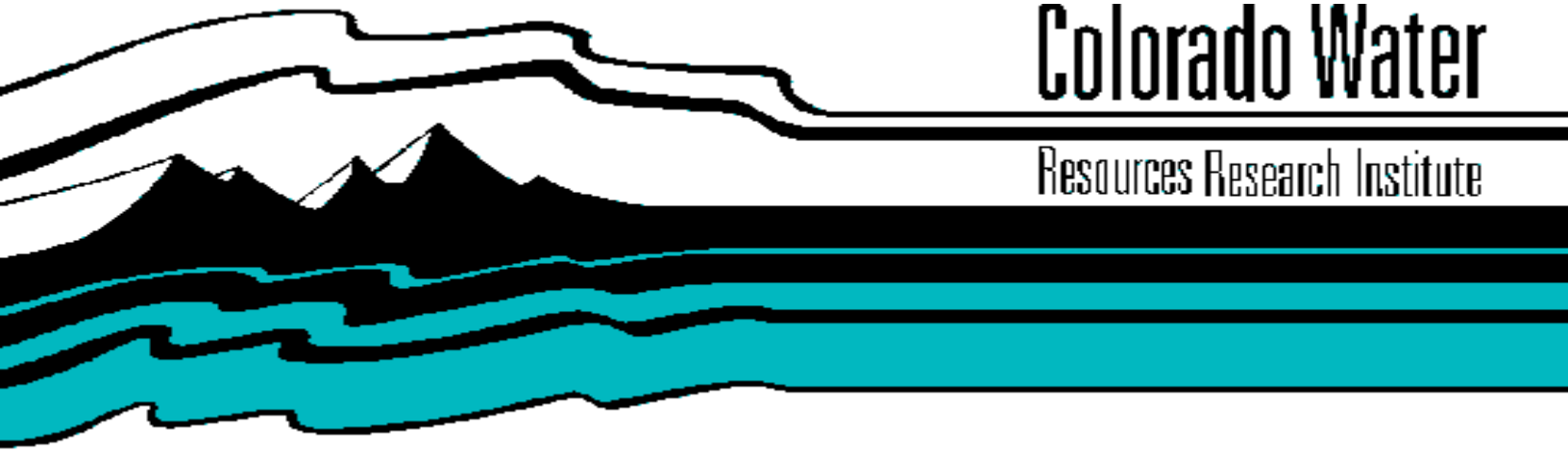
San Luis Valley Water Problems: A Legal Perspective

by

G.E. Radosevich and R.W. Rutz



Information Series Report No. 34

Colorado State University

SAN LUIS VALLEY WATER PROBLEMS:

A LEGAL PERSPECTIVE

by

G. E. Radosevich

and

R. W. Rutz

Department of Economics

Colorado State University

January, 1979

The work upon which this report is based was supported (in part) by funds provided by the United States Department of the Interior, Office of Water Research and Technology, as authorized by the Water Resources Research Act of 1964, and pursuant to Grant Agreement No. 14-34-0001-6211 (Project C-7144-COLO).

COLORADO WATER RESOURCES RESEARCH INSTITUTE
Colorado State University
Fort Collins, Colorado

Norman A. Evans, Director

FOREWORD

This report describes certain water administration and management problems and issues being faced in the San Luis Valley of Colorado. Prepared as a background document with a legal perspective for a study on waterlogging problems, it is being made available because it contains information of general interest to water users in the valley. A suggested approach to resolving the complex legal and institutional issues is included.

TABLE OF CONTENTS

SAN LUIS VALLEY WATER PROBLEMS:

A LEGAL PERSPECTIVE

by

George E. Radosevich*
Ronald W. Rutz

INTRODUCTION

The San Luis Valley stands at the crossroads of its economic future. Because of the existing water distribution system in the Valley and the superimposed legal system and legal constraints, a deep insecurity has arisen among the people. Suspicion and economic fear are facts of life. As a result, a number of lawsuits have been filed during the past year, thereby deepening the division already present and draining large amounts of money out of the Valley to law firms located primarily in Denver.

Presently, the Valley is a patchwork of local conservancy districts, ditch companies, drainage districts, water users associations, etc., all interested in protecting their own areas of concern at the expense of any other person or group which might be deemed a threat to their interest. The specific conflicting groups primarily break down into the Conejos River surface users vs. the Rio Grande River surface users, the Conejos River surface users vs. the ground water users in the Conejos Basin, surface users vs. ground water users, the "closed basin" vs. the rest of the Valley, municipalities vs. Valley water users, the Closed Basin Drainage Project vs. subirrigators, Colorado vs. New Mexico, Texas and the Republic of Mexico, etc.

The list can go on and one, but it is evident that much Balkanization exists. In fact, farmers have been known to contribute to both sides of

---

*Associate Professor of Environmental Law and Economics and Research Associate, respectively, Department of Economics, Colorado State University.

a lawsuit because they have economic interests on each side of the controversy.

With the Closed Basin Drainage Project beginning, it is possible that there is enough water present in the Valley to fulfill existing water requirements and interstate commitments, without substantially harming the existing pattern of water use in the Valley. But to approach this objective, a spirit of cooperation and trust must be developed, and a basic review of the legal principles controlling water, along with the delivery system and governing entities, must be made.

The purpose of this report is to describe the water law condition and problems in the Valley, primarily by means of examining the current legal cases before the water court in Alamosa and highlighting the more significant issues. The following areas are discussed:

- The Rio Grande River and Colorado's commitments thereunder;
- The Closed Basin Project;
- Water Rights and Organizations in the Valley;
- Problems and Conflicts in the Valley;
- Developments in Colorado Water Law since 1973; and
- An approach to resolving the water problems now and in the future.

I. THE RIO GRANDE RIVER AND COLORADO'S COMMITMENTS THEREUNDER

A. Short History

Surface irrigation in the San Luis Valley began in the early 1850's and today the People's Ditch, one of the earliest constructed with the priority date of April 10, 1852, is the oldest ditch in continuous use in the state of Colorado.[1] However, extensive irrigation did not develop until the period from 1880 to 1890, when the ditch system constituting the present day surface water distribution network was constructed.[2] Today, approximately 500,000 acres of irrigated land receive water from ditch or well pumping systems.

But along with the surface water development within the San Luis Valley, serious conflicts developed among Colorado, New Mexico, Texas and the Republic of Mexico. As diversions of water increased in Colorado, shortages began developing down river. In an effort to restrict further development, the Department of Interior on December 5, 1896, stopped granting rights-of-way over public lands for the construction of reservoirs.

A decade later on May 21, 1906, the United States and the Republic of Mexico signed a treaty which provided 60,000 acre feet of water a year to the Republic of Mexico. To meet this commitment, the United States in 1916 constructed the Elephant Butte Reservoir in New Mexico with a storage capacity of 2,600,000 acre feet. But even after construction of the reservoir, it was another nine years until Colorado was successful in having

---

[1]For interesting reading on the early history of the San Luis Valley, see: Bean, L.C., Land of the Blue Sky People, Ye Olde Print Shop, Alamosa, Colorado, 1975 and Spencer, F.C., The Story of the San Luis Valley, San Luis Valley Historical Society, Alamosa, 1975.

[2]Smiley, et al., Semi-Centennial History of the State of Colorado, Vol. I, Lewis Publishing Company, New York, 1913.

the federal government remove its embargo on the rights-of-way over public lands. But money to construct the reservoirs could not be raised because of threatened litigation.

In 1929, a temporary compact was entered into among Colorado, New Mexico and Texas which attempted to maintain the status quo upon the river until a permanent compact could be negotiated. The temporary compact required that gauging stations be maintained and operated upon the river to collect information on stream flow. The initial compact was to last for five years but it was subsequently extended for two more years.

Finally in 1938, Colorado, New Mexico and Texas signed the Rio Grande River Compact.[3] The specific terms of the Compact will be examined in greater detail later in this report.

