OF THE COLORADO RIVER COMMISSION, CHAPTER 3, ORGANIZATION OF COLORADO RIVER COMMISSION, DISCUSSES THE ACTIVITY OF ORGANIZING THE COLORADO RIVER COMMISSION, CHAPTER 4, THE COLORADO RIVER COMPACT, ADDRESSES THE FORMULATION OF THE COMPACT AND THE PROBLEMS DEALT WITH IN THE AGREEMENT. IN A FINAL CHAPTER, CONGRESSIONAL AND STATE ACTIONS RELEVANT TO THE COMPACT ARE DESCRIBED.

COLORADO RIVER COMPACT/COLORADO RIVER BASIN/COLORADO RIVER/GOVERNMENTS/
FEDERAL GOVERNMENT/SOUTHWEST U.S./WATER POLICY/FEDERAL PROJECT POLICY/STATE
GOVERNMENTS/REGIONAL DEVELOPMENT/IRRIGATION/HYDROELECTRIC POWER/HISTORY/
MEXICO/ALL-AMERICAN CANAL/LAGUNA DAM/ROOSEVELT DAM/KETTNER BILL/LEAGUE OF THE
SOUTHWEST

0093

KINSEY, D.J.

1928

THE RIVER OF DESTINY: THE STORY OF THE COLORADO RIVER.

LOS ANGELES DEPARTMENT OF WATER AND POWER. 63 P.

THIS BOOKLET EMPHASIZES THE NEED TO CONTROL THE WATERS OF THE COLORADO RIVER BY CONSTRUCTING A FLOOD CONTROL AND WATER STORAGE DAM AT BOULDER CANYON. IN THE FIRST THREE SECTIONS THE SPANISH DISCOVERY, THE EARLY AMERICAN EXPLORATIONS, AND THE THREAT OF FLOODS TO CALIFORNIA'S IMPERIAL VALLEY ARE BRIEFLY DESCRIBED AND USED TO STRESS THE NEED FOR BOULDER DAM. IN SECTION 4 THE FINDINGS OF A STUDY CONDUCTED BY THE U.S. RECLAMATION SERVICE IN 1922 ARE DESCRIBED AND THE ADVANTAGES OF LOCATING A DAM IN BOULDER CANYON ARE EMPHASIZED. IN PART 5 THE IMPORTANCE OF COLORADO RIVER WATER FOR AGRICULTURE IN IMPERIAL VALLEY, THE DIFFICULTIES OF DIVERTING THE WATER BY CANAL THROUGH MEXICO, AND THE NEED FOR AN ALL-AMERICAN CANAL ARE PRESENTED. PART 6 EMPHASIZES THE POTENTIAL WEALTH OF THE RIVER IN THE FORM OF HYDROELECTRIC POWER AND IRRIGATION WATER. PART 7 DESCRIBES THE USES AND BENEFITS WHICH WOULD RESULT FROM BUILDING A DAM IN BOULDER CANYON. THE IMPORTANCE OF A COLORADO RIVER AQUEDUCT FOR LOS ANGELES AND THE NEED FOR BOULDER CANYON DAM TO PROVIDE WATER STORAGE AND POWER TO PUMP WATER FOR THE AQUEDUCT ARE EMPHASIZED IN PART 8. THE NEED FOR THE FEDERAL GOVERNMENT TO HANDLE THE DEVELOPMENT OF THE RIVER IS ASSERTED IN PART 9, AND THE COLORADO RIVER COMPACT AND STATE POSITIONS REGARDING THE COMPACT, AND THE BOULDER CANYON DAM PROJECT BILL ARE DESCRIBED. THE FINAL PART ADDRESSES THE SELF-FINANCING FEATURES OF THE PROPOSED DAM, CANAL, AND AQUEDUCT PROJECTS, EMPHASIZING THAT THE DEVELOPMENT PROJECTS WILL NOT COST U.S. TAXPAYERS A SINGLE DOLLAR.

COLORADO RIVER/BOULDER CANYON PROJECT ACT/COLORADO RIVER COMPACT/FEDERAL
GOVERNMENT/STATE GOVERNMENTS/WATER RESOURCES DEVELOPMENT/FEDERAL PROJECT POLICY/
HYDROELECTRIC PLANTS/PROJECT PURPOSES/COST REPAYMENT/IRRIGATION/FLOOD CONTROL/
LEGISLATION/CALIFORNIA/COLORADO RIVER COMMISSION/IMPERIAL VALLEY

0094

KIRSCHTEN, D.

1977A

DRAINING THE WATER PROJECTS OUT OF THE PORK BARREL.

NATIONAL JOURNAL 9(15):540-548.

THE ATTEMPTS OF THE CARTER ADMINISTRATION TO SHAPE A COMPREHENSIVE NATIONAL WATER POLICY TO REPLACE THE PORK-BARREL PAROCHIALISM THAT HAS GUIDED FEDERAL PLANNING AND INVESTMENTS IN THE PAST IS DISCUSSED. PROBLEMS RESULTING FROM PAST WATER POLICIES ARE COMING TO A HEAD IN MANY AREAS OF THE COUNTRY, PERHAPS MOST DRAMATICALLY IN THE WATER-SHORT COLORADO RIVER BASIN. THERE IS A SECTION DISCUSSING THE PARTICULAR PROBLEMS OF THE COLORADO RIVER BASIN FROM AN HISTORICAL PERSPECTIVE.

WATER POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL PROJECT POLICY/FEDERAL GOVERNMENT/PROJECT PURPOSES/WATER RESOURCES DEVELOPMENT/PROJECT FEASIBILITY/COLORADO RIVER/COLORADO RIVER BASIN/ARIZONA/WATER RESOURCES/SOUTHWEST U.S./WATER CONSERVATION/ENVIRONMENTAL EFFECTS/PLANNING/HOOVER DAM/CENTRAL ARIZONA PROJECT

0095

KIRSCHTEN, D.

1978A

GOVERNORS SEEK A WATER POLICY THAT HAS SOMETHING FOR EVERYONE.

NATIONAL JOURNAL 10(11):432-435.

AS THE CARTER ADMINISTRATION PONDERES THE NEXT STEP IN ITS CRUSADE TO CUT OFF FEDERAL SUBSIDIES THAT ENCOURAGE WASTEFUL USES OF WATER, THE NATION'S GOVERNORS HAVE Banded Together to Urge that Federal Water Funds be Distributed More Widely. The Governors are seeking a stronger role in water resources decisions. Their strategy has been to side-step regional rivalries and unite behind a common framework that offers something for everybody. The Western Governors, in particular, were embittered by Carter's attempt a year ago to eliminate funding for water projects on what came to be known as his 'hit list'. The Governors' policy statement declares, 'any national water policy must recognize regional differences in water problems and ensure flexibility and equity in future federal water investments'. It is pointed out that one area that may be a time-bomb for the administration's water policy is water rights for Indian reservations. The single most important principle set forth in the Governors' statement asserts that state courts, rather than federal courts, should have original jurisdiction over all water claims.

WATER POLICY/FEDERAL PROJECTS POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/POLITICAL ASPECTS/WATER RESOURCES DEVELOPMENT/FEDERAL GOVERNMENT/STATE GOVERNMENTS/GOVERNMENTAL INTERRELATIONS

0096

KIRSCHTEN, D.

1978B

THE QUIET BEFORE THE SHOOTOUT OVER 'THE LAW OF THE WEST.'

NATIONAL JOURNAL 10(4):149-153.

THIS ARTICLE DISCUSSES THE 1977 PLAN BY THE CARTER ADMINISTRATION TO CUT FUNDING FOR SEVERAL MAJOR WESTERN WATER PROJECTS, AS WELL AS THE ADMINISTRATION'S PLANS FOR CHANGING THE 160-ACRE LIMIT ON IRRIGATION LANDS SET BY THE RECLAMATION ACT OF 1902. SEVERAL COURT CASES DEALING WITH PROVISIONS OF THAT ACT ARE DISCUSSED. THE CARTER ADMINISTRATION'S PROPOSAL FOR TAKING A NEW LOOK AT THE NATION'S OVERALL WATER RESOURCES POLICY IS DISCUSSED WITH THE AUTHOR CONCLUDING THAT PRESIDENT CARTER MAY HAVE SUCCEEDED IN AROUSING WIDESPREAD PUBLIC SKEPTICISM ABOUT THE POLITICS OF WATER PROJECTS. IF THAT IS THE CASE, CONGRESS MAY HAVE TO CLARIFY WHO WILL BENEFIT FROM FUTURE WATER PROJECT SPENDING.

U.S. BUREAU OF RECLAMATION/WATER POLICY/RECLAMATION/WATER RESOURCES DEVELOPMENT/POLITICAL ASPECTS/POLITICAL CONSTRAINTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL RECLAMATION LAW

0097

KIRSCHTEN, J.D.

1977P

TURNING BACK THE TIDES OF LONG-TIME FEDERAL WATER POLICY.

NATIONAL JOURNAL 9 (24) :900-903.

PRESIDENT CARTER'S PROPOSED COMPREHENSIVE NATIONAL WATER RESOURCES POLICY WHICH WOULD UNITE THE EFFORTS OF 25 FEDERAL AGENCIES THAT PRESENTLY DEAL WITH WATER PROBLEMS IS DISCUSSED. INTERIOR SECRETARY CECIL D. ANDRUS WILL LEAD THE WATER POLICY REVIEW WHICH HAS AS ITS MAIN PURPOSE A MORE RATIONAL USE OF WATER. AS MANY AREAS OF THE U.S. ARE DEALING WITH SERIOUS DROUGHT CONDITIONS, CARTER AND HIS AIDES FEEL THAT THE TIME IS RIPE TO CONVINCE AMERICANS THAT WISE MANAGEMENT AND CONSERVATION MAY BE BETTER ANSWERS TO WATER PROBLEMS THAN THE EXPENSIVE CONSTRUCTION PROJECTS OF THE PAST. THE ADMINISTRATION CUT THE BUDGET FOR SEVERAL WATER PROJECTS, BUT THESE ARE BEING CHALLENGED BY THE LEGISLATIVE BRANCH WHICH IS ATTEMPTING TO PROTECT ITS PROJECTS. CARTER'S FIVE BASIC AREAS FOR WATER POLICY REFORM (WATER CONSERVATION, COST SHARING, ECONOMIC STIMULUS, PROJECT EVALUATION, AND DAM SAFETY) ARE DISCUSSED. AMONG THE REFORMS INVESTIGATED ARE MORE EFFICIENT IRRIGATION PRACTICES AND NEW WATER PRICING STRATEGIES. THREE FEDERAL AGENCIES, OFFICE OF MANAGEMENT AND BUDGET, COUNCIL ON ENVIRONMENTAL QUALITY, AND THE WATER RESOURCES COUNCIL ARE RESPONSIBLE FOR CONDUCTING REVIEWS OF THE WATER POLICY. THE IMPACT OF STATE AND LOCAL WATER INTERESTS AND THE CREATION OF A NEW DEPARTMENT OF NATURAL RESOURCES ARE ALSO DISCUSSED.

WATER POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL PROJECT POLICY/FEDERAL GOVERNMENT/WATER RESOURCES DEVELOPMENT/WATER DEMAND/DROUGHTS/WATER CONSERVATION/U.S. WATER RESOURCES COUNCIL/SOUTHWEST U.S./ADMINISTRATIVE AGENCIES/IRRIGATION EFFICIENCY/COST SHARING

0098

LA RUE, E.C.

1916

COLORADO RIVER AND ITS UTILIZATION.

U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 231 P.

AN EARLY ACCOUNT WHICH DISCUSSES THE POSSIBLE FUTURE DEVELOPMENT OF THE COLORADO RIVER BASIN. THE U.S. GEOLOGICAL SURVEY BEGAN THE STUDY OF THE WATER RESOURCES OF THE BASIN BY ESTABLISHING GAGING STATIONS ON THE GILA RIVER IN 1889. THE U.S. RECLAMATION SERVICE, THE INDIAN OFFICE, THE FOREST SERVICE, AND THE WEATHER BUREAU ALSO STUDIED THE WATER RESOURCES OF THE BASIN. THIS REPORT DISCUSSES THE IMPORTANCE OF SOME COMPREHENSIVE PLAN TO DEAL WITH COLORADO RIVER BASIN WATER. IT POINTS OUT THAT THE IMPORTANCE OF COLORADO RIVER TO THE PROSPERITY OF THE AREA EXTENDING OVER SEVEN STATES WARRANTS BROAD CONSIDERATION AND PERHAPS FEDERAL ASSISTANCE NOT ONLY IN THE CONSTRUCTION OF LARGE IRRIGATION SYSTEMS AND INCIDENTAL STORAGE WORKS, BUT ALSO IN THE IMPORTANT PHASES OF RIVER CONTROL. THE HISTORY OF THE BASIN IS TRACED AS WELL AS A HISTORY OF IRRIGATION IN THE AREA. ALTHOUGH MENTIONED, THE ROLE OF THE FEDERAL GOVERNMENT IS NOT DISCUSSED IN DETAIL. IT IS USEFUL FOR THE BACKGROUND INFORMATION IT PROVIDES TO THE FEDERAL STATE WATER RIGHTS CONTROVERSY.

COLORADO RIVER/COLORADO RIVER BASIN/NEW MEXICO/ARIZONA/NEVADA/CALIFORNIA/UTAH/
WYOMING/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RESOURCES/WATER RESOURCES
DEVELOPMENT/WATER SUPPLY

0099

LOWI, T.J.

1964

AMERICAN BUSINESS, PUBLIC POLICY, CASE-STUDIES, AND POLITICAL THEORY.

WORLD POLITICS 16(4):677-715.

IN REVIEWING A BOOK ON TARIFF POLICY, THE AUTHOR DEVELOPS A TYPOLOGY OF PUBLIC POLICIES BASED ON POLITICAL ACTORS' PERCEPTIONS OF THE IMPACT OF A PARTICULAR POLICY ON SOCIETY, THAT IS DIFFERENT PATTERNS OF COSTS AND BENEFITS. THREE CLASSES OF POLICIES ARE IDENTIFIED: 1) DISTRIBUTIVE, CONFERRING HIGHLY DESIRABLE BENEFITS UPON PARTICULAR GROUPS, LOCALITIES, OR INDIVIDUALS WITHOUT ANY PERCEPTION OF COSTS, 2) REGULATORY, CONFERRING BENEFITS ON SPECIFIED PARTIES WHILE OTHER PARTIES ARE BURDENED WITH EXPLICIT COSTS, AND 3) REDISTRIBUTIVE DELIBERATELY BENEFITTING AND COSTING BROAD SOCIAL FORMATIONS APPROACHING SOCIETY-WIDE CLASSES. EACH ARENA HAS ITS OWN ACTORS AND INSTITUTIONAL SETTING.

POLITICAL ASPECTS/DISTRIBUTIVE POLITICS/REDISTRIBUTIVE POLITICS/REGULATORY
POLITICS/REGULATION/POLITICAL CONSTRAINTS

0100

MALONEY, F.E./AUSNESS, R.C.

1971

ADMINISTERING STATE WATER RESOURCES: THE NEED FOR LONG-RANGE PLANNING.

WEST VIRGINIA LAW REVIEW 73:209-230.

REGARDLESS OF THE GROWTH OF FEDERAL WATER DEVELOPMENT PROGRAMS, THE STATES WILL PROBABLY RETAIN MUCH ULTIMATE RESPONSIBILITY FOR REGULATION OF CONSUMPTIVE USES AS WELL AS A LARGE MEASURE OF WATER POLLUTION CONTROL AUTHORITY. IT IS IMPERATIVE, THEREFORE, THAT THE STATES PLACE MAJOR EMPHASIS ON COORDINATED PLANNING IN THEIR WATER MANAGEMENT PROGRAMS. THIS WILL REQUIRE CENTRALIZED PLANNING RESPONSIBILITY WITHIN A SINGLE AGENCY, RECOGNITION OF HYDROLOGIC RELATIONSHIPS, REGULATION OF CONSUMPTIVE USES, AND PROTECTION OF WATER QUALITY.

WATER RESOURCES/WATER MANAGEMENT(APPLIED)/PROJECT PLANNING/HYDROLOGY/WATER
POLICY/CONSUMPTIVE USE/REGULATION/WATER POLLUTION CONTROL/COORDINATION/WATER
QUALITY/PLANNING/STATE GOVERNMENTS

0101

MANN, D.

1963

THE POLITICS OF WATER IN ARIZONA.

UNIVERSITY OF ARIZONA PRESS, TUCSON. 317 P.

THIS STUDY LOOKS AT THE POLITICAL MACHINERY THROUGH WHICH WATER POLICY DECISIONS HAVE BEEN RENDERED IN ARIZONA. THE AUTHOR CHARACTERIZES ARIZONA GROUNDWATER LAW AS CONFUSED AND INCONSISTENT. A SUBSTANTIAL REVIEW OF ARIZONA STATUTORY AND CASE WATER LAW IS PRESENTED. IN HIS FOCUS ON GROUNDWATER, THE AUTHOR INDICATES THAT DECISIONS WHICH SHOULD HAVE BEEN MADE IN THE 1940'S STILL HAD NOT BEEN MADE IN THE EARLY 1960'S.

WATER SUPPLY/WATER MANAGEMENT(APPLIED)/WATER DEMAND/WATER COSTS/WATER UTILIZATION/GROUNDWATER/GROUNDWATER MINING/OVERDRAFT/WATER LAW/ARIZONA/POLITICAL ASPECTS/LEGISLATION/SOUTHWEST U.S./ADMINISTRATION/WATER POLICY/PUBLIC RIGHTS/LEGAL ASPECTS/SOCIAL ASPECTS

0102

MANN, D.

1975A

POLITICAL INCENTIVES IN U.S. WATER POLICY: THE CHANGING EMPHASIS ON DISTRIBUTIVE AND REGULATORY POLICIES. IN M. HOLDEN, JR. AND D.L. DRESANG, EDS., WHAT GOVERNMENT DOES, P. 94-123.

SAGE PUBLICATIONS, BEVERLY HILLS, CALIFORNIA.

TRADITIONALLY, WATER POLICY HAS BEEN A CLASSIC CASE OF DISTRIBUTIVE POLITICS, SEGMENTAL AND LOCALISTIC, WITH SUPPORTERS OF VARIOUS PROJECTS TRADING VOTES ON OTHER FORMS OF SUPPORT IN ORDER THAT THE PROJECT OF EACH OBTAINS MAXIMUM SUPPORT. RECENTLY, HOWEVER, WATER POLICY HAS SHOWN PATTERNS OF INTERACTION BETWEEN DISTRIBUTIVE AND REGULATORY POLITICS AND IN SOME CASE EVEN REDISTRIBUTIVE POLITICS. POLICY MAY NOT DEVELOP IN A DISTRIBUTIVE OR REGULATORY MODE BUT IN THE INTERACTION BETWEEN THOSE MODES WITH POLICY ACTORS RECOGNIZING THAT INTERACTION, AND CAPITALIZING ON IT IN THE ACHIEVEMENT OF THEIR POLICY GOALS. USING THREE CASE STUDIES, THE COLORADO RIVER STORAGE PROJECT, THE COLORADO RIVER BASIN PROJECT ACT, AND THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, THE AUTHOR ARGUES THAT DISTRIBUTIVE POLITICS TENDS TO PERSIST, THAT IT TAKES ON NEW OBJECTS, INVOLVES DIFFERENT SETS OF ACTORS, BUT FOLLOWS THE SAME BASIC PATTERN. HOWEVER, IT IS ACCOMPANIED BY A MODE OF DECISION-MAKING THAT FITS NOT THE DISTRIBUTIVE, BUT THE REGULATORY MODE OF POLITICS. MOREOVER, IT APPEARS THAT THE PRICE FOR WINNING ON A REGULATORY ISSUE IS ACQUIESCENCE IN THE DISTRIBUTIVE ELEMENTS IN THE POLICY PROPOSAL ITSELF AND VICE VERSA. FURTHER INCENTIVES FOR CHANGE WILL PROBABLY COME FROM OUTSIDE THE TYPICAL DISTRIBUTIVE AND REGULATORY AREAS. THESE INCENTIVES WILL PROBABLY BE SUPPLIED BY THE PRESIDENT WHO WILL ENDEAVOR TO TRANSFORM THE ISSUE FROM DISTRIBUTIVE OR REGULATORY TO REDISTRIBUTIVE.

WATER POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER ALLOCATION(POLICY)/FEDERAL PROJECT POLICY/POLITICAL CONSTRAINTS/COLORADO RIVER/COLORADO RIVER BASIN/WATER RESOURCES DEVELOPMENT/WATER RESOURCES/POLITICAL ASPECTS/GOVERNMENTAL INTERRELATIONS/FEDERAL WATER POLLUTION CONTROL ACT/REGULATION/DISTRIBUTIVE POLITICS/REDISTRIBUTIVE POLITICS/COLORADO RIVER STORAGE PROJECT ACT

0103

MANN, D.

1975B

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

NATURAL RESOURCES JOURNAL 15(1):113-128.

THE TRADITIONAL KEY TO UNDERSTANDING WATER POLICY IN THE UNITED STATES IS ITS DISTRIBUTIVE NATURE WHICH HAS 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 LEVEL, 3) AVOIDENCE 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, AND 5) LOGROLLING FOR MUTUAL BENEFIT WITH OTHER SIMILARLY SITUATED INTERESTS WHO SEEK DIVERSE OBJECTIVES THROUGH CONGRESSIONAL ACTION. OBSERVERS HAVE ARGUED THAT TREATY OBLIGATIONS TO MEXICO, THE ENVIRONMENTAL MOVEMENT, AND THE CHANGING CHARACTER OF THE ECONOMY IN THE COLORADO RIVER BASIN WILL CHANGE THE NATURE OF WATER POLICY MAKING. HOWEVER, THE LEGISLATIVE HISTORY OF THE COLORADO RIVER BASIN SALINITY CONTROL ACT CLEARLY SHOWS THE PERSISTENCE OF DISTRIBUTIVE POLICY-MAKING.

COLORADO RIVER/WATER POLICY/SALINITY/FEDERAL-STATE WATER RIGHTS CONFLICTS/REGIONAL DEVELOPMENT/FEDERAL GOVERNMENT/MEXICAN WATER TREATY/DISTRIBUTIVE POLITICS/COLORADO RIVER BASIN/COMPETING USES/FEDERAL PROJECT POLICY/WATER ALLOCATION(POLICY)/MEXICO/WATER QUALITY/COLORADO RIVER BASIN SALINITY CONTROL ACT

0104

MANN, D./WEATHERFORD, G./NICHOLS, P.

1974

LEGAL-POLITICAL HISTORY OF WATER RESOURCE DEVELOPMENT IN THE UPPER COLORADO RIVER BASIN.

UNIVERSITY OF CALIFORNIA, LOS ANGELES, INSTITUTE OF GEOPHYSICS AND PLANETARY PHYSICS, LAKE POWELL RESEARCH PROJECT BULLETIN 4. 53 P.

PART 1 CHRONICLES THE MAJOR EVENTS OF THE LEGISLATIVE HISTORY OF THE COLORADO RIVER STORAGE PROJECT ACT OF 1956. FIVE GENERAL THEMES ARE IDENTIFIED: 1) THE DEVELOPMENTAL NEEDS OF THE UPPER BASIN, 2) LEGAL CONSTRAINTS OF THE 1922 COLORADO RIVER COMPACT, 3) ECONOMIC WISDOM OF THE COLORADO RIVER STORAGE PROJECT, 4) CONSERVATION VALUE OF DINOSAUR NATIONAL MONUMENT, AND 5) THE ENGINEERING FEASIBILITY AND GEOLOGIC EFFECTS OF THE PROJECT. PART 2 DISCUSSES THE ROLES PLAYED BY THE PRINCIPAL ACTORS. THE DYNAMICS OF THE POLITICAL BARGAINING, INCLUDING THE NATURE OF SOME OF THE MAJOR TRADEOFFS, ARE ANALYZED. IN THE FACE OF INCREASING PRESSURE FOR A MORE REGULATORY MODEL OF DECISION-MAKING, THE PERSISTENCE OF DISTRIBUTIVE POLITICS IS DISCUSSED IN THE CONTEXT OF FUTURE BASIN PROBLEMS SUCH AS VALUE QUALITY, RAINBOW BRIDGE, AND TREATY OBLIGATIONS TO MEXICO. (JAMAIL-ARIZONA)

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/MEXICAN WATER TREATY/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL PROJECT POLICY/DISTRIBUTIVE POLITICS/REGULATORY POLITICS/POLITICAL ASPECTS/POLITICAL CONSTRAINTS/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/COLORADO RIVER STORAGE PROJECT ACT

0105

MARTZ, C.O.

1959

WATER MUSHROOMING POPULATIONS.

WEST VIRGINIA LAW REVIEW 62(1):1-67. SWRA W68-01344.

PART I EVALUATES WATER ALLOCATION THEORIES TO CONSIDER OBSTACLES TO FULL USE OF LIMITED RESOURCES. SUBSTITUTION OF A RULE OF REASONABLE USE APPLICABLE TO RIPARIANS AND NON-RIPARIANS ALIKE MAY BE THE BEST WAY TO AVOID WASTES. CONSTITUTIONAL PROBLEMS ARE RAISED BY SUBSTANTIVE CHANGES IN WATER DOCTRINE. INDIVIDUALS WHO SUFFER SPECIAL LOSSES BECAUSE OF LIMITATIONS PLACED IN THE PUBLIC INTEREST SHOULD BE COMPENSATED. PART II EXPLORES TECHNOLOGICAL DEVICES FOR CONSERVING WATER AND LEGAL PROBLEMS TO BE RESOLVED BEFORE THEIR UTILIZATION. THE NEED IS GREAT FOR POLICIES TO RESTORE WATER SUPPLIES TO SUITABLE PURITY, FOR PROGRAMS TO STORE WATER FROM WET TO DRY SEASONS, FOR INTERSTATE COMPACTS PERMITTING WATER ALLOCATIONS FOR REGIONAL NEEDS UNLIMITED BY STATE LINES AND FOR ORGANIZATIONAL PATTERNS THAT CAN ENCOURAGE DEVELOPMENT. PRIVATE RIGHTS AND LEGITIMATE STATE INTERESTS ARE THREATENED BY THE PUBLIC WELFARE EMPHASIS THAT IS INHERENT IN ANY SIGNIFICANT WATER CONSERVATION AND UTILIZATION PROGRAM. FOUR RECOMMENDATIONS FOR RESTORING THE FEDERAL GOVERNMENT TO ITS PROPER ROLE OF STIMULATION, COOPERATION AND ASSISTANCE WITH PRIVATE INTERESTS AND STATES CONCLUDE THE ARTICLE.

WATER SHORTAGE/WATER UTILIZATION/EFFICIENCIES/WATER CONSUMPTION/WATER CONSERVATION/STATE GOVERNMENTS/FEDERAL GOVERNMENT/APPROPRIATION/RIPARIAN RIGHTS/WEST VIRGINIA/NORTHEAST U.S./FEDERAL PROJECT POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL RECLAMATION LAW/REASONABLE USE

0106

MILLS, L.R.

1973

FEDERALLY RESERVED RIGHTS TO UNDERGROUND WATER: A RISING QUESTION IN THE ARID WEST.

UTAH LAW REVIEW 1973 (SPRING ISSUE):43-54. SWRA W74-02792.

