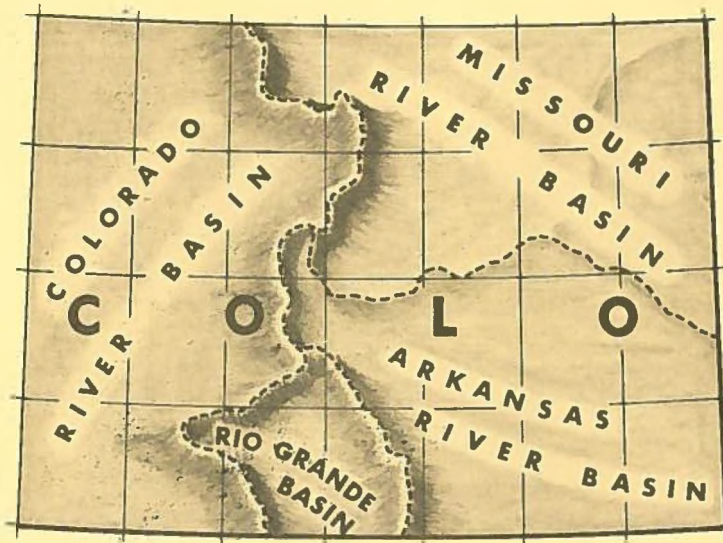


CWCB - Dezhholm



# WATER FOR TOMORROW



## COLORADO STATE WATER PLAN

PHASE II

*Report on*

**Legal and Institutional Considerations**

AUGUST 1974

BUREAU OF RECLAMATION IN COOPERATION WITH THE STATE OF COLORADO



**DEPARTMENT OF THE INTERIOR**

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**DEPARTMENT OF NATURAL RESOURCES**  
**Colorado Water Conservation Board**

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Water for Tomorrow - Colorado  
State Water Plan - Phase II - Report  
on Legal & Institutional Considerations  
USDOI/CWCB Aug 1974

**WATER FOR TOMORROW**

**COLORADO STATE WATER PLAN**

**PHASE II**

**A REPORT**

**on**

**Legal and Institutional Considerations**

**United States Department of the Interior  
Bureau of Reclamation  
in cooperation with  
The State of Colorado**

**August 1974**

THIS REPORT WAS PREPARED PURSUANT TO THE OCTOBER 8, 1969, ACT OF CONGRESS, PUBLIC LAW 91-81. PUBLICATION OF THE FINDINGS AND RECOMMENDATIONS HEREIN SHOULD NOT BE CONSTRUED AS REPRESENTING EITHER THE APPROVAL OR DISAPPROVAL OF THE SECRETARY OF THE INTERIOR. THE PURPOSE OF THIS REPORT IS TO PROVIDE INFORMATION AND ALTERNATIVES FOR FURTHER CONSIDERATION BY THE BUREAU OF RECLAMATION, THE SECRETARY OF THE INTERIOR, AND OTHER FEDERAL AGENCIES.

## PREFACE

This report is the result of cooperative investigations between the Colorado Water Conservation Board and the Lower Missouri, Upper Colorado, and Southwest Regions of the Bureau of Reclamation. Authority for these investigations is the Water Resources Planning Act of July 22, 1965, which provides for the coordination of studies, investigations, and assessments for developing a general plan to meet the future water needs of the western United States. The Colorado Water Conservation Board, in 1970, requested Federal assistance in making the investigations that will develop various options and alternatives from which to select a statewide water management plan. Beginning in fiscal year 1970, Federal funds were appropriated for the Bureau to initiate the investigations.

The initial efforts were the preparation of a study plan which was presented in a publication entitled "Colorado State Water Plan--Plan of Study," dated March 1971. The plan of study established an orderly program for conducting the overall investigations and accomplishing the objectives. The plan of study also divided the investigations into three phases and identified and defined them as follows: Phase I--Appraisal of Present Conditions, Phase II--Legal and Institutional Considerations, and Phase III--Plans for Development. The report on Phase I is an appraisal of the water and related land resources and is also a summation of the current status of development and utilization of these resources. That report also identifies and describes the critical issues and problems concerning present water resource developments and utilization in Colorado.

Phase II, Legal and Institutional Considerations, which is covered in this report, comprises an analysis of the legal and institutional factors that have governed and, until amended, will govern the development, use, and management of water and related land resources in the State.

Phase III, Plans for Development, scheduled for release later in 1974, will present alternative plans for the development of available surface and ground-water supplies and related land resources to meet future needs and objectives. All potential ways for augmenting Colorado's water supplies will be considered including weather modification, desalting, conservation and reuse of water, and surface water imports.

The initial studies for formulation of the State Water Plan were accomplished through the efforts of the Colorado-Westwide Study Team. <sup>1/</sup> This team was organized in the fall of 1972 to direct State input into the Western U.S. Water Plan studies and was composed of representatives of all appropriate Federal and State agencies. After the Western U.S. Water Plan was rescoped for early and abbreviated completion, the planning efforts for preparation of a separate Colorado State Water Plan were continued by the study team. Individual work items will be taken up by smaller task forces composed also of Federal and State officials.

The Colorado State Water Plan studies are being guided by concepts contained in the new multiobjective planning guidelines developed by the Bureau of Reclamation from the Water Resources Council's "Principles and Standards for Planning Water and Related Land Resources." These new principles and standards (Federal Register, Volume 38, No. 174, Part III, September 10, 1973) became effective October 25, 1973.

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<sup>1/</sup> The Colorado River Project Act of 1968 (Public Law 90-537) authorized the Bureau of Reclamation to develop comprehensive reconnaissance plans to meet the future water needs of the 11 western states, to be called the Western U.S. Water Plan (Westwide Study).

TABLE OF CONTENTS

	<u>Page</u>
Disclaimer	ii
Preface	iii
List of Statistical Tables	viii
List of Exhibits	viii
General Map (Exhibit 1)	follows viii

LIST OF PARTS

<u>Number</u>	<u>Title</u>	<u>Page</u>
I	INTRODUCTION.....	1.1
II	STATE WATER LAWS, POLICIES, AND ADMINISTRATION .....	2.1
III	COLORADO WATER RESOURCE AGENCIES.....	3.1
IV	FEDERAL WATER RESOURCE AGENCIES.....	4.1
V	PROBLEMS AND CONSTRAINTS .....	5.1

DETAILED CONTENTS

PART I--INTRODUCTION.....	1.1
Purpose and Scope .....	1.2
Authority for Report.....	1.2
Historical Background.....	1.2
Acknowledgments .....	1.4
PART II--STATE WATER LAWS, POLICIES, AND ADMINISTRATION.....	2.1
Development of Colorado Water Law .....	2.1
State Organizational Structure for Water Administration and Control.....	2.1
Administration of Water Rights .....	2.2
Rule of Priority .....	2.4
Preferences .....	2.6

CONTENTS (continued)

	<u>Page</u>
PART II--(Continued)	
Development of Colorado Water Law (Continued)	
Surface Waters.....	2.6
Method of Acquiring Rights.....	2.6
Nature and Limit of Rights.....	2.7
Ground Water.....	2.11
Tributary Ground Water.....	2.12
Nontributary Ground Water.....	2.13
Compacts and Interstate Decrees.....	2.14
Colorado River Compact, 1922.....	2.14
La Plata River Compact, 1922.....	2.15
South Platte River Compact, 1923.....	2.16
Rio Grande Compact, 1938.....	2.16
Republican River Compact, 1942.....	2.17
Upper Colorado River Basin Compact, 1948.....	2.17
Arkansas River Compact, 1948.....	2.18
Laramie River Litigation - Nebraska vs. Wyoming, 353 U.S. 953, 1957.....	2.18
North Platte River Litigation - Nebraska vs. Wyoming, 325 U.S. 589, 1954.....	2.19
Costilla Creek Compact, 1963.....	2.19
Animas-La Plata Project Compact, 1963.....	2.19
PART III--COLORADO WATER RESOURCE AGENCIES.....	
Department of Natural Resources.....	3.1
Colorado Water Conservation Board.....	3.1
Division of Water Resources.....	3.2
Ground Water Commission.....	3.3
Division of Wildlife.....	3.4
Division of Parks and Outdoor Recreation.....	3.4
Weather Control.....	3.4
Department of Health--Water Quality Control Division.....	3.5
Irrigation Districts.....	3.5
Water Conservancy Districts.....	3.6
Water Conservation Districts.....	3.8
Colorado River Water Conservation District.....	3.8
Southwestern Water Conservation District.....	3.8
Rio Grande Water Conservation District.....	3.9

CONTENTS (continued)

	<u>Page</u>
PART III--(Continued)	
River Basin Authorities.....	3.10
Drainage Districts .....	3.10
Interstate Compact Commissions .....	3.10
Urban Drainage and Flood Control Districts.....	3.11
Department of Local Affairs.....	3.12
Division of Commerce and Development.....	3.12
Division of Planning .....	3.12
Regional Planning Agencies .....	3.13
Denver Regional Council of Governments.....	3.13
Planning and Management Districts.....	3.14
PART IV--FEDERAL WATER RESOURCE AGENCIES.....	4.1
Department of Agriculture .....	4.1
Economic Research Service .....	4.1
Forest Service.....	4.2
Soil Conservation Service .....	4.3
Farmers Home Administration.....	4.3
Department of the Army .....	4.4
Corps of Engineers.....	4.4
Department of Commerce.....	4.6
Economic Development Administration.....	4.6
Environmental Science Services Administration.....	4.7
Federal Power Commission.....	4.7
Department of Health, Education, and Welfare .....	4.8
Department of Housing and Urban Development.....	4.8
Department of the Interior .....	4.9
Fish and Wildlife Service.....	4.9
Geological Survey .....	4.10
Bureau of Indian Affairs.....	4.11
Bureau of Land Management.....	4.11
Bureau of Mines.....	4.12
National Park Service.....	4.13
Bureau of Outdoor Recreation.....	4.13
Bureau of Reclamation.....	4.14
Office of Saline Water.....	4.15
Office of Water Resources Research.....	4.16



CONTENTS (continued)

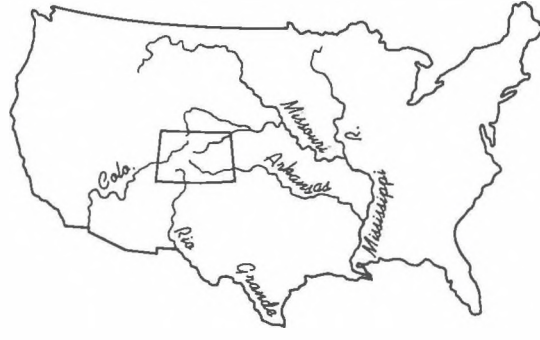
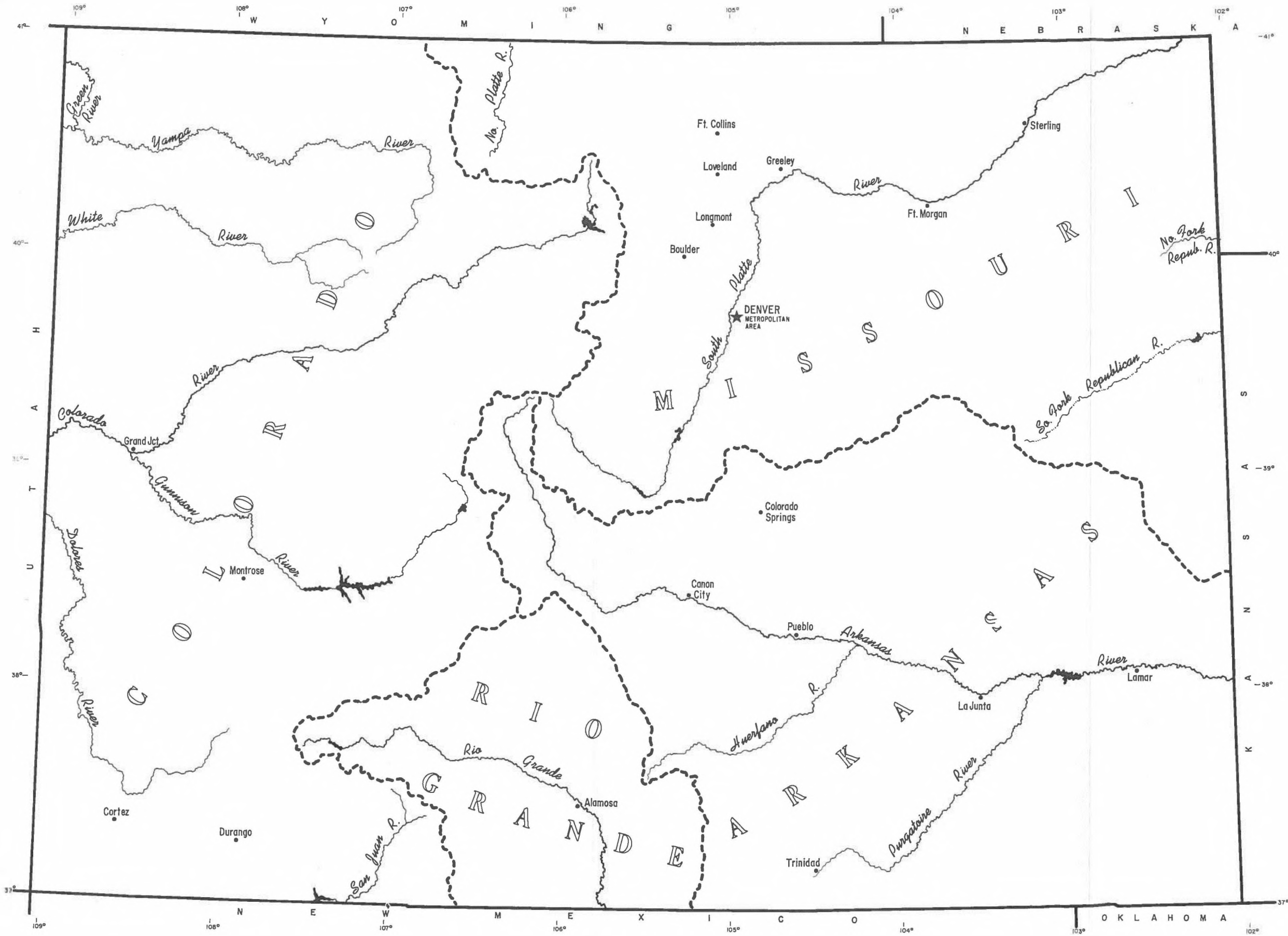
	<u>Page</u>
PART IV--(Continued)	
Environmental Protection Agency.....	4.16
Council on Environmental Quality.....	4.17
Water Resources Council.....	4.17
Advisory Council on Historic Preservation .....	4.18
National Water Commission.....	4.19
PART V--PROBLEMS AND CONSTRAINTS .....	
Federal-State Relationships.....	5.1
Interstate Compacts and Decrees .....	5.1
Federal Reserved Water Rights .....	5.2
Water Planning and Policy.....	5.3
State Financing of Water Projects .....	5.5
International Agreements and the Water Quality Issue.....	5.5
Other Considerations.....	5.6

LIST OF STATISTICAL TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Water Conservancy Districts.....	3.7

LIST OF EXHIBITS

<u>Number</u>	<u>Title</u>	<u>Follows page</u>
1	General Map.....	viii
2	Colorado Water Divisions .....	2.2
3	Colorado Department of Natural Resources (Organization Chart) .....	3.1
4	Planning and Management Districts .....	3.14