However the Compact did not solve the water shortage problem in the Rio Grande Basin and by 1965 Colorado was accused by Texas and New Mexico of being more than 900,000 acre feet behind its delivery commitments under the terms of the Rio Grande River Compact. The next year Texas and New Mexico filed suit against Colorado in the United States Supreme Court. The case was subsequently continued provided that Colorado annually meets its delivery commitments pursuant to the terms of the Rio Grande River Compact.[4] Until the latter part of 1975, Colorado attempted annually to regulate water use in the San Luis Valley by means of voluntary compliance on the part of the water users in the Valley with an annual set of operating criteria negotiated by the State Engineer, the Rio Grande Water Users

---

[3]Radosevich, G., D. Hamburg and L. Swick, Colorado Water Laws, pp. I-112 to 122; Appendix D.

[4]Texas, et al. vs. Colorado, Original No. 29, (October Term, 1966).

Association, the Conejos Water Conservancy District, and the Rio Grande Water Conservancy District.[5] (See Operating Criteria, Appendix A)

By 1975 the State Engineer felt that it was becoming increasingly difficult to arrive at a suitable agreement given all of the divergent and conflicting interests in the San Luis Valley, so he issued rules and regulations dated August 21, 1975 governing water diversion and water pumping from wells, which he lodged with the water court for the Third Water District in Alamosa, Colorado, having an effective date of January 1, 1976. (See Appendix B)

Pursuant to Section 37-92-304 CRS 1973, 75 separate protests were filed with at least 19 attorneys or law firms being involved in the controversy at one time or another.[6] In his order dated June 23, 1976, Judge Donald Smith ruled as a matter of law that the State Engineer had violated Colorado law in promulgating the rules and regulations pertaining to Colorado's obligation under the Rio Grande River Compact.[7] The motion for a new trial was deined on March 10, 1977. Subsequently, the Attorney General has filed an appeal to this ruling. In the meantime, his office is continuing to regulate the water in the Valley under the concept of "historic use."

At the same time, the State Engineer obtained a cease and desist order to reduce the diversion of Mogote Ditch in order to supply water to partially fulfill Colorado's delivery commitments under the Rio Grande River Compact.

---

[5] The Valley Courier, Vol. 47, No. 34, February 18, 1975, Col. 1

[6] In the Matter of the Rules and Regulations of the State Engineer for the Rio Grande and Conejos River Basins and Their Tributaries, Water Court, Third Division, Case No. W-3466.

[7] See the full text of Judge Smith's Order found in Appendix C.

In violation of the order, agents of the Mogote Ditch Company apparently restored the diversion of water to the company's historic priority amount, thereby causing the state engineer to file suit against the Ditch Company, seeking a temporary restraining order and a temporary and permanent injunction.[8] On June 17, 1976, the temporary restraining order was granted, and the matter is now before the court. Shortly thereafter several municipalities in the San Luis Valley filed suit, seeking to prevent the State Engineer from reducing the amount of water they pump from wells for use in their respective communities. Their unique theory is that the present city wells are a substitute for the many small domestic wells which would be exempt from regulation by the State Engineer.[9]

It is apparent that ever since the late 19th century grave water problems have existed in the San Luis Valley. As is evident from the three recent aforementioned Colorado cases now before the courts, much disagreement and uncertainty still exists. However, to get a better idea of the water problem in the San Luis Valley, it will be helpful to closely examine the various articles of the Rio Grande River Compact.

B. Rio Grande River Compact

The Rio Grande River Compact was signed at Santa Fe, New Mexico on March 18, 1938.[10] The document is complex and therefore it will be examined article by article to help one better under its terms. (See Appendix D)

---

[8] People vs. Mogote Ditch Company, Case No. W-3560, Water Court, Third Div.

[9] City of Alamosa, et al., vs. Sherman, et al., Case No. W-3593, Water Court, Third Division.

[10] Section 37-66-101 CRS 1973.

Article I describes the agency established to administer the Compact and also defines various terms used throughout the Compact. The following are the more significant:

1. Project Storage is defined as the combined capacity of Elephant Butte Reservoir in New Mexico and all other reservoirs available for storage below Elephant Butte and above the first diversion to lands of the Rio Grande Project, the total storage capacity being limited to 2,638,860 acre feet.

2. Tributary means any stream which naturally contributes to the flow of the Rio Grande River.

3. Closed Basin includes that part of the San Luis Valley which drains into the San Luis Lakes and adjacent territory and normally does not contribute to the flow of the Rio Grande River.

4. Transmountain Diversion defines water imported into the Rio Grande drainage basin but excludes water from the closed basin.

Article I also contains other definitions which will not be listed in this report, but the concepts will be explained when necessary so that one does not bog down in Compact terminology, which at times can be extremely confusing.

Article II provides for the establishment and the maintenance of gauging stations at certain specific points along the river and also below Elephant Butte Reservoir, Caballo Reservoir and all reservoirs constructed after 1929. The article also authorizes the establishment of gauging stations at other points that may be required to secure necessary information for the operation of the Compact. These stations collect data which is then used to assist in the proper administration of the Compact and is necessary because of the schedules established in Article III and in Article IV. The

schedules attempt to establish the relationship between water flows passing certain guaging stations upstream and the resulting amount of water that should flow past certain guaging stations downstream as calculated between 1928 and 1937.[11]

Article III establishes two tables. One for the Rio Grande River and its tributaries, less the discharge from the Conejos River system. The other for the Conejos River and its tributaries. The tables attempt to establish the amount of water required to flow across the state line into New Mexico by ascertaining the amount of water entering the river systems. The article permits the tables to be adjusted to reflect any change in location of the gauging stations, any new or increased depletion of the runoff above inflow gauging stations, and any transmountain diversions into the drainage basin of the Rio Grande River above Lobatos. These adjustments are necessary so that the relationship can be maintained between inflow and outflow resulting from new depletions of flow or increased amount of inflow resulting from transmountain diversions. Colorado was also granted a 10,000 acre foot credit against the amount of water required to be delivered to New Mexico.

The tables were designed to reflect the fact that runoff varies each year. Therefore, if the amount of water entering the drainage basin in Colorado decreases, Colorado's commitment to furnish water at the state line also decreases. In the alternative, during wet years Colorado's obligation to deliver water to New Mexico increases under the dual index system.

---

[11]Hinderlider, Analysis of Compact, Colorado Attorney General's Office, Denver, Colorado, page 21.

Article III also contains a very important prohibition concerning water quality which could prevent Colorado from utilizing water drained from the Closed Basin to fulfill its delivery requirements to New Mexico. For all such works constructed after 1937, Colorado shall not be credited with the amount of water so delivered, unless the proportion of sodium ions shall be less than forty-five percent of the total positive ions in the water anytime the total dissolved solids in such water exceeds three hundred fifty parts per million.

Article IV established a schedule which contains the relationship between quantities of water measured at one gauging station on the Rio Grande River, the Otowi Bridge gauging station in New Mexico, and the amount of water which should flow past the San Marcial Index Station in New Mexico. As in Article III, adjustments are permitted in the schedule to reflect depletions in the amount of water passing the Otowi Bridge Index Station due to diversions of the natural runoff after 1929 in New Mexico and also for depletions during the months of July, August and September of the runoff of tributaries between the Otowi Bridge Index Station and the San Marcial Index Station by works constructed after 1937. An adjustment must also be made for new water transported into the drainage basin from an outside source. A resolution was adjusted, effective January 1, 1949, changing the schedules set out in Article IV, to relate to Otowi supply to the Elephant Butte effective supply, instead of the San Marcial gauge. The resolution also eliminated the San Marcial and San Acacia gauging stations and removed the depletions occurring in July, August and September from the accounting systems.

In accordance with the theory of Article III, the purpose of the schedule is to establish the relationship between the amount of water passing

the first gauging station and the amount of water that should be available at the second gauging station based upon the conditions existing at the time the Compact was signed and ratified. Any change that would alter this basic relationship, whether it involves an increase in the amount of available water by means of transmountain diversions or a decrease in the amount of available water based upon either diversions above the first gauging station or diversions from tributaries between the two gauging stations, must be calculated so that the original relationship remains unchanged.

Article V permits the abandonment of gauging stations and the establishment of new gauging stations, provided that the commission gives unanimous approval and provided further that the rights and obligations to deliver water remain substantially unaltered.