THE EFFECT OF THE EXTENSION OF THE FEDERAL RESERVATION DOCTRINE ON THE STABILITY OF STATE WATER RIGHTS IS DISCUSSED. THE FEDERAL RESERVATION DOCTRINE DICTATES THAT THE FEDERAL GOVERNMENT IMPLIEDLY RESERVES AT THE TIME OF CREATING A FEDERAL RESERVATION OR ENCLAVE, ENOUGH WATER TO FULFILL THE PURPOSES FOR WHICH THE RESERVATION WAS CREATED. THE DEVELOPMENT IS TRACED OF THE PRIOR APPROPRIATION DOCTRINE UNDER STATE LAW REGARDING BOTH SURFACE AND GROUNDWATER. THE EFFECT OF THE EXTENSION OF THE DOCTRINE TO GROUNDWATER IS DESCRIBED. A PRIVATE INDIVIDUAL WAS PUMPING WATER FROM BENEATH HIS LAND IN ACCORDANCE WITH ALL RELEVANT NEVADA REGULATIONS. THE UNITED STATES SUCCESSFULLY ENJOINED THIS PUMPING, CLAIMING THAT IT LOWERED THE WATER LEVEL ON GOVERNMENT LAND. THE UNCERTAINTY TO ADJOINING LAND OWNERS IS STRESSED.

LEGAL ASPECTS/PRIOR APPROPRIATION/WATER LAW/RESERVATION DOCTRINE/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL RESERVATIONS/FEDERAL JURISDICTION/REASONABLE USE/PERMITS/WATER SOURCES/UNAPPROPRIATED WATER/WATER RIGHTS/PERCOLATION/GROUNDWATER/GROUNDWATER AVAILABILITY/SURFACE WATER AVAILABILITY/SURFACE WATERS

0107

MORGENSTERN, A.

1971

THE RELATIONSHIP BETWEEN FEDERAL AND STATE LAWS TO CONTROL AND PREVENT POLLUTION.

ENVIRONMENTAL LAW 1(2):238-256. SWRA W71-13664.

ALTHOUGH STATE INVOLVEMENT HAS BEEN STRESSED IN PAST FEDERAL ANTI-POLLUTION LEGISLATION, THE FEDERAL GOVERNMENT IS ASSUMING A MORE ACTIVE STANCE IN RECENT LEGISLATION. A SURVEY IS MADE OF RECENT FEDERAL LEGISLATION TO SHOW NEW AREAS OF FEDERAL INVOLVEMENT AND TO POINT OUT AREAS WHERE STATE ACTION HAS BEEN PREEMPTED. THE HISTORY OF WATER POLLUTION LEGISLATION IS REVIEWED. THE PREFERENCE OF THE FEDERAL GOVERNMENT FOR STATE ENFORCEMENT HAS BEEN SHOWN BY ITS RELUCTANCE TO PROSECUTE VIOLATIONS UNDER OLDER LEGISLATION. COURTS STRIVE TO GIVE STATES PRIORITY IN ABATING POLLUTION. THE CONFLICT BETWEEN STATE AND FEDERAL LAWS MUST BE DIRECT AND REGULATIONS MUST HAVE AN IDENTICAL PURPOSE BEFORE STATE LAW WILL BE PREEMPTED. THE CONTROL OF PESTICIDES, AIR POLLUTION, RADIATION, AND VEHICULAR EMISSIONS ARE ALSO DISCUSSED. RESPONSIBILITY FOR POLLUTION ABATEMENT, TRADITIONALLY RESERVED TO THE STATES UNDER THE POLICE POWER, HAS LARGELY BEEN SHIFTED TO THE FEDERAL GOVERNMENT. ALL LEVELS OF GOVERNMENT NOW POSSESS ADEQUATE ENFORCEMENT PROCEDURES, BUT THE ISSUE OF FEDERAL PREEMPTION HAS BECOME A CONCERN IN PROSECUTIONS FOR VIOLATIONS OF LOCAL OR STATE LAWS.

FEDERAL-STATE WATER RIGHTS CONFLICTS/POLLUTION ABATEMENT/WATER POLLUTION CONTROL/FEDERAL JURISDICTION/STATE JURISDICTION/JURISDICTION/WATER POLLUTION/WATER POLLUTION TREATMENT/AIR POLLUTION/WATER QUALITY CONTROL/LEGISLATION/LEGAL ASPECTS/FEDERAL GOVERNMENT/STATE GOVERNMENTS/LOCAL GOVERNMENTS/REGULATION/ADMINISTRATION/ADMINISTRATIVE AGENCIES/PESTICIDES/STANDARDS/PERMITS

0108

MOSK, S.

1962

PROBLEMS OF FEDERAL AND STATE RELATIONSHIPS IN THE FIELD OF WATER LAW.

AMERICAN BAR ASSOCIATION, SECTION OF MINERAL AND NATURAL RESOURCES LAW, 1962 PROCEEDINGS, P. 120-124. SWRA W70-06471.

IN CASE AND STATUTORY LAW, THE FEDERAL GOVERNMENT HAS PROTECTED THE DOCTRINE OF PRIOR APPROPRIATION IN THE WEST. THE ONLY INHIBITIONS HAVE BEEN WHERE THE UNITED STATES ITSELF ASSERTS A WATER RIGHT, AND THOSE HAVE BEEN GENERALLY IN ACCORDANCE WITH STATE LAW. HOWEVER, A 1955 DECISION ALLOWED THE FEDERAL POWER COMMISSION TO BUILD A DAM ACROSS A NON-NAVIGABLE RIVER ON FEDERAL LANDS NOT A PART OF THE PUBLIC DOMAIN. THIS RAISED A FEAR THAT THE FEDERAL GOVERNMENT COULD CLAIM OWNERSHIP OF ALL UNAPPROPRIATED WATERS IN THE WEST, SINCE MOST WATERSHEDS ARE NATIONAL FORESTS. FEDERAL LEGISLATION HAS NOT BEEN ABLE TO RELIEVE THIS APPREHENSION. CONGRESS HAS NOT BEEN ABLE TO DEAL WITH WESTERN WATER LAW BECAUSE IT HAS NOT BEEN ABLE TO ESTABLISH WHICH RIGHTS HAVE VESTED UNDER STATE LAWS. FEDERAL LAW MUST DEFER TO STATE LAW. COMPLEX PROBLEMS REQUIRE SPECIALIZED, PRACTICAL, LOCAL SOLUTIONS. THE FEDERAL GOVERNMENT TOO OFTEN STICKS TO PRINCIPLES THAT MAKE NO SENSE AT ALL BECAUSE THE INDIVIDUALS INVOLVED DO NOT HAVE THE PRACTICAL KNOWLEDGE THAT LOCAL PROBLEMS DEMAND.

FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RIGHTS/PRIOR APPROPRIATION/STATE JURISDICTION/WATER LAW/FEDERAL GOVERNMENT/STATE GOVERNMENTS/LEGISLATION/JUDICIAL DECISIONS/FEDERAL JURISDICTION/POLITICAL ASPECTS/LEGAL ASPECTS/JURISDICTION/PUBLIC LANDS/APPROPRIATION/PREFERENCES (WATER RIGHTS)/RIPARIAN RIGHTS/RELATIVE RIGHTS/WATERSHEDS (BASINS)/FEDERAL POWER ACT

0109

MUNRO, J.

1971

THE NAVIGATION SERVITUDE AND THE SEVERANCE DOCTRINE.

LAND AND WATER LAW REVIEW 6(2):491-510. SWRA W72-05756.

THE COMPLEXITIES, IMPLICATIONS, AND RAMIFICATIONS SURROUNDING THE NAVIGATIONAL SERVITUDE DOCTRINE ARE EXAMINED. A RECENT EXPANSION OF THE DOCTRINE BY THE SUPREME COURT RECOGNIZED AN OVERRIDING FEDERAL CLAIM TO WATERS TO WHICH THE UNITED STATES MAY BE RIPARIAN. THIS EXPANSION MAY CANCEL WATER RIGHTS LONG VESTED IN PRIVATE OR MUNICIPAL HANDS. THERE ARE SOUND ARGUMENTS TO REFUTE THE DOMINANCE OF ANY FEDERAL SYSTEM OVER ESTABLISHED STATE SYSTEMS. ONE ARGUMENT IS THE SEVERANCE DOCTRINE, WHEREBY WATERS FROM NON-NAVIGABLE SOURCES ARE CONSIDERED SEVERED FROM THE PUBLIC DOMAIN AND SUBJECT TO STATE LAW. ANOTHER ARGUMENT IS THAT CONGRESS IN ITS LEGISLATION HAS INSISTED ON RECOGNIZING THE VESTED NATURE OF STATE-CREATED WATER RIGHTS. ALSO DISCUSSED ARE THE DIFFICULTIES ENCOUNTERED BY COURTS IN DETERMINING WHAT PROPERTY, WHEN TAKEN FOR POWER PURPOSES, IS NON-COMPENSABLE. FOUR POINTS ARE MADE: 1) NAVIGATIONAL SERVITUDE IS A VALID CONCEPT, 2) THE SUPREME COURT HAS EXPANDED THIS CONCEPT BEYOND A DEFENSIBLE BASIS, 3) THE PELTON DAM CASE AND ARIZONA V. CALIFORNIA RAISE QUESTIONS AS TO THE VALIDITY OF WESTERN WATER RIGHTS AND SHOULD BE RE-EXAMINED, AND 4) FEDERAL AGENCIES SHOULD WORK WITH THE STATES AND RECOGNIZE STATE COGNIZANCE OVER WATER RIGHTS.

SEVERANCE/CONDEMNATION VALUE/NON-NAVIGABLE WATERS/NAVIGABLE WATERS/
FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE JURISDICTION/WATER RIGHTS/FEDERAL
GOVERNMENT/LEGAL ASPECTS/WATER LAW/RIPARIAN RIGHTS/EASEMENTS/PRIOR
APPROPRIATION/FEDERAL RECLAMATION LAW/EMINENT DOMAIN/JUDICIAL DECISIONS/LAND
TENURE/LEGISLATION/STATE GOVERNMENTS/FEDERAL POWER ACT/WATER RESOURCES
DEVELOPMENT/OWNERSHIP OF BEDS/FEDERAL JURISDICTION/ARIZONA V. CALIFORNIA/
PELTON DAM CASE/NAVIGATION SERVITUDE

0110

NATIONAL RESEARCH COUNCIL, COMMITTEE ON WATER

1968

WATER AND CHOICE IN THE COLORADO BASIN: AN EXAMPLE OF ALTERNATIVES IN WATER MANAGEMENT. A REPORT.

NATIONAL ACADEMY OF SCIENCES, WASHINGTON, D.C., NATIONAL RESEARCH COUNCIL
PUBLICATION 1689. 107 P.

THIS REPORT ADDRESSES WATER PROBLEMS AND ALTERNATIVE MANAGEMENT REMEDIES IN THE COLORADO RIVER BASIN AS A CONCRETE EXAMPLE OF THE GENERAL SUGGESTIONS OFFERED IN THE COMMITTEE'S FIRST REPORT, WITH THE AIM OF DRAWING LESSONS SIGNIFICANT TO OTHER BASINS AND OFFERING RESEARCH SUGGESTIONS, RATHER THAN RECOMMENDING SPECIFIC CHANGES IN MANAGEMENT OF COLORADO RIVER WATER. THE CASE STUDY OF THE BASIN DESCRIBES THE PHYSICAL AND ECONOMIC SETTING, OUTLINES THE HISTORY OF THE BASIN'S WATER DEVELOPMENT, POINTS TO DEFICIENCIES IN KNOWLEDGE OF THE WATER SYSTEM, DESCRIBES THE DIVERSITY OF WATER MANAGEMENT AIMS, ILLUSTRATES BY THE GRAND CANYON THE NON-MARKET VALUATION PROBLEM, DESCRIBES POSSIBLE INVESTMENTS FOR THE STATE OF ARIZONA, AND SUGGESTS ALTERNATIVE WATER USES FOR ECONOMIC GROWTH. IN CONCLUSION, THE PHYSICAL, CULTURAL, ECONOMIC, AND INSTITUTIONAL FACTORS WHICH LIMIT THE RANGE OF CHOICE IN THE BASIN ARE REVIEWED. THE CULTURAL AND INSTITUTIONAL FACTORS DESCRIBED UNNECESSARILY CONSTRAIN THE CONSIDERATION OF ALTERNATIVES IN WATER MANAGEMENT AND USE. RESEARCH NEEDS FOR SOLVING THE PROBLEM OF WIDENING THE RANGE OF CHOICE IN WATER MANAGEMENT AND USE ARE EXAMINED. (JULLERY-ARIZONA)

COLORADO RIVER BASIN/WATER MANAGEMENT (APPLIED)/WATER POLICY/WATER RESOURCES DEVELOPMENT/RESEARCH PRIORITIES/INSTITUTIONAL CONSTRAINTS/PLANNING/ARIZONA/WATER SUPPLY/WATER QUALITY/STREAMFLOW/STREAMFLOW FORECASTING/ECONOMIC EFFICIENCY/INCOME DISTRIBUTION/ENVIRONMENTAL CONTROL/REGIONAL DEVELOPMENT/REGIONAL ECONOMICS/COLORADO RIVER COMPACT/MEXICAN WATER TREATY/BOULDER CANYON PROJECT ACT/WATER RIGHTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/ADMINISTRATIVE AGENCIES/STATE GOVERNMENTS/CENTRAL ARIZONA PROJECT/GRAND CANYON/ECONOMIC GROWTH

0111

NELSON, M.C.

1977

THE WINTERS DOCTRINE: SEVENTY YEARS OF APPLICATION OF 'RESERVED' WATER RIGHTS TO INDIAN RESERVATIONS.

UNIVERSITY OF ARIZONA, OFFICE OF ARID LANDS STUDIES, ARID LANDS RESOURCE INFORMATION PAPER 9. 147 P.

THIS PAPER PROVIDES AN IN-DEPTH STUDY OF THE LITERATURE, BOTH LEGAL AND GENERAL, RELATING TO THE WINTERS DOCTRINE (WINTERS V. UNITED STATES, 207 U.S.), COMMONLY USED TO DESIGNATE INDIAN WATER RIGHTS IMPLIED BY THE COURTS FROM TREATIES AND OTHER GOVERNMENT AGREEMENTS INVOLVING INDIAN TRIBES. THE TOPIC IS CURRENTLY OF CONSIDERABLE IMPORTANCE IN WATER-SHORT WESTERN STATES BECAUSE OF THE EFFECTS OF WATERS SO 'RESERVED' BEING EXEMPT FROM APPROPRIATION BY NON-INDIANS. THE LITERATURE RELATING TO THE ORIGINAL WINTERS DOCTRINE AS ENUNCIATED FIRST IN 1908 IS SCATTERED THROUGHOUT A WIDE SPECTRUM OF SOURCES, AND IN BRINGING SUCH TOGETHER HERE IT IS EXPECTED THAT BOTH THE GENERAL PUBLIC AND THE LEGAL PROFESSION WILL BENEFIT FROM THIS HISTORICAL OVERVIEW OF SUBSEQUENT CLAIMS OVER THE PAST SEVENTY YEARS. INCLUDED ARE CHAPTERS ON THE NATURE OF INDIAN RESERVED WATER RIGHTS; WESTERN WATER LAW AND INDIAN RESERVED WATER RIGHTS; A CASE LAW DEVELOPMENT--WINTERS THROUGH ARIZONA V. CALIFORNIA (1963)--WHICH DESCRIBES IN DETAIL TWELVE MAJOR CASES THAT HAVE DETERMINED THE BOUNDS OF INDIAN RESERVED WATER RIGHTS; AND JUDICIAL PROTECTION OF INDIAN WATER RIGHTS UNDER THE MCCARRAN AMENDMENT. A LIST OF 64 ADDITIONAL RELATED CASES IS GIVEN, WITH BRIEF ANNOTATIONS, ARRANGED CHRONOLOGICALLY FIRST, THEN BY COURT LEVEL; AND FINALLY THOSE RESERVED WATER RIGHTS CASES CURRENTLY PENDING BEFORE THE COURTS, 28 IN NUMBER. AN 87-ITEM ANNOTATED BIBLIOGRAPHY OF THE GENERAL LITERATURE DEALING WITH WINTERS IS APPENDED. (PAYLORE-ARIZONA)

WATER LAW/WATER RIGHTS/INDIAN RESERVATIONS/IRRIGABLE LAND/ALLOTMENTS/LEGAL ASPECTS/RIPARIAN RIGHTS/TREATIES/PRIORITIES/BENEFICIAL USE/PRIOR APPROPRIATION/RESERVATION DOCTRINE/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL JURISDICTION/RIVER SYSTEMS/WINTERS DOCTRINE/MCCARRAN AMENDMENT/QUANTIFICATION/ARIZONA V. CALIFORNIA

0112

NEW REPUBLIC

1963

THE GREAT THIRST. A NEW REPUBLIC SPECIAL REPORT.

SAME AS AUTHOR 149 (1): 13-14.

THIS REPORT REVIEWS THE IMPLICATIONS OF A RECENT SUPREME COURT DECISION FOR THE POLITICAL SITUATION IN WASHINGTON AND FOR THE DISPUTE BETWEEN CALIFORNIA AND ARIZONA OVER THE ALLOCATION OF COLORADO RIVER WATER. IN ITS DECISION,

THE SUPREME COURT RULED AS FOLLOWS: THE GILA RIVER SHOULD NOT BE CONSIDERED A PART OF ARIZONA'S ALLOCATION AND THE COLORADO RIVER COMPACT DID NOT ALLOCATE WATER TO THE STATES BUT MERELY DIVIDED THE WATER BETWEEN THE UPPER AND LOWER BASIN STATES; THAT ALLOCATION BETWEEN THE LOWER BASIN STATES BE GOVERNED BY THE BOULDER CANYON PROJECT ACT; AND THAT IN YEARS OF SHORTAGE THE SECRETARY OF THE INTERIOR SHOULD HAVE DISCRETIONARY AUTHORITY TO ALLOCATE WATER. THE DECISION, FAVORABLE TO ARIZONA, FOLLOWED A DECADE OF HEARINGS BEFORE A SUPREME COURT MASTER. AS A RESULT OF THE DECISION ARIZONA IS SEEKING CONGRESSIONAL AUTHORIZATION AND FINANCING FOR THE CENTRAL ARIZONA PROJECT, AND BOTH CALIFORNIA AND ARIZONA WILL SEEK TO PROTECT THEMSELVES IN THE EVENT OF THE INTERIOR SECRETARY'S EXERCISING HIS DISCRETIONARY. THE ADMINISTRATION'S POSITION ON THE CENTRAL ARIZONA PROJECT IS CRUCIAL AND MAY BE DICTATED BY REALITIES OF THE UPCOMING ELECTION. INTERIOR SECRETARY UDALL, OF ARIZONA, AND UNDERSECRETARY CARR, A PROTEGE OF CALIFORNIA SENATOR ENGLE ARE WORKING ON A PLAN TO HELP CALIFORNIA MAKE UP WATER LOST IN THE SUPREME COURT DECISION AND LESSEN THE STATE'S OPPOSITION TO THE CENTRAL ARIZONA PROJECT. THE INTERIOR DEPARTMENT IS ALSO UNDERTAKING INVESTIGATION OF A FAR-REACHING WATER DEVELOPMENT PLAN FOR THE PACIFIC SOUTHWEST WHICH FOCUSES ON MORE EFFICIENT USE OF THE EXISTING WATER SUPPLY AND IMPORTATION OF WATER FROM OUTSIDE THE BASIN.

COLORADO RIVER BASIN/BOULDER CANYON PROJECT ACT/COLORADO RIVER COMPACT/
CALIFORNIA/ARIZONA/LEGAL ASPECTS/POLITICAL ASPECTS/WATER RESOURCES DEVELOPMENT/
WATER CONSERVATION/WATER RIGHTS/POLITICAL CONSTRAINTS/CENTRAL ARIZONA PROJECT/
UPPER COLORADO RIVER BASIN/LOWER COLORADO RIVER BASIN/ARIZONA V. CALIFORNIA

0113

O'BRIEN, R.R.

1977

INDIAN PUEBLO WATER RIGHTS NOT SUBJECT TO STATE LAW PRIOR APPROPRIATION.

NATURAL RESOURCES JOURNAL 17(2):341-344.

IN STATE OF NEW MEXICO V AAMODT, 537 F.2ND 1102 (10TH CIR.,1976), THE COURT HELD THAT THE INDIAN PUEBLOS' RIGHTS TO USE OF WATER ARE NOT GOVERNED BY THE NEW MEXICO LAW BASED ON THE DOCTRINE OF PRIOR APPROPRIATION. THE COURT INTERPRETED THE PUEBLO LAND ACTS OF 1924 AND 1933, REASONING THAT THE LANGUAGE OF THOSE ACTS INDICATED THAT THE INDIANS HAD A RESERVED RIGHT TO USE OF WATER IN THE RIVER SYSTEM. WHETHER FUTURE COURTS WILL RULE IN FAVOR OF THE INDIAN PUEBLOS USING THE SAME LINE OF REASONING OR WILL DECIDE THAT THERE IS A NEED TO BALANCE THE COMPETING INTERESTS OF INDIANS AND NON-INDIANS IS OPEN TO QUESTION.

PRIOR APPROPRIATION/NEW MEXICO/APPROPRIATION/WATER LAW/LEGAL ASPECTS/COMPETING
USES/WATER RIGHTS/WINTERS DOCTRINE/INDIAN WATER CLAIMS/PUEBLO WATER RIGHTS/
NEW MEXICO V. AAMODT

0114

OLSON, R.L.

1926

THE COLORADO RIVER COMPACT.

AUTHOR, LOS ANGELES, CALIFORNIA. 527 P., 3 APPEND.

A LEGALISTIC REPORT THAT DISCUSSES THE HISTORICAL BACKGROUND AND CONTENTS OF THE COLORADO RIVER COMPACT. THE AUTHOR DISAGREES WITH THE IDEA THAT SINCE PROPOSED PLANS FOR COLORADO RIVER DEVELOPMENT REACH BEYOND THE LIMITS AND INTERESTS OF A SINGLE STATE, THE FEDERAL GOVERNMENT MUST ASSUME RESPONSIBILITY FOR THIS DEVELOPMENT. HE OUTLINES A PLAN OF REGIONAL CONTROL TO DEAL WITH PROBLEMS THAT ARE NOT OF NATIONAL SIGNIFICANCE, BUT TRANSCEND THE STATE LEVEL. THE FLOOD CONTROL ACT OF 1917 AND THE NUMEROUS RIVER AND HARBOR IMPROVEMENT ACTS ARE CITED AS THE BASIS OF THE GROUNDS FOR FEDERAL ACTION IN COLORADO RIVER DEVELOPMENT. THE ONLY ARGUMENT FAVORING STATE ACTIVITY IS THE RESERVED POWERS CLAUSE OF THE U.S. CONSTITUTION. THERE IS A LONG DISCUSSION OF CONSTITUTIONAL ISSUES INVOLVED IN FEDERAL STATE WATER RIGHTS CONFLICTS. THE CONFLICTS BETWEEN THE UPPER AND LOWER COLORADO RIVER BASINS IS TREATED. THE CREATION OF A COLORADO RIVER AUTHORITY IS CALLED FOR.

FEDERAL-STATE WATER RIGHTS CONFLICTS/COLORADO RIVER/COLORADO RIVER BASIN/
ARIZONA/NEW MEXICO/UTAH/CALIFORNIA/WYOMING/NEVADA/COLORADO/REGIONAL DEVELOPMENT/
WATER RESOURCES DEVELOPMENT/COLORADO RIVER COMPACT/INTERSTATE COMPACTS/RIVER
BASINS/WATER RIGHTS/FEDERAL RESERVATIONS

0115

OLSON, R.L.

1928

LEGAL PROBLEMS IN COLORADO RIVER DEVELOPMENT.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE, ANNALS 135:108-114.

WITH THE STATED AIM OF PROVIDING A BROAD OUTLINE OF A PLAN FOR DEVELOPING THE COLORADO RIVER, THE AUTHOR DISCUSSES THE PRESENT IMPORTANCE AND LEGAL BACKGROUND OF THE SANTA FE COMPACT OF 1922, THE PROPER SPHERE OF ACTIVITY FOR A COLORADO RIVER COMMISSION, AND THE ORGANIZATION OF CONSERVANCY DISTRICTS. FUNDAMENTAL GROUNDWORK OF ANY PLAN FOR DEVELOPING THE RIVER WILL BE THE COLORADO RIVER COMPACT AND THE DISCUSSIONS IN CONFERENCES WHICH HAVE TAKEN PLACE DURING THE FIVE YEARS SINCE IT WAS DRAWN UP. THE PRESENT IMPORTANCE OF THE COMPACT DERIVES FROM THE CONTROVERSIES SURROUNDING IT WHICH HAVE MADE UNDERLYING ISSUES WIDELY APPARENT. THE COMPACT WAS BELIEVED NECESSARY BY THE UPPER BASIN STATES AS A MEANS OF CIRCUMVENTING THE PRIOR APPROPRIATION SYSTEM OF WATER RIGHTS AND PROTECTING THEIR FUTURE WATER USES AGAINST CURRENT AND PROPOSED USE IN THE LOWER BASIN. HOWEVER, THE COMPACT DID NOT SET OUT A PLAN FOR DEVELOPMENT OF THE RIVER. THIS IS A TASK WHICH SHOULD BE UNDERTAKEN BY AN INTERSTATE COMMISSION AND SHOULD BEGIN WITH AN INVENTORY OF ALL EXISTING WATER RIGHTS ON THE RIVER. THE MOST ESSENTIAL THING FOR A COMMISSION TO DO IS PROVIDE A FORUM FOR CONTENDING PARTIES TO AIR THEIR VIEWS, EXAMINE ALL DEVELOPMENT PLANS, AND THEREBY DEVELOP THE CONFIDENCE OF ALL PARTIES. FOLLOWING ESTABLISHMENT OF A COMMISSION AND THE DETERMINATION OF EXISTING WATER RIGHTS, CONSERVANCY DISTRICTS SHOULD BE ORGANIZED TO CONTRACT WITH EACH OTHER RELATIVE TO WATER RIGHTS. CONSERVANCY DISTRICTS WOULD PERMIT A LARGE DEGREE OF LOCAL CONTROL OVER THE MANNER IN WHICH PROJECTS SHOULD BE CONTROLLED AND ADMINISTERED. THE AUTHOR CONCLUDES THAT THE SANTA FE COMPACT WILL PROBABLY NEVER BE RATIFIED BY ALL THE STATES, BUT AN UNDERSTANDING OF THE COMPACT AND OF THE DISCUSSIONS WHICH HAVE SURROUNDED IT ARE ESSENTIAL IF FUNDAMENTAL ISSUES ARE TO BE RESOLVED INTO A UNIFIED PLAN OF ACTION.

COLORADO RIVER/COLORADO RIVER BASIN/WATER RESOURCES DEVELOPMENT/LEGAL ASPECTS/
WATER RIGHTS/COLORADO RIVER COMPACT/INTERSTATE/FEDERAL GOVERNMENT/PLANNING/
PROJECT PLANNING/RIVER BASIN DEVELOPMENT/MEXICO/STATE GOVERNMENTS/COLORADO
RIVER COMMISSION/SANTA FE COMPACT/WYOMING V. COLORADO (1922)/259 U.S. 419/
FEDERAL POWER COMMISSION/CONSERVANCY DISTRICTS

0116

PACIFIC SOUTHWEST INTER-AGENCY COMMITTEE

1971

UPPER COLORADO REGION COMPREHENSIVE FRAMEWORK STUDY, MAIN REPORT OF THE UPPER COLORADO REGION STATE-FEDERAL INTER-AGENCY GROUP.

SAME AS AUTHOR, N.P. 112 P.