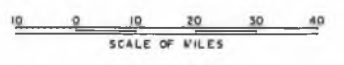


LOCATION MAP

# COLORADO

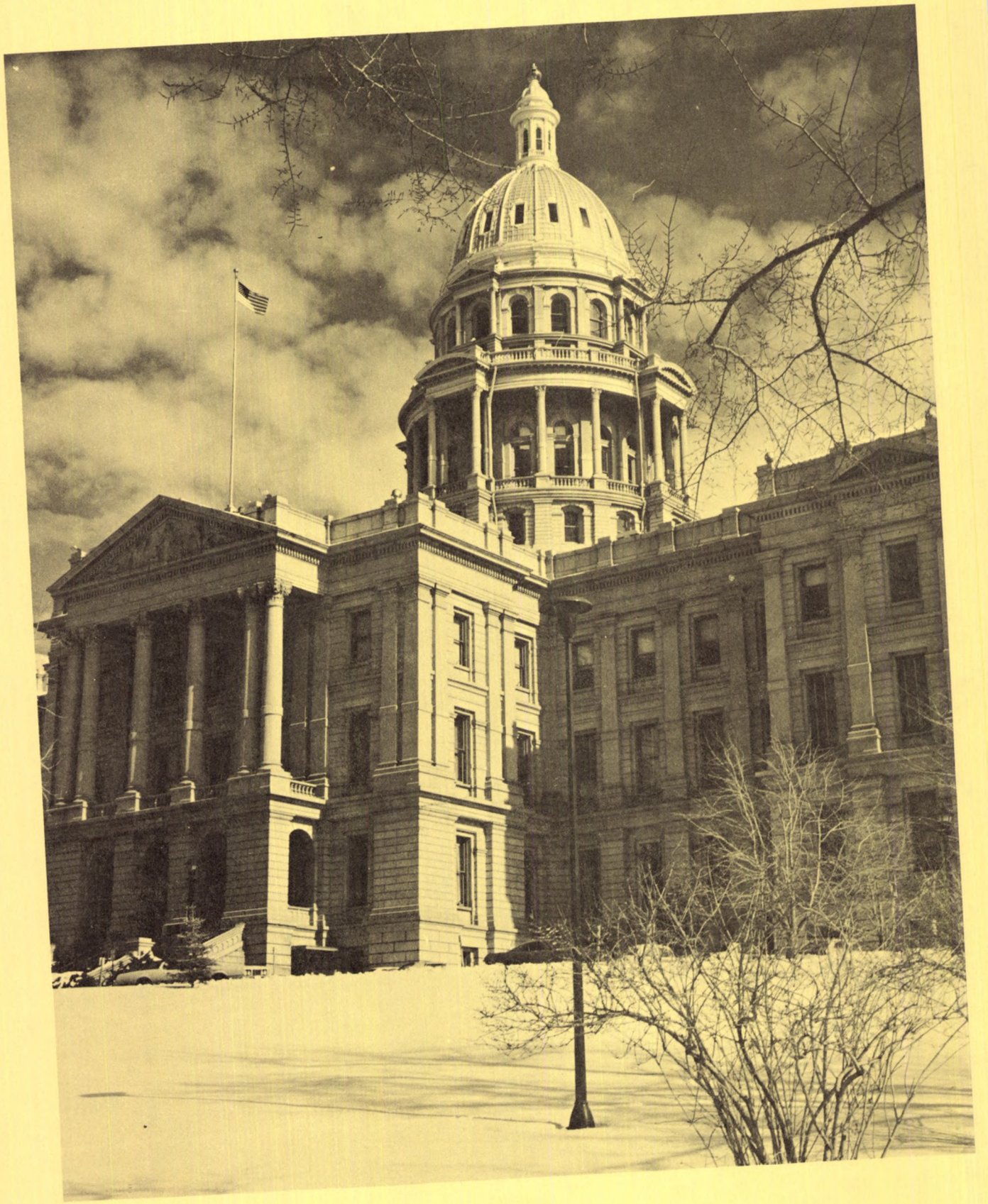
## GENERAL MAP

RIVER BASIN BOUNDARIES

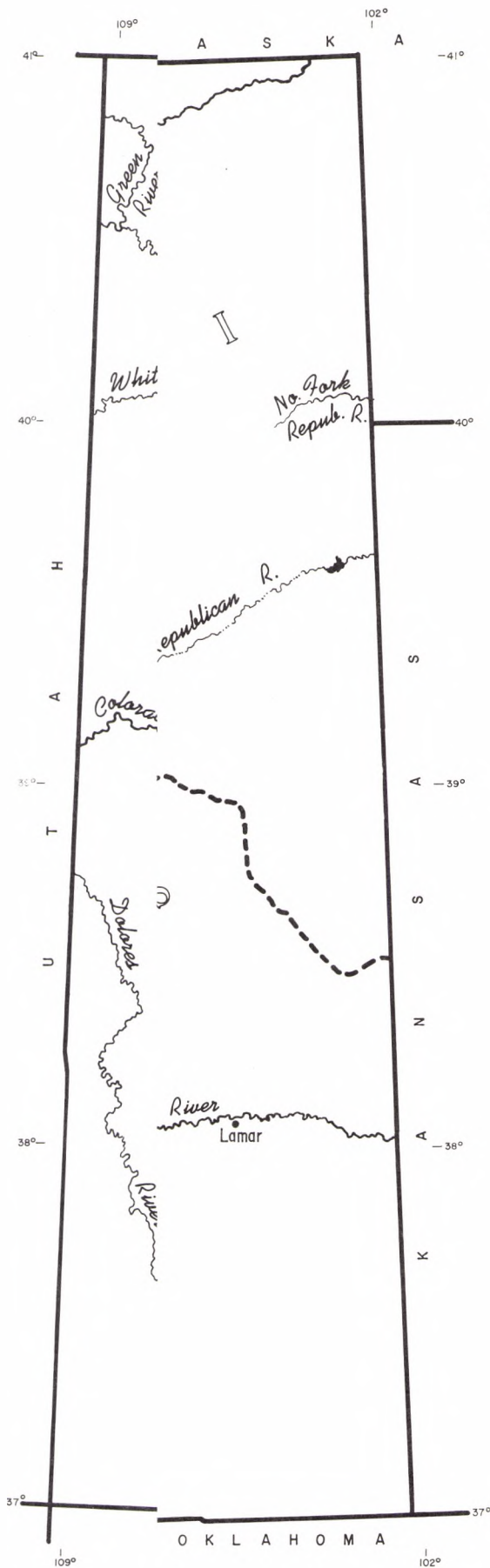


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PART I  
INTRODUCTION

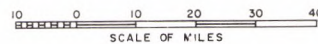


LOCATION MAP

# COLORADO

## GENERAL MAP

### RIVER BASIN BOUNDARIES



1973

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## PART I--INTRODUCTION

Water has played a vital role in the economic development and growth of Colorado since the advent of the first settlers. The distribution of surface water supplies throughout the State is influenced by climatic conditions which are affected by differences in elevation and by the orientation of mountain ranges and valleys with respect to general air movements. Annual precipitation varies from about 8 inches in some of the more arid parts of the State to as much as 50 inches in the higher mountain ranges. Runoff and streamflows resulting from these widely different conditions necessarily vary widely also. Many of the water problems of the State are directly related to the disparities in the occurrence of water supply and water requirements, both in time and place.

Water problems in Colorado are greatly compounded by the fact that population distribution bears no relationship to the State's available surface water supply. For instance, more than 65 percent of the total State population resides within the South Platte River Basin which produces only about 9 percent of the State's average annual surface water supplies. Conversely, the Colorado River Basin contains about 9 percent of the population, but produces almost 70 percent of the State's average annual surface water supplies.

Much progress has been made since the turn of the century in the development of Colorado's water resources by private and local interests, as well as by State and Federal agencies. However, many early water resource projects were designed to meet only localized and existing water demands, and were not considered from a statewide point of view.

Colorado's population increased 25.8 percent in the 1960's, growing from 1,753,947 to 2,207,259. Recent projections made by the Division of Planning, State of Colorado, indicate a State population of about 3,800,000 by the year 2000.

Associated with recent population growth and distribution has been an expanding requirement for more effective statewide planning and control of water and land resources development and utilization. In addition, there has been increasing pressure to allocate more water for other purposes such as the preservation and enhancement of fish and wildlife resources, recreation, and water quality control. These and other existing problems as well as pending water problems must be faced now. Moreover, their timely solution demands that new and imaginative approaches must be taken, and that development, control, and management of the State's water and related land resources must proceed under an orderly and well-conceived comprehensive plan which will be consistent with long range statewide goals.

PURPOSE AND SCOPE

This Phase II Report--Legal and Institutional Considerations - summarizes and evaluates the present legal and institutional framework underlying the development, use, and management of water and related land resources in the State of Colorado. In addition, this report also summarizes the major organizational framework of local, State, and Federal agencies which have a responsibility in the development and use of water resources in the State. Finally, the report will identify some of the problems in State and Federal water laws, policies, and administration, and suggest areas of future action.

AUTHORITY FOR REPORT

This report is authorized by the Water Resources Planning Act of 1965 (Public Law 89-80, 89th Congress), the Colorado River Project Act (Public Law 90-537), and by the Federal Reclamation Laws (Act of June 17, 1902, Stat. 388, and acts amendatory thereof or supplementary thereto). In 1967, amendments to the basic legislation provided for State participation and cooperation in comprehensive water planning programs authorized in the Water Resources Planning Act of 1965.

Authority was delegated to the Colorado Water Conservation Board to make water resource investigations when the board was created by the Colorado General Assembly in 1937. In 1967, the State assented to the provisions of the Federal Water Resources Planning Act of 1965. Under this legislation, the board was authorized, empowered, and directed to perform such acts as may be necessary to the conduct and establishment of a comprehensive water planning program.

HISTORICAL BACKGROUND

The history of water resources development in Colorado extends back to the irrigation systems of the Mesa Verde area. These systems were constructed by Indians and predate the arrival of Europeans to the area. In 1787, Juan Bautista de Anzi (or Anza), then governor of the Spanish Province of New Mexico, sent a group of Spanish farmers to develop an irrigation system in collaboration with the Jupe Tribe of the Comanche Indians. The irrigation project that this group

developed was located on the St. Charles River near its confluence with the Arkansas River, about 8 miles east of the present city of Pueblo. It was abandoned after a lapse of several years.

In 1852, construction was started on the People's Ditch in the San Luis Valley in Colorado on the Rio Grande River. The ditch has been used continuously since completion and has a decreed priority dating to 1852, making it the earliest decreed ditch in Colorado. About this same time several other projects were begun, the largest on the Purgatory River, about 20 miles downstream from Trinidad. While the ditch was not used continuously from the beginning, it is in operation today.

Following the gold rush of 1859, a great influx of people, familiar for generations with irrigation in New Mexico, came into Colorado and constructed fairly extensive irrigation works. They were particularly active in the valleys of the Rio Grande and the Purgatory, and to a lesser extent in the South Platte River Basin. The development in southern Colorado was quite extensive with the summer base flows of the Purgatory River being completely appropriated by the year 1864. Virtually all of these appropriations were for irrigation use.

Subsequently, larger irrigation systems were constructed on the Rio Grande, South Platte, the Arkansas, and their tributaries. Where possible, these systems have been continually expanded. Around the turn of the century, many of the earlier irrigation systems on the South Platte, which were financed by English companies, went broke. These systems again became profitable when taken over by local irrigators who improved the operations by providing holdover reservoir storage. The irrigation systems in these three basins still furnish the basis for a large part of the State's economic structure.

After the Civil War, attention in Colorado and other western states increasingly was focused on the development and use of water resources. This gave rise to legislation and suitable programs, and to mounting water usage for economic development in the form of mining, mineral processing, and irrigated agriculture. Rapid settlement of the West following the turn of the century and enactment of the Reclamation Act of 1902 accelerated irrigation development and gave impetus to hydroelectric power generation. More recently, and particularly since the early 1960's, public opinion together with legislative action and development programs have resulted in activities and projects for restoring and maintaining water quality and for water use to enhance recreation, fish and wildlife habitat, and to improve the general environment.

While the general adequacy of water supplies encouraged the enactment and adoption of liberal laws and policies during the early development periods, irrigation and industrial expansion, and population growth in later years have brought full utilization of surface water supplies in some areas. This situation has called for greater stringency in the administration of the water laws and policies in the State. Currently, mounting evidence indicates direct inter-relationships between occurrence and usage of surface and ground water. The evidence has prompted recent legislation to cope with problems or rights thereto and conflicts in surface and ground water usage and overall water right administration.

While the constitution stipulates that the water of every natural stream is dedicated to the use of the people of the State, this stipulation is subject to the qualification inasmuch as decisions of the United States Supreme Court provide for equitable apportionment of the benefits arising from the flow of an interstate stream. Accordingly, Colorado may not use and control, as it sees fit, all of the water in many streams originating within its borders. The equitable rights of the lower states must be recognized, and a division of the water of all interstate streams is required before the states can know the quantity each has for use. This division may be accomplished either by United States Supreme Court decree or by interstate compact consented to by the United States Congress.

Colorado has by decree or compact defined its rights to the use of the water of every major interstate stream. There are compacts apportioning the flows of the South Platte River, the Republican River, the Rio Grande, Costilla Creek, the La Plata River, the Colorado River, and for the Upper Colorado River Basin. Supreme Court decrees are enforced for the apportionment of flows of the North Platte and Laramie Rivers. The Arkansas River flows are apportioned by two Supreme Court decrees and an interstate compact.

#### ACKNOWLEDGMENTS

The preparation of this report has been made possible by the active cooperation and participation of the Colorado Water Conservation Board, the State Attorney General's Office, the State Engineer's Office, and the Colorado State Study Team.





STATE LEGISLATIVE SESSION -- A PROCESS TO IMPROVE WATER LAWS

PART II  
STATE WATER LAWS,  
POLICIES,  
AND ADMINISTRATION

## PART II--STATE WATER LAWS, POLICIES, AND ADMINISTRATION

### DEVELOPMENT OF COLORADO WATER LAW

Colorado has always been an "Appropriation" doctrine State. It has long been established that the common law or riparian rights doctrine never was the law of Colorado, even before statehood. Since Colorado was the first state to adopt a pure appropriation system, the doctrine early became known as the Colorado Doctrine, as distinguished from the California Doctrine which attempted to recognize both riparianism and appropriation.

The Colorado Doctrine, as set forth in the State constitution, declares that the unappropriated water of every natural stream is the property of the public, subject to appropriation, and that the right to divert unappropriated waters of any natural stream to beneficial uses shall never be denied. The constitution also provides that as between those using water for the same purpose, priority of appropriation shall give the better right. These constitutional expressions of the appropriation doctrine have been supplemented by legislative declaration that all waters of the State have always been and are the property of the public, dedicated to the use of the people, subject to appropriation and use in accordance with law.

The above doctrine applies only to the relationship between the State and individuals and/or organizations and do not necessarily apply to the Federal water rights or land.

#### State Organizational Structure for Water Administration and Control

Responsibility for water administration and control in Colorado is divided between the State Engineer, who is the executive officer of the Division of Water Resources of the State Department of Natural Resources, and the judiciary, specifically, one district court judge designated as a water judge for each of the seven water divisions of the State established by law. The State Engineer has exclusive jurisdiction to administer, distribute, and regulate the waters of the State. The water judges, on the other hand, have exclusive jurisdiction over "water matters" in the State district courts within their respective divisions. "Water matters" are those matters that are specified by statute to be heard by

## State Water Laws, Policies, and Administration

the water judges. They include determinations of amounts and priorities on applications for new water rights and conditional water rights, and determinations of rights with respect to proposed changes of water rights, plans for augmentation and biennial findings of due diligence, i. e., actual progress in the perfection of conditional rights.

The Ground Water Commission was created in 1965 by the Ground Water Management Act. The commission adjudicates water rights and regulates the use of designated ground water under special statutory rules within certain geographic areas defined by it on the basis of statutory criteria as designated ground water basins.

### Administration of Water Rights

The State Engineer is charged with the administration and distribution of the waters of the State. He has general supervisory control over measurement, record keeping, and distribution of the public waters of the State. Recent legislation has been passed concerning the powers of the Board of County Commissioners, and requiring land developers to submit to the board data, surveys, and other materials for the platting of subdivisions. Under this law, the county commissioners submit to the State Engineer the plans concerning decreed water rights, historical use, and estimated water yield to supply the proposed developments and conditions associated with said water supply. The State Engineer then renders an opinion as to whether or not the subdivision has an adequate water supply. Under this section of the law, the State Engineer and his planning division are reviewing water supply data for approximately three subdivisions per day.

As noted in connection with the territorial jurisdiction of water judges, the State has been divided into seven water divisions as shown on exhibit 2. The divisions correspond roughly with the major drainage basins of the State. A division engineer is appointed by the State Engineer for each division. The actual administration and distribution of water is conducted through the offices of the division engineer. Each division engineer may establish one or more field offices within his division and may appoint, as members of his staff, a water commissioner for each such office.

Unlike state engineers in other appropriation states using an administrative permit system, the Colorado State Engineer does not grant nor deny applications



# COLORADO WATER DIVISIONS

WATER DIVISION BOUNDARY -----

WATER DIVISION OFFICE } -----▲  
 WATER CLERK OFFICE }

## State Water Laws, Policies, and Administration

to appropriate water. The State Engineer is responsible for the issuance of a permit to construct a well. In order to issue a permit, he must determine that there is unappropriated water available and that the vested rights of others will not be materially injured by the issuance of the permit.

In Colorado, the rights of appropriators are determined in judicial proceedings in the district courts presided over by the water judges. The State Engineer and division engineers administer and distribute water to the owner of water rights in accordance with court adjudicated decrees for certain amounts of water and priorities in time for each right. Administration, distribution, and regulation of the use of water, both surface and underground, may be accomplished through the promulgation of rules and regulations or through the issuance of orders to individual owners and users of water rights. For example, division engineers must order discontinuance of any diversion of water not necessary for beneficial use or of any diversion of water causing material injury to water rights having senior priorities. They must also order the release from storage all water illegally or improperly stored. They administer the movement of water involved in a plan of augmentation or a water use project. They may order the installation and maintenance of meters, gages, and other measuring devices and may issue orders so that streams may be kept clear of unnecessary dams and obstructions that may impede the flow of water to water users. The State Engineer and division engineers may enforce their orders by applying through the Attorney General to the division water judge for injunctions.

Another important duty of the State Engineer and division engineers is the tabulation of decreed water rights. Before 1969, no system had been devised to keep statewide or division records of all the decreed priorities drawing water from the same or common sources of supply.

In 1969, the General Assembly passed the Water Right Determination and Administration Act of 1969, which authorized the tabulation of a priority list in numbered sequence of all decreed water rights taking water from the same or a common source of supply. Existing irrigation district subdivisions were abolished and the present seven water divisions were created. A "common source" was defined as including "all of those waters in a water division, either surface or underground, which if left in their natural state would join together to form a single natural watercourse prior to exit from the water division."

The division engineer of each division was directed not later than October 10, 1973, to prepare for administrative purposes a tabulation of all decreed water rights and conditional rights in his division in order of seniority, setting forth the priority and amount for each right as established by court decrees.

## State Water Laws, Policies, and Administration

Provision was made for publication of notice that the tabulation had been made and mailing of the tabulations for each division, as well as for filing objections to the manner in which a water rights is listed in a tabulation, and for necessary or advisable revisions of the tabulations. These tabulations were to serve as the basis for preparation of another set of tabulations to be completed by July 1, 1974, and for successive revisions of the tabulations every four years thereafter. The 1974 and succeeding tabulations are to be filed in court for adjudication by the water judge for each division. After adjudication, any person who wishes may protest either omissions from the tabulation or the manner of inclusion of water rights therein. The water judge is then directed to enter a judgment and decree either incorporating the tabulation of the division engineer as filed, or incorporating the tabulation with such modifications as the water judge may determine proper. Appellate review of the judgment and decree may be had as in other civil actions.