Article VI gives certain flexibility to New Mexico and to Colorado in delivery commitments pursuant to the schedules contained in Article III and Article IV. Colorado may have an annual debit or an accrued debit in its delivery commitments of up to 100,000 acre feet. Anything in excess must be supported by an equal amount of storage water in reservoirs constructed after 1937. In addition, within the physical limits of the post-1937 reservoir storage capacity, Colorado must retain water equal to its accrued deficit.

Unlike Colorado, New Mexico has a yearly ceiling of 150,000 acre feet on its annual debit. Thus if New Mexico falls behind in its delivery commitments in excess of 150,000 acre feet, that excess will not be added to New Mexico's accrued debit. The ceiling on New Mexico's accrued debit is set at 200,000 acre feet as opposed to Colorado's limitation of 100,000 acre feet. New Mexico is also required, within the fiscal limits of re-

servoirs constructed after 1929, to retain sufficient water to satisfy its accrued debits.

A ceiling is set for New Mexico and for Colorado as to any excess deliveries in any year. Article VI prevents either Colorado or New Mexico from acquiring an accrued credit in excess of 150,000 acre feet, and even this accrued credit can be lost by each state, either wholly or in part, if the reservoir capacity of the project is so full that some of the water must be released and cannot be held by a project reservoir further downstream. Thus, neither state is permitted to accumulate large amounts of credit which can be drawn upon during subsequent years. It forces each state to utilize, as best it can, any excess water that might be present in the stream system for any given year. It also apparently stabilizes the amount of water which New Mexico and Texas can expect to receive in any given year, since it would be impossible for a state to amass huge water delivery credits and then effectively draw upon those credits to meet future delivery requirements under the Compact.

An alternative rationale for limiting the amount of accrued credit has also been proposed. Limiting the amount of accrued credits would prevent unsound expansion of water development projects which otherwise might result from the accumulation of large annual credits.[12] Alternatively, by permitting flexibility in the amount of accrued debits, Colorado could continue to irrigate at the 1938 levels without undue hardship or curtailment.[13]

---

[12]Hinderlider, supra., at page 24.

[13]Ibid.

Article VI contains provisions for the reduction or elimination of accrued debits. If the project storage is so full that water must be released and cannot be recaptured in lower project reservoirs, the accrued debits of New Mexico and Colorado will be eliminated. In addition, if the aggregate accrued debits of Colorado and New Mexico exceed the unfilled capacity of project storage, the accrued debits will be reduced accordingly. Finally, the accrued credits and accrued debits will be reduced annually to compensate for evaporation losses sustained in certain designed project storage reservoirs.

Article VII prohibits either Colorado or New Mexico from increasing the amount of water stored in reservoirs constructed after 1929 whenever there is less than 400,000 acre feet of usable water in project storage. But if actual releases from either the effective date of the Compact or the calendar year following an actual spill are more than an average of 790,000 acre feet per annum, the minimum amount of storage in Elephant Butte Reservoir shall be adjusted to reflect the excess.

Article VIII permits both Texas and New Mexico, during the month of January, to demand the release of water in storage reservoirs constructed after 1929 up to the amount of the accrued debits, and the releases shall be in sufficient quantities to bring the amount of usable water in project storage up to 600,000 acre feet by March 1 and to maintain that amount in storage until April 13. This provision is designed to permit the normal release of 790,000 acre feet of water from project storage each year.

Article IX contains Colorado's consent to the importation by New Mexico or by the federal government of water from the San Juan River, provided that present and prospective uses in Colorado of such water and its tributaries are protected.

Article X provides that the state having the right to use the water will receive credit for any water imported into the basin.

Article XI contains the declaration by New Mexico and Texas that as of the effective date of the Compact, issues regarding the quantity or the quality of the water are settled. But each signatory state may at a later time seek redress in the United States Supreme Court if the character or quality of the water at the point of delivery is changed to the injury of another signatory state.

Article XII establishes the Rio Grande Compact Commission to administer the provisions of the Compact. The jurisdiction of the Commission includes the collection, correlation and presentation of factual data and the maintenance of records having a bearing upon the administration of the Compact. The Commission, by unanimous action, may make recommendations to the respective states upon matters concerned with the administration of the Compact. Finally the Commission can adopt rules and regulations concerning the Compact but only upon the unanimous consent of all the parties.

The ex officio member of the Commission from the state of Colorado is the State Engineer. The commission meetings are usually held in March each year at a site selected on a rotating basis. They are preceded by a meeting of the state engineers from each state during which time the facts and figures used in the later Commission meeting are agreed upon.[14]

Article XIII provides for a review of any provision of the Compact relating to nonsubstantive matters every five years, but only by the unanimous consent of all of the Commissioners. Substantive matters cannot be affected.

---

[14]Conversation with Mr. McFadden, the Division Engineer in Alamosa, on January 3, 1977.

Any proposed change has to be adopted by the unanimous action of the Commissioners, ratified by the various legislatures, and consented to by Congress.

Article XIV protects Colorado and New Mexico from any increased use or loss of water to the Republic of Mexico.

Article XV declares that the Compact was executed because of the special physical and other conditions characteristic of the Rio Grande River and surrounding territory and should not be construed as establishing any general principle or precedent applicable to other interstate streams.

Article XVI declares that the Compact is subject to the existing obligations of the United States to the Republic of Mexico and to the rights of the Indian tribes.

The remaining article and paragraphs in the Compact concern the Compact's effective date and other language affecting the execution and ratification of the Compact.

In summary, using the schedules found in Article III and Article IV, the Compact attempts to impose delivery requirements on Colorado and New Mexico by establishing the relationship between the amount of water entering the system and the amount of water which should be available at certain points within the river system. Adjustments can be made so that subsequent diversions which would deplete the amount of water passing the initial gauging stations would not reduce the amount of water that should be available at the designated downstream gauging on diversion points. It also protects the contributing states by not having their delivery commitments increased by water imported into the drainage system, which in turn would increase the amount of water flowing past the initial gauging

stations and thereby increase the amount of water required to flow through lower gauging points.

The Compact also attempts to restrict deficit deliveries so that water users downstream can have a dependable water supply. The debits were introduced to reflect the fact that during dry years it might be impossible to supply the commitments at the designated points along the stream system. The Compact permits a state to send down more water than is required and to get credit for this excess delivery. However, it places a limit upon the amount of accrued credits that either New Mexico or Colorado can obtain. This avoids the possibility that a state could build up a large credit and then in subsequent years draw on this credit to fulfill the commitments of the Compact without providing sufficient water for users downstream.

II. THE CLOSED BASIN PROJECT

But the Rio Grande River Compact, along with its commitments, restrictions and duties, was not the only major problem that has touched the Valley during the past half century or more. The proposed Closed Basin Project has also contributed to the uncertainty in the Valley.