THIS REPORT SUMMARIZES THE RESULTS OF COMPREHENSIVE INVESTIGATIONS FOR THE FORMULATION OF PROPOSED PLANS TO PROVIDE A BROAD GUIDE TO THE BEST USE, OR COMBINATION OF USES, OF WATER AND RELATED LAND USES TO MEET FORESEEABLE NEEDS IN THE UPPER COLORADO REGION. THE STATES OF ARIZONA, COLORADO, NEW MEXICO, UTAH, AND WYOMING AND THE UPPER COLORADO RIVER COMMISSION PARTICIPATED WITH THE VARIOUS FEDERAL AGENCIES IN COMPILING THIS STUDY. A DESCRIPTION OF THE REGION-ITS HISTORY, DEVELOPMENT, CLIMATE, GEOLOGY AND WATER, LAND AND HUMAN RESOURCES-IS PRESENTED. REGIONAL WATER DEMANDS AND REQUIREMENTS ARE DISCUSSED. THE FRAMEWORK PLAN CONCERNING AGRICULTURE, WATERSHED MANAGEMENT, FLOOD CONTROL, RECREATION, AND WATER QUALITY AND WATER POLLUTION IS DISCUSSED. CONCLUSIONS AND RECOMMENDATIONS ARE PRESENTED AND INCLUDE THE FOLLOWING: 1) LEGAL AND INSTITUTIONAL ARRANGEMENTS SHOULD BE MODIFIED TO PROMOTE GREATER FLEXIBILITY FOR FUTURE USES OF WATER AND LAND IN THE REGION, AND 2) THE FEDERAL RESERVATION DOCTRINE RELATING TO WATER RIGHTS AND QUALITY OF FEDERAL WATER CLAIMS SHOULD BE CLARIFIED AT AN EARLY DATE.

COLORADO RIVER/COLORADO RIVER BASIN/GREAT BASIN/ARIZONA/COLORADO/NEW MEXICO/UTAH/WYOMING/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/PLANNING/EVALUATION/REGIONAL ANALYSIS/REGIONAL DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER QUALITY/FLOOD CONTROL/RECREATION/LEGAL ASPECTS/FEDERAL RESERVATIONS/RESERVATION DOCTRINE

0117

PARSONS, M.B.

1947

THE COLORADO RIVER IN ARIZONA POLITICS.

UNIVERSITY OF ARIZONA (M.A. THESIS). 213 P.

EXAMINES AND INTERPRETS THE POSITION OF ARIZONA IN THE CONFLICT OVER APPORTIONMENT OF COLORADO RIVER WATER, PARTICULARLY THE STATE'S DISPUTE WITH CALIFORNIA. IN THE FIRST OF 6 CHAPTERS, THE AUTHOR INTRODUCES THE ECONOMIC IMPORTANCE OF THE RIVER TO THE WEST, THE LAW OF WATER RIGHTS ON WESTERN LANDS, AND SOME LEGAL PROBLEMS INVOLVED IN WATER RIGHTS ON INTERSTATE STREAMS. LATER SECTIONS FOCUS ON: 1) THE COLORADO RIVER COMPACT, GROUP AND SECTIONAL INTERESTS IN COLORADO RIVER PROBLEMS, THE FOUNDED AND ACTIVITIES OF THE COLORADO RIVER COMMISSION, THE SANTA FE COMPACT, AND THE INADEQUACY OF INTERSTATE COMPACTS FOR SOLVING WATER PROBLEMS, 2) ANALYSIS OF ARIZONA'S FAILURE TO RATIFY THE COMPACT AND AN EXAMINATION OF THE DEVELOPMENT OF COLORADO RIVER WATER AS AN ISSUE IN THE 1922 GOVERNATORIAL CAMPAIGN, THE PUBLICITY CAMPAIGN FOR THE COMPACT, AND ARIZONA LEGISLATIVE ACTION ON THE COMPACT IN 1923, 3) THE BASIS OF ARIZONA'S OPPOSITION, SIGNIFICANCE OF AGRICULTURAL, MINING AND UTILITY INTERESTS IN DETERMINING THE STATE'S OPPOSITION TO THE COMPACT AND BOULDER DAM, AND OPPOSITION TO THE STATE'S POSITION FROM YUMA AND MOJAVE COUNTIES, 4) LEGAL, POLITICAL, ECONOMIC FACTORS INVOLVED IN ARIZONA'S REVERSAL OF ITS POSITION AND ACCEPTANCE OF THE DEVELOPMENT PROGRAM FOR THE COLORADO RIVER, AND 5) SOME ECONOMIC ASPECTS OF CONTINUED DEVELOPMENT OF THE RIVER.

COLORADO RIVER BASIN/WATER RESOURCES DEVELOPMENT/WATER POLICY/ECONOMICS/
ARIZONA/POLITICAL ASPECTS/GOVERNMENTS/INSTITUTIONS/COLORADO RIVER COMPACT/
STATE GOVERNMENTS/LEGAL ASPECTS/WATER RIGHTS/WATER LAW/INTERSTATE COMPACTS/
AGRICULTURE/MINING/UTILITIES/INTEREST GROUPS/LITIGATION/SALT RIVER VALLEY
WATER USERS ASSOCIATION/COLORADO RIVER COMMISSION/SANTA FE COMPACT/LEAGUE
OF THE SOUTHWEST

0118

PARSONS, M.B.

1950

PARTY AND PRESSURE POLITICS IN ARIZONA'S OPPOSITION TO COLORADO RIVER
DEVELOPMENT.

PACIFIC HISTORICAL REVIEW 19(1):47-58.

BECAUSE THE DEMAND FOR COLORADO RIVER WATER EXCEEDS SUPPLY, CONTROVERSY HAS
DOMINATED STATE RELATIONS IN THE RIVER BASIN. THE HISTORICAL PATTERN OF THE
COMPLEXITY OF PROBLEMS MUST BE TAKEN INTO ACCOUNT IF SOLUTIONS ARE TO BE
FOUND. PRIOR TO 1944, CONTROVERSY WAS LARGELY CONDITIONED BY ARIZONA'S
OPPOSITION TO THE COLORADO RIVER COMPACT AND THE BOULDER CANYON PROJECT ACT.
SINCE 1944, CONTROVERSY HAS CENTERED PRIMARILY ON ARIZONA AND CALIFORNIA
DISAGREEMENT OVER INTERPRETING AGREEMENT TO APPORTION COLORADO RIVER WATER.
ISSUES INVOLVED IN THE CONTROVERSIES HAVE USUALLY DEALT WITH LEGAL
INTERPRETATIONS OF THE RELEVANT DOCUMENTS, BUT ARIZONA'S OPPOSITION HAS BEEN
LESS A MATTER OF LEGALISTIC ABSTRACTION THAN OF SUCCESSFUL POLITICAL
MANIPULATION WITHIN THE STATE BY POLITICIANS INVOKING THE TERMINOLOGY OF STATES'
RIGHTS AND THE THREAT OF CALIFORNIA AGGRESSION. THE MOBILIZATION OF PUBLIC
OPINION BY POLITICIANS WAS, MORE FUNDAMENTALLY, A MATTER OF RATIONALIZING THE
TRANSLATION INTO PUBLIC POLICY OF THE SPECIAL PROGRAMS OF PRIVATE INTERESTS.
THE MOTIVATION OF OFFICIAL STATE POLICY BY AGRICULTURAL, MINING, AND PRIVATE
UTILITY PRESSURE GROUPS CAN BE OBSERVED REGARDING THE PROPOSALS FOR THE
GENERATION OF ELECTRIC POWER AND THE DIVERSION OF WATER FOR IRRIGATION AS
ELEMENTS OF FEDERAL RIVER DEVELOPMENT PROJECTS. PRIVATE UTILITIES FEARED
COMPETITION FROM THE FEDERAL GOVERNMENT AND MINING INTERESTS FEARED FEDERAL
PROJECTS WOULD RESULT IN A LOSS OF TAX REVENUE TO THE STATE. AGRICULTURAL
INTERESTS FEARED FEDERAL PROPOSALS WOULD GIVE AGRICULTURE IN CALIFORNIA AND
MEXICO A COMPETITIVE ADVANTAGE, AS WELL AS THREATEN THEIR INTEREST IN UTILIZING
GILA RIVER WATER. THUS, ARIZONA'S OFFICIAL POSITION HAD ITS BASIS IN ALIGNMENT
OF INFLUENTIAL INTEREST GROUPS SEEKING TO PROTECT THEIR ECONOMIC INTERESTS.

COLORADO RIVER/ARIZONA/POLITICAL ASPECTS/COLORADO RIVER COMPACT/WATER RIGHTS/
FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE GOVERNMENTS/AGRICULTURE/MINING/
UTILITIES/MULTIPLE-PURPOSE PROJECTS/BOULDER CANYON PROJECT ACT/LEGISLATION/
ECONOMICS/WATER RESOURCES DEVELOPMENT/FEDERAL PROJECT POLICY/INTERSTATE
COMMISSIONS/MEXICAN WATER TREATY/INTEREST GROUPS/PRESSURE GROUPS

0119

PARSONS, M.B.

1962

ORIGINS OF THE COLORADO RIVER CONTROVERSY IN ARIZONA POLITICS, 1922-1923.

ARIZONA AND THE WEST 4(1):27-44.

THE LONG-TIME DOMINANCE OF THE COLORADO RIVER AS A CONTROVERSIAL ISSUE IN ARIZONA POLITICS ORIGINATED IN THE GUBERNATORIAL ELECTION OF 1922 AND THE MEETING OF THE SIXTH LEGISLATURE IN 1923 WITH THE EMERGENCE OF THE QUESTION OF WHETHER OR NOT ARIZONA SHOULD RATIFY THE PROPOSED COLORADO RIVER COMPACT. THE ARTICLE DISCUSSES AND EXPLAINS THE POSITIONS AND ACTIVITIES OF THE MAJOR POLITICAL PROTAGONISTS CONCERNED WITH THE ISSUES, INCLUDING THE DEMOCRATIC AND REPUBLICAN PARTIES AND THEIR GUBERNATORIAL CANDIDATES; THE COLORADO RIVER COMMISSION; THE FEDERAL GOVERNMENT'S REPRESENTATIVE AT THE SANTA FE CONFERENCE WHICH FRAMED THE COMPACT, SECRETARY OF COMMERCE HERBERT HOOVER; THE DIRECTOR OF THE U.S. RECLAMATION SERVICE; CERTAIN MEMBERS OF THE ARIZONA LEGISLATURE; A LEADING ARIZONA NEWSPAPER; AND MINING INTERESTS. ALTHOUGH IN THESE FORMATIVE YEARS THERE WAS LITTLE OPPORTUNITY FOR THE ARIZONA LEGISLATURE TO CAREFULLY CONSIDER ALL OF THE RAMIFICATIONS OF THE ISSUE, NEVERTHELESS, EARLY DELIBERATIONS IN THE ARIZONA LEGISLATURE SPAWNED ATTITUDES AND ARGUMENTS WHICH WORKED AGAINST ARIZONA'S AGREEMENT TO THE COLORADO RIVER COMPACT FOR TWO DECADES.

COLORADO RIVER COMPACT/ARIZONA/POLITICAL ASPECTS/COLORADO RIVER BASIN/STATE GOVERNMENTS/FEDERAL GOVERNMENT

0120

PATTERSON, J.

1955

PERCOLATING WATER LAW-THEORIES OF OWNERSHIP AND PROBLEMS OF DISTRIBUTION IN THE WESTERN U.S.

NEW YORK UNIVERSITY LAW REVIEW 30:1419-1438.

REVIEWING WESTERN GROUNDWATER DOCTRINES THE AUTHOR FOCUSES ON ARIZONA THROUGH THE BRISTOL DECISION. IN DISMISSING OTHER DOCTRINES, HE CONCLUDES THAT APPROPRIATION IS THE MOST SATISFACTORY FOR WESTERN PURPOSES. THE FUTURE IS SEEN AS REQUIRING EITHER INCREASING USE OF POLICE POWER TO REGULATE GROUNDWATER OR DECLARATION OF PUBLIC OWNERSHIP OF PERCOLATING WATERS.

ARIZONA/WATER LAW/JUDICIAL DECISIONS/WATER POLICY/PERCOLATING WATER/PRIOR APPROPRIATION/LEGAL ASPECTS/PUBLIC RIGHTS/WEST U.S./BRISTOL V. CHEATHAM

0121

PELHAM, A.

1978

WATER POLICY: BATTLE OVER BENEFITS.

CONGRESSIONAL QUARTERLY 36(9):565-574.

IN 1977 PRESIDENT CARTER, DRAWING ON ARGUMENTS ADVANCED BY ECONOMISTS AND ENVIRONMENTALISTS, PROPOSED THAT CONSTRUCTION OF SEVERAL WATER PROJECTS BE HALTED, BUT WAS FORCED TO RETREAT FROM HIS STRONG STAND AGAINST 'PORK BARREL' WATER PROJECTS AND COMPROMISE WITH CONGRESS, THUS REFLECTING THE STRENGTH OF THE CONGRESSIONAL SYSTEM FOR DETERMINING FEDERAL WATER POLICY AND BUILDING WATER PROJECTS. CONGRESS HAS LONG ENJOYED AN ADVANTAGE IN THE AREA OF WATER POLICY BECAUSE OF ITS CLOSE RELATIONSHIP WITH FEDERAL CONSTRUCTION AGENCIES AND OPERATION OF THE CONGRESSIONAL 'BUDDY' SYSTEM. ALTHOUGH CONGRESS LEGISLATED SOME CHANGES IN 1974 IN THE WAY WATER PROJECTS ARE AUTHORIZED, NO SIGNIFICANT POLICY CHANGES RESULTED BECAUSE THE APPROPRIATION SYSTEM, WHERE DECISION-MAKING ON PROJECTS OCCURS TO AN UNUSUAL EXTENT, WAS LEFT UNCHANGED. THE MOST

CRITICIZED PRACTICE OF CONGRESSIONAL APPROPRIATIONS COMMITTEES IS THEIR METHOD OF COMPUTING PROJECT COSTS AND BENEFITS USING OUTDATED DISCOUNT (INTEREST) RATES. ALSO, COST-BENEFIT ANALYSIS PERFORMED BY FEDERAL CONSTRUCTION AGENCIES ARE OFTEN BASED ON ASSUMPTIONS WHICH INFLATE BENEFITS AND DOWNPLAY COSTS. IN ADDITION TO CONGRESS AND THE FEDERAL CONSTRUCTION AGENCIES, LOCAL COMMUNITIES ARE A THIRD INTEREST BEHIND WATER PROJECT CONSTRUCTION, WHERE SUPPORT FOR PROJECTS USUALLY BEGINS. THE TRADITIONAL SYSTEM OF FUNDING WATER PROJECTS CONTINUES, BUT SOME INDICATIONS OF POTENTIAL CHANGES INCLUDE A GROWING AWARENESS OF ENVIRONMENTAL COSTS, DIMINISHING WATER SUPPLIES IN THE WEST, A BILL IN CONGRESS THAT WOULD TAX USERS OF NATIONAL WATERWAYS, CLIMBING COSTS FOR ACTIVE PROJECTS, AND SOME CONGRESSIONAL QUESTIONING OF THE EXISTING SYSTEM.

WATER POLICY/FEDERAL PROJECT POLICY/PROJECT PLANNING/WATER RESOURCES DEVELOPMENT/FEDERAL GOVERNMENT/GOVERNMENTAL INTERRELATIONS/CONSTRUCTION COSTS/LOCAL GOVERNMENTS/STATE GOVERNMENTS/LEGISLATION/COST-BENEFIT ANALYSIS/POLITICAL ASPECTS/GOVERNMENT FINANCE/FEDERAL JURISDICTION/U.S. BUREAU OF RECLAMATION/ENVIRONMENT/INTEREST GROUPS

0122

RANQUIST, H.A.

1975

THE WINTERS DOCTRINE AND HOW IT GREW: FEDERAL RESERVATION OF RIGHTS TO USE OF WATER.

BRIGHAM YOUNG UNIVERSITY LAW REVIEW 1975(3):639-724. SWRA W77-08375.

VARIOUS HISTORICAL FACTORS RESULTED IN THREE DIFFERENT APPROACHES TO WATER LAW IN THE EVOLUTION OF LEGAL SYSTEMS IN THE WESTERN STATES, AS OPPOSED TO THE UNIFORM ADHERENCE TO THE ENGLISH COMMON LAW DOCTRINE OF RIPARIAN RIGHTS IN THE EAST. BECAUSE THE WESTERN STATES EACH CREATED AND ENFORCED THEIR OWN SYSTEMS, A PATTERN OF RELIANCE ON STATE LAW DEVELOPED, AND THE ROLE OF FEDERAL LAW WAS IGNORED FOR MANY YEARS. IN 1908, HOWEVER, THE SUPREME COURT HELD IN WINTERS V. U.S. THAT THERE IS A RIGHT IN THE FEDERAL SOVEREIGN TO RESERVE WATER ON INDIAN RESERVATIONS. THIS PRINCIPLE, KNOWN AS THE WINTERS DOCTRINE, WAS AFFIRMED IN SUBSEQUENT DECISIONS AND EVENTUALLY EXPANDED TO UPHOLD CLAIMS ASSERTED BY THE UNITED STATES TO WATERS ON OTHER FEDERAL LANDS. AS THE DOCTRINE HAS DEVELOPED JUDICIALLY, WITH NO STATUTE DEALING DIRECTLY WITH THE SUBJECT, THE STATES HAVE OPPOSED ITS DEVELOPMENT IN MANY AREAS. THE RESULT HAS BEEN CONFUSION, CONFLICT, AND CONTROVERSY BETWEEN FEDERAL AND STATE INTERESTS AND DISAGREEMENT AMONG LEGAL SCHOLARS. THE AUTHOR SUGGESTS AN ADMINISTRATIVE SCHEME WHICH BRINGS ALL USERS OF THE WATER IN CONTESTED AREAS INTO A SINGLE FORUM HAVING JURISDICTION OVER THE WATER AND THE PARTIES.

FEDERAL GOVERNMENT/RESERVATION DOCTRINE/WATER RIGHTS/INDIAN RESERVATIONS/PRIOR APPROPRIATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/ADMINISTRATIVE AGENCIES/IRRIGATION WATER/DIVERSION/LEGAL ASPECTS/REASONABLE USE/FEDERAL RESERVATIONS/PUBLIC LANDS/RIPARIAN RIGHTS/JUDICIAL DECISIONS/FEDERAL JURISDICTION/STATE JURISDICTION/ARIZONA/CALIFORNIA/COLORADO/WITHDRAWN LANDS/WATER LAW/WINTERS DOCTRINE

0123

REYNOLDS, S.E.

1972

THE WATER QUALITY PROBLEM ON THE COLORADO RIVER.

NATURAL RESOURCES JOURNAL 12(4):480-486. SWRA W77-11168.

IN AN EFFORT TO SOLVE THE PROBLEM OF SALINITY OF THE COLORADO RIVER, THE FEDERAL WATER POLLUTION CONTROL ADMINISTRATION PROMULGATED POLICY GUIDELINES FOR THE INVOLVED STATES. THE FIRST GUIDELINE, WHICH STATES IN PART THAT STANDARDS PROVIDING FOR LESS THAN EXISTING WATER QUALITY WILL NOT BE ACCEPTABLE, COULD HAVE A DISASTROUS EFFECT ON THE UPPER BASIN STATES OF THE COLORADO RIVER. THE COLORADO RIVER BASIN COMPACT ALLOCATES TO THE UPPER BASIN STATES THE BENEFICIAL CONSUMPTIVE USE OF 7.5 MILLION ACRE-FEET OF WATER. PRESENTLY THESE STATES ARE CONSUMING ONLY ABOUT 3 MILLION ACRE-FEET. BECAUSE THE BENEFICIAL CONSUMPTIVE USE OF WATER RESULTS IN A DEGRADATION OF ITS QUALITY BY AN INCREASE IN THE CONCENTRATION OF DISSOLVED SOLIDS IN THE WATER, A STRICT INTERPRETATION OF THE GUIDELINES WOULD NOT ALLOW THE CONSUMPTIVE USE TO BE INCREASED. SINCE THIS IS CLEARLY UNREASONABLE THE ENVIRONMENTAL PROTECTION AGENCY (EPA) HAS RECOMMENDED THAT A BASIN-WIDE SALINITY CONTROL PROGRAM BE ESTABLISHED. THIS PROGRAM WOULD OFFSET THE INCREASE IN SALINITY CAUSED BY AN INCREASE IN BENEFICIAL CONSUMPTIVE USE. ALTHOUGH NONNUMERICAL SALINITY STANDARDS HAVE BEEN SET, THE BASIN STATES HAVE UNANIMOUSLY ADOPTED THE EPA RECOMMENDATION.

COLORADO RIVER/SALINITY/WATER QUALITY/MEXICAN WATER TREATY/COLORADO RIVER BASIN/MEXICO/WATER QUALITY CONTROL/WATER POLICY/BENEFICIAL USE/EQUITABLE APPORTIONMENT/RIVER BASINS/CONSUMPTIVE USE/LEGAL ASPECTS/INTERSTATE RIVERS/GOVERNMENTAL INTERRELATIONS/WATER ALLOCATION (POLICY)/INTERNATIONAL COMMISSIONS/INTERNATIONAL LAW/TREATIES

0124

ROGERS, W.

1962

CONGRESS AND THE NATION'S WATER RESOURCES.

AMERICAN BAR ASSOCIATION, SECTION OF MINERAL AND NATURAL RESOURCES LAW, 1962 PROCEEDINGS, P. 113-119. SWRA W69-09582.

THE AUTHOR DISCUSSES THE PROBLEM OF THE FEDERAL GOVERNMENT VERSUS THE STATE GOVERNMENTS WITH REFERENCE TO WATER RIGHTS. HE DISCUSSES THE HISTORICAL BACKGROUND OF THE PROBLEM DETAILING THE EVOLUTION OF FEDERAL CONTROL OVER NAVIGABLE WATERWAYS AND FEDERAL ACTIVITY IN THE AREA OF FLOOD CONTROL. SINCE WORLD WAR II FEDERAL ACTIVITY IN THE FIELD OF WATER RESOURCES HAS EXPANDED TO ENCOMPASS VIRTUALLY EVERY PHASE OF WATER RESOURCES DEVELOPMENT. THE AUTHOR THEN DELVES INTO THE POTENTIAL CONFLICTS BETWEEN STATE AND FEDERAL GOVERNMENT IN RESPECT TO WATER RIGHTS. THE FEAR IN WESTERN STATES HAS ARISEN THAT THE FEDERAL GOVERNMENT PROPOSED TO TAKE AWAY WITHOUT COMPENSATION, EXISTING WATER RIGHTS SECURED UNDER STATE LAW. VARIOUS CONGRESSIONAL EFFORTS TO RESOLVE THE PROBLEM HAVE BEEN ATTEMPTED AND THE AUTHOR OUTLINES THESE EFFORTS. THE AUTHOR CONCLUDES WITH A PLEA TO THE LEGAL PROFESSION TO ABANDON THE ROLE OF ADVOCATE OF A POSITION ON THE ISSUE TO STUDY IT OBJECTIVELY, AND THEN TO JOIN WITH THE CONGRESS IN FINDING A SOLUTION TO THE FEDERAL-STATE CONFLICT OVER WATER.

FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE GOVERNMENTS/FEDERAL GOVERNMENT/WATER RIGHTS/POLITICAL ASPECTS/LOCAL GOVERNMENTS/DESERT LAND ACT/LEGISLATION/PUBLIC LANDS/UNAPPROPRIATED WATER/FEDERAL RECLAMATION LAW/WATER RESOURCES DEVELOPMENT/NAVIGABLE WATERS/LEGAL ASPECTS/GOVERNMENTS

ROOD, W.B.

1977

WESTERN FARMERS FIGHT EFFORTS TO LIMIT FEDERALLY IRRIGATED LAND.

LOS ANGELES TIMES, PART 2, P. 1, OCTOBER 16.

THIS ARTICLE REVIEWS EFFORTS BY AGRICULTURAL INTERESTS IN WESTERN STATES TO PREVENT THE IMPLEMENTATION OF REGULATIONS PROMULGATED UNDER THE 1902 RECLAMATION ACT LIMITING THE SIZE OF FARMS RECEIVING WATER FROM FEDERAL IRRIGATION PROJECTS TO 160 ACRES PER FAMILY MEMBER. WHILE THE INTENT OF THE LAW WAS TO ENCOURAGE SETTLEMENT ON RECLAMATION LANDS BY FAMILY FARMERS AND AVOID SPENDING MONEY ON FEDERAL WATER PROJECTS TO ENRICH LARGE LANDHOLDERS, FARMERS HAVE BEEN ABLE TO CIRCUMVENT THE LAW. THE NEW REGULATIONS TO STRICTLY ENFORCE THE LAW WERE ISSUED BY THE INTERIOR DEPARTMENT IN RESPONSE TO A FEDERAL DISTRICT COURT ORDER. FORMERLY THE LAW WAS ADMINISTERED UNDER AN UNCOMPREHENSIVE SET OF SOLICITORS' OPINIONS AND MEMORANDUMS. THE KEY POINTS OF CONTROVERSY IN THE NEW REGULATIONS INCLUDE THE AMOUNT OF LAND A FARMER MAY OWN, HOW MUCH ADDITIONAL LAND HE CAN LEASE, AND WHETHER OR NOT HE MUST LIVE NEAR THE LAND TO BE ELIGIBLE FOR FEDERAL WATER. IT IS ALSO QUESTIONABLE WHETHER THE 1902 LAW ALLOWS FARMS OF SUFFICIENT SIZE TO WEATHER THE UNCERTAINTIES OF CONTEMPORARY ECONOMIC CONDITIONS FACED BY AGRICULTURE. THE NEW REGULATIONS WOULD ALLOW A FARMER AND HIS WIFE, CHILDREN, AND GRANDCHILDREN EACH TO OWN 160 ACRES AND LEASE AN ADDITIONAL 160 ACRES. THEY WOULD ALSO REQUIRE PURCHASERS OF FEDERALLY IRRIGATED LAND TO LIVE WITHIN FIFTY MILES OF THE LAND. THE REGULATIONS COULD AFFECT THE OWNERS OF NINE MILLION ACRES, AND THEIR POTENTIAL IMPACT HAS BEEN SUBSTANTIALLY INCREASED BY U.S. APPEALS COURT RULING THAT 434,000 ACRES OF FARMLAND SERVED BY THE IMPERIAL IRRIGATION DISTRICT WOULD HAVE TO COMPLY WITH THE RECLAMATION LAWS. THE LAND HAD BEEN THOUGHT TO BE EXEMPT FROM ACREAGE LIMITATIONS. CONSEQUENTLY, IMPERIAL VALLEY FARMERS HAVE BECOME DISILLUSIONED AND THOUSANDS HAVE PARTICIPATED IN PROTEST RALLIES. THE POLITICAL IMPLICATIONS OF THE SITUATION EXTEND TO STATES OUTSIDE THE WEST AND TO OTHER FEDERAL AGENCIES BESIDES INTERIOR AS WELL. THUS, IT IS LIKELY THAT CONGRESS WILL HAVE TO DEAL WITH THE PROBLEM.

FEDERAL PROJECT POLICY/WATER POLICY/WATER RESOURCES/WATER RESOURCES
DEVELOPMENT/IRRIGATION WATER/CALIFORNIA/IRRIGATION PROGRAMS/WATER UTILIZATION/
AGRICULTURE/WATER ALLOCATION(POLICY)/REGULATION

0126

SAX, J.L.

1964

PROBLEMS OF FEDERALISM IN RECLAMATION LAW.

UNIVERSITY OF COLORADO LAW REVIEW 37(1):49-84.

THE PROBLEMS RAISED HERE CENTER ON SECTION 8 OF RECLAMATION ACT OF 1902. THIS SECTION DELINEATES THE RIGHTS RESERVED TO THE STATES WHERE A FEDERAL RECLAMATION PROGRAM IS IN FORCE. SECTION 8 WAS ORIGINALLY INTERPRETED TO PLACE STATE LAW ABOVE FEDERAL LAW WHENEVER A CONFLICT OCCURRED. RECENT CASES INDICATE BY DICTA THAT THE SECTION NOW SHOULD BE READ SO AS TO GIVE STATE LAW PRIORITY ONLY IN SITUATIONS CONCERNING COMPENSATION FOR THE LOSS OF PRIVATE PROPERTY RIGHTS. BRIEF ATTENTION IS PAID TO VARIOUS LEGISLATION SUCH AS THE BOULDER CANYON PROJECT ACT, THE WARREN ACT, THE RECLAMATION EXTENSION ACT, AND THE FRYINGPAN-ARKANSAS PROJECT LAW. EXTENSIVE ANALYSIS OF THE LEGISLATIVE HISTORY OF THE RECLAMATION ACT IS PROVIDED. THE ROLE OF THE DEPARTMENT OF THE INTERIOR IN THE AREA OF RECREATION IN WATER AREAS IS DISCUSSED, WITH A CONCLUSION THAT IT WILL PLAY A QUITE ACTIVE ROLE BOTH IN POLICY PLANNING AND ADMINISTRATION. THE RELATIONSHIP BETWEEN THE RECLAMATION ACTS AND FEDERAL FARM POLICY IS DISCUSSED WITH THE CONCLUSION BEING THAT CONGRESS INTENDED TO UTILIZE THE RECLAMATION LAWS TO PROMOTE FARM POLICY.