In preparing the 1974 and successive tabulations, division engineers are directed to include priorities awarded subsequent to those listed in the preceding tabulations, to incorporate any changes of water rights that have been approved, to note any changes from conditional water right to water right, to modify any water rights which the division engineer determines to have been abandoned in part, and to omit any water rights which the division engineer determines to have been totally abandoned. Nonuse of a water right for ten years or more, "when needed by the person entitled to use same," creates a rebuttable presumption of abandonment. Division engineers are to prepare separate priority lists as necessary so that only those water rights taking water from the same source and which are in a position to affect one another will be on the same priority list.

### Rule of Priority

The basic rule set forth in the State constitution is that between competing users of water, priority of appropriation gives the better right. Consequently, in time of shortage of water supply, the uses of persons whose appropriations are junior in date of initiation are curtailed to make water available to those whose appropriations are senior in time, and therefore, prior in right.

The State officials who are charged with administration and distribution of water--the State Engineer, the division engineers, and the water commissioners--are governed by the priorities for water rights established by judicial decrees entered in court adjudication proceedings for the determination of water rights.

## State Water Laws, Policies, and Administration

Through the Water Right Determination and Administration Act of 1969, the Colorado General Assembly changed the procedures for adjudicating water rights. A water clerk and a water judge were named for each of the seven water divisions. Water referees were appointed by the water judges to make investigations and initial rulings. Any person who wishes a determination of a water right, conditional water right, change of water right, plan of augmentation, or biennial finding of reasonable diligence in perfecting a conditional water right, may at any time file an application with the water clerk. Others may file statements of opposition. The application is referred to the referee who, after publication and investigation, may either rule on it or refer it back to the water judge. If the referee rules on the matter, the water judge thereafter may hear protests of the ruling and may confirm, modify, reverse, or reverse and remand the rulings. If the referee does not rule on the matter, but instead refers it back to the water judge, the water judge decides it. Appellate review of judgments and decrees of the water judge is provided for in the statutes.

Priorities awarded under proceedings established in the 1969 act are junior to all priorities awarded in decrees entered prior to June 7, 1969, the effective date of the act. Priority dates awarded for applications filed in each division during each calendar year are junior to all rights awarded in the division in any previous calendar year. An exception to the foregoing two rules was made for wells for which priorities had not been established or sought but for which an application was filed with the water clerk on or before July 1, 1972.

The 1969 adjudication procedure is applicable to new appropriations of all waters of the State except water in certain designated ground-water basins. In addition, stock watering, domestic, and certain other wells not exceeding 15 gallons per minute may, but are not required to be adjudicated.

The 1969 act places jurisdiction of all "water matters" exclusively with the water judges. "Water matters," in addition to adjudication of claims, include all matters involving beneficial application of water or priorities of appropriation, enforcement of orders of the State Engineer or division engineers, and validity of rules and regulations of the State Engineer. Other matters, such as irrigation runoff may be brought in a State district court having ordinary civil jurisdiction. Suits to enjoin use of water in designated ground-water basins is administered by the Colorado Ground Water Commission.

## State Water Laws, Policies, and Administration

### Preferences

The Colorado constitution provides that whenever the waters of any natural stream are not sufficient, "those using the waters for domestic purposes shall have preference over those claiming for any other purpose, and those using the water for agricultural purposes shall have preference over those using the same for manufacturing purposes." The courts have held that the preference is not self-executing, but must be exercised by condemnation. Through the condemnation proceedings the preferred user, or condemner, is required to make just compensation to the defendant whose right is invalidated even though it be senior in priority.

### Surface Waters

Surface waters of the State are all waters in or tributary to natural streams. The term includes continuous and intermittent flows. All waters, both surface and underground, originating in or flowing into the State are subject to appropriations and use under the law.

### Method of Acquiring Rights

The State constitution declares that the right to divert and put unappropriated water to beneficial use "shall never be denied." As a consequence, the method of appropriation historically has been to take unappropriated water and apply it to beneficial use. There has never been a requirement of making an application to an administrator for a permit to appropriate surface water.

The first essential of an appropriation is the actual diversion of water with intent to apply it to beneficial use. What constitutes an actual diversion may depend on the facts of the case, but ordinarily a physical diversion by a structure is implied. Some of the uses recognized as "beneficial" are domestic, agricultural, industrial, municipal, and recreational, although others have also been recognized.

The priority of a water right is determined in an adjudication proceeding before the water judge. An application for a determination is made, as explained above, to the division water clerk and may be referred to a referee or decided by the water judge. At a minimum, applications must set forth a legal description of the diversion, a description of the source of the water, the date of initiation of the appropriation, the amount of water claimed, and the use of the water. A priority date based on the date of initiation of appropriation is determined, but



the legal priority of the right--that is, the seniority by date as of which the right is entitled to divert--must be determined in relation to all other rights deriving water from a common source subject to the rule that no award of priority made in any calendar year can be senior to any award made for rights for which applications were filed in a previous calendar year.

Priorities may be obtained for conditional water rights in the same manner though, owing to a necessary lengthy period of development, no water under an application can be expected to be applied to beneficial use, even for many years, until after the initial application. In such cases, subject to the rule requiring due diligence in prosecuting a project to completion, the appropriation date is said to relate back from the date of completion to the earliest date on which a substantial act providing an open, physical demonstration thereof is joined with an intention to initiate an appropriation. An appropriator of a conditional right must show reasonable progress in completion of his project and in seeking to have his claim allowed. Showings of reasonable diligence are made by filing applications for findings thereof with the water clerk not later than June 1 of each even-numbered year. When perfected, a conditional right obtains the same priority date it would have received had the original proceedings in which the conditional decree was entered remained open until the final determination of the right.

In Colorado, any person owning a water right is entitled to a right-of-way through the lands which lie between the point of diversion and the point of use for the purpose of transporting water for beneficial use. The power of eminent domain is conferred on water rights owners for the purpose of acquiring such a right-of-way but no occupied land can be subjected to the burden of more than one ditch or other structure without the landowner's consent and the shortest and most direct route practicable must be selected.

### Nature and Limit of Rights

Ownership of unappropriated water in natural streams is in the public, subject to appropriation. The appropriative right is right to the use of the water, rather than outright ownership. This usage right of the appropriator is based on the condition that the use is for beneficial purposes and is usually characterized as an interest in real property, entitling the owner to all the advantages and profits therefrom. As such, it is a vested property right, protected by the constitution, until lost by abandonment. It is alienable and transferable, either as an appurtenance to land, or if severed from the land, separately and independently therefrom.

## State Water Laws, Policies, and Administration

The concept of beneficial use not only prescribes the types of uses for which water may be diverted, but also is the basis for determining or measuring the water right. No one may divert more water than he reasonably needs for his intended beneficial use. This amount may vary, of course, depending on the nature, place, and time of use, and different duties of water may be established for different water rights depending on the circumstances of each case.

Both direct flow rights to divert for immediate use and storage rights to divert and store for future use are recognized. Direct flow rights are measured in terms of rate of flow in cubic feet per second. A direct flow water right is a right to a certain rate of flow, usually determined by the capacity of the ditch or canal, for such periods of time as may reasonably be necessary to fulfill the appropriator's announced purpose at the time he makes his appropriation. In contrast, storage rights are quantified and measured by the capacity of the storage reservoir in acre-feet of water. A water right to store water entitles its owner to fill his reservoir to its adjudicated capacity once each year unless there is free water in the stream not demanded by other appropriators. A reservoir may secure decrees permitting more than one filling under some conditions, but such decrees must take their proper place in the priority schedules.

In addition to prescribing the types of use and amounts of water that may reasonably be diverted for each type, the beneficial use concept also imposes requirements of efficiency and conservation on water appropriators. Statute law defines beneficial use as use of "that amount of water that is reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the diversion is lawfully made." An appropriator may not direct, transport, and use more water than he actually needs. He must convey diverted water in a ditch or canal or store water in a reservoir without an unreasonable loss through seepage or evaporation. Supervision of diversion and conveyance practices is vested in the State Engineer and division engineers.

Appropriators are required to have a reasonable means of diversion. An appropriator may not command the whole flow of the stream merely to facilitate his taking the fraction of the whole flow to which he is entitled.

An appropriative right may not be enlarged or extended beyond the amount beneficially needed and used for the original undertaking for which priority was awarded. That is, a priority for a water right will be enforced as against junior appropriators only to supply that amount of water to the senior priority holder which he has historically needed and used.

## State Water Laws, Policies, and Administration

Appropriators are entitled to be supplied in the order of their priorities. The most senior appropriator is entitled to be supplied without interference to the full extent of his original appropriation, whether his right is for direct use or for storage for future use, even when there is insufficient water in the source of common supply to meet the demands of all other junior appropriators. The uses of junior appropriators, whether they divert from the main stream, a tributary stream, or from a ground-water source, may be curtailed, if necessary, at a senior appropriator's request, by the responsible State water officials to satisfy the senior appropriator's lawful demand for water, subject to the so-called "futile call" rule that "no reduction of any lawful diversion because of the operation of the priority system shall be permitted unless such reduction would increase the amount of water available to and required by water rights having senior priorities."

Junior appropriators have a right to have stream conditions continued as they existed at the time of their appropriations. Thus, no appropriator may change his manner of diversion and use of water in any way that would alter stream conditions to the injury of appropriators who are junior to him and who are entitled to rely on the continuance of such conditions.

In Colorado, water rights may be sold or transferred freely, subject to certain rules and principles. A change in ownership by sale of a water right, whether or not the right is appurtenant to land, creates no serious problems peculiar to water rights law and is merely the subject of sales, conveyancing, and recording laws. Many changes in ownership, however, are also the occasions of a "change of water right," which is broadly defined to include changes in the type, place or time of use, and changes in point of diversion or storage.

A change of water right may be accomplished only with approval of the water judge. An application must be filed with the water clerk. The application must set forth a description of the water right for which a change is sought, its amount and priority, and a description of the proposed change. The proposed change must be approved if it will not injuriously affect other vested rights. If the proposed change would injure other rights, it may be approved subject to terms and conditions proposed either by the applicant or by any person opposed to the application. The terms and conditions may include limitations on use of the water subject to the change, relinquishment of part of the decree for which change is sought or of other decrees used by the applicant, time limitations on diversion of water, and such other conditions as are necessary to protect vested rights. Approval may be conditioned on subsequent reconsideration by the water judge on the question of injury to vested rights, or on any other provision which the water judge deems proper in determining the rights and interests of persons involved.

## State Water Laws, Policies, and Administration

In a recent case, the Colorado Supreme Court distinguished a change of point of return of irrigation or municipal effluent from other changes of water rights, holding that other appropriators had no vested rights to the maintenance by Denver of its original point of return of sewage effluent in the South Platte River.

Colorado law also authorized practices of substitution or exchange of water in which individuals or private or public entities may provide substituted supplies of water to appropriators senior to them to satisfy the rights of the senior. In return, the suppliers may then take and use amounts of water equivalent to the amounts supplied to the senior appropriator. A practice of substitution or exchange may constitute an appropriative right and may be adjudicated as any other right.

Colorado has no forfeiture statute. Water rights may be lost in whole or in part by abandonment. Abandonment has been defined by statute as "the termination of a water right in whole or in part as a result of the intent of the owner thereof to discontinue permanently the use of all or part of the water available thereunder." Abandonment of a conditional water right occurs as a result of failure to develop the proposed appropriation with reasonable diligence.

The Water Right Determination and Administration Act of 1969 provides for an administrative determination of abandonment by the division engineer when he prepares biennial water rights tabulations. These tabulations are routinely subjected to judicial scrutiny by the water judge at the times when they are presented pursuant to law for adjudication. For purposes of this procedure, nonuse of a water right for ten years or more creates a rebuttable presumption of abandonment.

Water rights may also be lost through adverse use. Adverse use for the statutory period of 18 years or use under claim and color of title coupled with payment of assessed taxes for a statutory period of seven years may ripen into a water right. Application of the doctrine of adverse use to appropriate rights is sharply limited by the rule that water not needed by an appropriator for beneficial use by him belongs to other appropriators on the stream and is thus not available to be subjected to adverse use. Similarly, reservoir seepage that is allowed to return to the stream is public water available for appropriation and is not subject to use adverse to the owner of the reservoir.

As noted above, Colorado law recognizes and makes provision for appropriation by storage of water for future application to beneficial use under the same system of priorities as that by which direct flow rights are administered.

## State Water Laws, Policies, and Administration

Reservoirs to store water may be constructed either in the channel or bed of a natural stream or elsewhere. The State Engineer's approval of plans for construction and completion of reservoirs is required by law. The State Engineer heads the Division of Water Resources. Reservoir owners are held strictly liable for damages arising from leakage, overflow, or floods caused by the breaking of embankments of their reservoirs.

Spring water, like other water, is subject to appropriation and use. The Colorado Supreme Court has thus upheld an injunction against a landowner preventing his interference with the appropriative use of spring water tributary to a natural stream even though the water arose on the landowner's land and a statute specifically gives landowners the right to use spring water arising on their lands. Landowners, too, must acquire an appropriative right to use tributary spring water. Spring water that is not tributary to a natural stream may also be appropriated, in which case the priorities are determined just among the users of the spring water rather than among all water users in the drainage basin.

Rainwater and other water following no defined course or channel is appropriable in Colorado as part of the waters of natural streams of the State "whether found on the surface or underground."

### Ground Water

The State constitution applies the appropriation doctrine to the unappropriated waters of any natural stream. The treatment of ground water in the State has historically involved the characterization of the ground water involved as water of, i. e., tributary to, a natural stream or as water not of, or tributary to, a natural stream. In general, water tributary to a natural stream has been treated as water subject to appropriation. The status of water not tributary to a natural stream has been in doubt until recent times when the enactment of the 1965 Ground Water Management Act authorized the creation of "designated ground water" basins, within which designated ground water, by definition, would appear to include all water not tributary to any natural stream or at least not in practice a part of the source of supply of appropriators from any natural stream. Designated ground water is administered according to a modified version of the appropriation doctrine under the 1965 act.

Tributary Ground Water

Tributary ground water includes what is sometimes called seepage, underflow, or percolating water, if that water would eventually become a part of a natural stream. A natural stream's waters include water "in the unconsolidated alluvial aquifer of sand, gravel, and other sedimentary materials, and all other waters hydraulically connected thereto which can influence the rate or direction of movement of the water in that alluvial aquifer or natural stream."

Tributary ground water is subject to the 1969 Water Right Determination and Administration Act. This act specifically recognized that previous and then existing laws had given inadequate attention to the development and use of underground waters of the State. In particular, surface water diversions and wells had usually been administered separately in the State. Few wells had been adjudicated. Though most wells were relatively junior to surface appropriations, little effort had been made to devise any plan to regulate their use even when their proliferation and use appeared to threaten interference with the flow of surface streams. The 1969 act declared it the policy of the State to integrate the appropriation, use, and administration of underground water with the use of surface water in such a way as to maximize the beneficial use of all the waters of the State.

The 1969 act made clear that, with certain exemptions, water rights for wells would have to be adjudicated in order to be given priority as of their actual dates of initiation and provided a grace period within which unadjudicated wells might be given such a priority date. The act also enabled a surface appropriator to secure the right to have a well so situated as to draw water from the same stream system made an alternate point of diversion to the surface right, and required the use of such an approved alternate point of diversion, where it exists, before diversions under junior rights might be ordered discontinued to make water available to its owner. A 1971 amendment to the act authorized the State Engineer to promulgate separate rules and regulations of wells in different water divisions, stream basins, and different aquifers having separate and different hydraulic characteristics. The State Engineer has promulgated rules and regulations for the use of wells diverting water tributary to both the Arkansas and South Platte Rivers. The Colorado Supreme Court has upheld the rules and regulations for the South Platte River Basin in the case of Kuiper v. Well Owners Conservation Association.

Nontributary Ground Water

The Colorado Ground Water Management Act makes all "designated ground waters" in the State subject to appropriation as modified by the act and in the manner defined in the act. Designated ground water generally is nontributary ground water within the geographic boundaries of a ground water basin, and is so designated by the State Ground Water Commission after certain procedures and upon the basis of certain criteria listed in the act. From time to time, as adequate factual data become available and after publication of notice and hearings, the commission determines designated ground water basins after making findings on the names and boundaries of aquifers within a basin, the estimated annual rate of recharge, the estimated use of ground water in the area, and the number of users withdrawing water during the 15-year period preceding the determination. After designation of a ground water basin, any person desiring to appropriate ground water therein must apply to the commission for a permit to do so.

If the proposed appropriation will not unreasonably impair existing rights or create unreasonable waste, the commission grants the permit subject to such reasonable conditions and limitations as the commission may specify. In determining the effect of a proposed appropriation on existing rights, the commission must consider the area and geologic conditions, the average annual yield and recharge rate of the supply, the priority and quantity of existing claims, the proposed method of use, and other matters appropriate to such questions. The commission may formulate appropriate tests for determining what may constitute unreasonable lowering of the water level beyond reasonable economic limits of withdrawal or use. In one designated basin, a 3-mile radius test by which the commission denied new applications was upheld by the courts. There, pumping of wells within a 3-mile radius of a proposed well was already sufficient to deplete available water by 40 percent over 25 years time. The court held that the commission was justified in using the test in concluding there was no longer any unappropriated water available.