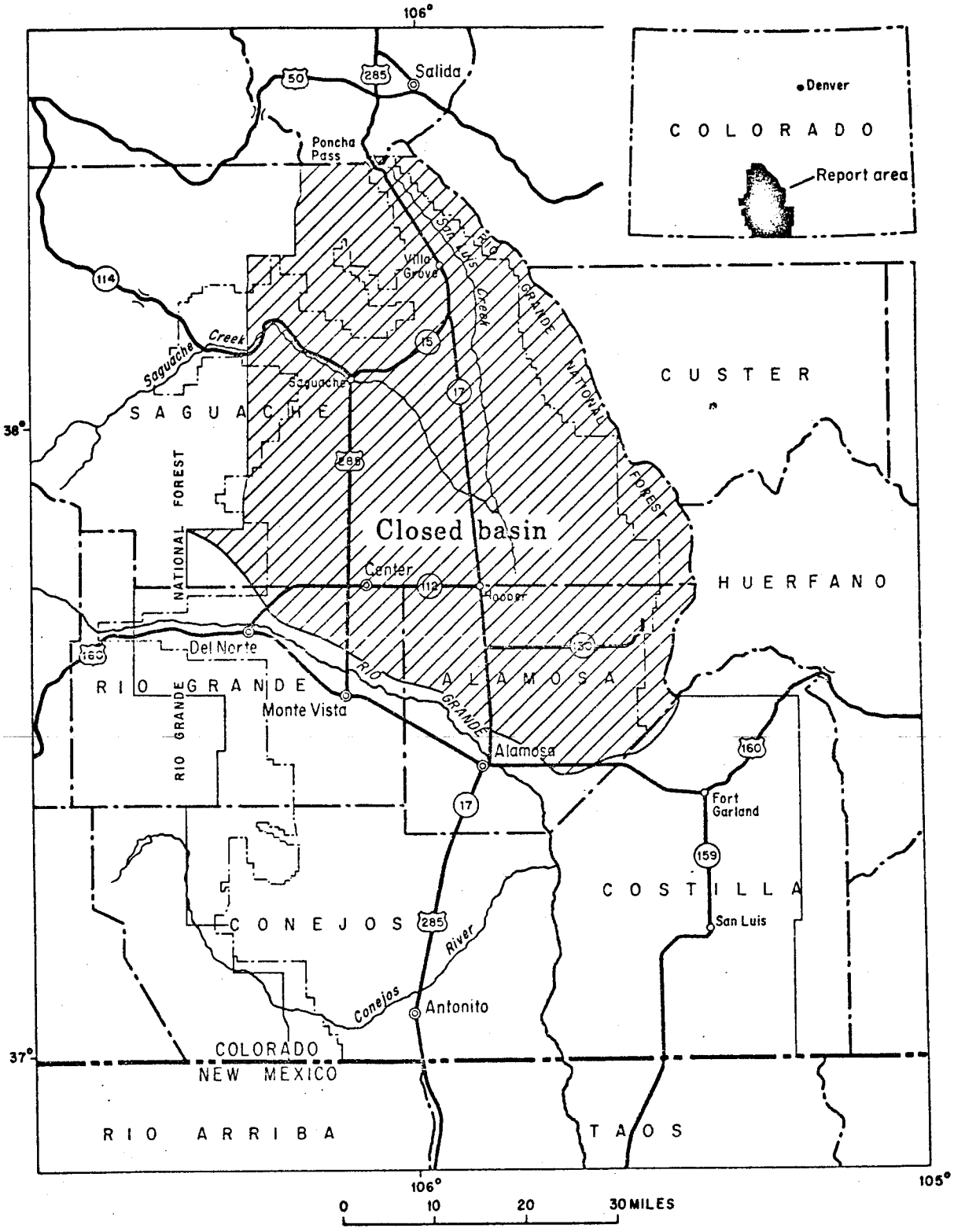
The Closed Basin is that part of the San Luis Valley lying north of the Rio Grande River which does not normally have a surface drainage outlet. It contains approximately 2,940 square miles of the Valley's 8,000 square miles.[15]

This area initially produced large amounts of spring wheat and oats. However, as irrigation continued, water applied in excess of evapotrans-

---

[15] A Report on Closed Basin Division, San Luis Valley Project, Colorado, House Document No. 91-369, 91st Congress, Second Session (1970), p. 55. See Figure 1 for a map of the Closed Basin.

Figure 1


106°
Salida
50
285
Poncha Pass
Denver
COLORADO
Report area
Villa Grove
San Luis Creek
Rio Grande National Forest
114
Saguache Creek
Saguache
15
17
SAGUACHE
CUSTER
38°
288
NATIONAL FOREST
Closed basin
Center
112
Hooper
HUERFANO
160
Del Norte
RIO GRANDE
Monte Vista
RIO GRANDE
ALAMOSA
Alamosa
160
17
Fort Garland
159
COSTILLA
CONEJOS
285
San Luis
River
Conejos
Antonito
37°
COLORADO
NEW MEXICO
RIO ARRIBA
TAOS
106°
105°
0 10 20 30 MILES

piration requirements began to raise the ground water table in the lower-lying lands in the eastern and central parts of the Basin. The soils in these areas eventually became waterlogged and were largely abandoned and the irrigated farming activities moved continually west across the Valley floor. Thus the lush wheat and oat fields were turned into salt flats, while the excess water evaporated uselessly into the atmosphere.[16]

Many individual farmers attempted to drain these lands, but the farmers in the eastern and central portion on the Basin found the magnitude and expense of individual efforts overwhelming. Much discussion about the problem ensued during the years, but nothing concrete was done.

The drafters of the Rio Grande River Compact saw a use for the water. Article III of the Compact envisioned the possible use of the excess water in the Basin to fulfill Colorado's delivery commitments to New Mexico, but certain water quality restrictions were also written into the Compact. Subsequently, the San Luis Valley Project, in conformity with the provisions of Section 9 of the Reclamation Project Act of 1939 and as described in House Document 693, 76th Congress, Third Session, was authorized under a secretarial finding of feasibility.

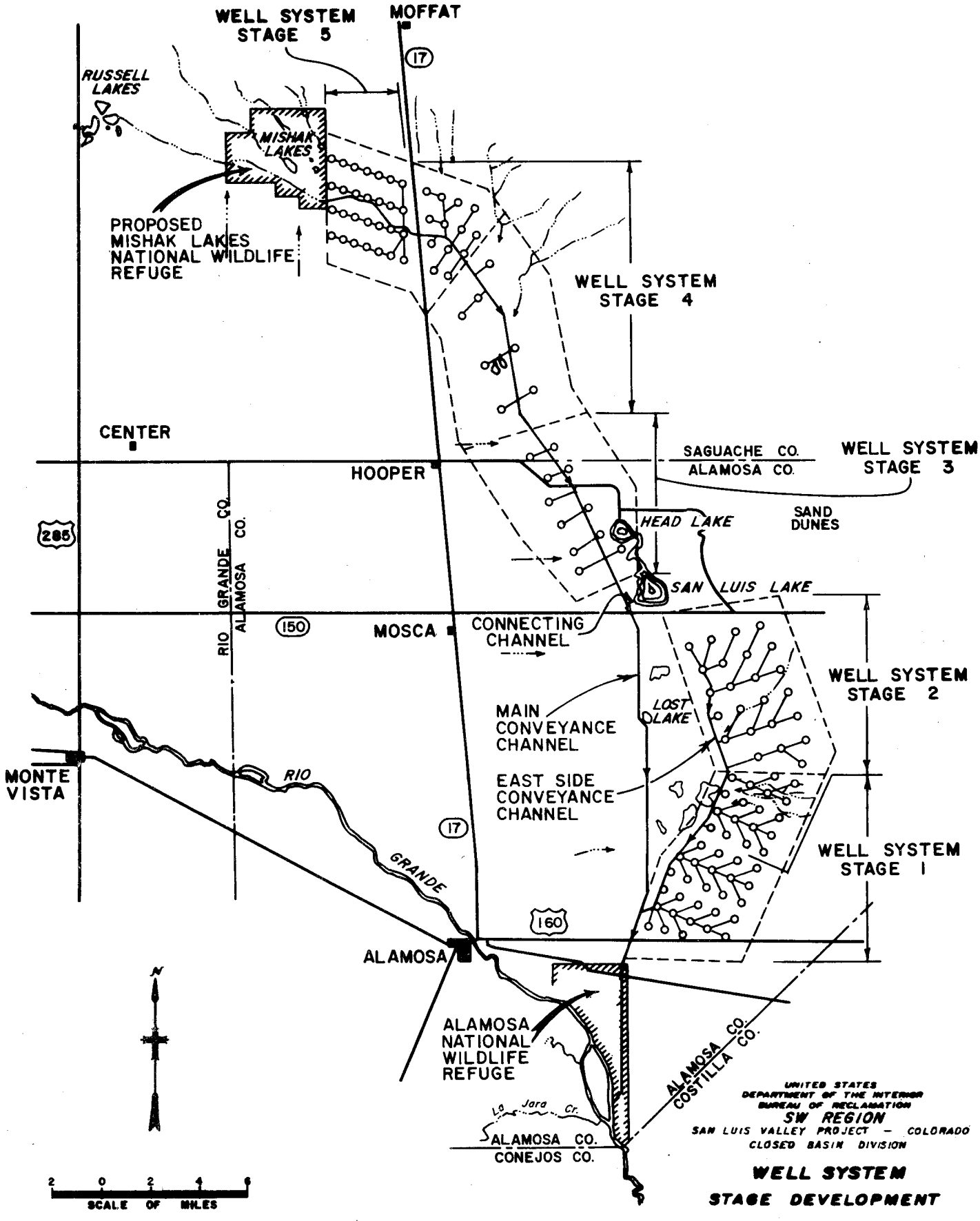
An expenditure of $500,000 was authorized for the construction of a drain, but construction was contingent on a finding of both a justification for the drain on the basis of cost and on the basis of the quantity and quality of water to be secured, and also contingent on the establishment of adequate arrangements for the maintenance of the drain.[17] Following

---

[16]Hafen, Colorado and Its People, Vol. II, Lewis Historical Publishing Company, (New York, 1948).