FEDERAL RECLAMATION LAW/FEDERAL-STATE WATER RIGHTS CONFLICTS/RECREATION/
JUDICIAL DECISIONS/STATE JURISDICTION/COMPENSATION/WATER REUSE/WATER POLICY/
RECLAMATION/IRRIGATION/WATER ALLOCATION(POLICY)/COMPETING USES

0127

SCHOENENBERGER, M.R.

1971

ENVIRONMENTAL LAW, WATER RESOURCES, ZONES OF SHARED CONSERVATION AUTHORITY AND U.S. PUBLIC POLICY.

NORTH CAROLINA LAW REVIEW 49(4):978-984. SWRA W72-07205.

THE DEVELOPMENT OF LEGAL AUTHORITY TO REGULATE USE OF THE NATION'S WATERWAYS IS HEREIN EXAMINED. EARLY CASE LAW ESTABLISHED THAT THE FEDERAL GOVERNMENT HAS AUTHORITY TO REGULATE ALL NAVIGABLE WATERWAYS. AN IMPORTANT LIMITATION IS THAT TITLE TO ALL NAVIGABLE WATERS AND THEIR BEDS IS VESTED IN THE STATES. EARLY FEDERAL POLLUTION CONTROL LEGISLATION WAS NOT EFFECTIVELY ENFORCED FOR MANY YEARS. AREAS OF SHARED AUTHORITY BETWEEN FEDERAL AND STATE GOVERNMENTS ARE EXAMINED IN THE CONTEXT OF THEIR RESPONSE TO WATER RESOURCES CONSERVATION PRESSURES. THE MULTIPLE-USE DOCTRINE OF THE FEDERAL POWER ACT IS ONE WAY TO COMPROMISE VARIOUS INTERESTS. STATE COMPACTS FOR RIVER BASIN DEVELOPMENT ARE ANOTHER. GRADUALLY, FEDERAL POWER OVER RIVER BASIN PLANNING AND DEVELOPMENT HAS BEEN RECOGNIZED. THE THREAT OF WATER POLLUTION IS RECOGNIZED IN THE NEW FOCUS ON SHARED AUTHORITY. THE FEDERAL WATER POLLUTION CONTROL ACT IS A CUMBERSOME DEVICE FOR INSTITUTIONAL ENFORCEMENT. A MORE INTEGRATED ENFORCEMENT SYSTEM IS NEEDED. ENACTMENT OF RECENT HOUSE RECOMMENDATIONS WOULD STRENGTHEN THE ACT, BUT THE ACT'S BASIC FAULT IS THAT THE ENFORCEMENT IS NOT A NATIONALLY CONTROLLED FUNCTION.

FEDERAL WATER POLLUTION CONTROL ACT/GOVERNMENTAL INTERRELATIONS/WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/POLLUTION ABATEMENT/LEGAL ASPECTS/LEGISLATION/WATER POLLUTION/INSTITUTIONAL CONSTRAINTS/FEDERAL GOVERNMENT/INTERSTATE COMMISSIONS/STATE GOVERNMENTS/RIVER BASIN DEVELOPMENT/NAVIGABLE WATERS/MULTIPLE-PURPOSE PROJECTS/WATER CONSERVATION/ADOPTION OF PRACTICES/INTERSTATE COMPACTS/WATER POLICY/LAW ENFORCEMENT/OWNERSHIP OF BEDS

0128

SEPULVEDA, C.

1972

MEXICAN-AMERICAN INTERNATIONAL WATER QUALITY PROBLEMS: PROSPECTS AND PERSPECTIVES.

NATURAL RESOURCES JOURNAL 12(4):487-495. SWRA W77-11169.

TWO TREATIES PRESENTLY GOVERN THE CONTROL OF INTERNATIONAL WATERS BETWEEN THE UNITED STATES AND MEXICO. NEITHER OF THESE TREATIES MAKES ANY SPECIFIC REFERENCE TO WATER QUALITY, ALTHOUGH THE 1944 TREATY INDICATES THAT WATER SUITABLE FOR BENEFICIAL USE WILL BE PROVIDED. BECAUSE OF THIS OMISSION, IN 1961 A DISPUTE AROSE OVER THE QUALITY OF THE WATERS OF THE COLORADO RIVER BEING DELIVERED TO MEXICO. AS A TRANSITORY SOLUTION, THE INTERNATIONAL BOUNDARY AND WATER COMMISSION ENACTED MINUTE 218 WHICH REQUIRED THE UNITED STATES TO BUILD A THIRTEEN MILE DRAINAGE CANAL. THIS CANAL DIVERTS POLLUTED WATER ORIGINATING IN THE WELLTON-MOHAWK PROJECT INTO THE GULF OF CALIFORNIA THUS PREVENTING IT FROM REACHING THE MORELOS DAM IN MEXICO. ALTHOUGH MINUTE 218 HAS BEEN SATISFACTORILY USED FOR MORE THAN FIVE YEARS, IT ALSO FAILS TO MENTION THE QUALITY OF WATER TURNED OVER TO MEXICO. TO AVOID DISPUTES THE TWO COUNTRIES NEED TO REACH A FORMAL AGREEMENT WHICH WILL DETERMINE ACCEPTABLE WATER QUALITY STANDARDS. IT IS SUGGESTED BY THE AUTHOR THAT THE INTERNATIONAL BOUNDARY AND WATER COMMISSION COULD SERVE AS THE APPROPRIATE BODY FOR MAKING AND IMPLEMENTING SUCH WATER QUALITY DECISIONS UNDER THE TREATY.

MEXICAN WATER TREATY/CANALS/COLORADO RIVER BASIN/SALINITY/BENEFICIAL USE/
DRAINAGE/WATER POLLUTION/INTERNATIONAL LAW/WATER QUALITY/WATER QUALITY
STANDARDS/TREATIES/INTERSTATE RIVERS/INTERNATIONAL BOUND. AND WATER COMM./
WATER POLICY/RIVER BASINS/INTERNATIONAL COMMISSIONS

0129

SIMMONS, R.B.

1936

BOULDER DAM AND THE GREAT SOUTHWEST.

PACIFIC PUBLISHERS, LOS ANGELES, CALIFORNIA. 312 P.

A NARRATIVE HISTORICAL, PICTORIAL, AND BIOGRAPHICAL WORK CONCERNING THE
BACKGROUND AND THE CONSTRUCTION OF THE BOULDER DAM. IT DEALS WITH THE SEVEN
COLORADO RIVER BASIN STATES AND THE NEED FOR THE REGULATION OF COLORADO RIVER
WATERS. BIOGRAPHICAL SKETCHES OF INDIVIDUALS PROMINENT IN THE PROJECT ARE
INCLUDED.

FEDERAL PROJECT POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/COLORADO RIVER/
COLORADO RIVER BASIN/NEW MEXICO/CALIFORNIA/ARIZONA/COLORADO/NEVADA/UTAH/WYOMING/
BOULDER CANYON PROJECT ACT/HOOVER DAM

0130

SMITH, G.E.P.

1929

AN EQUITABLE BASIS FOR SOLUTION OF THE COLORADO RIVER CONTROVERSY.

PROGRESSIVE ARIZONA AND THE GREAT SOUTHWEST 9(4):12-14, 30-35; (5):22-24,
34-35; (6):26, 28-29.

THIS 3 PART ARTICLE SKETCHES VARIOUS ASPECTS OF THE POLITICAL CONFLICT
CENTERING ON DEVELOPMENT OF THE COLORADO RIVER AND PROPOSES A SOLUTION FOR
RESTORING COOPERATION AMONG THE STATES OF THE SOUTHWEST. THE CHIEF THRUST OF
THE ARTICLE IS AN ARGUMENT AGAINST BUILDING THE BOULDER CANYON DAM. THE AUTHOR
EXAMINES THE MOTIVES AND ARGUMENTS OF THE DAM'S SUPPORTERS AND PRESENTS
ARIZONA'S OBJECTIONS TO THE DAM AND TO PROVISIONS OF THE SWING-JOHNSON BILL.
DETAILS OF SEVERAL FACETS OF THE CONFLICT OF ARIZONA WITH CALIFORNIA, THE
FEDERAL GOVERNMENT, MEXICO, AND THE UPPER BASIN STATES ARE DISCUSSED. THE
AUTHOR CONCLUDES THAT THE SWING-JOHNSON BILL IS UNCONSTITUTIONAL, THE COLORADO
RIVER COMPACT MUST BE FUNDAMENTALLY REVISED OR A NEW COMPACT DRAWN UP, AND THE
BOULDER CANYON DAM SHOULD BE BUILT, IF AT ALL, ONLY AFTER CONSTRUCTION OF THE
DEWEY PROJECT AND BRIDGE CANYON DAM WHEN ADDITIONAL POWER IS NEEDED AND THE
STREAMFLOW HAS BEEN EQUALIZED. THE AUTHOR PROPOSES NEW PRINCIPLES UPON WHICH
COLORADO RIVER DEVELOPMENT SHOULD BE BASED AND OFFERS A FOUR POINT PROGRAM
UPON WHICH TO PROCEED.

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/PROJECT PLANNING/
FEDERAL-STATE WATER RIGHTS CONFLICTS/POLITICAL ASPECTS/DAMS/WATER RIGHTS/FEDERAL
GOVERNMENT/FEDERAL PROJECT POLICY/WATER POLICY/WATER ALLOCATION(POLICY) /
ELECTRIC POWER/MUNICIPAL WATER/FLOOD CONTROL/CALIFORNIA/ARIZONA/PROJECT
BENEFITS/LEGAL ASPECTS/IRRIGATION/BOULDER DAM/SWING-JOHNSON BILL/UPPER COLORADO
RIVER BASIN/LOWER COLORADO RIVER BASIN/IMPERIAL VALLEY/DEWEY PROJECT/
BRIDGE CANYON DAM

0131

SOBARZO, A.

1972

SALINITY IN THE COLORADO: AN INTERPRETATION OF THE MEXICAN-AMERICAN TREATY OF 1944.

NATURAL RESOURCES JOURNAL 12(4):510-514. SWRA W77-11171.

THE 1944 WATER TREATY BETWEEN THE UNITED STATES AND MEXICO DOES NOT SPECIFY THE QUALITY OF WATER TO BE DELIVERED TO MEXICO. ARTICLE 3 STATES PREFERENCE USES FOR THE WATER WITH TOP PRIORITIES BEING GIVEN TO DOMESTIC, MUNICIPAL, AND AGRICULTURAL USES. THE VIENNA CONVENTION ON THE LAW OF TREATIES CALLS FOR A TREATY TO BE INTERPRETED IN GOOD FAITH IN ACCORDANCE WITH THE OBJECT AND PURPOSE OF THE TREATY. THIS WOULD MAKE IRRELEVANT THE EXCLUSION OF A SPECIFIC WATER QUALITY CLAUSE AND WOULD DEEM THE TREATY VIOLATED IF THE BENEFICIAL USES ESTABLISHED BY ARTICLE 3 WERE UNATTAINABLE. THE AUTHOR CONTENDS THAT THE INTRODUCTION OF HIGHLY SALINE DRAINAGE WATER FROM THE WELLTON-MOHAWK PROJECT INTO THE COLORADO RIVER VIOLATES THE VIENNA CONVENTION BECAUSE IT IS UNREASONABLE TO REFER TO SUCH WATERS AS A SOURCE OF THE RIVER. FURTHERMORE, THE CONTAMINATION CAUSED BY THIS WATER ADVERSELY AFFECTS THE BENEFICIAL USES OF ARTICLE 3. APPLYING INTERNATIONAL LAW STANDARDS, THE AUTHOR FEELS THAT THE UNITED STATES IS OBLIGATED BY THE TREATY TO DELIVER WATER FROM THE COLORADO RIVER IN ITS NATURAL CONDITION. IN ADDITION, THE UNITED STATES SHOULD BE RESPONSIBLE FOR DAMAGES TO CROPS CAUSED BY THE SALINITY.

MEXICAN WATER TREATY/COLORADO RIVER/BENEFICIAL USE/SALINITY/TREATIES/DRAINAGE WATER/WATER QUALITY/CONSUMPTIVE USE/INTERNATIONAL LAW/LEGAL ASPECTS/WATER POLLUTION/WATER POLICY/MUNICIPAL WATER/CROPS/DOMESTIC WATER/REASONABLE USE/WATER ALLOCATION(POLICY)/DAMAGES

0132

STEIN, M.

1962

PROBLEMS AND PROGRAMS IN WATER POLLUTION.

NATURAL RESOURCES JOURNAL 2(3)-388-415. SWRA W69-02033.

THE PRIMARY RIGHTS AND RESPONSIBILITIES FOR CONTROLLING WATER REST WITH THE STATES, SHOWN IN THE DECLARATION OF POLICY OF THE FEDERAL WATER POLLUTION CONTROL ACT. THE MODERN APPROACH TO THE PROBLEM OF POLLUTION IS REFLECTED IN RECENT STATE STATUTES WHOSE OBJECT IS TO PRESERVE AND IMPROVE WATER QUALITY FOR ALL USERS AND TO ACCOMPLISH THIS THROUGH AN AGENCY THAT REPRESENTS ALL THE AFFECTED INTERESTS IN THE STATE. POTENTIALLY, ONE OF THE MOST EFFECTIVE TECHNIQUES FOR CONTROL OF WATER POLLUTION IS A PERMIT SYSTEM UNDER WHICH DISCHARGES OF WASTES INTO ANY WATERS OF THE STATE ARE PROHIBITED EXCEPT AS PERMITTED BY THE AGENCY AFTER EXAMINATION OF PLANS, SPECIFICATIONS AND OTHER DATA. THE DISREGARD OF STATE BOUNDARIES BY FLOWING WATERS HAS LED TO THE FORMULATION OF INTERSTATE COMPACTS FOR THE PREVENTION AND CONTROL OF WATER POLLUTION. NINE SUCH INTERSTATE COMPACTS HAVE RECEIVED CONGRESSIONAL APPROVAL.

FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER POLLUTION/POLLUTION ABATEMENT/WATER QUALITY/PERMITS/STATE GOVERNMENTS/INTERSTATE COMPACTS/WATER CONSERVATION/INTERSTATE RIVERS/WATER LAW/ADMINISTRATIVE AGENCIES/LEGISLATION/WATER POLLUTION TREATMENT/TREATMENT FACILITIES/STANDARDS

0133

STEINER, W.E.

1976

ARIZONA STATE WATER PLAN, PHASE II.

ARIZONA WATERSHED SYMPOSIUM, 20TH, PHOENIX, ARIZONA, PROCEEDINGS P. 6-10.
ARIZONA WATER COMMISSION, REPORT 8.

AN ADDRESS TO THE ARIZONA WATER SYMPOSIUM ON WATER RESOURCES PLANNING IN ARIZONA. THE AUTHOR LOOKS BACK TO THE EARLY 1970'S TO SEE HOW THE FUTURE OF WATER RESOURCES PLANNING WAS ENVISIONED AT THAT TIME. THIS SERVES AS A PARTIAL PROGRESS REPORT ON WATER RESOURCE ACTIVITIES IN ARIZONA DURING RECENT YEARS. THE CENTRAL ARIZONA PROJECT AND INDIAN WATER RIGHTS ARE DISCUSSED. IN THE EARLY 1970'S THE AUTHOR CALLED FOR A MUCH MORE COMPREHENSIVE AND AGGRESSIVE WATER RESOURCES DEVELOPMENT PLANNING PROGRAM. HE FELT AND STILL FEELS THAT IF ARIZONA IS TO CHART HER OWN DESTINY, SHE MUST PERFORM ENOUGH OF THE BASIC WATER PLANNING TO BE ABLE TO ARTICULATE HER DESIRES CONCERNING DEVELOPMENT AND TO BREAK THE HISTORIC MOLD OF VIRTUAL, COMPLETE RELIANCE ON THE FEDERAL GOVERNMENT FOR WATER PLANNING. THERE IS A NEED FOR FEDERAL PLANNING, BUT NOT WITHOUT SUFFICIENT STATE AND LOCAL PLANNING TO BE ABLE TO DECIDE WHAT IS BEST FOR ARIZONA. THE PROPOSED STATE WATER PLAN PROVIDES FOR AN INVENTORY OF THE STATE'S WATER RESOURCES AND CURRENT USES, TO LOOK AT POSSIBLE FUTURE WATER PROBLEMS, AND TO LOOK AT THE WATER OPTIONS AVAILABLE TO THE STATE OF ARIZONA.

ARIZONA/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RESOURCES PLANNING/WATER ALLOCATION (POLICY)/PLANNING/FEDERAL PROJECT POLICY/WATER POLICY/WATER REQUIREMENTS/COMPETING USES/WATER UTILIZATION/FUTURE PLANNING (PROJECTED)/STATE GOVERNMENTS/CENTRAL ARIZONA PROJECT

0134

TERRELL, J.U.

1965

WAR FOR THE COLORADO RIVER. 1: THE CALIFORNIA-ARIZONA CONTROVERSY.

ARTHUR H. CLARK COMPANY, GLENDALE, CALIFORNIA. 325 P.

THIS VOLUME DEALS WITH THE LOWER COLORADO RIVER BASIN, THE CALIFORNIA-ARIZONA CONFLICT, ITS BACKGROUND, NEVADA INTERESTS, THE CENTRAL ARIZONA PROJECT AND DETAILED CONGRESSIONAL DEVELOPMENTS ON THE CALIFORNIA-ARIZONA DISPUTE. A USEFUL OVERVIEW OF THE COMPETITION FOR USE OF COLORADO RIVERS IS PRESENTED.

COLORADO RIVER/COLORADO RIVER BASIN/WATER RESOURCES DEVELOPMENT/WATER RESOURCES/NEVADA/CALIFORNIA/ARIZONA/COMPETING USES/CENTRAL ARIZONA PROJECT/FEDERAL PROJECT POLICY/FEDERAL GOVERNMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RIGHTS/FEDERAL JURISDICTION/COLORADO RIVER COMPACT

0135

TERRELL, J.U.

1965

WAR FOR THE COLORADO RIVER. 2: ABOVE LEE'S FERRY.

ARTHUR H. CLARK COMPANY, GLENDALE, CALIFORNIA. 323 P.

THIS VOLUME FOCUSES ON THE UPPER BASIN STATES OF COLORADO, UTAH, WYOMING AND NEW MEXICO. WITH THE LOWER BASIN AFFAIRS IN THE BACKGROUND, THERE ARE DISCUSSIONS OF THE UPPER BASIN COMPACT OF 1948, THE COLORADO RIVER STORAGE PROJECT PLANS, THE RESULTING INTER-BASIN CONFLICTS, THE FIGHT TO SAVE THE DINOSAUR NATIONAL MONUMENT, AND DEVELOPMENTS IN THE EIGHTY-THIRD AND EIGHTY-FOURTH CONGRESSES. THE MAIN FOCUS IS ON THE POLITICAL ASPECTS OF THE LEGISLATIVE STRUGGLE FOR WATER RESOURCES DEVELOPMENT IN THE UPPER BASIN.

COLORADO RIVER/COLORADO RIVER BASIN/UPPER COLORADO RIVER BASIN COMPACT/
COLORADO/NEW MEXICO/UTAH/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/WATER
STORAGE/POLITICAL ASPECTS/POLITICAL CONSTRAINTS/FEDERAL PROJECT POLICY/WATER
SUPPLY/WYOMING

0136

THOMAS, R.D.

1970

POLICY-MAKING IN THE AMERICAN FEDERAL SYSTEM: INTERGOVERNMENTAL RESPONSES
TO WATER PROBLEMS IN ARIZONA.

UNIVERSITY OF ARIZONA, TUCSON (PH.D. DISSERTATION). 307 P.

THIS STUDY EXAMINES PUBLIC POLICY-MAKING IN THE AMERICAN FEDERAL SYSTEM BY FOCUSING ON THE ISSUE OF WATER RESOURCES DEVELOPMENT AND MANAGEMENT IN THE STATE OF ARIZONA. THE INFORMATION WAS OBTAINED THROUGH EXTENSIVE INTERVIEWS WITH POLICY-MAKERS WHO ARE CONCERNED WITH WATER PROBLEMS IN ARIZONA. COOPERATION CHARACTERIZED CERTAIN IMPORTANT ASPECTS OF WATER POLICY-MAKING IN ARIZONA, WHILE THE POTENTIAL FOR CONFLICT CHARACTERIZED OTHER ELEMENTS OF THE WATER POLICY SYSTEM IN THE STATE. THE CONSEQUENCES OF THIS FEDERAL-STATE POLICY SYSTEM FOR ARIZONA HAVE BEEN 1) STATE ADMINISTRATIVE FRAGMENTATION IN WATER MANAGEMENT, AND 2) STATE ACQUIESCENCE BOTH IN TERMS OF FORMULATING AND IMPLEMENTING WATER POLICY. IN SUCH A SYSTEM WHICH HAS GROWN GRADUALLY OVER THE YEARS, CHANGES IN DEGREE ARE INEVITABLE, BUT CHANGES IN KIND ARE NEXT TO IMPOSSIBLE.

FEDERAL-STATE WATER RIGHTS CONFLICTS/ARIZONA/WATER RESOURCES DEVELOPMENT/
WATER POLICY/POLITICAL ASPECTS/INTER-AGENCY COOPERATION/GOVERNMENTAL
INTERRELATIONS/ADMINISTRATION

0137

THOMAS, R.D.

1972

FEDERAL-LOCAL COOPERATION AND ITS CONSEQUENCES FOR STATE LEVEL POLICY
PARTICIPATION: WATER RESOURCES IN ARIZONA.

PUBLIUS 1:77-94.

THIS ARTICLE EXAMINES HOW STATE LEVEL POLICY MAKING IN THE STATE OF ARIZONA ON THE ISSUE OF WATER RESOURCES IS AFFECTED BY A FEDERAL-LOCAL COOPERATIVE RELATIONSHIP AND SPECIAL PURPOSE LOCAL WATER USERS ASSOCIATIONS. THE MAIN CONSEQUENCES FOR STATE OFFICIALS IS EXCLUSION IN POLICY-MAKING AT THE VITAL POINTS OF PROBLEM IDENTIFICATION AND ACCOUNTABILITY AS WELL AS STATE ADMINISTRATIVE FRAGMENTATION IN WATER MANAGEMENT. STILL, STATE OFFICIALS PERCEIVE THE CONSEQUENCES AS ADVANTAGEOUS TO STATE INTERESTS AND THUS ARE VERY SUPPORTIVE OF FEDERAL-LOCAL POLICY MAKING IN WATER RESOURCES.

WATER POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER ALLOCATION (POLICY)/
WATER RESOURCES/STATE GOVERNMENTS/ARIZONA/POLITICAL ASPECTS/GOVERNMENTAL
INTERRELATIONS/LOCAL GOVERNMENTS/INTER-AGENCY COOPERATION

0138

TILDEN, W.

1975

THE POLITICS OF SALT: BACKGROUND AND IMPLICATIONS OF THE MEXICAN-AMERICAN TREATY OF 1944.

UNIVERSITY OF ARIZONA, TUCSON, INSTITUTE OF GOVERNMENT RESEARCH, PRELIMINARY REPORT. 123 P. SWRA W77-11097.

UNRESOLVED PROBLEMS CONCERNING THE SALINE COLORADO RIVER WATER SUPPLIED TO MEXICO BY THE UNITED STATES FOR AGRICULTURAL IRRIGATION ARE DISCUSSED. THE 1944 WATER TREATY BETWEEN THESE TWO COUNTRIES ALLOCATED 1.5 MILLION ACRE-FEET OF WATER TO MEXICO, BUT ONLY MUCH LATER DID THE U.S. AGREE TO ACCEPT RESPONSIBILITY FOR WATER QUALITY. LEGAL ANALYSIS DEALS WITH THE VARIOUS ALLOCATIONS OF COLORADO RIVER WATER MADE BY TREATY AND STATUTE. THE LEGAL PRINCIPLES ADOPTED BY GOVERNMENTS CONCERNING USE OF INTERNATIONAL RIVERS INCLUDE ABSOLUTE TERRITORIAL SOVEREIGNTY, ABSOLUTE TERRITORIAL INTEGRITY, COMMUNITY IN WATERS, OR RESTRICTED TERRITORIAL SOVEREIGNTY AND INTEGRITY. IN THE CASE OF THE 1944 TREATY, THE U.S. BASICALLY INTERPRETED ITS OBLIGATIONS ACCORDING TO THE FIRST PRINCIPLE WHILE MEXICO ADOPTED THE TERMS OF THE FOURTH PRINCIPLE. THE IMPRECISE LANGUAGE OF THE TREATY HAD MUCH TO DO WITH WATER QUALITY DISPUTES IN LATER YEARS. AS THE U.S. POLITICAL CLIMATE CHANGED, RESOLUTION OF THE DISPUTE WAS POSSIBLE; BY 1973, THE BROWNELL COMMISSION, APPOINTED BY PRESIDENT NIXON, SUBMITTED RECOMMENDATIONS TO BOTH GOVERNMENTS TO FACILITATE SUCH RESOLUTION. GAME THEORY, AS DISCUSSED BY HARSANYI, RIKER AND SCHELLING, IS USED TO ANALYZE THE CHANGE IN U.S. POLICY.

MEXICAN WATER TREATY/COLORADO RIVER/WATER LAW/POLITICAL ASPECTS/INTERNATIONAL WATERS/INTERNATIONAL BOUND. AND WATER COMM./SALINE WATER/WATER QUALITY/ INTERNATIONAL LAW/GOVERNMENTAL INTERRELATIONS/LEGISLATION

0139

TRELEASE, F.J.

1957

A MODEL STATE WATER CODE FOR RIVER BASIN DEVELOPMENT.

LAW AND CONTEMPORY PROBLEMS 22 (2) :301-322.SWRA W68-00448.

ALTHOUGH PARTICULAR WATER DEVELOPMENT PROBLEMS DIFFER, SOME CRITERIA MAY BE DEFINED THAT WILL HAVE UNIVERSAL VALIDITY. THE BASIC ASSUMPTION IS THAT ALL WATER ALLOCATION PROBLEMS HAVE ONE FEATURE IN COMMON, WHICH IS THAT THERE IS NOT ENOUGH WATER FOR ALL POSSIBLE USES, AND SOME CHOICE MUST BE MADE AMONG COMPETING USERS. THE FIRST PREREQUISITE OF A MODEL STATE SYSTEM OF WATER LAW IS THAT IT SHOULD ENCOURAGE, OR AT LEAST NOT DETER MAXIMUM DEVELOPMENT. IT MUST PROVIDE SECURITY TO THE WATER USER FOR HIS INVESTMENT IN FACILITIES AND YET BE SUFFICIENTLY FLEXIBLE TO PERMIT CHANGE IN THE EXISTING PATTERNS OF RESOURCE USE. IT SHOULD ALSO PROTECT THE PUBLIC INTEREST BY OBTAINING THE OPTIMUM DEVELOPMENT POSSIBLE WHILE PROVIDING FOR NAVIGATION, FISHING AND RECREATION. THE AUTHOR COMPARES THE EXISTING LEGAL THEORIES APPLICABLE TO WATER ALLOCATION AND CONCLUDES THE PRIOR APPROPRIATION IS THE BEST EXISTANT SYSTEM OF LAW FOR RIVER BASIN DEVELOPMENT IN THE UNITED STATES.