Although priority of claims within designated ground water basins is determined by priority of appropriation, the procedures are different from those for determining the priority of claims for surface water appropriations and of appropriations of ground water tributary to a natural stream. Priorities of appropriation in designated ground water basins are determined, after hearing, by the State Ground Water Commission. Appropriations based on actual taking and use of ground water before the effective date of the 1965 Ground Water Management Act are related back to the date of original use. Claims initiated after the effective date of the act are dated from the filing of an application with the commission.

## State Water Laws, Policies, and Administration

In summary, the administration and enforcement of the Ground Water Management Act is placed with the State Ground Water Commission, locally formed management districts, and the State Engineer, each of which are vested with certain regulatory or administrative powers and functions.

### COMPACTS AND INTERSTATE DECREES

Geographically, Colorado occupies a unique position within the continental boundaries of the United States. With few exceptions, waters originating in other states are not available for use in Colorado. On the other hand, all the surface flows of the State, except natural losses, are available by gravity to 18 other states. This situation itself would not be significant if it were not for the fact that by court decision and interstate compact, the State is compelled to deliver about 50 percent of the available surface water to other states.

Colorado is a signatory state to nine interstate water compacts. It is also an involuntary party to the Mexican Water Treaty. Apportionment of the surface waters of the North Platte and Laramie Rivers is governed by United States Supreme Court Decrees.

#### Colorado River Compact, 1922

Waters of the Colorado River were apportioned by this compact between the Upper and Lower Basin states. The Upper Basin includes those parts of the States of Arizona, Colorado, New Mexico, Utah, and Wyoming within and from which waters naturally drain into the Colorado River system above Lee Ferry, and also all parts of said states located without the drainage area of the Colorado River system which are now or shall hereafter be beneficially served by waters diverted from the system above Lee Ferry. The Lower Basin means those parts of the States of Arizona, California, Nevada, New Mexico, and Utah within and from which waters naturally drain into the Colorado River system below Lee Ferry, and also all parts of said states located without the drainage area of the Colorado River system which are now or shall hereafter be beneficially served by water diverted from the system below Lee Ferry. The compact allocated 7,500,000 acre-feet of consumptive use per annum to each of the two basins, with the Upper Basin required to deliver 75 million acre-feet of water during any ten-consecutive-year period reckoned in continuing progressive series.



## State Water Laws, Policies, and Administration

The compact specified that if the United States recognized any rights by the United States of Mexico in the Colorado River, the water would be supplied from the waters which are surplus to the allocations made to the Upper and Lower Basins. If this surplus water is insufficient, then the burden of fulfilling the deficiencies will be equally borne by the Upper and Lower Basin states.

The Rio Grande, Colorado, and Tijuana Treaty of 1945 between the United States and Mexico guaranteed delivery of 1,500,000 acre-feet of water per year to Mexico from the Colorado River.

Subsequent legislation, specifically Public Law 90-537 (Colorado River Basin Project Act), approved September 30, 1968, declared that the satisfaction of the requirements of the Mexican Water Treaty from the Colorado River constitutes a national obligation which shall be the first obligation of any water augmentation project planned pursuant to the act and authorized by Congress. It relieves both the Upper and Lower Basin states from the Colorado River Compact requirement covering deliveries of water to Mexico at such time as the Secretary of the Interior determines and proclaims that means are available and in operation for delivering annually into the Colorado River system sufficient water to satisfy the Mexican Water Treaty requirements together with associated losses. This relief is contingent upon the authorization and operation of a plan to augment the Colorado River water supply by 2-1/2 million acre-feet annually.

### La Plata River Compact, 1922

The States of Colorado and New Mexico, with the consent of Congress, entered into this compact for the division of the waters of the La Plata River.

Between the period of the first day of December and the 15th day of February of each year, each state shall have unrestricted right to the use of water flowing within its boundaries. Between the 15th day of February and the first day of December, each state shall have unrestricted use of waters within its boundaries when the mean daily flow at the interstate station is 100 cubic feet per second or more. During this period, if the flow at the interstate station drops below 100 cubic feet per second, Colorado must deliver one-half of the mean flow at the Hesperus Station the following day, but delivery need not exceed 100 cubic feet per second.

## State Water Laws, Policies, and Administration

If, in the opinion of the respective state engineers, the greatest beneficial use of water at periods of low flow can be accomplished by alternating the use of the entire flow, the water may also be rotated.

### South Platte River Compact, 1923

Division of the waters of the South Platte River is accomplished by this compact between Colorado and Nebraska, with consent of the United States Congress.

From the 15th day of October until April 1, Colorado has full use of the water of the South Platte River within the boundaries of the State except that Nebraska is entitled to divert surplus waters if the proposed Perkins County Canal is constructed.

From the first day of April to the 15th day of October, if the mean flow at the interstate station is less than 120 cubic feet per second, Colorado shall not permit diversions from the lower section of the river to supply appropriators with dates of priority subsequent to June 14, 1897.

### Rio Grande Compact, 1938

This compact entered into by the States of Colorado, New Mexico, and Texas, with consent of the United States Congress apportions the waters of the Rio Grande Basin. Colorado's commitment to deliver water at the New Mexico state line is based on runoff measured at four index stations located in the headwaters area. The compact provides schedules of required deliveries, for accrual of debits and credits in deliveries and control of storage under certain circumstances. Project storage is the combined capacity of Elephant Butte and Caballo Reservoirs.

In the event that works are constructed after 1937 for the purpose of delivering water into the Rio Grande from the Closed Basin, Colorado shall not be credited with the amount of such water delivered, unless the proportion of sodium ions shall be less than 45 percent of the total positive ions in that water when the total dissolved solids in such waters exceeds 350 parts per million.

State Water Laws, Policies, and Administration

Republican River Compact, 1942

Colorado, Kansas, and Nebraska with the consent of the United States Congress, negotiated this compact to divide the waters of the Republican River and its tributaries.

The compact specified the computed average annual virgin water supply in the various tributaries and mainstream of the Republican River on which is based the allocation of water to the three states. Should the future computed virgin flow vary more than 10 percent from the average, allocations will be adjusted according to the relative proportion that annual computed flow bears to the average computed flows.

The State of Colorado is allocated 54,100 acre-feet of water annually based on the average computed virgin flow from the following streams and in specified amounts:

North Fork of the Republican River	10,000 acre-feet
Arikaree River	15,400 acre-feet
South Fork of the Republican River	25,400 acre-feet
Beaver Creek	3,300 acre-feet
Frenchman Creek	Entire flow in Colorado
Red Willow Creek	Entire flow in Colorado

Upper Colorado River Basin Compact, 1948

This compact between the States of Arizona, Colorado, New Mexico, Utah, and Wyoming, with the consent of the United States Congress, apportions waters of the Upper Colorado River Basin which had been allocated to the Upper Basin states by the Colorado River Compact of 1922.

Of the Upper Basin allocations, the State of Arizona was allocated 50,000 acre-feet, and the other states were allocated the following percentages of the remainder:

Colorado	51.75 percent
New Mexico	11.25 percent
Utah	23.00 percent
Wyoming	14.00 percent

## State Water Laws, Policies, and Administration

The compact makes provision for the diversion and measurement of uses of certain tributaries of the Colorado River in the Upper Basin which serve as a source of water for two signatory states. Tributaries dealt with include:

Little Snake River - Colorado and Wyoming  
Henry's Fork - Utah and Wyoming  
Yampa River - Colorado and Utah  
San Juan River - Colorado and New Mexico  
La Plata River - Colorado and New Mexico

### Arkansas River Compact, 1948

This compact between the States of Colorado and Kansas, with the consent of the United States Congress, provides operating criteria for the John Martin Reservoir constructed by the Corps of Engineers in 1943.

During the winter storage season (November 1 - March 31) Colorado may demand releases of water equivalent to the river flow but not to exceed 100 cubic feet per second.

During the summer storage season (April 1 - October 31) Colorado may demand releases of water equivalent to the river flow up to 500 cubic feet per second. Kansas may demand releases of water equivalent to the portion of the river flow between 500 and 750 cubic feet per second.

During the summer storage season, water being held in storage may be released upon demand by both states concurrently or separately in amounts dependent upon the magnitude of the storage. With concurrent demand, Colorado is entitled to 60 percent of the release and Kansas 40 percent.

### Laramie River Litigation - Nebraska vs. Wyoming, 353 U.S. 953, 1957

The U.S. Supreme Court decision in this case allocated to Colorado users the right to divert from the Laramie River and its tributaries 49,375 acre-feet of water in each calendar year. Only 29,500 acre-feet of such water could be used within the drainage basins of the Laramie River and 19,875 acre-feet could be diverted outside the Laramie River Basin.

## State Water Laws, Policies, and Administration

Wyoming water users have the right to use all water remaining in the Laramie River and its tributaries after Colorado's diversions.

### North Platte River Litigation - Nebraska vs. Wyoming, 325 U.S. 589, 1954

The U.S. Supreme Court decision divided the water of the North Platte River between the States of Colorado, Wyoming, and Nebraska. Under the division, Colorado may irrigate up to 145,000 acres of land in Jackson County. Colorado, during any one irrigation season may store up to 17,000 acre-feet of water for irrigation purposes during the water year. Colorado also may export up to 60,000 acre-feet of water in any period of ten consecutive years from the basin of the North Platte River.

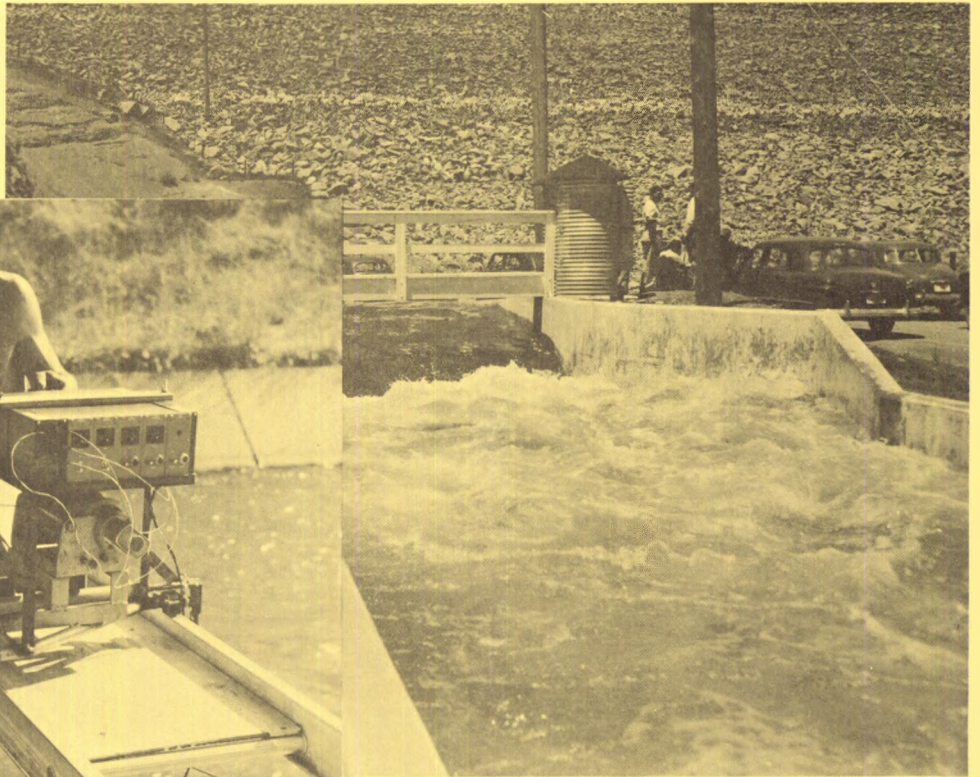
### Costilla Creek Compact, 1963

This compact apportions the waters of Costilla Creek between Colorado and New Mexico. Costilla Creek, a tributary of the Rio Grande, begins on the west slope of the Sangre de Cristo Range and crosses the State boundary three times above its confluence with the Rio Grande in New Mexico. Article IV of the compact provides for the apportionment of the natural flow of Costilla Creek, the allocation of water from Costilla Reservoir and Eastdale Reservoir.

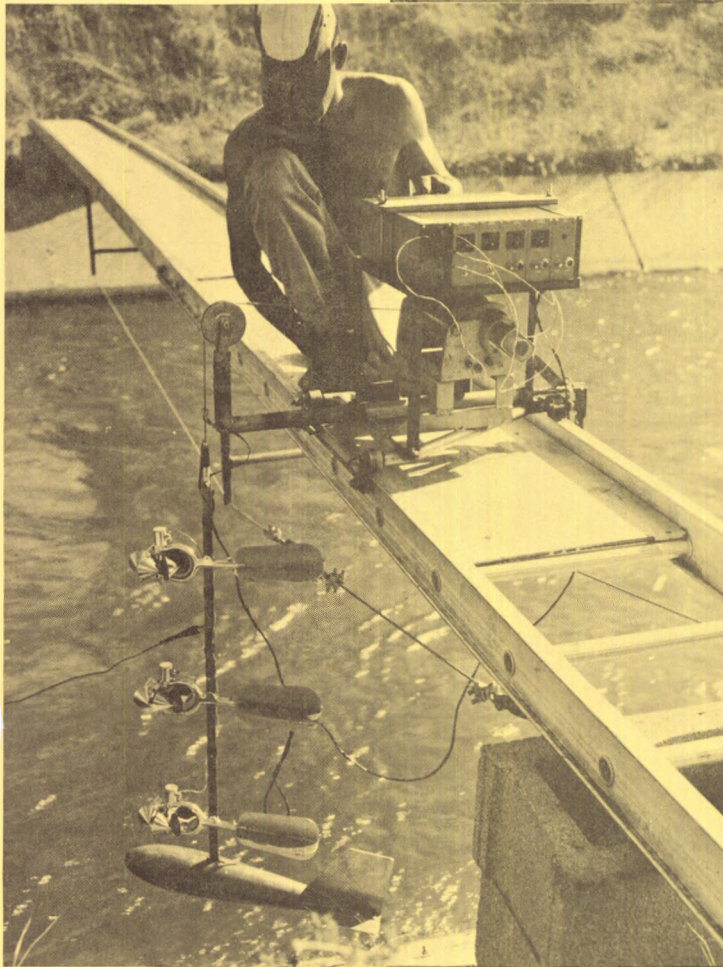
### Animas-La Plata Project Compact, 1963

The Animas-La Plata Project Compact has been entered into to clarify the relationships between Colorado and New Mexico water users on the Animas-La Plata Project authorized by Public Law 90-537.

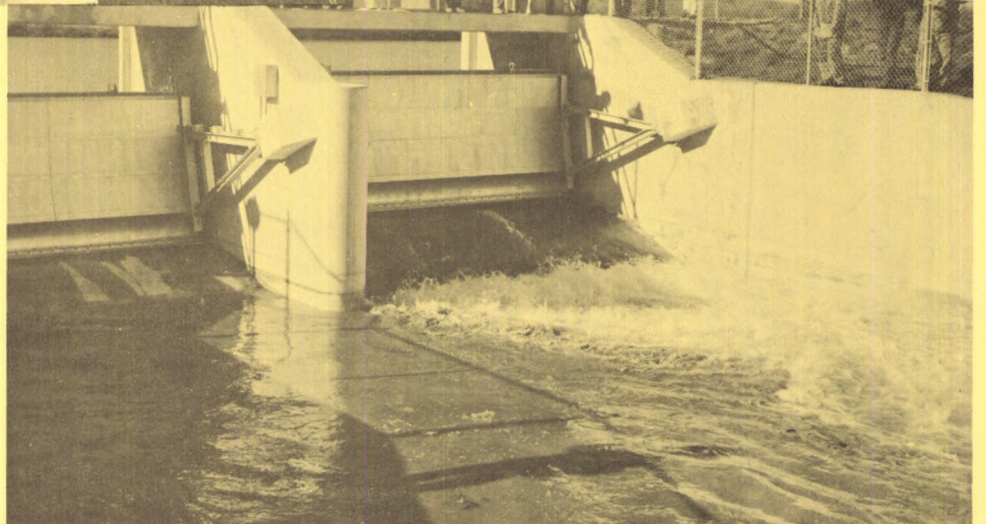
The compact sets the priority of the New Mexico water users of the Animas-La Plata Project water equal to the priority of the Colorado water users who take water from the same project.



WATER MEASUREMENT



WATER RECORDS



WATER CONTROL

PART III

STATE INSTITUTIONAL ORGANIZATIONS

## PART III--COLORADO WATER RESOURCE AGENCIES

### DEPARTMENT OF NATURAL RESOURCES

In 1957, Colorado took official action to meet the need for an overall natural resources policy and a coordinated State resource program. The General Assembly created a new department in the State government, the Department of Natural Resources, and charged it with the administration of programs dealing with water, forests, parks, minerals, and wildlife and directed it to develop a State resource policy. The present organization of this department is diagrammed on exhibit 3.

Prior to 1968, the Executive Branch of the State government included many separate departments, bureaus and commissions, each reporting directly to the Governor. Earlier, over a period of years, a legislative interim committee had studied this unwieldy organization for the purpose of streamlining governmental processes, coordinating programs, and establishing greater efficiency in agency services to the public. From its studies, the committee developed a reorganizational proposal which was presented to the voters in the form of a constitutional amendment. The voters approved the proposal and on July 1, 1968, all of the various State agencies were reorganized under 17 major executive departments.

Under this reorganization, the Department of Natural Resources was structured around five major resource categories--minerals, land, water, fish and wildlife, and parks. This setup grouped the State's major resource agencies into one unit dedicated to coordinate all natural resource activities and to encourage wide use and full development of Colorado's natural resources consistent with realistic conservation principles and in harmony with the environment.