[17]A Report on Closed Basin Division, supra., p. 59.

Figure 2


WELL SYSTEM STAGE 5
MOFFAT
17
RUSSELL LAKES
MISHAK LAKES
PROPOSED MISHAK LAKES NATIONAL WILDLIFE REFUGE
WELL SYSTEM STAGE 4
CENTER
HOOPER
SAGUACHE CO.
ALAMOSA CO.
WELL SYSTEM STAGE 3
285
RIO GRANDE CO.
RIO ALAMOSA CO.
HEAD LAKE
SAND DUNES
SAN LUIS LAKE
150
MOSCA
CONNECTING CHANNEL
WELL SYSTEM STAGE 2
LOST LAKE
MAIN CONVEYANCE CHANNEL
EAST SIDE CONVEYANCE CHANNEL
MONTE VISTA
RIO GRANDE
17
WELL SYSTEM STAGE 1
160
ALAMOSA
ALAMOSA NATIONAL WILDLIFE REFUGE
La Jara Cr.
ALAMOSA CO.
CONEJOS CO.
ALAMOSA CO.
COSTILLA CO.
N
2 0 2 4 6
SCALE OF MILES
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SW REGION
SAN LUIS VALLEY PROJECT - COLORADO
CLOSED BASIN DIVISION
WELL SYSTEM
STAGE DEVELOPMENT

the passage of the Act of June 18, 1940, the Closed Basin Project was studied, restudied and studied again.[18]

Finally, with the backing of Senator Allott, Senate Bill Number 520 and House Resolution 5337 were introduced into Congress in 1972 and were designed to authorize the construction, operation and maintenance of the Closed Basin Project in the San Luis Valley. (S.B. 520 is reproduced as Appendix E) But with the defeat of Senator Allott, nothing more was done until 1975 when $135,000 was appropriated for further studies of the project. In 1976, the House appropriated $375,000 to prepare an impact statement for the project.[19]

The project as recently modified would consist of a battery of wells along the east side of the Valley which would pump water into a channel, extending from Mishak Lakes to the Rio Grande (See Figure 2). Some water would drain into the San Luis Lakes and the Alamosa Wildlife Refuge. This project would probably add 60,000 acre feet of water to the Rio Grande River, which could be used for paying off the alleged indebtedness. Once that indebtedness is paid off, this water would be availabile for sale or appropriation by water users in Colorado.[19a]

As indicated in a prior section of this report, when water passes the initial gauging station on the Rio Grande River and its tributaries, the

---

[18]For a brief summary of the most pertinent studies, see A Report on Closed Basin Division, supra., p. 59-66.

[19]See, The Valley Courier, May 25, 1976, Vol. 48, No. 103, Col. 3, Page 1 for a story about Representative Evan's efforts in the House Appropriations Committee.

[19a]The priority of water use from the project is as follows: (1) insure that Colorado will meet its annual obligation, (2) provide water for Mishak and Alamosa National Wildlife Refuges, (3) contribute to the retirement of Colorado's alleged accrued debt, and (4) unallocated water would be available for purchase by Colorado water users. P.L. 92-514.

schedules in Article III of the Rio Grande River Compact indicate the amount of water that must be provided at certain lower gauging stations. As in 1973 when almost 373,000 acre feet were diverted into the Closed Basin,[20] a significant strain is put on Colorado to fulfill its Compact commitments. Therefore, provided the water quality standards of Article III of the Compact are met, water that would otherwise go to waste could be made available to New Mexico and Texas.

III. WATER RIGHTS AND ORGANIZATION IN THE VALLEY

In the early 19th century the Valley was a grazing area with a few irrigated plots nestled in the river valleys.[21] The early Mexican settlers along the Culebra and Conejos Rivers, however, began the construction of a series of small irrigation canals. These people were forced out of the Valley by hostile Indians but returned in the early 1850s.[22] This time the settlers remained and dug the San Luis People's Ditch, which is the oldest ditch in continuous use in Colorado.[23]

For the next several decades, irrigation remained on a small scale. It was not until the 1880s, after the arrival of the American settlers, that large scale irrigation systems were planned and constructed, culminating in the surface water distribution system as it exists today.[24]

The two largest ditches constructed during this period were the Rio Grande Canal, which diverts water from the Rio Grande River northward into

---

[20]Colorado State Engineer's Office, Div. of Water Resources, unpublished field records, Division Three Office (Alamosa, Colorado, 1968-74).

[21]Spencer, The Story of the San Luis Valley, p. 65-70 (1975).

[22]Hafen, supra.

[23]Smiley, supra.

[24]Hafen, supra., p. 129.

the Closed Basin, and the Farmer's Union, begun in 1887. These two ditches remain the largest in the Valley diverting respectively 228,840 acre feet and 86,208 acre feet in 1973.[25] The Monte Vista Canal, the San Luis Valley Canal and the Empire Canal were also constructed during this time.[26]

From the 1880s to the early 1960s surface irrigation was the primary method of applying water to crops. The Valley farmers learned to raise the ground water level by injecting massive amounts of water during the spring runoff through ditches into the ground. This subirrigation worked especially well in the Valley soil since water was plentiful and the soil permitted rapid lateral movement.[27]

As the dependable supply of water decreased with the increased irrigation, and as waterlogging of the soils increased, surface flood irrigation became dominant. But beginning in the 1950s and accelerating thereafter, pumped wells attached to a pivot sprinkling system have developed and promise to be the most efficient and economical method of irrigation.[28]

Within the Valley are a host of legal entities which have responsibility over distribution and management of the water.[28a] Aside from the Office of the Division of Water Resources, Division Number 3, which is responsible

---

[25]Colorado State Engineer's Office, Division of Water Resources, unpublished field records, Division Three Office (Alamosa, Colorado, 1968-74).

[26]Hafen, supra., p. 129.

[27]U.S. Department of Agriculture, The 1955 Water Yearbook of Agriculture, U.S. Government Printing Office (Washington, D.C., 1955), p. 226.

[28]Johnson, S. Costs and Returns for Selected Crops in a Closed Basin, San Luis Valley, Colorado, Colorado Extension Service Bulletin 490A (1974).

[28a]For a narrative discussion on Colorado's water laws see Radosevich, G.E., et al., Evolution and Administration of Colroado Water Law - 1876 - 1976, Water Resources Publications, Inc., Fort Collins, Colorado, 1976.

for administration of water laws and distribution of water in the San Luis Valley, the organizations range from public entities to the private companies holding water rights for irrigators in the Valley. A brief description of these legal entities may be helpful in understanding the problems in the San Luis Valley.[29] They are:

1. Rio Grande Water Conservation District (37-48-101, et. seg., CRS 1973.)

As a result of the litigation of 1966 involving the states of Texas, New Mexico and Colorado, residents of the San Luis Valley felt they needed a valley-wide conservation district which would represent them in the litigation and also assist them directly in their water problems. In response, the general assembly authorized the formation of the Rio Grande Water Conservation District in 1967. The district works with the Colorado Water Conservation Board and makes recommendations to that Board. The Rio Grande Water Conservation District promotes water resource development within the San Luis Valley, determines water policy, may own water, coordinates legal and engineering matters affecting the San Luis Valley, and assists in developing projects with the Colorado Water Conservation Board and the federal government. The Colorado Water Conservation Board acts as the planning and policy agent for the state on both interstate and intrastate matters. Theoretically it serves as Colorado's official contact with the federal government and other states.