RIVER BASIN DEVELOPMENT/RESOURCE ALLOCATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/RIPARIAN LAND/RIPARIAN WATERS/RIPARIAN RIGHTS/APPROPRIATION/NATURAL FLOW DOCTRINE/PRIOR APPROPRIATION/EMINENT DOMAIN/SOCIAL NEEDS/PRIORITIES/ REASONABLE USE/LAND TENURE/INTERSTATE COMPACTS/STATE JURISDICTION

0140

TRELEASE, F.J.

1970

WATER RESOURCES ON THE PUBLIC LANDS: PLLRC'S SOLUTION TO THE RESERVATION DOCTRINE.

LAND AND WATER LAW REVIEW 6(1):89-107. SWRA W71-06620.

THIS ARTICLE DEALS WITH THAT PORTION OF THE REPORT OF THE PUBLIC LAND LAW REVIEW COMMISSION PERTAINING TO THE RESERVATION DOCTRINE. AFTER A SUMMARY OF THE REPORT AND ITS RECOMMENDATIONS, THE FOLLOWING AREAS ARE DISCUSSED: QUANTIFICATION OF THE PROBLEM, PROCEDURES FOR ADMINISTRATIVE DETERMINATION OF THE REASONABLENESS OF QUANTITIES CLAIMED, AND COMPENSATION. THE TWO MOST IMPORTANT PROBLEMS TO BE RESOLVED ARE THE UNCERTAINTY ENGENDERED BY THE DOCTRINE AND THE EQUITY OF HOLDERS OF WATER RIGHTS VESTED UNDER STATE LAW. THE COMMISSION RECOMMENDED THAT THE IMPLIED RESERVATION DOCTRINE OF WATER RIGHTS FOR FEDERAL LANDS SHOULD BE CLARIFIED IN FOUR WAYS: 1) AMOUNTS OF WATER CLAIMED SHOULD BE FORMALLY ESTABLISHED, 2) PROCEDURES FOR CONTESTING CLAIMS SHOULD BE PROVIDED, 3) WATER REQUIREMENTS FOR FUTURE RESERVATIONS SHOULD BE EXPRESSLY RESERVED, AND 4) COMPENSATION SHOULD BE AWARDED WHERE INTERFERENCE RESULTS WITH CLAIMS VALID UNDER STATE LAW BEFORE THE DECISION IN ARIZONA V. CALIFORNIA, 373 U.S. 546 (1963). THE AUTHOR DISAGREES WITH THE COMMISSION IN THAT HE FEELS A CASE BY CASE APPROACH IS BEST FOR SETTLING DISPUTES IN THIS AREA, BUT AGREES THAT WATER USERS HARMED BY EXERCISE OF THE RESERVATION DOCTRINE SHOULD BE COMPENSATED. THE AUTHOR CONCLUDES THAT THE COMMISSION'S RECOMMENDATIONS SHOULD BE TRIED AND SUPPORTED TO DETERMINE THEIR EFFICACY.

RESERVATION DOCTRINE/FEDERAL RESERVATIONS/FEDERAL-STATE WATER RIGHTS CONFLICTS/
WATER SUPPLY/ADMINISTRATION/PUBLIC LAND LAW REVIEW COMMISSION(PLLRC)/WATER
RIGHTS/EQUITY/COMPENSATION

0141

TRELEASE, F.J.

1971

FEDERAL-STATE RELATIONS IN WATER LAW.

NATIONAL WATER COMMISSION, ARLINGTON, VIRGINIA, LEGAL STUDY 5. 357 P.
AVAILABLE NTIS AS PB-203 600. SWRA W72-01480.

THIS PAPER DESCRIBES THE SOURCES OF CONFLICT BETWEEN THE FEDERAL GOVERNMENT AND THE STATES (AND CITIZENS CLAIMING RIGHTS UNDER STATE LAW); IT PRESENTS A NUMBER OF RECOMMENDATIONS FOR RESOLVING THE CONFLICTS. SPECIFICALLY, THE PAPER DEALS WITH 1) RESERVED RIGHTS, 2) THE NAVIGATION SERVITUDE, 3) SOVEREIGN IMMUNITY AND 4) EMINENT DOMAIN PROCEDURES. A NATIONAL WATER RIGHTS PROCEDURES ACT DEALING WITH THOSE SUBJECTS IS PROPOSED.

FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RIGHTS/WATER LAW/INSTITUTIONAL
CONSTRAINTS/RESERVATION DOCTRINE/ADJUDICATION PROCEDURE/NAVIGATION/EMINENT
DOMAIN/SOVEREIGN IMMUNITY

0142

TRELEASE, F. J.

1966

STATES RIGHTS VERSUS NATIONAL POWERS FOR WATER DEVELOPMENT. IN WESTERN INTERSTATE WATER CONFERENCE, 2D, CORVALLIS, OREGON, 1965, PROCEEDINGS P. 99-115. UNIVERSITY OF CALIFORNIA, LOS ANGELES, WATER RESOURCES CENTER. 195 P.

THIS ARTICLE DISCUSSES THE POWERS OF THE FEDERAL GOVERNMENT AND THE STATE GOVERNMENTS IN THE FIELD OF WATER RESOURCE DEVELOPMENT. THERE IS A VERY THOROUGH AND USEFUL DISCUSSION OF THE INTERRELATION BETWEEN THE STATES AND THE NATIONAL GOVERNMENT. WHILE THE FEDERAL GOVERNMENT'S POWERS STEM FROM THE CONSTITUTION, THE POWERS OF THE STATES ARE DERIVED FROM WHAT IS LEFT AFTER THE GRANT OF SPECIFIC POWERS TO THE NATIONAL GOVERNMENT. THE AUTHOR SUGGESTS THAT IF THE STATES APPROACH THEIR RELATIONSHIP WITH THE FEDERAL GOVERNMENT AS ONE OF CONFLICT THEY WILL ALWAYS LOSE. THE FEDERAL GOVERNMENT IS DOMINANT IN THE FIELD OF WATER POLICY AND WILL REMAIN SO IN THE FORESEEABLE FUTURE. YET THE STATES HAVE INPUT TO THE WATER POLICY-MAKING ARENA IF THEY RECOGNIZE THIS ROLE, WHICH THOUGH IT MAY BE OMNIPOTENT, HAS SELDOM BEEN USED TO EXCLUDE STATE INTERESTS.

WATER RESOURCES DEVELOPMENT/WATER POLICY/FEDERAL-STATE WATER RIGHTS CONFLICTS/ STATE GOVERNMENTS/WATER ALLOCATION (POLICY)/POLITICAL ASPECTS/FEDERAL PROJECT POLICY

0143

U.S. BUREAU OF RECLAMATION

1946

THE COLORADO RIVER: A COMPREHENSIVE REPORT ON THE DEVELOPMENT OF THE WATER RESOURCES OF THE COLORADO RIVER BASIN FOR IRRIGATION, POWER PRODUCTION, AND OTHER BENEFICIAL USES IN ARIZONA, CALIFORNIA, NEVADA, NEW MEXICO, UTAH AND WYOMING.

SAME AS AUTHOR, WASHINGTON, D.C. 295 P.

THIS REPORT INCLUDES A DESCRIPTION OF THE BASIN'S RESOURCES, ITS NEEDS AND PROBLEMS, AND ITS PRESENT AND POTENTIAL DEVELOPMENT. LIMITED WATER SUPPLY IN THE COLORADO RIVER BASIN IS CITED AS A MAJOR NECESSITY FOR PLANNING. IT SUGGESTS STATE AND FEDERAL COOPERATION SO THAT THIS PLANNING MAY OCCUR IN A RATIONAL FASHION. YESTERDAY THE COLORADO WAS A NATURAL MENACE. TODAY IT IS RECOGNIZED AS A NATURAL RESOURCE. TOMORROW IT WILL BE UTILIZED TO THE VERY LAST DROP. IT SEES THAT INTRASTATE AND INTERSTATE PROBLEMS, TO BE SOLVED BY THE CITIZENS OF THE STATES OF THE COLORADO RIVER BASIN AND THE INTERNATIONAL PROBLEM BETWEEN MEXICO AND THE UNITED STATES, ARE ALL INTERRELATED. INTEGRATED DEVELOPMENT OF THE RESOURCES OF THE COLORADO RIVER BASIN CAN BEST BE ACHIEVED BY THE COOPERATION OF ALL FEDERAL, STATE, AND LOCAL INTERESTS IN THE REGION. THIS COOPERATION IS NECESSARY NOT ONLY IN THE FORMULATION OF A COMPREHENSIVE, COORDINATED PLAN, BUT IN THE EXECUTION OF A UNIFIED PROGRAM THAT WILL BE KEYED TO THE WELFARE OF THE PEOPLE IN THE BASIN.

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/WATER SHORTAGE/ WATER SUPPLY/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/IRRIGATION/POWERPLANTS/ARIZONA/CALIFORNIA/COLORADO/NEW MEXICO/ NEVADA/UTAH/WYOMING/INTERSTATE RIVERS/COMPREHENSIVE PLANNING/REASONABLE USE/ MULTIPLE-PURPOSE PROJECTS

U.S. BUREAU OF RECLAMATION

1964

PACIFIC SOUTHWEST WATER PLAN. REPORT. 2V.

SAME AS AUTHOR, WASHINGTON, D.C.

THIS REPORT, A REVISION OF THE INITIAL PLAN OF AUGUST 1963, OUTLINES ONE DESIGNED TO MEET THE IMMEDIATE AND LONG-RANGE WATER NEEDS OF THE AREA SERVED BY THE LOWER COLORADO RIVER BASIN. THE FIRST SECTION OF VOL. 1 SUMMARIZES THE AUGUST 1963 PLAN AND THE COMMENTS ON THE INITIAL PLAN SUBMITTED BY THE AFFECTED STATES AND FEDERAL AGENCIES, AND BRIEFLY DESCRIBES FOUR MAJOR CONSIDERATIONS LEADING TO THE MODIFICATION OF THE ORIGINAL PLAN AS WELL AS THE PROPOSED REVISIONS. THE FEATURES PROPOSED BY THE INITIAL PLAN FOR IMMEDIATE AUTHORIZATION AS WELL AS THE FEATURES REQUIRING MORE DETAILED STUDY ARE BRIEFLY DESCRIBED AND THE FINANCIAL AND ECONOMIC ASPECTS OF THE PLAN ARE SUMMARIZED. TEN ACCOMPLISHMENTS EXPECTED OF THE PLAN ARE LISTED AND SEVEN SPECIFIC ITEMS INVOLVED IN IMPLEMENTING THE PLAN ARE DISCUSSED. NEXT THE REPORT PRESENTS THE VIEWS AND RECOMMENDATIONS SUBMITTED BY ARIZONA, NEVADA, CALIFORNIA, THE UPPER BASIN STATES, AND SIX FEDERAL AGENCIES, AND BRIEFLY DISCUSSES THE COMMENTS OF EACH. FINALLY THE MODIFIED PLAN IS PRESENTED: 1) A DESCRIPTION OF THE AREA INCLUDING NATURAL RESOURCES, POPULATION GROWTH, ECONOMIC GROWTH, AND RECREATIONAL, CULTURAL, AND SCIENTIFIC DEVELOPMENT, 2) HISTORICAL, CONTEMPORARY, AND FUTURE ASPECTS OF THE WATER PROBLEM, 3) PRESENT WATER SUPPLIES AND USES, 4) FUTURE WATER SUPPLIES AND DEMAND, 5) PRESENT AND FUTURE POWER REQUIREMENTS, SOURCES, AND MARKETS, 6) THE INITIAL PLAN OF DEVELOPMENT AND THE LONG-RANGE PLANNING PROGRAM, 7) ECONOMIC AND FINANCIAL ANALYSIS, (8 IMPLEMENTATION OF THE PLAN, AND 9) WATER RESEARCH PROGRAMS. THE REPORT ACCEPTS THE OBJECTIVES OF THE INITIAL PLAN BUT REVISIONS INCLUDE DELETION OF SPECIFIC PLANS FOR LONG-RANGE SOLUTIONS, PROPOSING INSTEAD ESTABLISHMENT OF A REGIONAL COMMISSION TO COORDINATE LONG-RANGE PLANNING. THE SECOND VOLUME OF THE REPORT CONTAINS THE APPENDICES TO BOTH THE INITIAL REPORT AND THE PRESENT REPORT OF ELEVEN AGENCIES AND OFFICES OF THE DEPARTMENT OF THE INTERIOR.

WATER RESOURCES DEVELOPMENT/GOVERNMENTS/FEDERAL GOVERNMENT/SOUTHWEST U.S./
 WATER POLICY/PROJECT PLANNING/FEDERAL PROJECT POLICY/MULTIPLE-PURPOSE PROJECTS/
 COST-BENEFIT ANALYSIS/COLORADO RIVER BASIN/STATE GOVERNMENTS/REGIONAL
 DEVELOPMENT/WATER RIGHTS/WATER SUPPLY/WATER STORAGE/PUBLIC LANDS/WATER DEMAND/
 WATER UTILIZATION/WATER QUALITY/WATER DELIVERY/WATER SHORTAGE/IRRIGATION/
 HYDROELECTRIC POWER/POWER MARKETING/DESALINATION/FLOOD CONTROL/RECREATION/
 ECONOMICS/LOWER COLORADO RIVER BASIN/WATER REQUIREMENTS/COMPREHENSIVE PLANNING

0145

U.S. DEPARTMENT OF AGRICULTURE, ECONOMIC RESEARCH SERVICE

1972

STATE WATER RIGHTS LAWS AND RELATED SUBJECTS: A SUPPLEMENTAL BIBLIOGRAPHY,
 1959 TO MID-1967.

U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C., MISCELLANEOUS PUBLICATION
 1249. 268 P. SWRA W73-01389.

SUPPLEMENTS ONE ISSUED BY USDA AS MISCELLANEOUS PUBLICATION 921, DECEMBER 1962. INCLUDED HERE ARE CITATIONS, WITH MAJOR TOPICS, BASED ON A SURVEY OF THE LITERATURE PUBLISHED FROM 1959 TO MID-1967 AND ON RESPONSES TO FORMAL INQUIRIES SENT IN 1966 TO STATE AND FEDERAL AGENCIES CONCERNED WITH WATER RESOURCES, LAW SCHOOLS, WATER RESOURCE CENTERS, AGRICULTURAL COLLEGES AND OTHERS. PUBLICATIONS DEALING WITH STATE WATER RIGHTS LAWS INCLUDING LAW REVIEW ARTICLES AND OTHER SOURCES; PUBLISHED PROCEEDINGS OF SYMPOSIUMS, CONFERENCES AND SIMILAR MEETINGS; OTHER LISTS ENTITLED 'AMERICAN LAW REPORTS', 'FEDERAL MATTERS', AND 'INTERSTATE AND INTERNATIONAL MATTERS'; A PUBLICATIONS INDEX/AND AN AUTHOR INDEX ARE INCLUDED. SPECIAL EFFORT WAS MADE TO ACHIEVE COMPREHENSIVE COVERAGE OF PUBLICATIONS DEALING WITH STATE WATER RIGHTS LAWS.

BIBLIOGRAPHIES/STATE JURISDICTION/WATER RIGHTS/WATER LAW/INTERNATIONAL LAW/
 FEDERAL-STATE WATER RIGHTS CONFLICTS/LEGAL ASPECTS/GOVERNMENTS/WATER RESOURCES
 DEVELOPMENT/WATER ALLOCATION(POLICY)/FEDERAL JURISDICTION

0146

U.S. DEPARTMENT OF THE INTERIOR

1961

THE STORY OF BOULDER DAM.

SAME AS AUTHOR, CONSERVATION BULLETIN 9. 75 P.

A CHRONOLOGICAL REVIEW OF THE USE AND DEVELOPMENT OF THE COLORADO RIVER WATER RESOURCES IS PRESENTED, WATER RIGHTS TO THE WATERS OF THE COLORADO RIVER ARE OUTLINED, AND NEED FOR REGULATION OF WATERS TO DEAL WITH FLOOD AND DROUGHT CONDITIONS ADEQUATELY ARE DISCUSSED. UNCONTROLLED AND UNREGULATED, THE COLORADO RIVER HAD LIMITED VALUE. THE UPPER BASIN AND LOWER BASIN CONCEPT AS A WAY OF DIVIDING THE COLORADO RIVER WATERS IS DISCUSSED. THE BOULDER CANYON PROJECT ACT OF 1928 IS DISCUSSED IN DETAIL, AND REASONS FOR CONSTRUCTION OF HOOVER DAM AND BENEFITS RESULTING FROM ITS CONSTRUCTION ARE EXPLORED.

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/BOULDER CANYON PROJECT ACT/WATER RESOURCES/HOOVER DAM/DAMS/REGIONAL ANALYSIS/PLANNING/ARIZONA/CALIFORNIA/COLORADO/NEVADA/UTAH/WYOMING/NEW MEXICO/SOUTHWEST U.S./WATER RIGHTS/FLOOD PROTECTION/DROUGHTS

0147

U.S. FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

1974

ADOPTED STANDARDS [WATER QUALITY].

US/FWPCA POLLUTION CONTROL GUIDE 1(581-588):577-580. SWRA W75-06602.

ANY WATER QUALITY STANDARD ADOPTED BY ANY STATE AWAITING APPROVAL OR APPROVED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) ON OCTOBER 18, 1972, WILL REMAIN IN EFFECT UNLESS THE STATE IS NOTIFIED OF ANY REQUIRED CHANGES. THE 18TH OF OCTOBER IS THE DATE OF ENACTMENT OF THE AMENDMENTS TO THE FEDERAL WATER POLLUTION CONTROL ACT. IF THE STATE FAILED TO ADOPT THE REQUIRED CHANGES WITHIN NINETY DAYS THE AGENCY WOULD BE REQUIRED TO PROMULGATE THE NECESSARY CHANGES. ANY STATE THAT HAD NOT ADOPTED INTRASTATE WATER QUALITY STANDARDS BY OCTOBER 18, 1972, WAS REQUIRED TO ADOPT AND SUBMIT SUCH STANDARDS TO THE EPA REGIONAL ADMINISTRATOR BY APRIL 16, 1973. THE AGENCY MAY ESTABLISH WATER QUALITY STANDARDS FOR A STATE THAT FAILS TO ADOPT OR REVISE ADEQUATE STANDARDS BY CALLING A CONFERENCE OF FEDERAL DEPARTMENTS AND AGENCIES, INTERSTATE AGENCIES, STATES, MUNICIPALITIES AND INDUSTRIES AFFECTED BY THE STANDARDS. FOLLOWING THE CONFERENCE, THE AGENCY MAY ESTABLISH SUCH STANDARDS PURSUANT TO PROCEDURES SET FORTH IN THE ACT.

ADMINISTRATIVE AGENCIES/WATER QUALITY STANDARDS/FEDERAL WATER POLLUTION CONTROL ACT/STATE GOVERNMENTS/ADOPTION OF PRACTICES/WATER POLICY/WATER LAW/LEGISLATION/WATER QUALITY CONTROL/WATER POLLUTION CONTROL/LEGAL ASPECTS/FEDERAL GOVERNMENT/WATER QUALITY/WATER TREATMENT/REGULATION/GOVERNMENTAL INTERRELATIONS/LAW ENFORCEMENT/JURISDICTION/FEDERAL-STATE WATER RIGHTS CONFLICTS

0148

U.S. NATIONAL WATER COMMISSION

1973A

FEDERAL-STATE JURISDICTION IN THE LAW OF WATERS. IN WATER POLICIES FOR THE FUTURE, FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS OF THE UNITED STATES, P. 459-471.

WATER INFORMATION CENTER, INC., PORT WASHINGTON, N.Y. 579 P.

RELATIONS BETWEEN THE FEDERAL GOVERNMENT AND STATES AND PRIVATE CITIZENS OVER WATER RIGHTS HAVE EVOKED SERIOUS CONCERN. FEDERAL AND STATE WATER LAWS HAVE EVOLVED SEPARATELY, WITH EACH OF THE STATES DEVELOPING ITS OWN SET OF LAWS UPON WHICH FEDERAL LAW HAS BEEN SUPERIMPOSED. SOMETIMES STATE AND FEDERAL LAWS ARE COMPATIBLE, BUT WHEN CONFLICT OCCURS UNCERTAINTY AND BAD FEELINGS RESULT, AND THE EFFICIENT PERFORMANCE OF THE ECONOMIC SYSTEM TO OPTIMIZE THE YIELD FROM SCARCE WATER RESOURCES IS ADVERSELY AFFECTED. NO LAW CAN TOTALLY ELIMINATE THE PROBLEM, BUT COMPROMISES ARE CONSTITUTIONALLY POSSIBLE. THE THREE MAJOR PROBLEM AREAS IN FEDERAL-STATE RELATIONS IN THE LAW OF WATER RIGHTS ARE: 1) COORDINATION OF FEDERAL WATER ACTIVITIES WITH STATE WATER ADMINISTRATION, 2) SOVEREIGN IMMUNITY AS A BAR TO THE ADJUDICATION OF FEDERAL WATER CLAIMS, AND 3) COMPENSABILITY OF STATE-CREATED WATER RIGHTS IMPAIRED BY FEDERAL ACTIVITIES. UNTIL 1963 FEDERAL RIGHTS WERE THOUGHT TO BE BASED ON STATE LAW, BUT IN SUPREME COURT DECISIONS IN CITY OF PRESNO V. CALIFORNIA AND ARIZONA V. CALIFORNIA A DIFFERENT CONCEPT OF WATER RIGHTS WAS INTRODUCED. IN THE FORMER CASE THE COURT INDICATED THE 1902 RECLAMATION ACT DID NOT REQUIRE THAT COMPENSATION BE PAID FOR TAKING PROPERTY INTERESTS RECOGNIZED BY STATE LAW. THE LATTER CASE SIMILARLY LIMITED STATE LAW BY CREATING THE RESERVED RIGHT FOR VARIOUS FEDERAL ACTIVITIES FOR WHICH LAND WAS SET ASIDE. OTHER COURT DECISIONS IN THE 1950S AND 1960S CONSTRUED THE COMMERCE CLAUSE TO PERMIT THE FEDERAL GOVERNMENT TO TAKE LAND ALONG A WATERCOURSE FOR NAVIGATION AND MULTIPURPOSE PROJECTS WITHOUT COMPENSATING LANDOWNERS FOR VALUES ATTRIBUTABLE TO THE NAVIGABLE WATER. THESE DECISIONS THREATENED ESTABLISHED STATE PROCEDURES AND PROPERTY RIGHTS, AND IMPAIRED PLANNING AS WELL. THESE CONFLICTS CAN BE SETTLED BY CONGRESSIONAL ACTION ON A PROPOSED 'NATIONAL WATER RIGHTS PROCEDURES ACT,' THE PRINCIPLES OF WHICH ARE DISCUSSED IN NINE RECOMMENDATIONS. THE EFFECTS OF THE PROPOSED ACT WOULD BE GREATEST IN THE WESTERN STATES ALTHOUGH EASTERN STATES WOULD ALSO BENEFIT BY IT.

FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL RESERVATIONS/FEDERAL GOVERNMENT/ RESERVATION DOCTRINE/LEGAL ASPECTS/WATER RIGHTS/COMPENSATION/WATER LAW/ LEGISLATION/GOVERNMENTS/PROJECT PLANNING/ECONOMICS/EMINENT DOMAIN/RIVERS AND HARBORS ACT/HOOVER DAM/MCCARRAN AMENDMENT/WINTERS DOCTRINE/SOVEREIGN IMMUNITY/ RECLAMATION ACT OF 1902/NAVIGATION SERVITUDE/ARIZONA V. CALIFORNIA/CITY OF PRESNO V. CALIFORNIA/COMMERCE CLAUSE

0149

U.S. NATIONAL WATER COMMISSION

1973B

IMPROVEMENTS IN STATE WATER LAWS TO PROVIDE RECOGNITION FOR SOCIAL VALUES IN WATER. IN WATER POLICIES FOR THE FUTURE, FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS OF THE UNITED STATES, P. 271-279.

WATER INFORMATION CENTER, INC., PORT WASHINGTON, N.Y. 579 P.

STATE WATER LAWS HAVE EMBODIED A PREFERENCE FOR ECONOMIC DEVELOPMENT WITHOUT ADEQUATELY RECOGNIZING THE NON-ECONOMIC VALUES OF WATER SUCH AS ESTHETICS, RECREATION, AND FISH AND WILDLIFE PROPAGATION. STATE LAWS SHOULD BE IMPROVED AND LEGAL RIGHTS SHOULD BE CREATED TO RECOGNIZE SOCIAL VALUES. THE PRESENT DEFECTS IN STATE LAWS HAVE THEIR BASIS IN LEGAL DOCTRINES OF APPROPRIATION IN THE WESTERN STATES AND RIPARIAN WATER RIGHTS IN THE EASTERN STATES. STATE LEGISLATIVE REFORM HAS BEEN UNDERTAKEN IN SOME STATES. SIX EXAMPLES OF REFORM ARE IDENTIFIED AND BRIEFLY DISCUSSED AS WELL AS LEGAL QUESTIONS RELATING TO THE TEST OF NAVIGABILITY, RIGHTS OF PUBLIC ACCESS, AND STATE-FEDERAL JURISDICTION.

PUBLIC RECREATIONAL RIGHTS ARE LARGELY DEPENDENT UPON THE INITIATIVE AND THE AGGRESSIVENESS OF THE STATES. STATES EXHIBIT A VARIETY OF STATUTES AND LEGAL DOCTRINES, AND MANY HAVE STATEWIDE WATER AND OUTDOOR RECREATION PLANS. IN DISCUSSING THE COORDINATED MANAGEMENT OF LAND AND WATER FOR PUBLIC RECREATION THE FOLLOWING TOPICS ARE ADDRESSED: EVALUATION OF RECREATION POTENTIALS, ACQUISITION OF PUBLIC ACCESS, ZONING, AND INCENTIVES FOR STATE ACTION. TEN SPECIFIC RECOMMENDATIONS FOR REVISION OF STATE WATER STATUTES ARE ADVANCED. (ULLERY-ARIZONA)

LEGISLATION/WATER LAW/WATER RIGHTS/PUBLIC RIGHTS/GOVERNMENTS/WATER RESOURCES/ STATE GOVERNMENTS/SOCIAL VALUES/RECREATION DEMAND/APPROPRIATION/RIPARIAN RIGHTS/ WATER RESOURCES DEVELOPMENT/ADMINISTRATION/LEGAL ASPECTS/SHORES/SUBMERGED LANDS ACT/WATER ALLOCATION(POLICY)/PUBLIC ACCESS/LEGISLATIVE REFORM

0150

U.S. NATIONAL WATER COMMISSION

1973C

INDIAN WATER RIGHTS. IN WATER POLICIES FOR THE FUTURE, FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS OF THE UNITED STATES, P. 473-483.

WATER INFORMATION CENTER, INC., PORT WASHINGTON, N.Y. 579 P.