#### Colorado Water Conservation Board

The board, created by the General Assembly in 1937, is an inventorying, investigational, promotional, and development and coordinating agency. General functions of the board are (1) to formulate and further a continuing State policy with respect to water development programs and problems, (2) to promote the conservation of the waters of the State in order to secure the greatest utilization of such water, minimum waste, and the prevention of floods, (3) to conduct

## Colorado Water Resource Agencies

investigations as are necessary in the interest of the State's water resource development and to coordinate water related investigations and studies conducted by Federal and other State agencies, (4) to assist various types of districts, mutual companies, and other agencies to obtain financing, but without pledging the credit of the State, (5) investigate and determine the nature and extent of the ground-water resources of the State, (6) to enter into contracts for the construction of projects which as authorized by the General Assembly will conserve and utilize for the best advantage of the people of the State the water and power resources of Colorado, including projects beyond the boundaries of the State located on interstate waters.

The State, by and through the board, has assented to the provisions of the Federal Water Resources Planning Act of 1965. Under this legislation, the board is authorized, empowered, and directed to perform such acts as may be necessary to the conduct and establishment of a comprehensive water planning program.

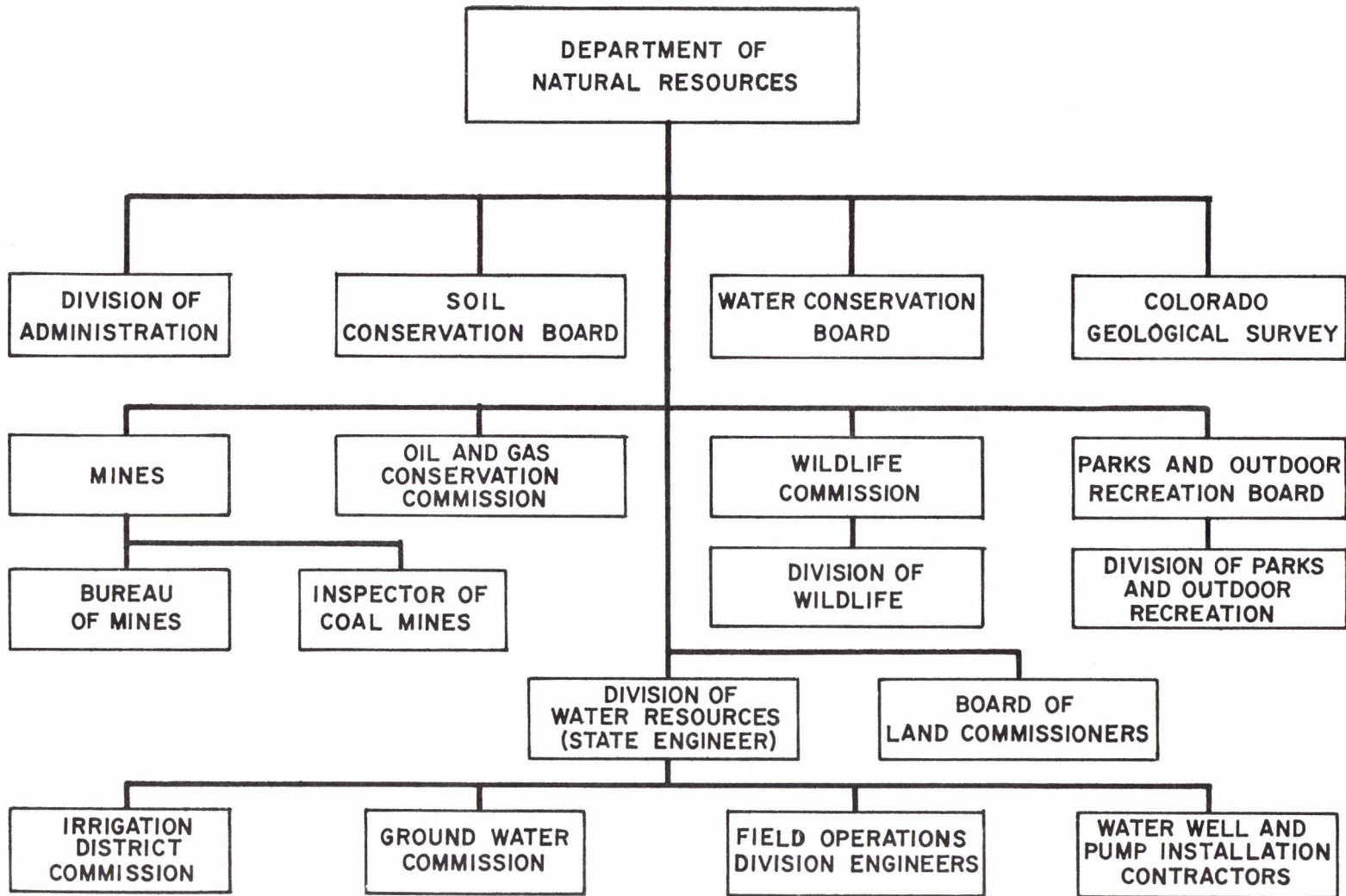
### Division of Water Resources

The division, which is headed by the State Engineer, administers the public waters of the State in accordance with legislative directives, U.S. Supreme Court decisions, and interstate compacts. It governs the use of both surface and sub-surface waters, supervises design, construction, maintenance, and safe water storage control in all reservoir dams over ten feet in height, and measures water and collects information related thereto. The division also administers five interstate compacts and two decrees involving interstate streams.

The Water Right Determination and Administration Act of 1969 made significant changes in the way water in Colorado is administered and distributed. In lieu of previous legislation which provided for water right determination within water districts, the 1969 act created seven water divisions based on territorial boundaries of the major watersheds. Stemming from these and other changes, and except in matters of water pollution control, the State Engineer and the division engineers shall administer, distribute, and regulate the waters of the State.



COLORADO DEPARTMENT OF NATURAL RESOURCES



Ground Water Commission

The Ground Water Commission consists of 12 members, nine appointed by the Governor and three ex officio. The Executive Director, Department of Natural Resources, the State Engineer, and the Director of the Water Conservation Board are ex officio voting members. The State Engineer is the Executive Director of the Ground Water Commission. He provides the staff, and is responsible for carrying out and enforcing the decisions and orders of the commission.

The commission defines "Designated Ground Water Basins," administers the water resources found therein according to established water rights, and creates ground-water management districts.

The commission receives applications to appropriate ground water within the designated ground-water basins, holds hearings, and rules on the applications. If favorable, the commission orders the State Engineer to issue a conditional permit. Following issuance of the conditional decree, the applicant must fulfill the requirements for beneficial use and must submit proof. If the proof is acceptable, a final permit is issued with appropriate limitations and conditions.

In the enforcement and administration of the law, the Ground Water Commission is empowered and directed to:

1. Establish reasonable levels to which the ground-water table may be lowered.
2. Issue permits for replacement wells.
3. Confer and consult with pertinent water management district boards on matters relating to said districts.
4. Conduct hearings after issuing notices and provide for appeals from decisions of the commission.

Ground-water management districts are formed within designated ground-water basins to provide for local management. The State Engineer need not become involved in such districts except that he must issue "permits to construct wells" or deny the applications in conformance with the law.

## Colorado Water Resource Agencies

### Division of Wildlife

This division is concerned primarily with conservation, preservation, and management of the State's wildlife resources, and is largely self-supporting since it obtains the major portion of its operating funds from the sale of hunting and fishing licenses. It enforces the State game and fish laws; conducts research on all phases of life, environments, and diseases of fish, game, predators, fur bearers, and all other forms of wildlife; judges and pays game damage claims; and conducts an extensive educational program on wildlife conservation.

### Division of Parks and Outdoor Recreation

This division administers boating laws and licensing; plans and establishes State parks and campgrounds; develops, operates, and maintains recreation areas; administers Federal cooperative programs for parks and recreation projects of municipalities and governmental subdivisions.

### Weather Control

Legislation concerning weather control declares that the State claims the right to all moisture suspended in the atmosphere which would fall so as to become a part of the natural streams of Colorado for use in accordance with its laws, and also the prior right to increase precipitation by artificial means for use in Colorado without material damage to others.

The Executive Director of the Department of Natural Resources shall establish rules, regulations, and practices necessary to effectuate the program and to issue all licenses for weather modification programs.

Parties conducting any weather control or cloud modification operation or attempting to artificially produce precipitation in Colorado shall report the place, method, type, and material use, purpose, and area to be benefited of, by, or through such operation. Such reports shall be submitted at such time or times and in the manner and form as may be required by regulations.

DEPARTMENT OF HEALTH--WATER QUALITY CONTROL DIVISION

The 1973 Colorado General Assembly adopted the State Water Quality Control Act. Section 66-28-703 of this act provides that the division shall establish and conduct a continuing planning process for coordinated waste treatment management as required by amendments of the 1972 Federal Water Pollution Control Act.

The objective of the water quality planning process is to provide for an orderly and coordinated effort of water quality management in Colorado. Three types of management plans will be developed in the planning process. These include basin plans, areawide plans, and facilities plans.

IRRIGATION DISTRICTS

Early water resource development in Colorado was primarily accomplished by private local interests of each community. Simple projects to develop local supplies were constructed first. Small distribution organizations were founded to facilitate distribution of the water from these early projects. In general, these organizations took the form of private mutual or carrier ditch companies formed for the express purpose of furnishing water only to the local shareholders.

Associated with the State's growth was an expanding need for water resource development. Fulfilling this need required more complex and costly water resource projects. Consequently, the smaller operating and distribution organizations existing at that time became plagued by their inability to finance extensive water supply and distribution systems. Revenues from the water users and private capital were insufficient to support such projects. Therefore, organizations with greater financing capabilities were needed to cope with these financial problems.

An outgrowth of the need for greater financing capability was the creation of irrigation districts which have the advantage of being able to obtain revenue from a broad tax base. To create an irrigation district, a majority of landowners in the proposed district may file a petition with the respective county commissioners, force a vote, and if the proposal is approved by a majority of the landowners therein, form the district. This "public corporation" then may contract with the Federal Government, exercise the power of eminent domain, issue bonds, and

tax the landowners with irrigable land. These latter two powers enable irrigation districts to secure financing for the construction and maintenance of major irrigation systems.

### WATER CONSERVANCY DISTRICTS

Even with the larger financial base, there still remained one great weakness in the irrigation district law. In actual development, the easy and simple projects were completed first; thereafter, the sources of water became further removed, which multiplied the costs of storing and delivering the water. In most irrigation districts, the largest taxpayers were contributing nothing to the cost of the works even though the irrigation development plainly benefited the entire community. Thus, the irrigation districts had not provided a broad enough tax base inasmuch as the entire financial burden was carried by the irrigated lands. The outgrowth of this inequity was the conservancy district law.

Water conservancy districts are organized by prescribed procedures in the Colorado district courts. Thereafter, they remain under the jurisdiction of the proper court throughout their existence. The boards of directors are appointed by the court, unless at least 15 percent of the qualified taxpayers of the district request the right to designate directors by election.

Water conservancy districts have the power, among others, to acquire water rights, construct and operate facilities, condemn private property, contract with the Federal Government for construction, operation and maintenance of diversion and storage facilities, and to adopt plans and specifications for the works for which the district was organized. A district possesses the power to make special assessments and to levy an ad valorem tax on all property within the district.

There are 36 water conservancy districts in Colorado which are planning for projects or have entered into contracts with the United States for repayment of the nonfederal participation costs. These districts are listed in table 1.

Colorado Water Resource Agencies

Table 1--Water Conservancy Districts

<u>District</u>	<u>Date of organization</u>	<u>River Basin</u>	<u>County</u>
Basalt	4/14/64	Colorado	Garfield, Eagle, Pitkin
Battlement Mesa	5/ 7/62	Colorado	Mesa
Bluestone	1/14/63	Colorado	Garfield, Mesa
Bostwick Park	9/ 6/61	Colorado	Montrose, Gunnison
Central Colorado	9/15/65	Missouri	Adams, Weld
Collbran	10/26/55	Colorado	Mesa
Conejos	9/30/40	Rio Grande	Conejos
Crawford	5/31/57	Colorado	Delta, Montrose, Gunnison
Dolores	11/20/61	Colorado	Montezuma, Dolores
Florida	8/--/48	Colorado	La Plata
Fruitland Mesa	8/18/60	Colorado	Delta, Montrose, Gunnison
Grand Mesa	4/10/61	Colorado	Delta
Great Northern	12/20/63	Colorado	Moffat, Routt
Jackson County	11/ 7/61	Missouri	Jackson
Juniper	6/27/66	Colorado	Moffat
La Plata	4/17/44	Colorado	La Plata
Lower South Platte	5/ 6/64	Missouri	Logan, Morgan, Sedgwick, Washington
Mancos	7/20/42	Colorado	Montezuma
Middle Park	8/21/50	Colorado	Grand, Summit
Northern Colorado	9/28/37	Missouri	Boulder, Larimer, Weld, Morgan, Logan, Sedgwick, Washington
North Fork	3/17/41	Colorado	Delta, Gunnison
Ouray	7/25/57	Colorado	Montrose, Ouray
Pot Hook	6/23/60	Colorado	Moffat
Purgatoire River	12/ 2/60	Arkansas	Las Animas
San Luis Valley	11/14/49	Rio Grande	Alamosa, Rio Grande, Saguache
San Miguel	9/--/57	Colorado	San Miguel, Montrose
Silt	10/ 7/57	Colorado	Garfield
Southeastern Colorado	4/29/58	Arkansas	Chaffee, Fremont, El Paso, Pueblo, Otero, Bent, Kiowa, Prowers, Crowley
St. Vrain and Left Hand	4/19/71	Missouri	Boulder, Larimer, Weld
Tri-County	9/20/57	Colorado	Delta, Montrose, Ouray
Upper Gunnison River	7/ 9/59	Colorado	Gunnison, Saguache, Hinsdale
Upper South Platte	10/17/55	Missouri	Park, Teller, Douglas, Jefferson, Clear Creek
Upper Yampa	3/--/66	Colorado	Routt, Moffat
Ute	4/ 4/56	Colorado	Mesa
West Divide	4/22/64	Colorado	Garfield, Pitkin, Mesa
Yellow Jacket	9/29/59	Colorado	Rio Blanco, Moffat, Garfield

## Colorado Water Resource Agencies

### WATER CONSERVATION DISTRICTS

Three water conservation districts have been organized in Colorado. They are--(1) Colorado River Water Conservation District, (2) Southwestern Water Conservation District, and (3) Rio Grande Water Conservation District. The water conservation districts are independent of the Colorado Water Conservation Board, but they do work with and make recommendations to the board. Other activities include the promotion of water resource developments located within their respective boundaries, and they participate or take the lead in resolving water resource problems that are regional in nature or if more than a single water conservancy district is involved. A general description of each water conservation district follows:

#### Colorado River Water Conservation District

Concurrently with the creation of the Colorado Water Conservation Board in 1937, the Colorado General Assembly authorized the organization of the Colorado River Water Conservation District. This district was created for the purpose of dealing specifically with the waters of the Colorado River.

The district embraces 15 counties lying within the main Colorado River Basin. The board of directors is comprised of one representative from each county within the district, appointed by the board of county commissioners of each county. The necessary operating revenues are derived from ad valorem taxes imposed upon the real and personal property of the district.

The district board determines policy within its jurisdiction and lends active assistance to the development of water resource projects, including detailed engineering and legal studies. Actual contractual relations and project operation have to date been reserved to local conservancy district boards, although the conservation district has broad general powers in these fields.

#### Southwestern Water Conservation District

The State statutes creating this district are for all practical purposes identical with those creating the Colorado River Water Conservation District. The Southwestern District, organized in 1941, embraces the remainder of the

## Colorado Water Resource Agencies

Colorado River Basin in Colorado not included within the boundaries of the Colorado River District, namely, the San Juan and Dolores River Basins. The San Juan and Dolores Rivers enter the Colorado River at widely separated points in the State of Utah.

The district includes the counties of San Miguel, Dolores, Montezuma, San Juan, La Plata, Hinsdale (part), Montrose (part), and Mineral (part). Each county is represented by one member on the board of directors, appointed by the county commissioners of each county. Except for the geographical division, the board functions in the same manner as does the board of the Colorado River Water Conservation District.

The problems of the two districts are somewhat similar since all waters of the Colorado River and its tributaries are governed by the terms of the Colorado River Compact and the Upper Colorado River Compact.

### Rio Grande Water Conservation District

Irrigation in the San Luis Valley was extensively developed in the 1880-1890 decade. From this period until the 1930's, serious interstate and international differences arose concerning the waters of the Rio Grande River and its tributaries. In 1929, a temporary compact between Colorado, New Mexico, and Texas was consummated. Finally, in 1939, the Rio Grande Compact was entered into by the aforementioned states and approved by the United States Congress.

In 1966, the States of Texas and New Mexico brought suit against Colorado over the delivery of water under the terms of the Rio Grande Compact. At that time, San Luis Valley residents felt that they should have a valley-wide conservation district which could represent them in the litigation. Stemming from this need, the General Assembly authorized the organization of the Rio Grande Water Conservation District in 1967.

The district includes all of Alamosa, Conejos, and Rio Grande Counties and parts of the counties of Mineral and Saguache. The board of directors consists of nine members, two each from Alamosa, Conejos, Rio Grande, and Saguache Counties, and one from Mineral County, appointed by the county commissioners from each county. While other provisions of the enabling legislation differ in some respects, the powers of the board are nearly identical with the other two conservation districts.