2. Water Conservancy Districts (37-45-101, et. seg., CRS 1973.)

Water conservancy districts are instrumentalities of the state government designed to create an entity large enough to tax and finance fairly large

---

[29]Some of this material has been condensed from Colorado Water Law Practice, published by the University of Denver, College of Law, for its Program of Advanced Professional Development, 1976.

scale projects. The water conservancy districts contract with the federal government for delivery of water from reclamation projects, acquire their own rights, construct and operate water resource projects and have the power to condemn property. In the San Luis Valley there are three such water conservancy districts, the Conejos Water Conservancy District, the San Luis Valley Water Conservancy District and the Trinchera Water Conservancy District. See Appendix F for addresses.

3. Irrigation Districts.

Various statutes authorize the creation of irrigation districts: 37-41-101, et. seg., CRS 1973; 37-42-101, et. seg., CRS 1973; 37-43-101, et. seg., CRS 1973; and 37-44-101, et. seg., CRS 1973. The irrigation district is a public corporation and exercises power such as eminent domain, contracts with the federal government for water, and taxes lands within the district for irrigation district purposes. The San Luis Valley Irrigation District is one of several districts operating within the Valley.

4. Drainage Districts (37-30-101, et. seg., CRS 1973.)

A drainage district plans, develops and constructs projects to drain land not presently cultivatable or useful. The district has the power to assess lands within the district for the repayment of the cost of any construction projects. Within the San Luis Valley there are a number of drainage districts - Bowen Drainage District, San Luis Valley District No. 1, The Waverly Drainage District No. 1, and the Morgan Drainage District.

5. Water and Sanitation Districts (32-4-101, et. seg., CRS 1973.)

There are a number of water and sanitation districts located throughout the San Luis Valley designed to promote public health, safety, prosperity, security and general welfare. Among these districts are the East Alamosa Water and Sanitation District, the Capulin Water and Sanitation District,

Will Marrow Water and Sanitation District, Fort Garland Water and Sanitation District, and the San Luis Water and Sanitation District.

6. Non-Profit Corporations and Voluntary Organizations.

There are numerous non-profit corporations and/or voluntary organizations throughout the Valley. Some of these groups are organized under the Reclamation Act of June 17, 1902 and Section 7-44-101, et. seg., CRS 1973 as water users' associations, often consisting of a federation of ditch companies. Others have been created to protect and promote a special interest group within the Valley. A list of such organizations includes Conejos Water and Sewer Association, Champa Domestic Water Users Association, Guadelupe Water Users Association, Association of Senior Water Rights, Carmel Drain Water Users Association, Alamosa-LaJara Water Users Protective Association, Saguache Creek Water Users Association, San Antonio River Water Users Association, Rio Grande Canal Water Users Association, Monte Vista Water Users Association, Rio Grande Water Users Association and the San Luis Valley Irrigation Well Owners Association.

7. Ditch and Canal Companies.

These companies are organized pursuant to Section 7-42-101, et. seg., CRS 1973 for the purpose of constructing and repairing ditches and furnishing of water to shareholders. Most are organized formally under the corporation laws of Colorado. They are generally non-profit organizations in which a group of neighbors will cooperate to gain economies of scale in obtaining water rights and constructing a conveyance system. Their status is widely recognized according to their longevity and priority of right to receive water. As such, they are an important political force in water use within the Valley. A list of most companies in the Valley appears in Section B of Appendix F.

8. Other Entities.

Groups and entities such as the Rio Grande Compact Commission, the U.S. Soil Conservation Service, the U.S. Crops of Army Engineers, the Environmental Protection Agency, and the Secretary of the Interior through the Bureau of Land Management, among others, all have an impact on water rights and water administration within the San Luis Valley.

It is evident from the above listing that the Valley is fragmented among many different entities with overlapping responsibilities and duties. The organizations were generally created to improve the water use conditions, and as such, have been a important force in the historical development of irrigation and water use in the Valley.

IV. PROBLEMS AND CONFLICTS IN THE VALLEY

In spite of the progress and partly because of it, conflicts between surface water diverters and ground water users intensifies each year. The growing pressures and constraints are best evidenced by several pending legal cases and administrative action that preceded the litigation. These events are considered bench markets in the legal history of the Valley. The first was the enactment in 1969 of the Water Rights Administration and Determination Act, which required the integration of ground and surface water, the tabulation of all water rights on a basin-wide basis rather than a tributary basis as was done in the past, and a centralization of judicial handling of water matters in division water courts. As a result of this Act, the various water districts of the State, numbering 70 at that time, were reorganized into seven divisions with a division engineer and a water court in each division. Each division engineer was given the responsibility of developing a basin-wide ranking of water rights within his division. In 1973 the tabulation of water rights was published.

The significance of this Act in the San Luis Valley is perhaps greater than in any other basin in Colorado. Prior to 1973, administration of water rights in the Valley had been accomplished as though there were two separate rivers, the Rio Grande and the Conejos. The rationale was partly that Conejos water rights holders have the earliest water rights in the Valley, whereas the Rio Grande rights holders acquired rights later in time; and perhaps more, because they are two separate rivers, not hydrologically connected except at points near their convergence, and the division engineer felt it logical to administer them as two rivers.

To implement the basin rank concept outlined in section 37-92-401, CRS 1973 would have truly caused a substantial change in the priority of many water users on the Rio Grande system. But section 37-92-104 (1)(b)(VI), CRS 1973 enabled the division engineer to designate the priority according to the historic practice where to do otherwise would cause a substantial change. The problem is still not resolved however. The call below the confluence of the two river systems imposed by the Rio Grande Compact, and section 37-92-401, CRS, has resulted in a controversy as to the proper administration of water in Division Number 3.[29a]

With respect to the Rio Grande Compact, by 1965 an alleged indebtedness of 900,000 acre feet to the two downstream states was asserted by Texas and New Mexico. Presumably this was brought about through failure to closely manage the Colorado diversions from the Rio Grande in the early 1960s. In 1965, Texas and New Mexico brought suit against Colorado, charging Colorado with a violation of Article III of the Compact. The suit came as a surprise to the Valley residents since up to that time no one in Colorado had attempted to comply with the Compact, and Coloradoans didn't feel the

---

[29a]Letter and Comments to Report, Division Engineer, Water Division Number 3, dated November 15, 1977.

Compact would be enforced.[30] In 1967, a continuance of the litigation was negotiated and the three states entered into a stipulation designed to insure that compact allocations between the three states would be maintained (see Appendix G). Colorado agreed to meet its obligations under the Compact on an annual basis and if it does so, Texas and New Mexico will not pursue their claims for repayment of the alleged debt. By the end of 1976, approximately 300,000 acre feet of the alleged indebtedness was repaid to the downstream basin states. It is maintained by Colorado, however, that this is only an alleged indebtedness and is nonenforcible. It is only out of good will that the state is repaying the debt.

As a consequence of the 1967 stipulation, flexibility was taken away from administering the waters of the Rio Grande and its tributaries in the San Luis Valley. Previously, if Colorado went in debt one year to the downstream states, they would make it up in the next year. Under the present system this opportunity does not exist. The downstream states will not accept underdelivery in any year. In fact, the problem with delivering water to the downstream states is that if Colorado does underdeliver in any year, those states may exercise their option to return to the court, revoke the stipulation, place a call on the remaining alleged indebtedness and perhaps require a Federal Master to come in and regulate the diversion on the Rio Grande under the conditions set out in the compact.

Another issue of administration in the valley is the restoration of surface water rights to their status prevailing in 1938. The 1938 date is significant because this is the date on which the Rio Grande Compact was ratified by Texas, New Mexico and Colorado and the United States

---

[30] The Valley Courier, February 18, 1975, Vol. 47, No. 34, Page 1, Col. 3.

government. The state engineer has to consider water rights existing at that time in dividing Colorado's portion of water in the Rio Grande. All water rights acquired after that date are limited to nonallocated flows of the river in Colorado.