THIS CHAPTER DEALS WITH THE RIGHTS OF INDIANS TO USE WATER FROM SURFACE STREAMS ON INDIAN RESERVATIONS. INDIAN WATER RIGHTS ARE CREATED UNDER FEDERAL LAW, USUALLY IN CASES WHEN A RESERVATION IS CREATED, AND ARE NOT SUBJECT IN ANY WAY TO STATE LAW. THE LEGAL FOUNDATION OF INDIAN WATER RIGHTS WAS ESTABLISHED BY THE SUPREME COURT IN WINTERS V. UNITED STATES (1908). THE COURT RULED THAT APPROPRIATIVE RIGHTS CREATED BY WATER LAW IN THE WESTERN STATES ARE NOT SUPERIOR TO RESERVATION RIGHTS CREATED BY FEDERAL LAW. THE QUESTION OF THE NATURE AND EXTENT OF INDIAN WATER RIGHTS WAS ADDRESSED BY THE SUPREME COURT FOR THE SECOND TIME IN ARIZONA V. CALIFORNIA (1963) IN WHICH THE COURT REAFFIRMED THE WINTERS DOCTRINE. THE DECISION CLARIFIED THE QUESTION OF QUANTIFICATION OF INDIAN WATER RIGHTS BY DEFINING THE QUANTITY OF WATER INTENDED TO BE RESERVED AS THE AMOUNT NEEDED 'TO IRRIGATE ALL THE PRACTICABLY IRRIGABLE ACREAGE ON THE RESERVATIONS,' AND THUS REJECTING ARIZONA'S CONTENTION 'THAT THE QUANTITY OF WATER RESERVED SHOULD BE MEASURED BY THE INDIANS' 'REASONABLY FORESEEABLE NEEDS', I.E. 'THE NUMBER OF INDIANS.' OTHER INDIAN RESERVATIONS CREATED FOR OCCUPATIONS OTHER THAN FARMING AND RANCHING MAY HAVE WATER RIGHTS MEASURED BY DIFFERENT FORMULAS. INDIAN WATER RIGHTS ARE PRESENTLY IN CONFLICT WITH NON-INDIAN WATER USERS WHO BENEFIT FROM WATER RESOURCE PROJECTS COSTING BILLIONS OF DOLLARS. MUCH OF THIS MONEY HAS BEEN INVESTED BY THE FEDERAL GOVERNMENT. THE COMMISSION'S RECOMMENDATIONS FOR ACTION ON RESOLVING THIS CONFLICT ARE DISCUSSED, AND THE PREMISES UPON WHICH THE RECOMMENDATIONS ARE BASED ARE EXPLICATED.

FEDERAL-STATE WATER RIGHTS CONFLICTS/INDIAN RESERVATIONS/FEDERAL RESERVATIONS/ LEGAL ASPECTS/PRIOR APPROPRIATION/PREFERENCES(WATER RIGHTS)/PRIORITIES/FEDERAL GOVERNMENT/RESERVATION DOCTRINE/STATE JURISDICTION/WATER RIGHTS/COMPENSATION/ WATER LAW/WATER USERS/WINTERS DOCTRINE/INDIAN WATER RIGHTS/ARIZONA V. CALIFORNIA/LEGISLATIVE REFORM/POLICY RECOMMENDATIONS

U.S. NATIONAL WATER COMMISSION

1973D

TRANSFER OF WATER RIGHTS UNDER APPROPRIATION DOCTRINE. IN WATER POLICIES FOR THE FUTURE, FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS OF THE UNITED STATES, P. 260-270.

WATER INFORMATION CENTER, INC., PORT WASHINGTON, N.Y. 579 P.

ONCE CONSIDERED VIRTUALLY A FREE GOOD, WATER HAS BECOME A SCARCE RESOURCE DUE TO CHANGING CONDITIONS IN AGRICULTURE, POPULATION, AND LAND USE, AMONG OTHERS. TO RESPOND TO THESE CHANGES, ALLOCATION OF LIMITED WATER SUPPLIES SHOULD BE FLEXIBLE, BUT LEGAL AND INSTITUTIONAL RESTRAINTS, PARTICULARLY IN THE WESTERN STATES, CREATE A BARRIER TO 'THE SMOOTH OPERATION OF THE TRANSFER PROCESS,' AND CONSEQUENTLY A CONSIDERABLE AMOUNT OF WATER REMAINS DEDICATED TO LOW-VALUE AGRICULTURAL USES DESPITE THE EXISTENCE OF 'INDUSTRIAL AND URBAN DEMAND AT SUBSTANTIALLY HIGHER PRICES.' TO CORRECT THIS SITUATION, CHANGES IN BOTH STATE AND FEDERAL LAWS WILL BE REQUIRED: IMPROVING STATES' WATER RIGHTS RECORDS, SIMPLIFYING THE PROCEDURES FOR TRANSFERRING WATER RIGHTS, AND MODIFYING THE LEGAL RESTRAINTS ON TRANSFERS OF WATER RIGHTS.

WATER RIGHTS TRANSFER/WATER RIGHTS/WATER LAW/WATER TRANSFER/LEGAL ASPECTS/
APPROPRIATION/FEDERAL-STATE WATER RIGHTS CONFLICTS/INSTITUTIONAL CONSTRAINTS/
WATER POLICY/WATER UTILIZATION

0152

U.S. SENATE, 80TH CONGRESS, 2D SESSION, COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, SUBCOMMITTEE ON IRRIGATION AND RECLAMATION

1948

HEARINGS ON COLORADO RIVER WATER RIGHTS.

U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 519 P.

TRANSCRIPTS OF HEARINGS ON LEGISLATION DEALING WITH CLARIFICATION OF INTERSTATE WATER RIGHTS IN THE COLORADO RIVER BASIN. IT IS DETAILED, LONG, AND OFTEN REPETITIVE, BUT INCLUDES STATEMENTS BY MOST OF THE PARTIES INVOLVED. THE DEVELOPMENT OF PROJECTS FOR THE USE OF WATER IN THE LOWER COLORADO RIVER BASIN IS BEING HAMPERED BY REASON OF LONG STANDING CONTROVERSIES AMONG THE BASIN STATES AS TO THE MEANING OF THE COLORADO RIVER COMPACT AND THE BOULDER CANYON PROJECT ACT. THE SENATE RESOLUTION SOUGHT TO EXPEDITE THE DEVELOPMENT OF WATER RESOURCES IN THE AREA BY HAVING THE FEDERAL GOVERNMENT TAKE LEGAL ACTION AGAINST THE STATES OF UTAH, NEW MEXICO, ARIZONA, CALIFORNIA, AND NEVADA TO DETERMINE PROPER CLAIMS AND RIGHTS TO USE OF WATER IN THE AREA.

COLORADO RIVER/COLORADO RIVER BASIN/COLORADO RIVER COMPACT/BOULDER CANYON
PROJECT ACT/FEDERAL PROJECT POLICY/NEW MEXICO/ARIZONA/UTAH/CALIFORNIA/NEVADA/
INTERSTATE COMPACTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL GOVERNMENT/
STATE GOVERNMENTS/WATER POLICY/WATER RESOURCES/WATER RESOURCES DEVELOPMENT/LEGAL
ASPECTS

0153

U.S. SENATE, 90TH CONGRESS, 1ST SESSION, COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, SUBCOMMITTEE ON IRRIGATION AND RECLAMATION.

1967

HEARINGS ON THE COLORADO RIVER BASIN PROJECT.

U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 762 P.

HEARINGS WERE HELD TO EVALUATE LEGISLATION CONCERNING THE COLORADO RIVER BASIN PROJECT. VARIOUS ASPECTS OF COLORADO RIVER BASIN DEVELOPMENT ARE REVIEWED INCLUDING THE MEXICAN WATER TREATY AND CONTROVERSY BETWEEN THE STATES AND THE FEDERAL GOVERNMENT. TEXT OF THE PROPOSED LEGISLATION IS INCLUDED ALONG WITH COMMENTS FROM SEVERAL INTERESTED PARTIES. INCLUDES A DISCUSSION OF REGIONAL APPROACH TO WATER RESOURCE DEVELOPMENT. IT IS ARGUED THAT REGIONAL ARRANGEMENTS MAY BE THE ANSWER TO SOLVING FUTURE WATER SUPPLY DEMANDS OF THE SOUTHWEST. REPRESENTATIVE MORRIS K. UDALL STATES THAT HE SUPPORTS REGIONAL WATER PLANNING AND ACTION. THE BILL UNDER DISCUSSION IS A REGIONAL BILL. IT CONTAINS THE ESSENTIAL FOUNDATION AND SKELETON ON WHICH FUTURE REGIONAL AND INTERREGIONAL DEVELOPMENT MAY BE BUILT. THE DISPUTE BETWEEN ARIZONA AND CALIFORNIA CONCERNING WATER RIGHTS IS DISCUSSED.

FEDERAL-STATE WATER RIGHTS CONFLICTS/COLORADO RIVER/COLORADO RIVER BASIN/BOULDER CANYON PROJECT ACT/MEXICAN WATER TREATY/RIVER BASINS/COLORADO RIVER COMPACT/UTAH/ARIZONA/CALIFORNIA/NEW MEXICO/NEVADA/COLORADO/WYOMING/REGIONAL DEVELOPMENT/PLANNING/CENTRAL ARIZONA PROJECT/FEDERAL PROJECT POLICY/SOUTHWEST U.S.

0154

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY V. CALIFORNIA EX REL STATE WATER RESOURCES CONTROL BOARD

1976

[PERMIT REQUIREMENTS OF FEDERAL INSTALLATION DISCHARGING WATER POLLUTANTS].

96 S CT 2022-35. SWRA W77-05067.

PLAINTIFF STATES BROUGHT THIS ACTION AGAINST DEFENDANT ENVIRONMENTAL PROTECTION WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, MUST SECURE THEIR PERMITS FROM THE STATE OR FROM EPA. PLAINTIFFS CONTEND THAT UNDER THE ACT STATES PARTICIPATING IN APPROVED NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT PROGRAMS CAN REQUIRE FEDERAL DISCHARGERS WITHIN THE STATE'S JURISDICTION TO OBTAIN STATE RATHER THAN EPA PERMITS, AND THE EPA HAS NO AUTHORITY TO SUSPEND OPERATION OF A STATE'S PERMIT PROGRAM ONLY FOR NONFEDERAL DISCHARGERS. THE SUPREME COURT HELD THAT FEDERAL INSTALLATIONS ARE SUBJECT TO STATE REGULATION ONLY WHEN, AND TO THE EXTENT THAT, CONGRESSIONAL AUTHORIZATION IS CLEAR AND UNAMBIGUOUS. FEDERAL INSTALLATIONS MUST COMPLY WITH THE ACT'S REQUIREMENTS CONCERNING STATE CONTROL AND ABATEMENT OF POLLUTION, BUT OBTAINING A PERMIT FROM A STATE WITH A FEDERALLY APPROVED PROGRAM IS NOT ONE OF THE REQUIREMENTS EVEN THOUGH SUCH DISCHARGERS MAY BE REQUIRED TO COMPLY WITH STRICTER DISCHARGE STANDARDS ESTABLISHED BY THE STATE.

FEDERAL WATER POLLUTION CONTROL ACT/CALIFORNIA/WATER POLLUTION CONTROL/WATER QUALITY STANDARDS/WATER QUALITY CONTROL/WATER PERMITS/WATER POLLUTION SOURCES/WATER RESOURCES/WATER CONSERVATION/WASTE DISPOSAL/WASTE WATER(POLLUTION)/WATER LAW/ADMINISTRATIVE DECISIONS/FEDERAL GOVERNMENT/FEDERAL JURISDICTION/FEDERAL-STATE WATER RIGHTS CONFLICTS

0155

UNITED STATES V. ARIZONA

1935

[CONGRESSIONAL AUTHORIZATION REQUIRED FOR FEDERAL DAM PROJECTS].

295 US 174, 55 S CT 666-673. SWRA W71-02340.

PLAINTIFF UNITED STATES SOUGHT AN INJUNCTION TO PREVENT DEFENDANT STATE FROM INTERFERING WITH A FEDERAL DAM PROJECT ON THE COLORADO RIVER. PLAINTIFF CONTENDED THAT THE DAM PROJECT WAS AUTHORIZED BY CONGRESS UNDER ITS POWER OVER NAVIGABLE WATERS. DEFENDANT CONTENDED THAT WHILE CONGRESS HAD POWER OVER NAVIGABLE WATER, IT HAD NOT AUTHORIZED THE PROJECT IN QUESTION. DEFENDANT FURTHER MAINTAINED THAT THE CHIEF OF ENGINEERS HAD NOT AUTHORIZED THE PROJECT AS WAS REQUIRED BY THE NATIONAL INDUSTRIAL RECOVERY ACT. THE SUPREME COURT HELD THAT THE PROJECT DID NOT HAVE PROPER CONGRESSIONAL AUTHORIZATION. THE UNITED STATES COULD NOT ENJOIN INTERFERENCE BY THE STATE OF ARIZONA AS TO THE PROPOSED DAM WHERE THE CONSTRUCTION OF THE DAM WAS NOT PROPERLY AUTHORIZED.

ARIZONA/DAMS/NAVIGABLE WATERS/FEDERAL-STATE WATER RIGHTS CONFLICTS/FEDERAL GOVERNMENT/STATE GOVERNMENTS/LEGAL ASPECTS/LEGISLATION/DAMSITES/BENEFICIAL USE/ELECTRIC POWER/WATER RESOURCES DEVELOPMENT/PROJECT PURPOSES/PLANNING/JUDICIAL DECISIONS/COLORADO RIVER/REGULATION/DAM CONSTRUCTION

0156

UNITED STATES V. DISTRICT COURT IN AND FOR COUNTY OF EAGLE, COLORADO

1971

[JOINDER OF UNITED STATES AS DEFENDANT UNDER A FEDERAL STATUTE CONSENTING T].

91 SUP. CT. 993-1003. 6 P. SWRA W72-02373.

PLAINTIFF UNITED STATES SOUGHT A WRIT OF PROHIBITION IN THE COLORADO SUPREME COURT TO PRECLUDE THE EAGLE COUNTY DISTRICT COURT FROM ASSERTING JURISDICTION OVER PLAINTIFF FOR ADJUDICATION OF WATER RIGHTS COVERING THE EAGLE RIVER SYSTEM. WHEN THE SUPREME COURT DISCHARGED THE ROLE, THE UNITED STATES SUPREME COURT GRANTED PLAINTIFF'S PETITION FOR CERTIORARI. THE ATTEMPTED JOINDER WAS PURSUANT TO A FEDERAL STATUTE GIVING CONSENT TO JOIN THE UNITED STATES AS DEFENDANT IN A SUIT FOR ADMINISTRATION OF RIGHTS TO USE OF WATER OF A RIVER SYSTEM. PLAINTIFF HAD RESERVED WATERS FOR A NATIONAL FOREST FROM THE EAGLE RIVER. PLAINTIFF CONTENDED THAT THE STATUTE ONLY APPLIES TO WATER RIGHTS ACQUIRED UNDER STATE LAW, AND DOES NOT CONSENT TO HAVE ADJUDICATED IN STATE COURTS THE RESERVATION OF WATER RIGHTS BY THE UNITED STATES ARISING FROM WITHDRAWALS OF LAND FROM THE PUBLIC DOMAIN. THE SUPREME COURT HELD THAT THE STATUTE IS AN ALL-INCLUSIVE PROVISION SUBJECTING TO GENERAL ADJUDICATION IN STATE PROCEEDINGS ALL RIGHTS OF THE UNITED STATES TO WATER WITH A PARTICULAR STATE'S JURISDICTION REGARDLESS OF HOW THEY WERE ACQUIRED. ALSO, THE COURT HELD THAT ANY CONFLICT BETWEEN ADJUDICATED RIGHTS AND RESERVED RIGHTS OF THE UNITED STATES, IF PRESERVED IN THE STATE PROCEEDING, CAN BE REVIEWED BY THE SUPREME COURT.

COLORADO/STATE JURISDICTION/FEDERAL-STATE WATER RIGHTS CONFLICTS/PUBLIC LANDS/LEGISLATION/WATER RIGHTS/JUDICIAL DECISIONS/LEGAL ASPECTS/APPROPRIATION/PREFERENCES(WATER RIGHTS)/PRIOR APPROPRIATION/FEDERAL JURISDICTION/WITHDRAWN LANDS/FEDERAL RESERVATIONS/NATIONAL FORESTS

0157

UNITED STATES V. DISTRICT COURT IN AND FOR WATER DIV. NO. 5. COLORADO

1971

[CONSENT OF U.S. TO BE SUED UNDER 43 U.S.C. PARAGRAPH 666].

91 S. CT. 1003-1005. SWRA W72-01314.

IN THIS COMPANION CASE TO UNITED STATES V. DISTRICT COURT FOR EAGLE COUNTY, PLAINTIFF UNITED STATES SOUGHT A WRIT OF PROHIBITION IN THE COLORADO SUPREME COURT TO PREVENT DEFENDANT COURT FROM ADJUDICATING WATER RIGHTS RESERVED BY PLAINTIFF. THE UNITED STATES SUPREME COURT GRANTED CERTIORARI. SINCE THE MAJOR ISSUE--THE SCOPE OF THE CONSENT TO BE SUED PROVISION OF 43 U.S.C. 666--HAD BEEN DECIDED IN EAGLE COUNTY, THE SUPREME COURT DID NOT CONSIDER IT. THE INSTANT ACTION, HOWEVER, INVOLVED A DIFFERENT COLORADO STATUTE WHICH PROVIDED THAT DEFENDANT COURT WAS RESPONSIBLE FOR DETERMINING WATER RIGHTS ON A MONTHLY BASIS, BUT ONLY AS TO THOSE RIGHTS FOR WHICH AN APPLICATION HAD BEEN FILED WITHIN A PARTICULAR MONTH. PLAINTIFF CONTENDED THE ACTION WAS NOT A 'GENERAL ADJUDICATION' UNDER 43 U.S.C. 666. BECAUSE THE COLORADO STATUTORY PROCEEDINGS REACHED ALL CLAIMS MONTH BY MONTH AND WAS INCLUSIVE IN THE TOTALITY, THE SUPREME COURT HELD THAT PLAINTIFF HAD CONSENTED TO SUIT THROUGH 43 U.S.C. 666 AND HAD BEEN PROPERLY JOINED BY DEFENDANT. FURTHERMORE, THE COURT STATED THAT IF THERE IS A COLLISION BETWEEN PRIOR ADJUDICATED RIGHTS AND RESERVED RIGHTS OF THE UNITED STATES, THE FEDERAL QUESTION CAN BE PRESERVED IN THE STATE DECISION AND REVIEWED IN THE UNITED STATES SUPREME COURT.

COLORADO/FEDERAL-STATE WATER RIGHTS CONFLICTS/STATE JURISDICTION/
WATER RIGHTS/LEGISLATION/APPROPRIATION/PREFERENCES (WATER RIGHTS)/PRIOR
APPROPRIATION/LEGAL ASPECTS/JUDICIAL DECISIONS/FEDERAL GOVERNMENT/STATE
GOVERNMENTS/FEDERAL JURISDICTION

0158

UNITED STATES V. UTAH

1931

[STATE VERSUS FEDERAL OWNERSHIP OF BEDS OF NAVIGABLE RIVERS].

283 US 64, 51 S CT 438-446. SWRA W71-02616.

PLAINTIFF UNITED STATES SUED DEFENDANT UTAH TO QUIET TITLE TO CERTAIN RIVER BEDS IN WHICH PLAINTIFF HAD GRANTED MINERAL RIGHTS TO CERTAIN PARTIES WHILE DEFENDANT HAD GRANTED THOSE SAME RIGHTS TO OTHER PARTIES. PLAINTIFF CONTENDED THAT THE RIVER BEDS BELONGED TO THE FEDERAL GOVERNMENT SINCE THE RIVERS WERE NON-NAVIGABLE WHEN UTAH WAS ADMITTED TO THE UNION AND INTRODUCED EVIDENCE SHOWING THE PAUCITY OF NAVIGATION ON THE RIVERS AT THAT TIME AND THE PRIVATE RATHER THAN PUBLIC NATURE OF SUCH NAVIGATION. DEFENDANT CONTENDED THAT THE RIVERS WERE NAVIGABLE AT THE TIME OF ITS ADMISSION INTO THE UNION AND THAT THEREFORE TITLE TO THE RIVER BEDS WAS VESTED IN THE STATE. THE SUPREME COURT NOTED THAT THE TEST OF NAVIGABILITY WAS NOT THE EXTENT OF ACTUAL USE OF THE RIVER FOR NAVIGATION OR WHETHER SUCH USE WAS PUBLIC OR PRIVATE, BUT THE CAPACITY OF THE RIVER FOR COMMERCIAL NAVIGATION AT THAT TIME. THE COURT DISMISSED PLAINTIFF'S PETITION AND HELD THAT THE RIVERS IN QUESTION WERE NAVIGABLE IN LAW, IF NOT IN FACT.

INTERSTATE RIVERS/OWNERSHIP OF BEDS/NAVIGATION/UTAH/NAVIGABLE RIVERS/
NON-NAVIGABLE WATERS/FEDERAL JURISDICTION/STATE JURISDICTION/FEDERAL-STATE
WATER RIGHTS CONFLICTS/COLORADO RIVER/RIVER BEDS/RIPARIAN RIGHTS/LEGAL ASPECTS/
JUDICIAL DECISIONS/BOUNDARIES (PROPERTY)/PUBLIC LANDS/FEDERAL GOVERNMENT/REMEDIES

0159

VAN PETTEN, D.R.

1942

ARIZONA'S STAND ON THE SANTA FE COMPACT AND THE BOULDER DAM PROJECT ACT.

NEW MEXICO HISTORICAL REVIEW 17(1):1-20.

THE INTRODUCTORY SECTION OF THIS ARTICLE NOTES THE POTENTIALITIES OF THE COLORADO RIVER FOR POWER AND IRRIGATION ARE OF PARAMOUNT IMPORTANCE FOR THE INDUSTRIAL LIFE OF THE COLORADO BASIN. HOWEVER, THE THREAT OF FLOODS, SUCH AS EXPERIENCED IN 1906 BY CALIFORNIA'S IMPERIAL VALLEY, AND THE FACT THAT THE MAIN CANAL CONDUCTING WATER FROM THE COLORADO RIVER TO THE VALLEY RUNS THROUGH MEXICO, HAS RESULTED IN POLITICAL AND OPERATING COMPLICATIONS. THE SOLUTION TO THE PROBLEMS OF CONTROLLING THE FLOW OF THE RIVER AND SETTling INTERNATIONAL QUESTIONS LOGICALLY RESTED WITH THE UNITED STATES GOVERNMENT. BRIEFLY REVIEWED HERE ARE THE BACKGROUND AND DEVELOPMENT OF THE SANTA FE COMPACT AND THE POLITICAL AND ECONOMIC RIVALRY BETWEEN ARIZONA AND CALIFORNIA CONCERNING DEVELOPMENT OF THE RIVER. PROPOSALS BY THE IMPERIAL IRRIGATION DISTRICT TO BUILD AN ALL-AMERICAN CANAL AND EXTEND THE EXISTING CANAL, AS WELL AS ARRANGEMENTS BETWEEN THE DISTRICT AND THE SECRETARY OF THE INTERIOR WERE VIEWED WITH SUSPICION BY ARIZONA AS POTENTIALLY JEOPARDIZING ITS AGRICULTURAL FUTURE. A FAVORABLE REPORT ON BUILDING A CANAL WITHIN THE UNITED STATES CAME AS A RESULT OF AN INVESTIGATION CONDUCTED BY A BOARD APPOINTED IN ACCORDANCE WITH A CONTRACT BETWEEN THE SECRETARY OF THE INTERIOR AND THE IRRIGATION DISTRICT, AND THE KETTNER BILL, PROVIDING FOR GOVERNMENT FINANCING OF SUCH A CANAL, WAS INTRODUCED IN CONGRESS IN 1919. BUT BECAUSE THE BILL DID NOT PROVIDE FOR STORAGE ON THE COLORADO RIVER, AND DATA CONCERNING THE ADEQUACY OF THE WATER SUPPLY AND THE EXTENT OF IRRIGABLE ACREAGE WAS LACKING THE BILL FAILED TO PASS. A BILL DIRECTING THE INTERIOR SECRETARY TO COLLECT THIS DATA AND REPORT ON THE FEASIBILITY OF CONSTRUCTING A DAM WAS PASSED AND A SUBSEQUENT REPORT RECOMMENDED THE GOVERNMENT CONSTRUCT A NEW CANAL AND A RESERVOIR AT BOULDER CANYON TO BE PAID FOR BY THE LANDS BENEFITED AND ELECTRIC POWER REVENUES. REALIZING THE PROPOSAL WOULD RAISE DIFFERENCES AMONG THEM, THE BASIN STATES SOUGHT TO SETTLE MATTERS AMONG THEMSELVES THROUGH ORGANIZING THE SOUTHWEST LEAGUE AND CONDUCTING SEVERAL CONFERENCES WHICH RESULTED IN THE CREATION OF THE COLORADO RIVER COMMISSION FOR THE PURPOSE OF ENTERING INTO A COMPACT AMONG THE STATES. A COMPACT WHICH DIVIDED THE WATER OF THE RIVER BETWEEN THE UPPER AND LOWER BASINS WAS SIGNED IN SANTA FE, NEW MEXICO IN 1922, AND RATIFIED BY ALL THE STATES EXCEPT ARIZONA. THE THIRD SECTION OF THE ARTICLE EXPLAINS ARIZONA'S OPPOSITION TO THE COMPACT. ARIZONA WAS NOT OPPOSED TO DEVELOPMENT OF THE RIVER BUT WISHED TO ACHIEVE A MORE EQUITABLE DIVISION OF THE WATER RELATIVE TO CALIFORNIA. ARIZONA ALSO CONTENDED POINTS CONCERNING REVENUE FROM THE SALE OF POWER, ITS RIGHT TO TAX WHOLESALE POWER SOLD AT THE DAM, AND THE NEED FOR A TREATY TO CLARIFY MEXICO'S RIGHT TO COLORADO RIVER WATER. THE FOURTH SECTION OF THE ARTICLE DESCRIBES EFFORTS TO SETTLE DIFFERENCES BETWEEN ARIZONA AND CALIFORNIA AND THE RESULTING ENMITY GENERATED BETWEEN THE TWO STATES. THE ARTICLE'S FINAL SECTION ADDRESSES THE BACKGROUND, PURPOSES, AND PROVISIONS OF THE BOULDER CANYON PROJECT ACT AND ITS RELATION TO THE COMPACT; ARIZONA'S CONTINUED OPPOSITION, FURTHER EFFORTS BY THE SECRETARY OF THE INTERIOR TO ACHIEVE HARMONY AMONG THE LOWER BASIN STATES, AND ARIZONA'S UNSUCCESSFUL ATTEMPT TO HAVE THE SUPREME COURT DECLARE THE BOULDER CANYON PROJECT ACT AND THE COLORADO RIVER COMPACT UNCONSTITUTIONAL.

COLORADO RIVER COMPACT/BOULDER CANYON PROJECT ACT/ARIZONA/CALIFORNIA/FEDERAL GOVERNMENT/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RESOURCES DEVELOPMENT/MULTIPLE-PURPOSE PROJECTS/FEDERAL PROJECT POLICY/HYDROELECTRIC PLANTS/PROJECT PURPOSES/IRRIGATION/LEGISLATION/MEXICAN WATER TREATY/IRRIGATION CANALS/ECONOMICS/GOVERNMENTAL INTERRELATIONS/FLOOD PROTECTION/POLITICAL ASPECTS/COLORADO RIVER COMMISSION/SOUTHWEST LEAGUE/SANTA FE COMPACT/ALL-AMERICAN CANAL

0160

VEEDER, W. H.

1974

INDIAN PRIOR AND PARAMOUNT RIGHTS VERSUS STATE RIGHTS (INDIAN WATER RIGHTS).

NORTH DAKOTA LAW REVIEW 51(1):107-136. SWRA W76-03588.

THIS ARTICLE DISCUSSES THE POLICE POWER OF THE STATES IN CONNECTION WITH INDIAN RESERVATIONS AND INDIAN WATER RIGHTS. PARTICULAR CONCERN IS FOCUSED ON THE ARID AND SEMIARID WESTERN STATES. AFTER EXAMINING THE LEGAL HISTORY OF INDIAN RIGHTS, THE AUTHOR CONCLUDES THAT THE POLICE POWER OF THE STATES MAY NOT BE EXTENDED TO AFFECT INDIAN WATER RIGHTS. SEVERAL REASONS SUPPORT THIS CONCLUSION: 1) THE UNBROKEN LINE OF DECISIONAL LAW, 2) THE WILL OF CONGRESS EXPRESSED IN THE ENABLING ACTS ADMITTING WESTERN STATES INTO THE UNION, 3) THE CONSTITUTIONAL DISCLAIMERS IMPOSED AS CONDITIONS TO STATE ADMISSION (UNDER WHICH THE STATES RENOUNCED ALL CLAIMS TO INDIAN LANDS), AND 4) THE OVERRIDING TRUST OBLIGATION OF THE UNITED STATES TO PRESERVE AND PROTECT THE 'INDIAN WINTERS DOCTRINE' RIGHTS TO THE USE OF WATER IN THE ARID AND SEMIARID WEST. THE AUTHOR STATES THAT THE PRIMARY REASON FOR THE VIOLATION OF INDIAN RIGHTS BY THE STATES HAS BEEN THE AVIDITY FOR WATER IN THE WESTERN STATES AND THE FAILURE OF THE UNITED STATES TO PREVENT THOSE VIOLATIONS.