RIVER BASIN AUTHORITIES

The 1969 session of the Colorado General Assembly enacted legislation authorizing the formation of fourteen river basin authorities. The purpose of the legislation is to promote stability of ground and surface water supplies and to encourage maximum utilization of, and benefit from, all water supplies within the State of Colorado by planned management. These authorities are empowered to construct and operate facilities and structures for the diversion and transport of water and to tax according to the benefits received by the water users. Project operations would bring benefits to those within a basin but not within the boundaries of a water conservancy district. No authorities have been organized to date under this enabling legislation.

DRAINAGE DISTRICTS

Colorado statutes provide for the formation of drainage districts to facilitate the artificial removal of water from such agricultural land which could be, but is not presently, cultivable or useful. Irrigation districts likewise have the authority to undertake investigations to determine the feasibility and cost of drainage of irrigation district lands.

Formation of a drainage district requires the filing of a petition by a majority of the landowners with the county commissioners, an election if prayed for in the petition, and, if the proposal is approved by a majority of the landowners therein, the district is declared organized. Thereafter, the district, through its three-man board of directors, may undertake the necessary surveys to plan, develop, and construct the required works. Authority to contract with the State of Colorado or the United States, singly, or jointly, for planning and construction of drainage works is vested in the board of directors. Assessments to repay the cost of plans and construction are made by the board of directors in accordance with the benefits received.

INTERSTATE COMPACT COMMISSIONS

Water resource development in the State is complicated by the fact that Colorado is a signatory state to the several interstate water compacts described

in Part II. The compacts, in addition to allocating waters to the signatory states, provide for the administration of the terms of the compacts.

Provisions of some of the compacts stipulate that the administration of the compacts shall be accomplished by designated officials of the affected states. Others prescribe that administration shall be accomplished by compact commissions. The latter group includes the Rio Grande Compact, the Upper Colorado River Compact, and the Arkansas River Compact.

### URBAN DRAINAGE AND FLOOD CONTROL DISTRICTS

The 1969 Colorado General Assembly enacted the Urban Drainage and Flood Control Act. The act, relating to storm waters, flood control, and drainage, created the Urban Drainage and Flood Control District.

Responsibilities of the district include the development of comprehensive regional plans and programs for drainage and flood control and the construction of the needed facilities.

The district boundary encompasses lands located in the city and county of Denver and in the counties of Adams, Arapahoe, Boulder, Douglas, and Jefferson. Approximately 872,320 acres are contained within the district.

All powers, rights, privileges, and duties of the district are vested in a 15-man board of directors representing the city and county of Denver and the other five counties included in the district.

To implement the district's programs, the board is authorized to levy and collect taxes against all taxable property in the district, to borrow money, to issue district securities and to accept contributions or loans from the Federal Government for the purpose of planning and financing district projects.

## Colorado Water Resource Agencies

### DEPARTMENT OF LOCAL AFFAIRS

The Department of Local Affairs was created by the Administrative Act of 1968. Presently, the department includes the Division of Commerce and Development, the Division of Planning, the Division of Housing, the Division of Property Taxation, the Division of Criminal Justice, the Division of Local Government, the Colorado Bureau of Investigation, the Colorado Law Enforcement Training Academy, and the Board of Assessment Appeals. Two of the above agencies, the Division of Commerce and Development and the Division of Planning are involved in water and related land resources planning activities.

#### Division of Commerce and Development

The division's primary responsibilities are rural job development and economic assistance. This includes maintaining close liaison with communities and development and disseminating information on all parts of the State except the Front Range area. A complement to this program consists of efforts to persuade established companies within the Front Range area to expand their operations to other parts of the State. The Community Development Section also conducts numerous economic studies.

The Travel Marketing Section has the responsibility for assisting and encouraging tourism in the rural areas of Colorado.

The Federally funded supplemental grant programs, sponsored by the Four Corners Regional Commission, are handled through the division.

#### Division of Planning

The division is involved indirectly and/or directly in the following activities related to water resource planning:

1. Prepares population projections on a statewide basis which support and give direction to water resource planning and development in the State.

## Colorado Water Resource Agencies

2. Prepares countywide water-sewer studies in support of the Farmers Home Administration in meeting its requirements prior to making water-sewer grants and loans, and also supervises water-sewer studies conducted by outside (private) consultants.
3. Supervises State programs under Section 701 of the Housing and Urban Development Act of 1965 providing for grants to assist State and local governments and other planning agencies to solve planning problems. Grants may be used to prepare comprehensive plans for urban and rural development, including water and sewer studies, for programing capital improvements and other expenditures, for coordinating plans and planning activities and for preparing regulatory and administrative measures.
4. Advises the Governor on designations for agencies to administer the requirements set forth in Section 208 of the Federal Water Pollution Control Act Amendment of 1972. This section is concerned with area-wide waste treatment management, relating specifically to water quality control problems caused by urban-industrial concentrations or other factors.

## REGIONAL PLANNING AGENCIES

### Denver Regional Council of Governments

In 1955, representatives of Arapahoe, Adams, Denver, and Jefferson Counties approved in principle the formation of a permanent regional planning commission. Articles of Association were filed and the organization was formed under Chapter 106, Article 2, Section 4, of the Colorado Revised Statutes.

Subsequently, the area of jurisdiction of the Denver Regional Council of Governments was expanded and now includes the counties of Adams, Arapahoe, Boulder, Clear Creek, Douglas, Gilpin, Jefferson, and the city and county of Denver. Additional members include 25 other towns and cities in the region. The region which encompasses 3,687 square miles had a 1970 population of 1,227,500, well over one-half of the entire State's population.

All voting members of the council of governments are elected officials, representing the seven counties, the city and county of Denver, and the member

## Colorado Water Resource Agencies

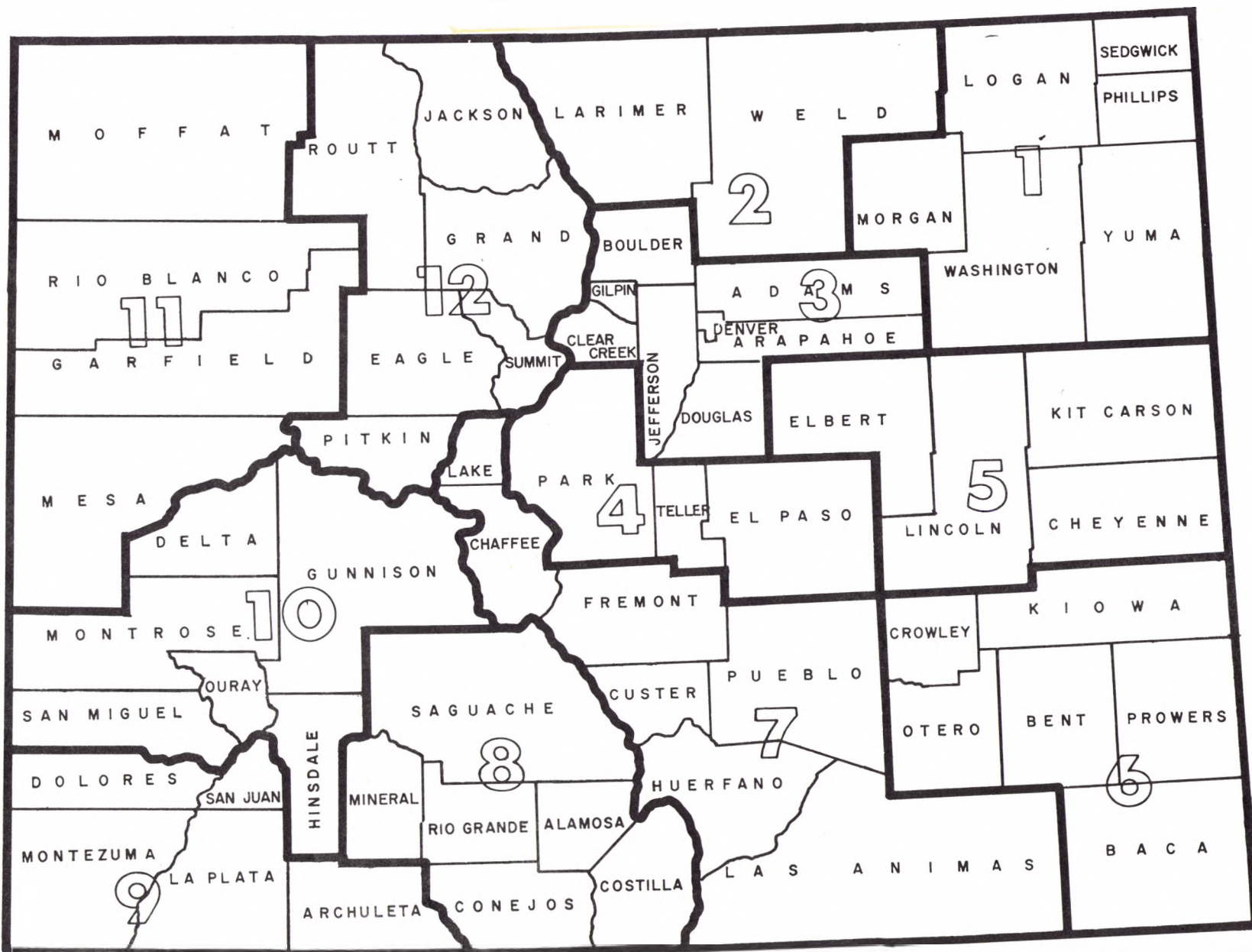
towns and cities. A 6-member executive committee directs the council's financial affairs.

Similar organizations exist in other areas of the State including the Arkansas River Basin; the Rio Grande Basin; and the South Platte River Basin.

As councils of governments, their functions are to provide a forum for discussion of issues and challenges commonly shared by member governments; to determine policy and priorities on these issues; to implement decisions through member governments; and to coordinate Federal, State, and local programs with regional impact.

### Planning and Management Districts

Bureau of Budget Circulars A-95 and A-96, which supersede in part Circulars A-80 and A-82, require, as of October 1, 1969, the establishment of a Project Notification and Review System based upon compatible planning jurisdictions in order to facilitate the development of coordinated districts or regions and statewide planning and review activities with regard to Federal programs. Stemming from the above requirement, which necessitated action by the State, Governor John A. Love issued an executive order dated November 17, 1972, establishing twelve official planning and management districts for the State of Colorado. These twelve districts are shown on exhibit 4.



# PLANNING AND MANAGEMENT DISTRICTS

PART IV FEDERAL WATER  
RESOURCES AGENCIES



DENVER FEDERAL CENTER

## PART IV--FEDERAL WATER RESOURCE AGENCIES

This part of the report presents a resume of the program of each Federal agency having a direct influence in the development or management of Colorado's water resources. The reader should bear in mind that many Federal agencies are not of this category and, therefore, have not been included. Moreover, some agencies that have been included have programs in addition to those summarized here. Reference to statutory authority of a Federal agency is for the purpose of illustration and is not an attempt to define the Federal statutory authorities. The legal and administrative authority of the agencies of the Federal Government is derived from the Constitution of the United States. For the most part, the authority of the agencies directly involved in the field of water resource development relate to four clauses in the Constitution, i. e., the Commerce Clause (Article I, Section 8, Clause 3), the Property Clause (Article IV, Section 3), the General Welfare Clause (Article I, Section 8), and the Treaty Clause (Article II, Section 2). To attempt to delineate the specific application of the above clauses is beyond the scope of this discussion. Through the years, however, the above clauses have been interpreted to cover such functions as navigation, power, public lands, flood control, irrigation, drainage, water supply, fish and wildlife preservation, recreation, soil protection, sedimentation, salinity and pollution control, and basic data collection.

### DEPARTMENT OF AGRICULTURE

The Department of Agriculture is primarily involved in water resource activities through the programs of four agencies: the Economic Research Service, the Forest Service, the Soil Conservation Service, and the Federal Housing Administration.

#### Economic Research Service

This Service has conducted research and investigations in natural resources for many years and is concerned with investigations of agricultural and related problems having national, regional, and local significance. It participates in departmental and interagency efforts to formulate policies regarding planning programs for the use, preservation, and development of natural resources. Projections of agricultural production, employment, income, rural population,



## Federal Water Resource Agencies

and land use for indicating future needs of water are developed by the Economic Research Service, within the framework of the Federal Water Resources Council under the guidance of Senate Document 97, 87th Congress, and the Water Resources Planning Act of 1965.

### Forest Service

The Forest Service was organized under the Department of Agriculture by the Transfer Act of February 1, 1905, which transferred the responsibility for the administration of forest reserves from the Department of the Interior. The original charge of responsibility was taken from several pieces of existing legislation which involved the improvements to land and resource protection from fire, insects and disease, the management of the resource for orderly and continuous service, and the maintenance of stable economic conditions in dependent communities. One of the most important acts was the Organic Act of 1897 which provides for the management of the national forests to secure "favorable conditions of water flows." Later, during the period from 1900 to 1960, the Forest Service developed the twin conservation policies of multiple use and sustained yield for the lands under its jurisdiction.

The Forest Service is responsible for applying sound service and utilizing practices in its administration of the natural resources within the national forests and national grasslands.

Watershed management is an important aspect of forest administration and contributes substantially to soil and water resources as embraced in the multiple use and sustained yield concept. Accordingly, watersheds are to be managed to improve the quality, quantity, and timing of water yield for onsite national forest purposes and to meet the needs of downstream water users. Policies have been adopted which provide for the formulation of a watershed management plan for each national forest. Plan formulation would be based on hydrologic analyses of water resources which would reflect the water users' requirements for high quality and adequate quantities of water for use within the watershed. Each plan will give consideration to municipal water supply areas to be managed in cooperation with Federal and State agencies to yield high quality raw water.

The act of June 12, 1960, declared the congressional policy that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. The Wilderness Act (Public Law 88-577) authorizes the establishment of a preservation system for

## Federal Water Resource Agencies

the future use and enjoyment of the American people and specifies conditions under which reservoirs, waterworks, and other facilities may be authorized in the wilderness areas. The Forest Service conducts scientific research to develop comprehensive information concerning the extent and condition of forest lands, timber resources, other factors affecting the future use of the public on these lands, and the development of multiple use and conservation.

### Soil Conservation Service

The Soil Conservation Service is the technical soil and water conservation agency of the Department of Agriculture. It administers activities involving technical and financial assistance for planning and carrying out programs to protect and improve water and related land resources in small watersheds. The Service was established in 1935. It was preceded by the Soil Erosion Service which had been established in 1933.

The central objective of the Soil Conservation Service is an integrated system of land use and conservation treatment in harmony with the capabilities of the land. Local participation and control is provided by districts organized under state laws. The districts are autonomous and governed by locally elected supervisors. The Service channels its grant assistance to landowners through the local soil and water districts. Participation consists primarily of professional assistance and planning and applying conservation measures needed for each type of land involved. The Service provides technical assistance and information in cooperation with local individuals and organizations in the broad resource areas of land planning in the community, the area, and the region.

Guidance is offered in the preparation of plans for the timely and efficient development of soils, water, and related resources and their relationship to social and economic needs. The basic policy of the Service is to encourage the prudent use and conservation of water and related land resources. The information of the Service is available to private engineers, architects, contractors, farmers, and to the agencies who need help in soil and water conservation problems.

### Farmers Home Administration

The Farmers Home Administration (FHA) provides financial assistance to farmers and local organizations for development of irrigation and drainage systems,

## Federal Water Resource Agencies

watershed protection, and flood protection projects. In addition, the FHA has the responsibility for administering the loan and advance provisions of the Watershed Protection and Flood Protection Act.

The Consolidated FHA Act of 1961, as amended, authorizes long term direct and insured loans as well as grants of up to 50 percent of construction costs to public and nonprofit associations for the development of community water and waste-disposal systems in rural areas, including rural municipalities of not more than 5,500 population. Planning grants also may be made for the development of official comprehensive area water and sewer plants. Loans to groups and individuals are made for the development of soil conservation, irrigation, drainage, grazing, forestry, and recreation projects.

## DEPARTMENT OF THE ARMY

### Corps of Engineers

Water resource planning and project construction within the Department of the Army is the responsibility of the Corps of Engineers. The Corps was established in 1775 and for many years it was the only engineering organization as such in the government. In its early history, the Corps was called upon to conduct explorations, establish routes for canals and roads, and to serve as an advisor to both the President and Congress in civil engineering aspects. Navigation improvement for rivers and harbors has been a function of the Corps since about 1824.

In 1894, Congress formally established the Corps' civil functions and during the administration of President Theodore Roosevelt, the Corps was directed to undertake full-range water resource planning, including the development of plans for river basins. Under this directive, the Corps initiated studies on most of the main river basins of the country, and the reports thereon were published as H. D. 308, 69th Congress, 1st Session.

The Corps of Engineers Civil Works Plan consists of the investigation, and construction of works for navigation, flood control, beach erosion control, and related purposes. Investigations are made by the Corps to consider major problems or projects as specifically directed by the Congress. The directive may be a part of a river and harbor or flood control act or may consist of a

## Federal Water Resource Agencies

resolution by one or more of the civil works committees. The studies or surveys recommend appropriate projects to Congress and when approved become the basis for construction of the approved projects.

The scope of the construction of projects has evolved through a long series of river and harbor and flood control acts. The projects of the Corps are basically for improvement of navigation, control of flood waters, and beach erosion. However, when appropriate, power, irrigation, municipal and industrial water supply, water quality control, recreation, and fish and wildlife enhancements may be included as project purposes. Local participation in developments and funding of project costs are required on all projects except major flood control storage projects.

The Corps has continuing authority to undertake small emergency projects. Major projects are handled in cooperation with the Federal Disaster Assistance Administration. Projects of both categories are undertaken following emergency declarations by the governor of the affected state and the President.

Small navigation projects may be developed as may small shore and beach restoration and protection projects. Clearing and snagging of stream channels and reservoirs in the interest of flood control may be authorized, and bank protection work related to highways and other public works may be constructed.