In addition to problems associated with surface diversions and meeting compact requirements, another problem emerged with the proliferation of wells in the valley. Water is pumped from at least three identifiable ground water sources. A hydrologic divide north of the Rio Grande forms a closed basin so that water in an unconfined aquifer does not return to the river system. There is also another shallow unconfined aquifer throughout the Valley that is hydraulically connected to the surface streams. And finally there is a deep confined aquifer. It is alleged that water users who are irrigating in the closed basin areas and withdrawing from the unconfined aquifer are causing the water table within the Conejos River portion of the valley to be lowered. This is a point of real controversy and it contributed to the issuing of rules and regulations by the State Engineer and to the litigation subsequently discussed.

To meet the compact requirements as agreed in the 1967 stipulation, until 1974, each year the State Engineer negotiated with local interests in the Valley to establish operating criteria for administering surface and groundwaters of the Rio Grande and Conejos Rivers.[31] The meetings in the early 1970s began to involve opposition by certain Valley residents to the Closed Basin Project.[32] Finally on December 4, 1973, in order to assist the discussion of the problem in the Valley the State Engineer held

---

[31]See Appendix A for the Operating Criteria established for 1974.

[32]Interview with Mr. Clarence Kuiper, State Engineer for Colorado, on December 21, 1976, in Denver, Colorado.

a public hearing to discuss eleven issues.[33] Several attorneys in the audience threatened to obtain a temporary restraining order if the meeting continued. The meeting was held anyway and from the State Engineer's point of view it was a useful exercise since many of the key issues were discussed and the Valley residents were better informed of the conditions under which the State Engineer must operate. The next year, "citing 'several vociferous and special interest groups,'"[34] the State Engineer issued proposed Rules and Regulations with an effective date of January 1, 1976, and logged them on September 18, 1975 with the court pursuant to Section 37-92-501, et al., CRS 1973.[35] The proposed rules and regulations were divided into three parts: Part One contained definitions and citations; Part Two covered surface water administration; and Part Three involved underground water administration (see Appendix B).

Following are the major provisions of the proposed rules and regulations:

1. Water to be delivered pursuant to the commitments contained in the Rio Grande River Compact constitute the most senior commitment in the Rio Grande and Conejos River Basins (Provisions IIA and IIIA of the Proposed Rules and Regulations).

2. The Rio Grande River and the Conejos River are to be treated as separate rivers and each is required to provide the amount of water determined in its respective schedule found in Article III of the Rio Grande River Compact, all in accordance with the doctrine of prior appropriation (IIB and IIC).

---

[33]A discussion of some of the issues follows later in this report and a copy of Mr. Kuiper's memorandum and issues is attached as Appendix H.

[34]The Valley Courier, February 18, 1975, Vol. 47, No. 34, Page 1, Col. 1.

[35]Case No. W-3466, Water Court, Third Div., supra.

3. Storage in post-compact reservoirs and diversions of water decreed for beneficial use for less than the entire year are prohibited during the months of January, February, March, November and December (IID).

4. The 10,000 acre foot credit contained in Article III of the Rio Grande River Compact was to be allocated to each river system on the same percentage as each river system's delivery requirement determined by Article III bore to Colorado's total commitment (IIE).

5. Except for certain uses such as stock or domestic use, pumping would be limited to five days a week during 1976 and thereafter reduced one day per week for each year until 1981 when all pumping would be curtailed. Drains and other similar structures were to be treated as wells for the purposes of the rules and regulations (IIIC).

6. Pumping from the wells would not be curtailed if the wells were operating pursuant to a decreed plan of augmentation, or to a decree as an alternative point of diversion, or as a decreed changed point of diversion. Also, pumping could continue if the well could stand upon its own priority date or drew water that was not in the unconsolidated alluvial aquifer to sand, gravel and other sedimentary materials or was not hydrologically connected thereto (IIID).

As previously stated, 75 separate protests were filed against the proposed rules and regulations. Upon request of the Judge, briefs, discussing points of law, were submitted. A hearing was set for May 28, 1976 to permit the State Engineer to discuss the submitted exhibits. This hearing was cancelled by the Judge. But on June 23, 1976, without holding a hearing to discuss any of the factual disputes in the matter, Judge Donald Smith issued an order which dealt only with the legal issues involved in the State Engineer's proposed rules and regulstions. The order

is reproduced herein as Appendix C. Judge Smith held that the proposed rules and regulations in their present form and content were disapproved, and remanded the proposed rules and regulations to the State Engineer for separate action pursuant to Section 37-80-104 CRS 1973 for the rules and regulations involving the Rio Grande River Compact, and pursuant to Section 37-92-501, et al., for the rules and regulations affecting water administration within the state of Colorado and not affected by the Rio Grande River Compact.

Judge Smith ruled that it is improper to combine rules and regulations involving the Rio Grande River Compact and rules and regulations which strictly apply to water determinations within the state of Colorado. The court ruled that the standards to be applied for each set of rules and regulations were different. Rules and regulations adopted by the State Engineers involving the Compact require that they be "legal and equitable" (Section 37-80-104 CRS 1973) while the rules and regulations applicable to water within the state of Colorado have specific standards listed in Section 37-92-502 CRS 1973. The Judge also listed certain additional factors which should be considered by the State Engineer in promulgating any rules and regulations that affect purely intrastate water, i.e., designation of tributary streams, location of aquifers, interconnection of aquifers, the hydrologic characteristics of aquifers and tributaries, the interrelationship of surface and subsurface uses of common owners, regulations for uses in times of unusual hydrological or climatic conditions, regulations for the control of waste water, and regulations relating to beneficial use and control of excess application of water.

Thus the court ruled that the State Engineer should separately adopt rules and regulations, and those rules and regulations should be tested

in separate actions governed by the separate statutes. The court held this was the only orderly and proper way to determine the validity and applicability of each set of rules and regulations. Following his decision Judge Smith retired from the bench. He returned on special assignment to hear a motion for a new trial in March, 1977, which motion he denied. The Attorney General is now appealing this decision. In the meantime, the rules and regulations proposed by the State Engineer are not in effect. Also, specific operating criteria have not been approved by the various water organizations and the State Engineer as had previously been done. This situation gave rise to the second state lawsuit.

The Mogote Ditch Company has a right to divert 342.40 cubic feet of water per second with the priority date of June 2, 1887. On June 5, 1976, the water commissioner in the San Luis Valley reduced the diversion by Mogote Ditch to 100 cubic feet of water per second in order to fulfill commitments under the Rio Grande River Compact. After the water commissioner left, the ditch diversion was adjusted upward. The water commissioner returned, found the upward adjustment, issued a verbal order pursuant to Section 37-92-502 CRS 1973 and adjusted the headgate downward. The headgate was subsequently adjusted upward and on June 7, 1976 the Division Engineer issued a written order. The order was not heeded. Suit was filed seeking a temporary restraining order and a temporary and a permanent injunction.[36]

The State Engineer contended that unless the diversion of Mogote Ditch was reduced from 342.40 cubic feet of water per second to 100 cubic

---

[36]People vs. The Mogote Northeastern Consolidated Ditch Company, Case No. W-3560, Water Court, Third Division.

feet of water per second, Colorado would be deficient in its delivery to New Mexico pursuant to the Rio Grande Compact by 450 acre feet, thereby raising the spectrum that the state of New Mexico and the state of Texas would reopen the litigation in the United States Supreme Court, all to the detriment of Colorado.

Mogote Ditch answered that contention by pointing out the State Engineer's proposed rules and regulations were not approved by the water court in Case No. W-3466 and therefore the State Engineer did not have authority to reduce the diversion of water from its historic level, especially when junior rights on the Rio Grande River were not curtailed. The Mogote Ditch is on the Conejos River and is senior to some rights on the Rio Grande that were not yet regulated by the state.

The water court granted the state's request for a temporary restraining order because the Mogote Ditch diversion disrupted the pre-existing status quo on the river. The temporary restraining order was later extended by stipulation among the parties, because it would have been impossible to hold a hearing on the motion for a temporary injunction within the period before the judge went on vacation. For a time it appeared that many of the same parties involved in the rules and regulations case would intervene in this case, but shortly after this case began, the river was declared "open" by the State Engineer, thereby eliminating the immediate necessity for the suit.[37] Nothing of substance has since been done in the case.