INDIAN RESERVATIONS/WATER RIGHTS/LEGAL ASPECTS/JURISDICTION/FEDERAL JURISDICTION/STATE JURISDICTION/FEDERAL-STATE WATER RIGHTS CONFLICTS/IRRIGATION/PUEBLO WATER RIGHTS/WATER LAW/CONSTITUTIONAL LAW/NORTH DAKOTA/SOUTH DAKOTA/MONTANA/IDAHO/WASHINGTON(STATE)/FEDERAL GOVERNMENT/STATE GOVERNMENTS/PUBLIC RIGHTS/WINTERS DOCTRINE/RESERVATION DOCTRINE

0161

WALKER, W.R./COX, W.E.

1974

LEGAL ASPECTS OF WATER FOR COAL GASIFICATION. IN WORKSHOP ON RESEARCH NEEDS RELATED TO WATER FOR ENERGY.

UNIVERSITY OF ILLINOIS, URBANA, WATER RESOURCES CENTER, RESEARCH REPORT 93:82-92. SWRA W75-07092.

SINCE WATER IS A NECESSARY ASPECT OF THE CONVERSION PROCESSES, THE ACQUISITION OF THE LEGAL RIGHT TO THE REQUISITE WATER IS A SIGNIFICANT FACTOR. LAWS AND REGULATIONS THROUGHOUT THE UNITED STATES WHICH APPLY TO WATER RIGHTS, OWNERSHIP AND CONTROL OF USE ARE EXPLORED. PRIVATE WATER RIGHTS FOR BOTH SURFACE WATER AND GROUNDWATER HAVE BEEN THE PRINCIPAL METHOD OF ALLOCATING WATER AMONG COMPETING USERS. ALTHOUGH FEDERAL CONTROL EXTENDS OVER NAVIGABLE WATERS AND INTER- AND INTRA-STATE STREAMS WHICH AFFECT THOSE WATERS, STATE LEGISLATION IS THE PRIMARY SOURCE OF CONTROL. COMPLEXITY AND UNCERTAINTY OF WATER RIGHTS DEVELOP FROM ENVIRONMENTAL QUALITY CONSTRAINTS AS WELL AS THE OBSCURE WESTERN 'RESERVED WATER RIGHTS' LEGISLATION. PRIVATE WATER RIGHTS CAN BE CATEGORIZED INTO THE RIPARIAN DOCTRINE, APPROPRIATIVE DOCTRINE AND DIFFUSED SURFACE WATER DOCTRINE. THESE DOCTRINES ARE DISCUSSED IN RELATION TO COAL GASIFICATION OR LIQUEFACTION IN OPERATION. STATE WATER LAWS OFTEN CONSTRAIN THE QUANTITY OF WATER NEEDED FOR SUCH AND MAY ALSO IMPOSE CONSTRAINTS ON WATER QUALITY ALTERATION. FEDERAL ACTS TO PROTECT THE ENVIRONMENT MAY CONFLICT WITH INDUSTRIAL WATER APPLICATIONS. LEGAL PROBLEMS INVOLVE ALTERING USE OF STORED WATER TO MEET NEEDS OF ENERGY CONVERSION.

LEGAL ASPECTS/EASEMENTS/PATENT DOMAIN/EQUITY/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER PERMITS/PUBLIC RIGHTS/USUFRUCTUARY RIGHT/RIPARIAN RIGHTS/WATER LAW/NATURAL FLOW DOCTRINE/LEGISLATION/WATER ALLOCATION (POLICY)/RESEARCH AND DEVELOPMENT/COMMON LAW/REGULATION/ZONING/SUPPLY CONTRACTS/APPROPRIATION/SURFACE RUNOFF/COAL GASIFICATION

0162

WATER RESOURCES COUNCIL

1977A

POLICY CONSIDERATIONS AND ALTERNATIVES RELATIVE TO INSTITUTIONS AND INSTITUTIONAL ARRANGEMENTS. WATER RESOURCES POLICY STUDY.

FEDERAL REGISTER 42(136):36792-36794.

TO WHAT EXTENT IS THE CARTER ADMINISTRATION'S GOALS FOR REFORM OF FEDERAL WATER RESOURCES POLICY AFFECTED BY 'INSTITUTIONAL ARRANGEMENTS RELATIVE TO THE ACQUISITION, USE AND DISPOSITION OF WATER RESOURCES?' A COMPLEX SET OF INSTITUTIONS (BOTH LEGAL AND ECONOMIC) INFLUENCE FEDERAL WATER POLICY. THE INFLUENCE OF STATE INSTITUTIONS IS PARTICULARLY STRONG. '...ACQUISITION, USE AND DISPOSITION OF RIGHTS TO USE WATER HAVE HISTORICALLY BEEN A MATTER OF INDIVIDUAL STATE LAW. BUT...AS DEMANDS ON THE NATION'S LIMITED WATER RESOURCES INCREASE, IT MAY BE NECESSARY TO DEVELOP A NATIONAL PERSPECTIVE BOTH AS TO WATER QUANTITY AND QUALITY AND TO ENSURE THAT FEDERAL POLICIES PROMOTE THE RECOGNITION OF REALISTIC GOALS THROUGH CHANGES IN EXISTING INSTITUTIONS AT ALL LEVELS OF GOVERNMENT.' FIVE INSTITUTIONAL PROBLEMS ARE IDENTIFIED: SUBSIDIES AND EQUITY, LAWS AND PRACTICES WHICH IMPAIR THE RECOGNITION OF ENVIRONMENTAL VALUES, THE TIMELINESS AND QUALITY OF OPPORTUNITIES FOR PUBLIC INPUT, LACK OF RECOGNITION OF THE RELATIONSHIPS BETWEEN WATER QUANTITY AND QUALITY, AND SURFACE WATER AND GROUNDWATER IN MANY STATE WATER RIGHTS SYSTEMS. FOUR POLICY OPTIONS ARE OFFERED FOR EACH PROBLEM. (ULLERY-ARIZONA)

WATER POLICY/INSTITUTIONS/WATER RESOURCES DEVELOPMENT/ECONOMICS/GOVERNMENTS/
FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER RIGHTS/EQUITY/LEGAL ASPECTS/
INSTITUTIONAL CONSTRAINTS/ENVIRONMENTAL CONTROL/WATER QUALITY/WATER
REQUIREMENTS/STATE JURISDICTION/NATIONAL WATER POLICY/SUBSIDIES

0163

WATER RESOURCES COUNCIL

1977B

FEDERAL RESERVED WATER RIGHTS. WATER RESOURCES POLICY STUDY.

FEDERAL REGISTER 42 (142) :37957-37959.

A RE-EXAMINATION OF FEDERAL RESERVED WATER RIGHTS DOCTRINES IS A NECESSARY PART OF FORMULATING A COMPREHENSIVE FEDERAL WATER POLICY. FEDERAL RESERVED WATER RIGHTS IS A 'JUDICIALLY CREATED DOCTRINE' WHICH RECOGNIZES THAT 'A SUFFICIENT QUANTITY OF UNAPPROPRIATED WATER IS RESERVED TO ACCOMPLISH THE PURPOSES' OF VARIOUS FEDERAL LAND RESERVATIONS. THE AMOUNTS OF WATER NEEDED FOR THESE PURPOSES, HOWEVER, HAVE NOT BEEN QUANTIFIED. THIS DEFICIENCY PRESENTS PROBLEMS 'BECAUSE IT CONFLICTS WITH THE WATER LAW DOCTRINE OF APPROPRIATION WHICH DEVELOPED AS THE WESTERN STATES WERE CREATED FROM THE PUBLIC DOMAIN.' THIS STATE DOCTRINE IS BASED 'ON THE PHYSICAL APPROPRIATION OF WATER AND ITS APPLICATION TO A BENEFICIAL USE...THE ONE FIRST IN TIME IS FIRST IN RIGHT, AND THE MEASURE OF THE APPROPRIATION RIGHT IS THE AMOUNT OF WATER WHICH IS ACTUALLY APPLIED TO A BENEFICIAL USE.' THIS DOCTRINE IS ALSO SANCTIONED BY CONGRESSIONAL STATUTE IN THE DESERT LAND ACT (43 U.S.C. 321) WHICH PROVIDES THAT 'ALL SURPLUS WATER...UPON THE PUBLIC LANDS AND NOT NAVIGABLE, SHALL REMAIN AND BE HELD FREE FOR THE APPROPRIATION AND USE OF THE PUBLIC...SUBJECT TO THE EXISTING RIGHTS.' SUBSEQUENTLY, STATES HAVE 'LICENSED AND REGULATED THE USE OF WATERS OF THE PUBLIC DOMAIN.' THERE IS NO FEDERAL STATUTE ESTABLISHING CRITERIA FOR DETERMINING THE AMOUNT OF SURPLUS WATER SUBJECT TO STATE APPROPRIATION AND THE AMOUNT AVAILABLE FOR SERVING THE PURPOSES OF FEDERAL RESERVATIONS. CONSEQUENTLY, RIGHTS HAVE BEEN SUBJECTED TO 'TIME-CONSUMING AND COSTLY LITIGATION.' THE COMPLEXITY OF THE PROBLEM IS COMPOUNDED BY THE FACT THAT UNDER PRESENT LAW 'STATE COURTS MAY HAVE CONCURRENT JURISDICTION WITH THE FEDERAL COURTS OVER CONTROVERSIES INVOLVING FEDERAL RIGHTS TO THE USE OF WATER.' GIVEN THE FINITE SUPPLY OF WATER, 'THE DESIRE TO MAXIMIZE PRESENT WATER USES,' AND THE WATER REQUIREMENTS FOR ENERGY DEVELOPMENT, IT IS IMPERATIVE FOR A COMPREHENSIVE WATER POLICY THAT THE INSTITUTIONAL PROBLEMS OF CONCURRENT COURT JURISDICTION, AND LACK OF FEDERAL-STATE AGREEMENT ON PROCEDURES FOR QUANTIFYING 'SURPLUS WATER' BE RESOLVED BY FEDERAL INITIATIVE. THE PROBLEM THUS STATED, FOUR POLICY OPTIONS FOR THE QUANTIFICATION OF FEDERAL RESERVE WATER RIGHTS ARE OFFERED. (ULLERY-ARIZONA)

WATER POLICY/FEDERAL RESERVATIONS/LEGAL ASPECTS/INSTITUTIONS/FEDERAL-STATE
WATER RIGHTS CONFLICTS/ADMINISTRATIVE AGENCIES/GOVERNMENTS/WATER RIGHTS/WATER
UTILIZATION/PRIOR APPROPRIATION/DESERT LAND ACT

0164

WEATHERFORD, G./JACOBY, G.C.

1975

IMPACT OF ENERGY DEVELOPMENT ON THE LAW OF THE COLORADO RIVER.

NATURAL RESOURCES JOURNAL 15(1):171-213.

HISTORICALLY, LAW AND DEVELOPMENT IN THE COLORADO RIVER BASIN HAVE REFLECTED MULTIPLE PURPOSES WITH THE RECLAMATION ETHIC PARAMOUNT. PROPERTY RIGHTS TO THE WATER HAVE BECOME LEGALLY VESTED AND THE SUPPLY OF REGULATED SURFACE WATER IN THE BASIN OVERSUBSCRIBED. PROFOUND CHANGES ARE NOW OCCURRING AS NEW DEMANDS FOR WATER FOR ENERGY DEVELOPMENT ARE ON A COLLISION COURSE WITH THE VESTED LEGAL RIGHTS, PAST COMMITMENTS, INDIAN CLAIMS, AND ENVIRONMENTALISTS' DEMANDS. THE QUESTION IS RAISED: IS THE 'LAW OF THE RIVER' FLEXIBLE ENOUGH TO MODERATE THESE COMPETING DEMANDS IN THE PUBLIC INTEREST? THE AUTHORS' ANSWER IS AFFIRMATIVE. THE 'LAW OF THE RIVER' IS DYNAMIC. VESTIGAL LEGAL PRIORITIES AND PROVISIONS CAN BE CHANGED, AT A PRICE, AS NEW CNES ARE TAKEN ON. CHANGES CAN BE HANDLED BY THE LEGAL SYSTEM THROUGH WATER CONSERVATION AND THE AQUISITION OR CONDEMNATION OF WATER RIGHTS.

COLORADO RIVER/COLORADO RIVER BASIN/WATER LAW/WATER DEMAND/COMPETING USES/
LEGAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/WATER POLICY/WATER RIGHTS/
WATER CONSERVATION/ENERGY CONVERSION/WATER RESOURCES DEVELOPMENT/RIVER BASINS/
RIVER BASIN DEVELOPMENT/RECLAMATION/SURFACE WATERS/ENVIRONMENTAL EFFECTS

0165

WESTERN INTERSTATE WATER CONFERENCE, 2D, CORVALLIS, OREGON, 1965

1966

STRATEGIES FOR WESTERN REGIONAL WATER DEVELOPMENT. EDITED BY E.A. ENGELBERT.

UNIVERSITY OF CALIFORNIA, LOS ANGELES, WATER RESOURCES CENTER. 195 P.

THE CONFERENCE ADDRESSED COURSES OF ACTION BY WHICH STATES COULD ALLEVIATE WATER SCARCITY, AND EXPLORED ISSUES OF WATER CONSERVATION, LARGE-SCALE DIVERSIONS, REGIONAL PLANNING, FEDERAL AND STATE ORGANIZATIONS AND ADMINISTRATIVE ARRANGEMENTS, AND PUBLIC INVOLVEMENT IN DECISIONS AFFECTING WATER DEVELOPMENT. ALTERNATIVE STRATEGIES FOR ACTION THROUGH COOPERATION IN WESTERN WATER DEVELOPMENT, GOVERNMENTAL POWERS AND RESPONSIBILITIES, AND ORGANIZING FOR WATER DEVELOPMENT ARE DISCUSSED. CONFERENCE RESOLUTIONS ARE INCLUDED.

WATER RESOURCES DEVELOPMENT/INTERSTATE COMMISSIONS/REGIONAL DEVELOPMENT/
STATE GOVERNMENTS/GOVERNMENTS/WATER POLICY/INSTITUTIONAL CONSTRAINTS/PLANNING/
POLITICAL ASPECTS/FEDERAL-STATE WATER RIGHTS CONFLICTS/ALTERNATIVE PLANNING/
WATER RESOURCES PLANNING ACT/LEGISLATION/POLITICAL ASPECTS/PUBLIC ACCESS

0166

YATES, R./MARSHALL, M.

1974

THE LOWER COLORADO RIVER: A BIBLIOGRAPHY.

ARIZONA WESTERN COLLEGE PRESS, YUMA. 153 P. SWRA W75-10453.

A COMPREHENSIVE GATHERING OF OVER 1400 ENTRIES, SOME ANNOTATED, ARRANGED BY TOPICS: INDIANS OF THE LOWER COLORADO RIVER, EARLY EXPLORATION AND SETTLEMENT, THE MILITARY, STEAM NAVIGATION, THE COLORADO DELTA, MEXICO AND THE COLORADO RIVER, THE POLITICS OF WATER, RECLAMATION; CITIES, TOWNS, AND PLACES; MINING, AND GENERAL. AUTHOR AND SUBJECT INDEXES.

COLORADO RIVER/BIBLIOGRAPHIES/CALIFORNIA/ARIZONA/SOUTHWEST U.S./SOCIAL ASPECTS/
POLITICAL ASPECTS/MILITARY ASPECTS/ECONOMIC DEVELOPMENT/EXPLORATION/SETTLEMENTS/
COLORADO DELTA/MEXICO/WATER RESOURCES DEVELOPMENT/IRRIGATION/RECLAMATION/MINING/
NATURAL RESOURCES/INDIANS OF NORTH AMERICA/LAND USE/TRANSPORTATION/COLORADO
RIVER BASIN

KEYWORD INDEX

ADJACENT LAND OWNERS		0036		
ADJUDICATION PROCEDURE			0048	
0069 0141				
ADMINISTRATION	0037	0051	0059	
0071 0090 0101 0107	0136	0140		
0149				
ADMINISTRATIVE AGENCIES			0008	
0009 0010 0012 0031	0037	0051		
0058 0066 0073 0087	0097	0107		
0110 0122 0132 0147	0163			
ADMINISTRATIVE DECISIONS			0004	
0005 0006 0033 0154				
ADOPTION OF PRACTICES			0127	
0147				
AGRICULTURAL USE OF WATER			0039	
AGRICULTURE	0007	0029	0031	
0062 0077 0117	0118	0125		
AIR POLLUTION	0107			
ALL-AMERICAN CANAL		0020	0021	
0025 0092 0159				
ALLOTMENTS	0111			
ALTERNATIVE PLANNING		0165		
ALTERNATIVE WATER USE			0007	
ANIMAS-LA PLATA PROJECT			0083	
APPALACHIAN MOUNTAIN REGION				
0026				
APPROPRIATION	0035	0043	0048	
0053 0054 0056 0067	0069	0070		
0073 0105 0108 0113	0139	0149		
0151 0156 0157 0161				
AREA REDEVELOPMENT		0066		
ARIZONA	0011	0015	0016	0018
0019 0020 0021 0022	0023	0024		
0029 0030 0034 0038	0039	0040		
0044 0045 0046 0049	0052	0054		
0068 0072 0077 0079	0080	0083		
0087 0089 0094 0098	0101	0110		
0112 0114 0116 0117	0118	0119		
0120 0122 0129 0130	0133	0134		
0136 0137 0143 0146	0152	0153		
0155 0159 0166				
ARIZONA POWER AUTHORITY			0077	
ARIZONA V. CALIFORNIA			0079	
0080 0109 0111 0112	0148	0150		
BENEFICIAL USE	0111	0123	0128	
0131 0155				
BIBLIOGRAPHIES	0034	0039	0145	
0166				
BOULDER CANYON PROJECT ACT				
0003 0019 0020 0021	0024	0025		
0030 0034 0044 0045	0046	0056		
0061 0068 0077 0079	0086	0093		
0110 0112 0118 0129	0146	0152		
0153 0159				

BOULDER DAM	0003	0054	0068
0130			
BOUNDARIES (PROPERTY)	0158		
BRIDGE CANYON DAM	0130		
BRISTOL V. CHEATHAM	0120		
CALIFORNIA	0003	0012	0016 0018
0022 0023	0024	0030	0034 0039
0040 0044	0045	0046	0047 0049
0054 0061	0068	0070	0077 0079
0080 0089	0093	0098	0112 0114
0122 0125	0129	0130	0134 0143
0146 0152	0153	0154	0159 0166
CANALS	0064	0128	
CENTRAL ARIZONA PROJECT			0015
0027 0029	0075	0077	0080 0083
0089 0094	0110	0112	0133 0134
0153			
CENTRAL ARIZONA PROJECT ASSOCIATION			
0077			
CITY OF FRESNO V. CALIFORNIA			
0148			
COAL GASIFICATION		0161	
COLORADO	0011	0013	0016 0023
0039 0047	0048	0049	0069 0083
0114 0116	0122	0129	0135 0143
0146 0153	0156	0157	
COLORADO DELTA		0166	
COLORADO RIVER	0007	0011	0016
0019 0020	0021	0022	0023 0024
0027 0029	0030	0034	0044 0045
0046 0047	0048	0049	0054 0061
0064 0065	0068	0072	0074 0075
0077 0080	0081	0083	0086 0088
0089 0092	0093	0094	0098 0102
0103 0104	0114	0115	0116 0118
0123 0129	0130	0131	0134 0135
0138 0143	0146	0152	0153 0155
0158 0164	0166		
COLORADO RIVER BASIN	0003	0007	
0011 0016	0019	0020	0021 0022
0023 0024	0025	0027	0030 0034
0040 0044	0045	0046	0047 0049
0054 0061	0065	0068	0074 0077
0080 0081	0086	0087	0088 0092
0094 0098	0102	0103	0104 0110
0112 0114	0115	0116	0117 0119
0123 0128	0129	0130	0134 0135
0143 0144	0146	0152	0153 0164
0166			
COLORADO RIVER BASIN BILL			0083
COLORADO RIVER BASIN SALINITY CONTROL ACT	0103		
COLORADO RIVER COMMISSION			0054
0068 0093	0115	0117	0159

COLORADO RIVER COMPACT 0011
 0019 0020 0021 0024 0025 0030
 0034 0044 0045 0046 0047 0049
 0054 0061 0068 0077 0080 0089
 0092 0093 0104 0110 0112 0114
 0115 0117 0118 0119 0130 0134
 0143 0146 0152 0153 0159
 COLORADO RIVER CONFERENCE, DENVER,
 1927 0068
 COLORADO RIVER STORAGE PROJECT ACT
 0088 0102 0104
 COLUMBIA RIVER 0058
 COMMERCE CLAUSE 0041 0148
 COMMON LAW 0042 0161
 COMMUNITY DEVELOPMENT 0033
 COMPENSATION 0037 0051 0053
 0126 0140 0148 0150
 COMPETING USES 0015 0018 0055
 0057 0074 0075 0081 0088 0089
 0103 0113 0126 0133 0134 0164
 COMPREHENSIVE NATIONAL WATER POLICY
 0008
 COMPREHENSIVE PLANNING 0031
 0143 0144
 CONDEMNATION 0053
 CONDEMNATION VALUE 0037 0109
 CONJUNCTIVE USE 0039
 CONSERVANCY DISTRICTS 0115
 CONSERVATION 0008 0029 0033
 0069
 CONSTITUTIONAL LAW 0036 0062
 0160
 CONSTRUCTION COSTS 0121
 CONSUMPTIVE USE 0057 0069 0088
 0100 0123 0131
 COORDINATION 0028 0071 0100
 CORRELATIVE RIGHTS 0039 0042
 COST ALLOCATION 0066
 COST REPAYMENT 0008 0066 0093
 COST SHARING 0008 0071 0097
 COST-BENEFIT ANALYSIS 0027
 0121 0144
 COSTS 0020
 CRITICAL GROUNDWATER AREAS
 0039
 CROPS 0131

DAM CONSTRUCTION 0155
 DAMAGES 0131
 DAMS 0003 0020 0071 0083 0089
 0130 0146 0155
 DAMSITES 0155
 DESALINATION 0055 0144
 DESALINATION PLANTS 0040
 DESERT LAND ACT 0056 0063 0124
 0163
 DEVELOPMENT 0009
 DEWEY PROJECT 0130
 DISTRIBUTIVE POLITICS 0086
 0099 0102 0103 0104
 DIVERSION 0053 0070 0122
 DOMESTIC WATER 0131
 DOWNSTREAM 0007
 DRAINAGE 0009 0010 0128

DRAINAGE WATER 0064 0131
 DRAINAGE WELLS 0064
 DROUGHTS 0097 0146

EASEMENTS 0109 0161
 ECONOMIC DEVELOPMENT 0166
 ECONOMIC EFFICIENCY 0007 0090
 0110
 ECONOMIC GROWTH 0029 0110
 ECONOMIC IMPACT 0037 0051 0090
 ECONOMIC JUSTIFICATION 0066
 ECONOMICS 0003 0007 0020 0029
 0061 0117 0118 0144 0148 0159
 0162
 EFFICIENCIES 0008 0105
 ELECTRIC POWER 0020 0054 0061
 0072 0090 0130 0155
 ELECTRIC POWER INDUSTRY 0003
 0077
 EMINENT DOMAIN 0032 0053 0109
 0139 0141 0148 0161
 ENERGY 0007
 ENERGY CONVERSION 0164
 ENGINEERING STRUCTURES 0020
 ENGLISH RULE 0039 0042
 ENVIRONMENT 0121
 ENVIRONMENTAL ADMINISTRATION
 0087
 ENVIRONMENTAL CONTROL 0012
 0110 0162
 ENVIRONMENTAL EFFECTS 0016
 0017 0086 0088 0094 0164
 EQUITABLE APPORTIONMENT 0019
 0024 0044 0045 0046 0062 0065
 0123
 EQUITY 0062 0140 0161 0162
 EROSION CONTROL 0031
 EVALUATION 0116
 EXPLORATION 0166

FALL-DAVIS REPORT 0068
 FEDERAL GOVERNMENT 0001 0003
 0004 0005 0006 0009 0010 0022
 0025 0027 0028 0030 0037 0051
 0056 0062 0063 0066 0070 0071
 0075 0078 0083 0084 0086 0087
 0090 0091 0092 0093 0094 0095
 0097 0103 0105 0107 0108 0109
 0115 0119 0121 0122 0124 0127
 0130 0134 0144 0147 0148 0150
 0152 0154 0155 0157 0158 0159
 0160
 FEDERAL JURISDICTION 0010 0013
 0020 0030 0033 0035 0036 0037
 0041 0043 0048 0051 0053 0056
 0067 0069 0073 0082 0090 0091
 0106 0107 0108 0109 0111 0121
 0122 0134 0145 0154 0156 0157
 0158 0160
 FEDERAL POWER ACT 0056 0090
 0108 0109

FEDERAL POWER COMMISSION 0115
 FEDERAL PROJECT POLICY 0001
 0003 0008 0011 0014 0015 0017
 0022 0025 0027 0038 0061 0066
 0068 0072 0075 0076 0077 0078
 0080 0083 0084 0086 0087 0092
 0093 0094 0097 0102 0103 0104
 0105 0118 0121 0125 0129 0130
 0133 0134 0135 0142 0144 0152
 0153 0159
 FEDERAL PROJECTS POLICY 0095
 FEDERAL RECLAMATION LAW 0062
 0096 0105 0109 0124 0126
 FEDERAL RESERVATIONS 0008 0013
 0036 0037 0048 0051 0106 0114
 0116 0122 0140 0148 0150 0156
 0163
 FEDERAL WATER POLLUTION CONTROL ACT
 0012 0102 0127 0147 0154
 FEDERAL-STATE WATER RIGHTS CONFLICTS
 0002 0003 0004 0005 0006 0008
 0009 0010 0012 0013 0014 0015
 0016 0017 0018 0019 0020 0021
 0022 0024 0026 0027 0028 0030
 0032 0033 0034 0035 0036 0037
 0038 0040 0041 0043 0044 0045
 0046 0047 0048 0049 0051 0052
 0053 0055 0056 0057 0058 0059
 0060 0062 0063 0066 0067 0069
 0070 0071 0073 0076 0078 0079
 0080 0082 0084 0085 0086 0090
 0091 0094 0095 0096 0097 0098
 0102 0103 0104 0105 0106 0107
 0108 0109 0110 0111 0114 0116
 0118 0122 0124 0126 0127 0129
 0130 0132 0133 0134 0136 0137
 0139 0140 0141 0142 0143 0145
 0147 0148 0150 0151 0152 0153
 0154 0155 0156 0157 0158 0159
 0160 0161 0162 0163 0164 0165
 FINANCING 0066
 FLOOD CONTROL 0020 0031 0054
 0071 0093 0116 0130 0144
 FLOOD PLAIN ZONING 0031 0057
 FLOOD PROTECTION 0146 0159
 FUTURE PLANNING (PROJECTED)
 0133