The Corps also works with state and local agencies to maintain and improve channels for recreation and to protect against flood damages and beach erosion. When appropriate and feasible, storage may be provided in reservoirs for needed irrigation water supplies. Hydroelectric power may be included in Corps projects when economically justified. Any power development is marketed through agencies of the Department of the Interior. Outdoor recreation and fish and wildlife conservation are project features authorized under the provisions of the Federal Water Project Recreation Act of 1965. Cooperation with other Federal, as well as state agencies, and sponsoring by a local organization is desired for these supplemental project purposes.

Municipal and industrial water supply may be recommended in multiple purpose Corps reservoirs either as a sole supply or by joint use of seasonal flood control or other storage. Costs allocated to the water supply may not exceed 30 percent of construction costs and are reimbursable by the water users over a specified period of time with applicable interest rates.

DEPARTMENT OF COMMERCE

The Department of Commerce, through its Economic Development Administration and Environmental Science Services Administration, has some indirect involvement in water resources.

Economic Development Administration

The Economic Development Administration (EDA) was basically established to make grants and loans to state political subdivisions, Indian tribes, and private or nonprofit organizations for public works and development facilities in defining redevelopment areas and development centers. The administration is to provide new industry and permanent jobs where they are most needed in areas of eligibility. Most of the funds will be used for public work's grants and loans, loans for industrial and commercial facilities, technical planning, and research assistance.

The Four Corners Regional Commission was organized through the EDA in December 1966, when the governors of Colorado, Arizona, Utah, and New Mexico entered into an agreement with the Secretary of Commerce. The Commission membership consists of the governors of the aforementioned states and a Federal cochairman appointed by the President. Each Commission member designates an alternate.

The Commission's jurisdiction extends over 92 counties in the four states, a land area of 288,000 square miles, or 67 percent of the four states. In 1968, the estimated population of the area was 1,950,800. Six population centers-- Colorado Springs and Pueblo, Colorado; Sante Fe and Albuquerque, New Mexico; Provo, Utah; and Flagstaff, Arizona, are located within the Commission boundaries.

The purposes of the Commission are summarized below:

1. Initiate and coordinate the preparation of immediate and long range overall economic development programs.
2. Foster surveys and studies to provide data for use in developing specific plans and programs.
3. Promote increased private investment.

## Federal Water Resource Agencies

4. Promote and coordinate public investment through various Federal programs.
5. Promote legislative and executive programs for both short range and long range projects involving Federal, state, and local agencies.
6. Establish plans and program priorities with consideration for local, state, and Federal planning.
7. Provide a forum for consideration of problems common to the region and a means of communicating and sharing experience in the various sections of the region.
8. Advise and assist the Secretary of Commerce and the states in the initiation and coordination of economic development districts in order to obtain maximum benefits from the expenditure of Federal, state, and local funds.

### Environmental Science Services Administration

The Environmental Science Services Administration includes the Weather Bureau which observes and reports on the weather of the United States and its possessions and develops and distributes forecasts of weather conditions and severe storms, floods, and other adverse weather associated conditions. It develops and furnishes specialized weather services which fill the needs of agriculture, aeronautics, recreation, and other activities. It provides forecasts to the general public in the field of hydrology showing the daily stage and periods during the levels of flow for seasonal periods as required.

### FEDERAL POWER COMMISSION

The Federal Power Commission was established in 1920 under the Federal Water Power Act. It was composed of the Secretaries of War, Interior, and Agriculture. In 1930, the Commission was reorganized as an independent agency composed of five commissioners. Many important congressional acts have since been enacted which have expanded the work and responsibilities of the Commission. It is a quasi-judicial agency in the water resources field. It is authorized to make investigations, collect, and record data concerning the utilization of water

## Federal Water Resource Agencies

resources of any region to be developed, the water power industry and its relation to other industries in interstate and foreign commerce, to cooperate with state and local agencies and to license nonfederal hydroelectric projects.

The general policy of the Commission under the Water Resource Planning Act of July 1965 is to encourage the conservation, development, and utilization of water and related land resources of the United States on a comprehensive and coordinated basis. The jurisdiction and operation of the Commission in the water resources field have been the subject of a large number of cases in the Federal court system. The Commission has jurisdiction to determine the use of lands in the United States which are withdrawn for power purposes. It makes cooperative studies with Federal agencies on prospective multiple-purpose reservoirs, has jurisdiction over the licensing of nonfederal hydroelectric projects, and the relicensing, abandonment, or recapture of projects when licenses expire. Each of these activities require a determination that, in the judgment of the Commission, the proposed action is best adapted to a comprehensive plan in a river basin for all beneficial uses. In making adequate plans for the development of the nation's rivers, the Commission is engaged in a limited water resource appraisal program of the river basins of the United States.

## DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

The Public Health Service of the Department has responsibility for cooperation and rendering assistance in the coordination of research, investigation, and studies for the prevention of physical and mental diseases of man, including research in water purification, sewage treatment, and pollution of lakes and streams. In addition, the Service is concerned with water supplies used by interstate carriers and standards for potable water.

## DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

The Department came into existence on November 9, 1965. It has developed standards to assist in the sound development of the nation, communities, and metropolitan areas. The Public Works Planning Program provides for interest-free loans to construct some local public works and thus assist communities in dealing with their needs. All types of public works are eligible, including water and sewer systems, recreational projects, irrigation projects, and bridges.

## Federal Water Resource Agencies

Assistance is provided for local public bodies and agencies to finance the cost of improving or constructing basic sewer and water facilities. Funds are available for the acquisition and development of land for open spaces which includes beautification of water-related lands and purchase and upgrading of watershed areas for public use and conservation activities.

### DEPARTMENT OF THE INTERIOR

The Department of the Interior was created in 1849 to fill the role of general housekeeper of government lands. During the more than one hundred years of its existence, numerous activities have been added to or removed from the original functions of the Department. Its function has since evolved into that of custodian of much of the nation's natural resources. The Department's responsibilities in the water and related land resource field are carried out under the authority of numerous acts and executive orders by its various offices and bureaus.

#### Fish and Wildlife Service

The history of the Service began in 1871 when the United States Fish Commission began its work with fishery resources and later became the Bureau of Fisheries under the Department of Commerce. In 1939, by Reorganization Plan 2, the activities were transferred to the Department of the Interior. Reorganization under the Fish and Wildlife Act of 1956 created the present United States Fish and Wildlife Service which contained two bureaus, the Bureau of Sport Fisheries and Wildlife and the Bureau of Commercial Fisheries. The latter was changed to the National Marine Fishery Service and transferred to the Department of Commerce.

The Bureau of Sport Fisheries and Wildlife is primarily responsible for ensuring the conservation and management of birds, mammals, and sport fishes, both for their recreational and economic values. Its principal objectives are to conserve these resources for the continuing enjoyment of hunters, anglers, and nature enthusiasts, and to manage them so that their abundance is most compatible with the economic, social, and aesthetic interests of all Americans. The Fish and Wildlife Act of 1956 established the national policy for the development, protection, and wise use of the country's fish and wildlife resources, and the Fish and Wildlife Coordination Act provides that wildlife conservation shall receive equal consideration and be coordinated with other features of water



## Federal Water Resource Agencies

resource development programs. The Bureau of Sport Fisheries and Wildlife correlates with other Federal and nonfederal agencies engaged in water resource development projects to determine the effects of such projects on the fish and wildlife resource and recommends measures for the protection and improvement thereof. It provides for the development and operation of a national system of refuges insuring a balanced wildlife management program for migratory waterfowl, big game, and other forms of wildlife as well as preservation of species of wildlife threatened with extinction. Under its program, Federal grants and aid to states are available for fish and wildlife restoration and management and it provides technical assistance to Federal, state, and private organizations in the development and administration of fish and wildlife management programs.

### Geological Survey

The Geological Survey was established by the Act of March 3, 1879, for the purpose of the classification of the public lands and examination of the geological structure, mineral resources, and products of the national domain. Over the years, by other congressional enactments, its duties and functions have been enlarged to include the making of geological maps of the United States and topographic maps, the gauging of streams, and determining water supplies of the United States. Several of the early functions of the Survey have been recast into other agencies, such as the Forest Service in 1905, Reclamation Service in 1902, Bureau of Mines in 1910, and the Grazing Service in the 1930's. The broad objectives of the Survey are to perform surveys, investigations, and research covering topography, geology, and the mineral and water resources of the United States; and to classify land for its mineral and water and power resources. It furnishes engineering supervision to the Federal Power Commission, enforces departmental regulations applicable to oil, gas, and other mining leases, and publishes and disseminates data relating thereto. In the field of water resources, it develops information concerning the source, quality, quantity, distribution, management, and availability of both surface and ground water. This work includes investigations of floods and droughts, the relation of climatic information to available water in river basins and underground water sources. It furnishes information as to the chemical and physical quality of water resources, makes special studies of the interrelations between climate, topography, vegetation, soils, and water supplies. The results of these investigations are published in a series of Geological Survey publications.

## Federal Water Resource Agencies

### Bureau of Indian Affairs

The Bureau of Indian Affairs was created in the War Department in 1824 and was transferred to the Department of the Interior at the time of its establishment in 1849. The Bureau acts as trustee for Indian lands and monies, and assists the Indians in making the most efficient use of their land and resources. It aids Indian tribes and bands, in cooperation with local and state agencies, in developing programs to attract industries to reservation areas. Enabling legislation has authorized the Indian tribes to organize themselves in self-governing groups for the management of their own resources. The General Allotment Act of February 8, 1887, is the basic authority for irrigation projects on Indian reservations. The Bureau's policy with respect to the management of Indian land and water resources is for the retention of ownership by Indians and for those resources to be used so as benefits accrue to the Indians through sustained yields. The Resource Use and Conservation Use programs involve agricultural development, forestry, grazing, irrigation, soil conservation, and industrial development on Indian lands. Under the Reservation Doctrine, it is asserted that the Indians are entitled to the amount of water as is needed for the Indian reservation with a priority related back to the date of the establishment of the reservation.

### Bureau of Land Management

The Bureau of Land Management and its predecessors, including the General Land Office, have been the nation's primary Federal real estate agency since 1812. Its policies and programs have been governed by approximately five thousand Federal land laws. Its primary function initially was to transfer Federal lands to private citizens for settlement and development. About 1880, Federal land policies began to change and reserves were created for national parks, forests, wildlife refuges, and military and Indian reservations. The current Bureau of Land Management was created in 1946 when a reorganization act coordinated the Grazing Service and the General Land Office in the Department of the Interior.

The Bureau is now partially or totally responsible for the administration of the mineral resources for about one-third of the total land area of the United States and with similar responsibilities for minerals on the Outer Continental Shelf. The Bureau has jurisdiction of approximately 178 million acres of land in the 11 western states and in addition, most of Alaska. The Bureau has become a full-fledged management agency and under the former Classification and

## Federal Water Resource Agencies

Multiple-Use Act of 1964, land administered in accordance with this act was segregated for disposal or retention in Federal ownership. The act directed the Bureau to protect, manage, and develop the retained lands and nonrenewable resources for multiple-use and the renewable resources under principles of sustained yield for ten defined purposes. This act expired December 23, 1970. Pending new legislation, the BLM continues to implement land management policies under authorities of the Code of Federal Regulations, Part 2400, and other specific classification authorities. Although the Bureau is not directly oriented to water development projects, the land management practices and uses of lands under its jurisdiction have an important effect on the watersheds and related water resources. The Bureau has the control and responsibility of transferring public lands through sales, exchanges, grants, and public land entries for nonfederal purposes such as residential, urban, recreational, industrial, or commercial development. The granting and administering of all types of rights-of-way, easements and permits for the occupancy of public lands under its jurisdiction and the maintenance of the basic land ownership records for all public domain lands is Bureau responsibility. The Bureau, in its management and development of resources, is concerned with watershed conditions and installs and maintains devices to stabilize soil, control silt, modify water yield, and maintain water quality. Its activities include the evaluation, planning, protection, management, and development of water resources for outdoor recreation, fish and wildlife habitat, timber, and livestock water, and forage value. The Bureau is responsible for the cadastral surveys of public lands and plats and approves mineral surveys executed by United States mineral surveyors and prepares maps of the surveys of public lands and, on occasions, of intermingled private lands. The Public Land Law Review Commission submitted its report to the President and the Congress in June of 1970 recommending extensive changes in the approximately 1,000 laws affecting the public lands under the jurisdiction of the Bureau and modification of the general policies and goals of the Bureau.

### Bureau of Mines

The Bureau of Mines was established in 1910 to conduct programs to conserve and develop the mineral resources of the United States and promote safety and healthful working conditions in the mining and mineral industries. The Bureau makes studies of mining methods, mineral industries, and production techniques, and conducts long range resource investigations where conservation of other resources, such as water and power, is involved. The Bureau has no direct responsibility in water resource development or management, but engineering, economic, and statistical information are made available to the government and

## Federal Water Resource Agencies

other interested individuals concerning water resource development. The Bureau of Mines does have installations and experimental facilities which use water to sustain facilities and conduct tests and studies in the amount of water needed or required in the mining industry.

### National Park Service

The National Park Service was established pursuant to the act of August 25, 1916. Sixteen national parks and many national monuments were established prior to that time, the first being Yellowstone National Park, established by Congress by the act of March 1, 1872. The areas under the jurisdiction of the NPS are administered under a variety of specific designations which apply to areas other than national parks and monuments. The fundamental policy of the NPS is to preserve the scenery, the natural and historic objectives, and conserve the wildlife therein for the enjoyment of the public and leave them unimpaired for future generations. The NPS manages large areas on the headwaters of many streams and areas where water and land uses are important and closely related. In managing these areas, the NPS has programs for the prevention of erosion and water pollution.

Section 8 of the Colorado River Storage Act of April 11, 1956, authorizes the development of recreation, fish and wildlife facilities on lands acquired for the projects and participating projects authorized thereunder. The NPS has developed and is administering recreational facilities under its authority and provides assistance of a scientific and a technical nature concerning the broad spectrum of recreation to state and Federal agencies.

With regard to water resource development planning, an agreement dated December 10, 1965, divides the responsibility for planning recreation facilities between the Bureau of Outdoor Recreation (BOR) and the NPS. In the preauthorization phase, the recreation planning is given to the BOR, and the postauthorization planning to the NPS.

### Bureau of Outdoor Recreation

The Bureau of Outdoor Recreation was established in 1962 by Secretarial Order. Later the Congress passed the act of May 28, 1963 (77 Stat. 49) (P. L. 88-29) which sets forth basic authorization and responsibilities relating

## Federal Water Resource Agencies

to outdoor recreation. However, this act made no mention of a Bureau of Outdoor Recreation, nor has any overt action by the Congress been made which would confirm the Secretarial Order.

The BOR, by delegation, carries out certain responsibilities of the Secretary under the above cited act as well as the Federal Water Project Recreation Act and the Land and Water Conservation Act of 1965 through participation in the investigation and planning of all Federal water resource developments. It becomes involved in the planning efforts to the extent that the proposed recreation and fish-wildlife developments conform to and are in accordance with state plans developed under those acts. The BOR's concern extends not only to parks but also to all types of areas involving active recreation and natural beauty, and it conducts studies of special areas such as wild rivers, national parks and islands, as well as other recreation potentialities, including trains. Its participation in the planning of Federal water resource developments include assistance with recreation facilities, evaluation of the recreation potential and correlating the recreational planning with the appropriate state agencies. The BOR is not a land management agency.

### Bureau of Reclamation

The Reclamation Service was organized within the Geological Survey in 1902, but was later removed from under the Survey and made a separate agency within the Department of the Interior. In 1923 the name was changed from Reclamation Service to the Bureau of Reclamation. The Reclamation Act, approved on June 17, 1902, authorized the Secretary of the Interior to locate, construct, operate and maintain works for the storage, diversion, and development of water for the reclamation of arid and semiarid lands in the western states. The act provided for a revolving reclamation fund which was to be used for the planning, construction, and operation of projects and to be repaid without interest by the owners of the lands benefited.

In the early years, most projects were single-purpose irrigation projects, but over the years, authorization has been enacted by Congress for projects having multiple purposes in which benefits may be assigned to irrigation, power, municipal water supply, navigation, flood control, recreation, and fish and wildlife. The Bureau conducts investigations and develops plans for projects to conserve and utilize water and related land resources and constructs projects authorized by and for which funds are appropriated by Congress. It operates and maintains projects and project facilities and inspects the operation and maintenance of projects constructed by the Bureau but transferred to and operated and maintained by local water user organizations.

## Federal Water Resource Agencies

In multiple-purpose projects, funds expended for flood control and some parts of costs for designed enhancement of fish and wildlife, recreation, and water quality are nonreimbursable by the project sponsors. The reimbursable portion must be borne by a nonfederal public entity. In many multiple-purpose projects, the sale of hydroelectric power is authorized to offset and to repay to the reclamation fund the costs allocated to irrigation which are over and above the ability of the water users to pay.

The Bureau is actively engaged in water quality, salinity and pollution control in the river basins of the West. The Bureau administers the Small Reclamation Project Act which is a program designed to provide funds for private, nonprofit organizations, and to obtain loans for the construction of small nonfederal water resource projects.

### Office of Saline Water

The Office of Saline Water, established by the act of July 3, 1952, as responsibility for research and development of practical means for the economical production, from sea or other saline water, of water suitable for agricultural, industrial, municipal, and other beneficial consumptive uses.

This program is conducted by means of research grants, and contracts are made with chemists, physicists, engineers, educational institutions, scientific organizations, and industrial or engineering firms, to conduct research and technical development work.

The Office of Saline Water is engaged in an accelerated and intensified effort to find economical and feasible means of converting saline waters to fresh water.

The Saline Water Demonstration Act of September 2, 1958, authorized the construction and operation of saline water conversion demonstration plants in various parts of the country, such as the one at Webster, South Dakota. An amendment to the basic Saline Water Act of 1952, approved on June 24, 1967, changed these demonstration plants into research and development test beds. As such, they became a part of the basic research and development program, entitling them to the privilege of introducing experimental hardware into the saline water conversion process employed by the specific plant in order to obtain performance data.

## Federal Water Resource Agencies

### Office of Water Resources Research

The Water Resources Research Act of 1964, authorized the financing of water resources research by the states through colleges and universities that participate with the Water Resources Research Institute. The Supplemental Appropriation Act of 1965, as well as subsequent appropriation acts, provides the Office of Water Resources Research with funds to carry out the objectives of the Water Resources Research Act of 1964.

### ENVIRONMENTAL PROTECTION AGENCY

The Agency was created by the President's Reorganization Plan No. 3 of 1970. This plan became effective on December 2 of that year, and it consolidated the major Federal programs dealing with air and water pollution, solid waste disposal, pesticide regulation, and other environmental concerns into one agency. The major transfers were the Federal Water Quality Administration from the Department of the Interior and the National Air Pollution Administration from the Department of Health, Education and Welfare. The initial Federal legislation dealing specifically with water quality was the first comprehensive Federal water pollution control program enacted in 1948, amended in 1956, 1961, and extensively updated by the Water Quality Act of October 2, 1965, the Clean Water Restoration Act of 1966, the National Water Quality Improvement Act of 1970, and the Federal Water Pollution Control Act Amendments of 1972.

The first Federal legislation concerned exclusively with air pollution was enacted in 1955, and modified by the Clean Air Act of 1965, and the Air Quality Act of 1967. The National Environmental Policy Act of 1969 established the basic perimeter and requirements for detailed consideration of the activities and programs of the Federal Government's involvement in any project including water resources development and its effect upon the environment.

The Environmental Protection Agency is charged with a nationwide, comprehensive control program to enhance the quality and value of water resources, and to implement a national policy for the prevention, control, and abatement of water and air pollution. The Agency is moving ahead in its program to develop standards, regulations, and controls of water and air quality and the prevention of pollution of these resources.

COUNCIL ON ENVIRONMENTAL QUALITY

The Council on Environmental Quality was established by the National Environmental Policy Act of 1969 to formulate and recommend national policies for improving the quality of the environment.

The Council consists of three members appointed by the President upon the advice and with consent of the Senate. One of the members is designated by the President as Chairman. The Council is located within the Executive Office of the President.

The Council develops and recommends to the President national policies which promote environmental quality, performs a continuing analysis of changes or trends in the national environment, and assists the President in the preparation of the annual environmental quality report to the Congress.

WATER RESOURCES COUNCIL

The Water Resources Council is a Cabinet-level body established by the Water Resources Planning Act of 1965, Public Law 89-80. It consists of the Secretaries of Agriculture, Army, Health, Education and Welfare, Interior, and Transportation, and the Chairman of the Federal Power Commission.

The functions of the Council are stated in the three titles of the act. Title I directs the Council generally to coordinate Federal activities dealing with water and related land resources; to adopt principles, standards, and procedures for planning Federal water resource projects; and to prepare a biennial assessment of the Nation's water resources.

Title II authorizes the President, on the request of affected governors, to establish joint Federal-state river basin commissions to coordinate programs and to develop a comprehensive, coordinated, joint plan for the conservation, utilization, and development of water and related land resources in major river basins. To date, river basin commissions have been established for the Pacific Northwest, the Missouri, the Upper Mississippi, Ohio, Great Lakes, and New England. Thirty-two states, including Colorado, are now members of one or more of these six commissions. The chairman of each commission is a full-time Federal employee appointed by the President. The Water Resources Council arranges for the Federal contribution to the commission budget, provides direction to the



## Federal Water Resource Agencies

chairman and Federal members of the commission, and reviews the comprehensive plan developed by the commission.

Title III of the act authorizes the council to administer a program of matching grants to states to help finance state water-planning activities.

### ADVISORY COUNCIL ON HISTORIC PRESERVATION

This Council was established by Title II of Public Law 89-665, 89th Congress, S. 3035, October 15, 1966, which was enacted to establish a program for the preservation of additional historic properties throughout the Nation, and for other purposes. This Council, composed of 17 members, submits annually a comprehensive report of its activities and the results of its studies to the President and the Congress and from time to time submits such additional and special reports as it deems advisable. Each report proposes such legislative enactments and other actions as are necessary and appropriate to carry out the recommendations of the Council.

The Council is authorized to secure directly from any Federal Government entity all types of information to the extent permitted by law and within available funds.

The seventeen members of the Council are as follows:

The Secretary of the Interior  
The Secretary of Housing and Urban Development  
The Secretary of Commerce  
The Administrator of the General Services Administration  
The Secretary of the Treasury  
The Attorney General  
The Chairman of the National Trust for Historic Preservation  
Ten appointed by the President from outside the Federal Government

The chairman of the Council is designated by the President.

NATIONAL WATER COMMISSION

The National Water Commission was created by act of Congress in 1968, to review national water resources problems and to consider ways of meeting future national water requirements. The Commission stemmed from proposals for water development in the Colorado River Basin which raised a number of fundamental questions as to what should be the future policies for water development in the United States. On June 14, 1973, the Commission submitted its final report to the President which contained over 230 recommendations and conclusions covering almost all aspects of water resource problems that the Nation faces in the future.

increase with less water, thereby cutting cost of production. Hearings are expected to be after the July 4 Congressional recess on a bill introduced May 14 by Chairman Harold T. Johnson, D-Calif., of the House water and power resources subcommittee and others to control pollution on the Colorado River. The bill provides for construction to control so-called "natural salinity" at LaVerde Springs, Utah, and in the Dolores River in Paradox Valley in Colorado, and from irrigation activities in Grand Valley in Colorado, at a cost of \$125 million.

It aims to remove 600,000 tons of salt a year from the Colorado River. Sen. John V. Tunney, D-Calif., has introduced a similar bill in the Senate. The companion measure calls for halving the seven Colorado River Basin states. Sponsors now are awaiting the administrator's report, and the agencies already have been asked to comment on the Johnson bill.

**NOT SOLVED**  
With a river as controversial as the Colorado, there are, of course, some problems not being solved.

Not much is being done about the crucially important problem of Indian water rights on the Colorado River and in the Southwest generally.

There has been so much now in the Colorado River Basin that the desalination program the bureau has been conducting in the San Juan Mountains in southwestern Colorado has been suspended. Colorado River water program, the plan will have to be extended another year to get data to evaluate the feasibility of desalination as a method of augmentation.

Colorado hearing late and non-attendance of some members of the House and Senate. The bill is still in the House. The Senate has not yet acted on it. The bill is still in the House. The Senate has not yet acted on it.

### Western Resources Wrapup

## Rural Electric

Water has always been a problem in the West. It is now becoming a crisis. The West is a dry area, and the water is being used up. The West is a dry area, and the water is being used up. The West is a dry area, and the water is being used up.

### Water Resources Wrapup

## Water Panel Expected to Alter Indian-Rights Plan

WASHINGTON—Major long-range water hearings may be made in the coming weeks, many talked issues the "foundation of the New West," as one commission member put it.

Plans to SPEAK FOR THEMSELVES. But they were extremely effective witnesses. Most Indian leaders no longer depend on white attorneys to speak for them. They speak for themselves.

### Consolidation Sought For Water Districts

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### Trimer-Wald COG Selects Priorities, Chooses Officers

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# PART V

# PROBLEMS

# AND

# CONSTRAINTS

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## S. Platte River

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## Arkansas Valley could face electricity

By CHRISTOPHER SMITH  
Arkansas Valley Water Board asks panel for course of action to meet water needs.

## Conservationists Vie With Officials for Area

ENCAMPMENT WATERSHED  
Conservationists vie with officials for area.

## Two Forks Area Reside

LAKEWOOD IN 8 YEARS  
140,000 Population

## Water Rights Fight Erupts

STANLEY LAKE  
Water rights fight erupts.

## Reservoir Plan

Reservoir plan for water rights.

## Water

Water resources wrapup.

## PART V--PROBLEMS AND CONSTRAINTS

In the preceding parts of this report, an attempt has been made to identify all aspects of Federal, State, and local water law and institutional considerations which affect the development and utilization of water resources in Colorado. Many provisions of these existing laws, compacts, and other operational considerations which are now and have been effective in the past are being questioned and criticized by citizens and representatives of public agencies alike. A few of the concerns raised by the State Study Team are discussed in this concluding part of the report and should be fully examined during Phase III of the investigations.

### FEDERAL-STATE RELATIONSHIPS

Because of their magnitude and high costs, most of the large water resource developments in the State of Colorado have been sponsored and funded by the Federal Government. In many instances, planning efforts have been spread among many different geographic areas and further diffused inasmuch as various responsibilities are divided among several Federal agencies. Colorado would obtain more effective and timely water resource planning and development if the responsibilities of cooperating Federal agencies were affixed to common geographical areas.

### INTERSTATE COMPACTS AND DECREES

Several of the U.S. Supreme Court decrees and interstate compacts negotiated through the years among the affected states and the Federal Government now are being widely criticized as being outmoded and are considered detrimental to Colorado's interests in water resources. The critical aspects of these legal instruments become evident when new environmental guidelines, including water quality standards, are imposed upon the river systems, indicating clearly that some were conceived and implemented without due consideration for the economic and social impacts on the affected areas.

FEDERAL RESERVED WATER RIGHTS

One of the continuing sources of friction in the State of Colorado has been the failure of the Federal Government to participate in State water adjudication proceedings. The Supreme Court of the United States in United States vs. District Court in and for Eagle County, 401 U.S. 520, and United States vs. District Court for Water Division 5, 401 U.S. 527, held the principle that the United States could be joined pursuant to the so-called McCarren Amendment, 43 U.S.C., Section 666, and required to participate in the Colorado adjudication proceedings. This Supreme Court ruling sustained the State's contention that water rights claimed by the Federal Government are subject to adjudication by State water courts. As a result of the above decisions, the United States was joined in 1971 in a State water court suit. This suit is a consolidation of claims made in Colorado Water Divisions 4, 5, and 6 (generally the Gunnison, Yampa, Colorado, and North Platte River watersheds) as well as several statutory proceedings under pre-1969 Act law. In a second suit, the United States initiated action in the United States district court to adjudicate its water rights in Water Division 7, which includes all of southwestern Colorado except the Dolores River Basin. On June 21, 1973, the U.S. district court ruled that the Federal Government should take its claims for water rights in Water Division 7 to State courts before resorting to Federal courts. The dismissal of this Federal court action has been appealed by the United States and the filing of Federal claims in the State water courts has been stayed pending the outcome of this appeal.

In December 1973, the United States filed its claim in the water court at Durango concerning the Dolores River, but has requested that action be deferred pending a ruling of the United States Court of Appeals regarding the above case involving Water Division 7.

The forum, whether in State or Federal courts, in which the Federal water rights in western Colorado are determined may not be nearly so important as are the priority dates and amount of water adjudicated. Colorado law provides that water rights priority are ranked according to date of adjudication. The reserved water rights of the United States, both filed and to be filed, claim a water right priority as of the date of public land withdrawal. Withdrawal was made by the government for the establishment of national forests and parks, for Indian reservations, for public watering purposes, for hot springs and geothermal resources, and for the development of naval oil shale deposits. Under these claims, the United States contends that water rights are reserved in perpetuity to affect the purposes of the withdrawn lands. Further, the United States claims,

with respect to its reserved water rights on the national forests and parks, that it is entitled to maintain streamflows at a level adequate to support aquatic and animal life and to protect the aesthetics and environmental values of the Federal lands.

The outcome of the above litigation in western Colorado may have repercussions on the amount of available water for use within the Colorado River Basin and for exportation from the basin for use elsewhere in the State. The extent to which existing transmountain diversions would be limited by entry of a decree in favor of the United States is not known at this time. Also, the full impact of these above Federal claims cannot be known until the quantities of water being sought by the government are identified in terms of future uses.

#### WATER PLANNING AND POLICY

Water is a critical factor in Colorado's future and should be managed so as to obtain statewide long range goals. In particular, policies on water use and management should be coordinated with policies on land use, natural resource management, population, and environment.

Uncontrolled water reallocation and uncontrolled land development are two major reasons for the imbalance in Colorado's growth. Water use and land development are interrelated and interdependent to the extent that consideration of planning, direction, and policy formulation must be based on an integrated approach.

Current water laws in Colorado permit any individual, group, or municipality to acquire water for beneficial use to the extent that their wealth and inclination make possible, even to the total limits of availability of the resource within the state. This "dollar policy" of water management has not been a conscious creation but rather the result of a patchwork of law and edict that has grown from territorial days. Its lack of vision, consistency, and logic now has the state facing contradictory values. On the one hand, the existing water rights must be respected; on the other, the threat to the public good inherent in personal or separate community decisions regarding water must be considered.

Colorado law states that all waters of the state are property of the public, subject to appropriation and use according to law. A property right to use a specified quantity of water with a fixed priority date inures to the benefit of any

## Problems and Constraints

person or organization complying with the statutory requirements. Retention of the right is subject to standards of beneficial use, nonwaste and misuse or relocation affecting the vested water rights.

In Colorado, water is a commodity that can be bought and sold almost without regard to the consequences of such transactions upon changing social values. Water is one of the most easily transportable of all the state's resources and certainly the one offering the most clear evidence of the results of its arrival and departure. As the more affluent areas of the state respond to expansion pressure by acquiring greater amounts of water, they also, in reality, establish a state policy regarding land use and population balance and prescribe the destiny of surrounding counties and regions.

Implementation of a state growth policy will require the establishment of a water management policy and a system of water law that recognizes the overriding importance of that resource to the future of the entire state. Present Colorado water policy encourages the continued growth and concentration of people in those areas within the state that have the money and power to acquire water. Conversely, the policy encourages the sale of water by individuals in less affluent areas of the state. Such a policy could ultimately reduce nonmetropolitan Colorado to an arid wasteland incapable of making positive contributions to the well-being of the state.

Control of the use of real property without denying the right of ownership is an accepted fact in modern society. Land use controls, including zoning and other restrictions, have been consistently held constitutional. If land use zoning is in the public interest, could not restrictions also be placed upon the use and movement of water and water rights within Colorado?

Because water is a finite resource and is held in trust by the state for the public, the state has an obligation and right to control, regulate, and direct the uses to which it shall be put with respect to the public interest. By exercising its right and duty over this resource, the state can effectively implement a planning and development policy consistent with present and future needs.

It is evident that rational and orderly development of Colorado will take place only if there is strong state policy reinforced by effective statutes and their implementation. Such policy and statutory directions are urgently needed. Further delay in development, articulation, and enforcement of such policies and statutes will compound the problem in terms of future decisions.

STATE FINANCING OF WATER PROJECTS

The Colorado General Assembly in 1971 amended Article 149-1-11, Colorado Revised Statutes 1963, to provide authority for the Colorado Water Conservation Board to enter into contracts for construction of projects which will conserve and utilize the water and power resources of the state. This legislation also created the "Colorado Water Conservation Board Construction Fund" in an amount not to exceed 10 million dollars to finance construction of conservation projects selected for authorization by the General Assembly. The fund consists of moneys appropriated or otherwise made available to it by the General Assembly and the charges made to water users. It is a revolving fund and yearend balances do not revert to the general fund, except for amounts in excess of 10 million dollars.

The 1971 legislation was deficient in that it did not authorize the Colorado Water Conservation Board to conduct feasibility investigations before presenting projects to the General Assembly for approval.

To overcome this deficiency, legislation has been introduced in the 1974 General Assembly which would authorize expenditures from the Colorado Water Conservation Board Construction Fund for project feasibility investigations. The cost of such feasibility investigations shall be considered a part of the total project cost if the project is subsequently constructed.

INTERNATIONAL AGREEMENTS AND THE WATER QUALITY ISSUE

Another source of concern to the State of Colorado, as well as the entire Colorado River Basin, is the international agreement dealing with the delivery of specified quantities and quality of water to Mexico. The quality of water delivered to Mexico was not specified in the 1944 Mexican Water Treaty. However, in the interest of international comity, the United States in recent years has pledged its cooperation to the Mexican Government and has agreed in Minute 242 of the International Boundary and Water Commission to implement a program that will insure Mexico a good quality water of a certain standard. In order to meet the agreed salinity levels, the Colorado River International Salinity Control Project was initiated. This study proposed construction of a large desalting plant near Yuma, Arizona, to treat saline irrigation water returned to the river. However, construction of the plant has not yet been authorized.



## Problems and Constraints

Another program relating to the water quality issue is the Colorado River Water Quality Improvement Program. This program emphasizes a basinwide management plan for salinity control. The program is presently identifying salinity sources, possible control facilities and techniques, and related economic and environmental impacts in the basin. Construction of control units under this program also has not yet been authorized.

The State of Colorado is concerned that in order to meet improved water quality in the Lower Basin, water resource projects now scheduled for implementation in the Upper Basin may be delayed or indefinitely deferred because of these water quality commitments.

### OTHER CONSIDERATIONS

As discussed in the Phase I Report, there are many other serious problems facing the State of Colorado involving land use, population imbalance, water needs for energy and environmental considerations, the future of tourism, and recreational opportunities in the State. Action on these issues will have an impact upon water resource development. It is not the purpose of this Phase II Report to recommend changes in the legal and institutional considerations, but to define State concerns in this area.