 GEOGRAPHICAL REGIONS 0003
 GEORGIA 0005
 GILA RIVER 0083
 GLEN CANYON DAM 0088
 GLEN CANYON PROJECT 0054
 GLEN CANYON RESERVOIR 0024
 GOVERNMENT FINANCE 0071 0121
 GOVERNMENTAL INTERRELATIONS
 0001 0052 0064 0084 0085 0087
 0095 0102 0121 0123 0127 0136
 0137 0138 0147 0159
 GOVERNMENTS 0008 0020 0021
 0026 0087 0092 0117 0124 0144
 0145 0148 0149 0162 0163 0165
 GRAND CANYON 0110
 GREAT BASIN 0116

GROUNDWATER 0018 0039 0042
 0070 0082 0088 0091 0101 0106
 GROUNDWATER AVAILABILITY 0029
 0075 0106
 GROUNDWATER MINING 0029 0039
 0042 0101
 GROUNDWATER RESOURCES 0073

 HISTORY 0033 0070 0082 0092
 HOOKER DAM 0083
 HOOVER DAM 0019 0022 0094 0129
 0146 0148
 HYDROELECTRIC PLANTS 0020 0090
 0093 0159
 HYDROELECTRIC POWER 0019 0024
 0025 0044 0045 0046 0066 0092
 0144
 HYDROLOGY 0100

 IDAHO 0160
 IMPERIAL VALLEY 0054 0093 0130
 INCOME DISTRIBUTION 0110
 INDIAN RESERVATIONS 0013 0029
 0035 0048 0070 0111 0122 0150
 0160
 INDIAN WATER CLAIMS 0113
 INDIAN WATER RIGHTS 0018 0150
 INDIANS OF NORTH AMERICA 0166
 INDUSTRIAL WATER 0033 0070
 INDUSTRY 0090
 INLAND WATERWAYS 0033
 INSTITUTIONAL CONSTRAINTS 0001
 0007 0039 0085 0087 0110 0127
 0141 0151 0162 0165
 INSTITUTIONS 0008 0040 0087
 0117 0162 0163
 INTER-AGENCY COOPERATION 0012
 0067 0136 0137
 INTEREST GROUPS 0077 0117 0118
 0121
 INTERNATIONAL BOUND. AND WATER COMM.
 0081 0128 0138
 INTERNATIONAL COMMISSIONS 0123
 0128
 INTERNATIONAL LAW 0064 0065
 0123 0128 0131 0138 0145
 INTERNATIONAL WATERS 0040 0081
 0138
 INTERSTATE 0016 0026 0033 0040
 0115
 INTERSTATE COMMISSIONS 0002
 0009 0010 0025 0033 0118 0127
 0165
 INTERSTATE COMPACTS 0009 0010
 0011 0023 0028 0030 0033 0034
 0047 0049 0058 0082 0114 0117
 0127 0132 0139 0152
 INTERSTATE RIVERS 0009 0010
 0033 0058 0065 0079 0123 0128
 0132 0143 0158

INTERSTATE STREAM COMMISSION

0077
IRRIGABLE LAND 0111
IRRIGATED LAND 0062
IRRIGATION 0022 0029 0033 0061
0065 0092 0093 0126 0130 0143
0144 0159 0160 0166
IRRIGATION CANALS 0159
IRRIGATION DRAINAGE 0031
IRRIGATION EFFICIENCY 0097
IRRIGATION PRACTICES 0075
IRRIGATION PROGRAMS 0054 0066
0068 0077 0125
IRRIGATION WATER 0007 0022
0039 0122 0125

JUDICIAL DECISIONS 0004 0005
0006 0013 0018 0033 0036 0039
0041 0042 0043 0048 0053 0056
0062 0069 0073 0090 0091 0108
0109 0120 0122 0126 0155 0156
0157 0158
JURISDICTION 0036 0037 0053
0067 0080 0091 0107 0108 0147
0160

KETTNER BILL 0092

LAGUNA DAM 0092
LAKE POWELL 0088
LAND DEVELOPMENT 0057
LAND RECLAMATION 0031
LAND TENURE 0109 0139
LAND USE 0166
LAW ENFORCEMENT 0127 0147
LEAGUE OF THE SOUTHWEST 0092
0117
LEGAL ASPECTS 0003 0007 0012
0018 0021 0026 0035 0036 0037
0039 0040 0041 0042 0051 0053
0056 0058 0059 0061 0062 0063
0064 0065 0066 0067 0068 0069
0077 0079 0080 0089 0090 0091
0101 0106 0107 0108 0109 0111
0112 0113 0115 0116 0117 0120
0122 0123 0124 0127 0130 0131
0145 0147 0148 0149 0150 0151
0152 0155 0156 0157 0158 0160
0161 0162 0163 0164
LEGAL REVIEW 0048 0062 0091

LEGISLATION 0003 0004 0006
0009 0010 0017 0020 0021 0025
0029 0033 0042 0053 0056 0062
0066 0067 0069 0082 0083 0089
0090 0091 0093 0101 0107 0108
0109 0118 0121 0124 0127 0132
0138 0147 0148 0149 0155 0156
0157 0159 0161 0165
LEGISLATIVE REFORM 0149 0150
LITIGATION 0117
LOCAL GOVERNMENTS 0060 0067
0071 0107 0121 0124 0137
LONG-TERM PLANNING 0055
LOWER COLORADO RIVER BASIN
0054 0068 0112 0130 0144

MANAGEMENT 0026
MCCARRAN AMENDMENT 0013 0043
0048 0069 0111 0148
MEXICAN WATER TREATY 0011 0019
0020 0021 0022 0023 0024 0034
0044 0045 0046 0056 0064 0065
0074 0077 0081 0089 0103 0104
0110 0118 0123 0128 0131 0138
0153 0159
MEXICO 0054 0064 0081 0092
0103 0115 0123 0166
MILITARY ASPECTS 0166
MINING 0029 0077 0117 0118
0166
MINNESOTA 0004 0005 0006
MODEL STUDIES 0007 0083
MONITORING 0073
MONTANA 0160
MULTIPLE-PURPOSE PROJECTS 0066
0071 0087 0118 0127 0143 0144
0159
MUNICIPAL WATER 0029 0054 0130
0131
MUTUAL PRESCRIPTION 0042

NATIONAL FORESTS 0156
NATIONAL HISTORIC SITES 0013
NATIONAL PARKS 0013
NATIONAL RECREATION AREAS 0013
NATIONAL SCIENTIFIC RESERVES
0036
NATIONAL WATER COMMISSION 0008
NATIONAL WATER POLICY 0162
NATURAL FLOW DOCTRINE 0139
0161
NATURAL RESOURCES 0166
NAVIGABLE RIVERS 0082 0090
0158

NAVIGABLE WATERS 0012 0032
 0033 0041 0063 0109 0124 0127
 0155
 NAVIGATION 0031 0033 0057 0070
 0141 0158
 NAVIGATION SERVITUDE 0041 0070
 0109 0148
 NEVADA 0016 0023 0034 0039
 0049 0098 0114 0129 0134 0143
 0146 0152 0153
 NEW MEXICO 0011 0016 0023 0039
 0049 0083 0087 0098 0113 0114
 0116 0129 0135 0143 0146 0152
 0153
 NEW MEXICO V. AAMODT 0113
 NEW YORK 0026
 NON-NAVIGABLE WATERS 0041 0063
 0109 0158
 NORTH DAKOTA 0160
 NORTHEAST U.S. 0105

OPERATION AND MAINTENANCE 0066
 OPTIMUM DEVELOPMENT PLANS 0031
 ORDINANCES 0040
 OVERDRAFT 0039 0101
 OWNERSHIP OF BEDS 0109 0127
 0158

PELTON DAM CASE 0109
 PERCOLATING WATER 0082 0120
 PERCOLATION 0106
 PERMITS 0012 0070 0106 0107
 0132
 PESTICIDES 0107
 PHOENIX 0029
 PITTMAN RESOLUTION 0024
 PLANNING 0026 0028 0031 0037
 0051 0071 0085 0094 0100 0110
 0115 0116 0133 0146 0153 0155
 0165
 POLICY RECOMMENDATIONS 0150
 POLITICAL ASPECTS 0001 0003
 0007 0008 0019 0024 0025 0026
 0029 0033 0043 0044 0045 0046
 0052 0056 0059 0061 0068 0071
 0076 0077 0078 0080 0083 0084
 0085 0087 0089 0090 0095 0096
 0099 0101 0102 0104 0108 0112
 0117 0118 0119 0121 0124 0130
 0135 0136 0137 0138 0142 0159
 0165 0166
 POLITICAL CONSTRAINTS 0001
 0052 0076 0077 0078 0084 0085
 0087 0090 0096 0099 0102 0104
 0112 0135
 POLITICAL FEASIBILITY 0083
 POLLUTION ABATEMENT 0033 0107
 0127 0132

PORT AUTHORITY OF NEW YORK
 0009
 POWER MARKETING 0090 0144
 POWERPLANTS 0143
 PREFERENCES (WATER RIGHTS) 0019
 0032 0048 0069 0108 0150 0156
 0157
 PRESCRIPTIVE RIGHTS 0070 0073
 PRESSURE GROUPS 0118
 PRIOR APPROPRIATION 0032 0036
 0039 0042 0051 0053 0063 0066
 0069 0082 0090 0091 0106 0108
 0109 0111 0113 0120 0122 0139
 0150 0156 0157 0163
 PRIORITIES 0053 0069 0111 0139
 0150
 PROJECT BENEFITS 0020 0054
 0130
 PROJECT FEASIBILITY 0020 0094
 PROJECT PLANNING 0014 0017
 0020 0031 0072 0100 0115 0121
 0130 0144 0148
 PROJECT PURPOSES 0014 0020
 0087 0093 0094 0155 0159
 PROPRIETARY POWER 0041 0056
 PUBLIC ACCESS 0149 0165
 PUBLIC BENEFITS 0087
 PUBLIC LAND LAW REVIEW COMMISSION
 (PLLRC) 0140
 PUBLIC LANDS 0028 0036 0108
 0122 0124 0144 0156 0158
 PUBLIC RIGHTS 0042 0062 0101
 0120 0149 0160 0161
 PUBLIC UTILITIES 0090
 PUEBLO WATER RIGHTS 0035 0113
 0160
 PUMPING 0039 0064

QUANTIFICATION 0111

REASONABLE USE 0039 0042 0065
 0073 0105 0106 0122 0131 0139
 0143
 RECLAMATION 0062 0096 0126
 0164 0166
 RECLAMATION ACT OF 1902 0148
 RECLAMATION STATES 0083
 RECREATION 0031 0057 0116 0126
 0144
 RECREATION DEMAND 0149
 REDISTRIBUTIVE POLITICS 0099
 0102
 REGIONAL ANALYSIS 0023 0028
 0058 0085 0116 0146
 REGIONAL DEVELOPMENT 0023 0033
 0038 0073 0085 0092 0103 0110
 0114 0116 0144 0153 0165
 REGIONAL ECONOMICS 0110

REGULATION 0012 0091 0099 0100
 0102 0107 0125 0147 0155 0161
 REGULATORY POLITICS 0099 0104
 RELATIVE RIGHTS 0108
 REMEDIES 0053 0158
 RESEARCH AND DEVELOPMENT 0002
 0161
 RESEARCH PRIORITIES 0110
 RESERVATION DOCTRINE ~~0013~~ 0035
 0036 0037 0048 0050 0051 0053
 0069 0070 0091 0106 0111 0116
 0122 0140 0141 0148 0150 0160
 RESERVOIR STORAGE 0020
 RESERVOIRS 0071
 RESOURCE ALLOCATION 0139
 RETURN FLOW 0064
 RIO GRANDE RIVER 0065 0081
 RIPARIAN LAND 0139
 RIPARIAN RIGHTS 0032 0056 0063
 0066 0070 0082 0090 0091 0105
 0108 0109 0111 0122 0139 0149
 0158 0161
 RIPARIAN WATERS 0032 0070 0139
 RIVER BASIN DEVELOPMENT 0006
 0010 0026 0033 0066 0071 0115
 0127 0139 0164
 RIVER BASINS 0009 0086 0114
 0123 0128 0153 0164
 RIVER BEDS 0158
 RIVER REGULATION 0020
 RIVER SYSTEMS 0111
 RIVERS AND HARBORS ACT 0073
 0148
 ROOSEVELT DAM 0092
 RURAL AREAS 0031

SALINE WATER 0138
 SALINITY 0016 0064 0065 0074
 0086 0103 0123 0128 0131
 SALT RIVER VALLEY WATER USERS
 ASSOCIATION 0117
 SALTS 0064
 SANTA FE COMPACT 0021 0115
 0117 0159
 SANTA FE CONFERENCE 0077
 SEDIMENTATION 0031
 SETTLEMENTS 0166
 SEVERANCE 0109
 SHORES 0149
 SOCIAL ASPECTS 0026 0058 0062
 0101 0166
 SOCIAL CHANGE 0032
 SOCIAL FUNCTION 0032
 SOCIAL NEEDS 0032 0033 0139
 SOCIAL VALUES 0149
 SOUTH DAKOTA 0160
 SOUTHWEST LEAGUE 0159
 SOUTHWEST U.S. 0027 0029 0039
 0075 0086 0087 0089 0092 0094
 0097 0101 0144 0146 0153 0166
 SOVEREIGN IMMUNITY 0141 0148
 STANDARDS 0107 0132

STATE GOVERNMENTS 0004 0005
 0006 0009 0014 0025 0026 0028
 0032 0037 0038 0050 0051 0052
 0056 0060 0063 0066 0067 0068
 0070 0071 0075 0077 0082 0091
 0092 0093 0095 0100 0105 0107
 0108 0109 0110 0115 0117 0118
 0119 0121 0124 0127 0132 0133
 0137 0142 0144 0147 0149 0152
 0155 0157 0160 0165
 STATE JURISDICTION 0002 0010
 0013 0020 0033 0037 0038 0041
 0043 0048 0051 0052 0056 0060
 0069 0073 0090 0107 0108 0109
 0122 0126 0139 0145 0150 0156
 0157 0158 0160 0162
 STATE WATER MANAGEMENT PLANS
 0029
 STREAMFLOW 0007 0079 0110
 STREAMFLOW FORECASTING 0110
 SUBMERGED LANDS ACT 0056 0149
 SUBSIDIES 0162
 SUBSURFACE WATERS 0063
 SUPPLY CONTRACTS 0161
 SURFACE RUNOFF 0161
 SURFACE WATER AVAILABILITY
 0070 0106
 SURFACE WATERS 0063 0070 0088
 0091 0106 0164
 SURFACE-GROUNDWATER RELATIONSHIPS
 0039 0073
 SWING-JOHNSON BILL 0024 0025
 0068 0130

TAXES 0012
 TENNESSEE VALLEY AUTHORITY
 0009
 TEXAS 0039
 TRANSPORTATION 0166
 TREATIES 0035 0056 0064 0065
 0081 0111 0123 0128 0131
 TREATMENT FACILITIES 0132
 TUCSON 0029

U.S. BUREAU OF RECLAMATION
 0027 0047 0072 0096 0121
 U.S. WATER RESOURCES COUNCIL
 0050 0087 0097
 UNAPPROPRIATED WATER 0036 0106
 0124
 UPPER COLORADO RIVER BASIN
 0054 0068 0112 0130
 UPPER COLORADO RIVER BASIN COMPACT
 0135
 URBANIZATION 0070
 USUFRUCTUARY RIGHT 0161
 UTAH 0011 0016 0023 0039 0049
 0098 0114 0116 0129 0135 0143
 0146 0152 0153 0158
 UTILITIES 0025 0117 0118

WASHINGTON (STATE) 0160
WASTE DISPOSAL 0012 0154
WASTE WATER (POLLUTION) 0008
0012 0154
WATER ALLOCATION (APPLIED) 0054
WATER ALLOCATION (POLICY) 0007
0018 0019 0024 0035 0039 0043
0044 0045 0046 0059 0062 0064
0065 0066 0068 0070 0072 0077
0083 0084 0086 0089 0090 0102
0103 0123 0125 0126 0130 0131
0133 0137 0142 0145 0149 0161
WATER CONSERVATION 0008 0009
0014 0015 0057 0075 0094 0097
0105 0112 0127 0132 0154 0164
WATER CONSUMPTION 0105
WATER CONTRACTS 0062
WATER CONTROL 0009
WATER COSTS 0075 0101
WATER DELIVERY 0144
WATER DEMAND 0007 0014 0015
0037 0051 0075 0087 0097 0101
0144 0164
WATER DISTRIBUTION (APPLIED) 0088
WATER DISTRICTS 0048
WATER LAW 0004 0005 0006 0022
0028 0035 0036 0039 0042 0048
0050 0051 0055 0056 0058 0062
0063 0067 0070 0073 0082 0091
0101 0106 0108 0109 0111 0113
0117 0120 0122 0132 0138 0141
0145 0147 0148 0149 0150 0151
0154 0160 0161 0164
WATER LEVEL FLUCTUATIONS 0036
WATER LEVELS 0036
WATER MANAGEMENT (APPLIED) 0004
0005 0006 0026 0036 0039 0059
0088 0100 0101 0110
WATER MEASUREMENT 0035
WATER PERMITS 0154 0161
WATER POLICY 0007 0008 0011
0014 0015 0017 0019 0023 0024
0026 0031 0035 0038 0042 0044
0045 0046 0049 0052 0054 0055
0059 0061 0064 0065 0068 0071
0072 0075 0076 0077 0078 0080
0084 0085 0086 0087 0092 0094
0095 0096 0097 0100 0101 0102
0103 0110 0117 0120 0121 0123
0125 0126 0127 0128 0130 0131
0133 0136 0137 0142 0144 0147
0151 0152 0162 0163 0164 0165
WATER POLLUTION 0064 0087 0107
0127 0128 0131 0132
WATER POLLUTION CONTROL 0050
0057 0100 0107 0147 0154
WATER POLLUTION SOURCES 0154
WATER POLLUTION TREATMENT 0107
0132
WATER QUALITY 0007 0008 0012
0064 0065 0074 0086 0100 0103
0110 0116 0123 0128 0131 0132
0138 0144 0147 0162
WATER QUALITY CONTROL 0012
0040 0057 0107 0123 0147 0154

WATER QUALITY STANDARDS 0012
0038 0065 0128 0147 0154
WATER REQUIREMENTS 0055 0133
0144 0162
WATER RESOURCES 0001 0004 0005
0006 0009 0011 0012 0015 0022
0023 0027 0030 0031 0034 0037
0038 0041 0047 0049 0051 0055
0059 0072 0084 0086 0088 0090
0094 0098 0100 0102 0104 0116
0125 0133 0134 0135 0137 0143
0146 0149 0152 0154
WATER RESOURCES DEVELOPMENT
0001 0002 0003 0007 0008 0010
0011 0015 0019 0022 0023 0026
0027 0028 0030 0031 0033 0034
0035 0037 0038 0039 0047 0049
0051 0052 0054 0057 0060 0061
0067 0068 0071 0072 0076 0077
0078 0083 0084 0085 0086 0087
0088 0089 0090 0093 0094 0095
0096 0097 0098 0102 0104 0109
0110 0112 0114 0115 0116 0117
0118 0121 0124 0125 0127 0133
0134 0135 0136 0142 0143 0144
0145 0149 0152 0155 0159 0162
0164 0165 0166
WATER RESOURCES PLANNING 0133
WATER RESOURCES PLANNING ACT
0026 0165
WATER REUSE 0055 0126
WATER RIGHTS 0003 0007 0008
0013 0014 0018 0019 0020 0021
0022 0024 0030 0035 0036 0037
0038 0039 0040 0042 0044 0045
0046 0048 0051 0053 0055 0056
0057 0059 0062 0063 0067 0069
0079 0080 0089 0091 0106 0108
0109 0110 0111 0112 0113 0114
0115 0117 0118 0122 0124 0130
0134 0140 0141 0144 0145 0146
0148 0149 0150 0151 0156 0157
0160 0162 0163 0164
WATER RIGHTS TRANSFER 0151
WATER SHORTAGE 0007 0037 0051
0105 0143 0144
WATER SOURCES 0029 0106
WATER STORAGE 0055 0088 0135
0144
WATER SUPPLY 0027 0029 0030
0031 0035 0037 0047 0051 0057
0069 0088 0098 0101 0110 0135
0140 0143 0144
WATER SUPPLY DEVELOPMENT 0088
WATER TRANSFER 0007 0028 0049
0089 0151
WATER TREATMENT 0147
WATER USERS 0029 0035 0062
0087 0150
WATER UTILIZATION 0009 0037
0047 0051 0053 0062 0069 0070
0089 0090 0101 0105 0125 0133
0144 0151 0163
WATER WELLS 0036
WATER YIELD IMPROVEMENT 0057

WATERSHED MANAGEMENT	0009 0010
0028 0057	
WATERSHEDS (BASINS)	0009 0010
0063 0108	
WEATHER MODIFICATION	0055
WELL REGULATIONS	0073
WEST U.S.	0042 0120
WEST VIRGINIA	0105
WINTERS DOCTRINE	0111 0113
0122 0148 0150 0160	
WITHDRAWN LANDS	0122 0156
WYOMING	0011 0016 0023 0049
0098 0114 0116 0129 0135 0143	
0146 0153	
WYOMING V. COLORADO (1922)	0115

ZONING	0161
--------	------

AUTHOR INDEX

ALLEE, D.J. 0001
 ALLOTT, G.L. 0002
 AMERICAN ACADEMY OF POLITICAL AND
 SOCIAL SCIENCE 0003
 AMERICAN BAR ASSOCIATION, COMMITTEE
 ON NATURAL RESOURCES 0004
 AMERICAN BAR ASSOCIATION, COMMITTEE
 ON WATER RESOURCES 0005
 0006
 ANDERSON, J.C. 0007
 ANDRUS, C.D. 0008
 ANONYMOUS 0009 0010 0011 0012
 0013 0014 0015 0016 0017 0018
 ARIZONA, COLORADO RIVER COMMISSION
 0019 0020 0021 0022 0023 0024
 ASTON, R.E. 0025
 AUSNESS, R.C. 0100

BARBAROSSA, N.L. 0026
 BERKMAN, R.L. 0027
 BERRY, M.P. 0052
 BINGHAM, J.R. 0028
 BLUNDELL, W.E. 0029
 BOULDER DAM ASSOCIATION 0030
 BUIE, E.C. 0031
 BURKE, W.J. 0032

CALDWELL, L.K. 0033
 CALIFORNIA, COLORADO RIVER COMMISSION
 0034
 CAMPBELL, S.M. 0035
 CAPPAERT V. UNITED STATES 0036
 CARVER, J.A., JR. 0037
 CASTRO, R.H. 0038
 CHALMERS, J.R. 0039
 CHRISMAN, J., JR. 0040
 CLARK, C.D. 0041
 CLARK, R.E. 0042
 CLYDE, E.W. 0043
 COLORADO RIVER CONFERENCE, DENVER,
 1927 0044 0045 0046
 COLORADO, COLORADO RIVER WATER
 CONSERVATION DISTRICT 0047
 COLORADO, COLORADO RIVER WATER
 CONSERVATION DISTRICT V. UNITED
 STATES 0048
 COMMITTEE OF FOURTEEN OF THE SEVEN
 STATES OF THE COLORADO RIVER
 BASIN 0049

CONFERENCE OF STATE AND FEDERAL WATER
 OFFICIALS 0050
 CORKER, C.E. 0051
 CORTNER, H.J. 0052
 COX, W.E. 0161
 CRAIG, L.B. 0053

DAVIS, A.P. 0054
 DAVIS, C.A. 0055 0056
 DE WEEIDT, J.L. 0057
 DOERKSEN, H.R. 0058 0059
 DWORSKY, L.B. 0060
 DYKSTRA, C.A. 0061

ECLAVEA, R.P. 0062
 ELY, N. 0063

FRIEDKIN, J.F. 0064

GANTZ, D.A. 0065
 GLICK, P.M. 0057
 GOLZE, A.R. 0066
 GOODCELL, R.B., JR. 0067
 GRISWELL, R.L. 0068
 GUADNOLA, J.C. 0069

HARRIS, R.W. 0070
 HART, H.C. 0071
 HARZA ENGINEERING COMPANY, CHICAGO,
 ILLINOIS 0072
 HILLHOUSE, W.A., II 0073
 HOLBURT, M.B. 0074
 HORNBLLOWER, M. 0075 0076
 HOUGHTON, N.D. 0077
 HUME, E. 0078
 HUNDLEY, N. 0079 0080 0081
 HUTCHINS, W.A. 0082

INGRAM, H.M. 0001 0083 0084
0085 0086 0087

RANQUIST, H.A. 0122
REYNOLDS, S.E. 0123
ROGERS, W. 0124
ROOD, W.B. 0125

JACOBY, G.C. 0088 0164
JEFFERY, W.D. 0070
JOHNSON, R. 0089

SAX, J.L. 0126
SCHOENENBERGER, M.R. 0127
SEPULVEDA, C. 0128
SIMMONS, R.B. 0129
SMITH, G.E.P. 0130
SNYDER, J.H. 0040
SOBARZO, A. 0131
STEIN, M. 0132
STEINER, W.E. 0133
STEWART, B.W., JR. 0070

KEITH, J.E. 0007
KERWIN, J.G. 0090
KIECHEL, W.J. 0091
KIGHT, G. 0092
KINSEY, D.J. 0093
KIRSCHTEN, D. 0094 0095 0096
KIRSCHTEN, J.D. 0097

TERRELL, J.U. 0134 0135
THOMAS, R.D. 0136 0137
TILDEN, W. 0138
TRELEASE, F.J. 0139 0140 0141
0142

LA RUE, E.C. 0098
LOWI, T.J. 0099

MALONEY, F.E. 0100
MANN, D. 0101 0102 0103 0104
MARSHALL, M. 0166
MARTZ, C.O. 0105
MCCAIN, J.R. 0087
MILLS, L.R. 0106
MOORE, C.V. 0040
MORGENSTERN, A. 0107
MOSK, S. 0108
MUNRO, J. 0109

U.S. BUREAU OF RECLAMATION
0143 0144
U.S. DEPARTMENT OF AGRICULTURE,
ECONOMIC RESEARCH SERVICE
0145
U.S. DEPARTMENT OF THE INTERIOR
0146
U.S. FEDERAL WATER POLLUTION CONTROL
ADMINISTRATION 0147
U.S. NATIONAL WATER COMMISSION
0148 0149 0150 0151
U.S. SENATE, 80TH CONGRESS, 2D SESSION
COMMITTEE ON INTERIOR AND INSULAR
AFFAIRS, SUBCOMMITTEE ON IRRIGATION
AND RECLAMATION
0152
U.S. SENATE, 90TH CONGRESS, 1ST SESSION
COMMITTEE ON INTERIOR AND INSULAR
AFFAIRS, SUBCOMMITTEE ON IRRIGATION
AND RECLAMATION
0153
UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY V. CALIFORNIA EX REL STATE
WATER RESOURCES CONTROL BOARD
0154
UNITED STATES V. ARIZONA 0155
UNITED STATES V. DISTRICT COURT IN
AND FOR COUNTY OF EAGLE, COLORADO
0156
UNITED STATES V. DISTRICT COURT IN
AND FOR WATER DIV. NO. 5. COLORADO
0157
UNITED STATES V. UTAH 0158

NATIONAL RESEARCH COUNCIL, COMMITTEE
ON WATER 0110
NELSON, M.C. 0111
NEW REPUBLIC 0112
NICHOLS, P. 0104

O'BRIEN, R.R. 0113
OLSON, R.L. 0114 0115

PACIFIC SOUTHWEST INTER-AGENCY
COMMITTEE 0116
PARSONS, M.B. 0117 0118 0119
PATTERSON, J. 0120
PELHAM, A. 0121

VAN PETTEN, D.R. 0159
VEEDER, W.H. 0160
VISCUSI, W.K. 0027

WALKER, W.R. 0161
WATER RESOURCES COUNCIL 0162
0163
WEATHERFORD, G. 0104 0164
WESTERN INTERSTATE WATER CONFERENCE,
2D, CORVALLIS, OREGON, 1965
0165

YATES, R. 0166