Resolution of the Mogote case could answer some of the legal issues that are confronting the Valley water users. The following are a list of such issues:

---

[37]Information obtained at a meeting with the Assistant Attorney General for Land and Water, October 7, 1976, in the Attorney General's Office, Denver, Colorado.

1. Do the schedules contained in Article III of the Rio Grande River Compact constitute separate and specific commitment on each river system, or are the schedules merely determinative of Colorado's overall commitment, thereby permitting the ultimate regulation of each river within the state by the State Engineer pursuant to Colorado law? The water users in the Conejos River Basin want the Rio Grande River administered as one unit in Colorado since their priority dates are generally earlier than the priority dates on the Rio Grande River.[38] They argue that the Compact did not repeal the appropriation doctrine in Colorado and when a "call" is made below the confluence of the Rio Grande River and the Conejos River, water rights must be curtailed in reverse order. The Compact requirement is the number one "call" on the river and the schedules contained in Article III are merely mathematical calculations to determine the amount of water to be sent to New Mexico. Thus, presumably water users on the Rio Grande would be curtailed if a "call" on the river is made to fulfill Compact requirements.

On the other hand, the water users along the Rio Grande River feel that the schedules in the Compact were required to establish a commitment for each river basin regardless of the priority date. Historically the Rio Grande River and the Conejos River were administered as two separate rivers and negotiations at that time on the Rio Grande River recognized the two river concept. As was previously pointed out, paragraphs IIB and IIC of the State Engineer's Proposed Rules and Regulations would have treated the Compact schedules as specific requirements for each river.

---

[38]See protests filed in People vs. The Mogote Ditch, supra.

2. Article III of the Rio Grande River Compact is silent as to the allocation of the 10,000 acre foot credit. The water users along the Conejos River feel that the full 10,000 acre feet should be allocated to them, especially if the courts decide that the Compact establishes separate delivery commitments on each river system based upon the schedules. Paragraph IIE of the Proposed Rules and Regulations would allocate the credit on the same percentage that each river's delivery requirements bears to the sum of such requirements.

3. Should some form of credit be determined benefiting the Conejos River System, since it is contended that water, especially from well diversion in the Conejos Basin, drains into the Rio Grande River drainage system and is therefore lost to the Conejos River system?

4. What are the "historic uses" that the Compact attempts to preserve, especially in relation to wells and post-Compact reservoirs constructed in the San Luis Valley? Must the wells be governed by the strict appropriation doctrine or can some type of accommodation be created, reflecting the significant impact that the wells have on the Valley's economy, despite the Water Rights Determination and Administration Act of 1969 affecting wells hydraulically connected to the natural stream.

At this point in time, it is difficult to give a clear idea about how the litigation will proceed and which issues will become focal points. The importance of this litigation cannot be stressed too highly, because if the aforementioned issues are decided, much of the uncertainty involving water rights in the San Luis Valley will be answered. The only remaining major problems will involve the closed basin system and the mechanics of integration of surface and ground water use.

The third case of City of Alamosa, et al. vs. Sherman, et al. involves municipalities attempting to obtain total exemption from the State Engineer's supervision by claiming that the municipalities' wells are a substitute for the many smaller exempt domestic wells.[39] The importance of this case is that if the towns are able to become exempt from regulation by the State Engineer, other entities in the Valley will try to follow suit, thereby increasing the number of lawsuits in the Valley.

But in addition to the issues highlighted in the aforementioned court cases, there are several other issues that are also affecting the Valley and many are related to the integration of the tributary water into the surface water priority system which is the conflict that caused the State Engineer to issue his Proposed Rules and Regulations. The problem is especially acute in the Conejos Basin because water diversions have had a noticeable effect on the amount of surface water available to fulfill senior surface rights.[40]

Drainage of lands for reclamation purposes has caused conflicts. Although once productive farm ground, most of the Closed Basin is unsuitable for agriculture because of the high water table. An obvious answer would be a drainage project, but certain interests in the Valley have opposed such a plan. A unique irrigation system exists in the Valley called subirrigation whereby the water table is raised and maintained by permitting water to percolate into the ground by means of a network of ditches.[41] Lowering the water table would mean destroying this method of irrigation.

---

[39]Case No. W-3593, Water Court, Third Division.

[40]Meeting with Mr. W. D. McFadden, Division Engineer, in Alamosa on November 22, 1976.

[41]Bean, Land of the Blue Sky People, (1975), p. 71.

The Closed Basin water could be drained into the Rio Grande River and be used to fulfill Colorado's commitments to New Mexico. However, for Colorado to be given credit for such water under the terms of the Compact, the sodium ions must constitute less than 45% of the total positive ions in the water when the total dissolved solids in the water exceeds 350 parts per million.[42] Thus New Mexico is concerned about the quality of any water that is drained from the Basin.

But the foregoing are not the only issues that must be decided.[43] There is some question whether Trinchera, LaJara and Alamosa Creeks, and other tributary streams, should be subject to administration under the Compact "call." There is evidence that strongly supports the contention that these streams are tributary to the Rio Grande River through subsurface flow, but the Compact negotiation did not provide gauging stations on these streams. These streams are usually not connected to the Rio Grande River on the surface and historically have not been subject to administration under the Compact.

Another problem concerns storage during the off-irrigation season by junior appropriators. It is argued that by permitting such storage, the amount of water which would flow to New Mexico to fulfill Compact commitments is reduced. But to curtail such storage would cause loss of water so necessary for late season irrigation.

Under the Valley floor, three areas of ground water exist--one is the confined (deep) aquifer and the other two are unconfined aquifers.

---

[42]Article III of the Rio Grande River Compact.

[43]The following discussion of issues is in part based upon a memorandum dated December 4, 1973 from the State Engineer to Whom It May Concern, a copy of which is found in Appendix G.

It must be determined whether the confined aquifer (artesian) is tributary to the Rio Grande Stream system or to the unconfined aquifer, and if so, how much. Based upon the answer to the two questions, then it must be determined if the connection is legally significant.[44] There is strong evidence that the confined aquifer is tributary to the Rio Grande and Conejos Rivers. But it is also true that the materiality of injury of a well or group of wells is not precisely known at this time.

The high water table is a problem in certain parts of the Valley. Thus the question exists as to whether the surface water appropriators should be given a preference in the granting of wells in the unconfined aquifer. Because of the practice of subirrigation, surface diverters try to keep the water table high. But this practice causes evaporation and the loss of land due to waterlogging of downslope lands and build up of salt deposits. To permit a junior appropriator to lower the water table by the use of his wells could hurt a senior appropriator.

Finally, another issue involves whether the Closed Basin and the Rio Grande River should be subject to a common priority list since there appears to be some ground water connection. In fact, should there be a division-wide priority list?

V. WHAT CAN BE DONE

From an examination of the complex physical hydrological system that exists in the San Luis Valley, and the various interest groups polarized along junior vs. senior, surface vs. ground, agricultural vs. municipal water users, it is obvious there can be no simple, easy and expedient

---

[44]See, Kuiper vs. Lundvall, 529 P .2d 1328 (1974) for a discussion concerning the factors examined to make such a decision.

solution for the Valley's water problems. And the circumstances that have induced the water users for agriculture, industry and municipal uses to engage in extensive and costly litigation, indicate the people of the San Luis Valley consider their water rights very important.[47]

But the complex water problem and legal battle found in the San Luis Valley are not a first in the West. Three areas in California have experienced a similar set of facts over the past several decades. In all three areas, the initial response was to resolve the problems through prolonged litigation. The solution, however, in the three areas was not just to divide and distribute available water according to water rights, but rather to manage the water supplies in a manner so that the various parties now receive a more dependable supply, even though, perhaps, reduced in quantity from their original allocation.

The areas referred to are the San Gabriel Valley, the West Basin and Orange County.[48] In the case of the San Gabriel Valley, the City of Pasadena sought to protect its rights to ground water in the Raymond Basin Area. This dispute ended up in the Supreme Court of California deciding between competing ground water users.[49]

The situation in the West Basin of Los Angeles is the next step in evolving a management approach. After 16 years of litigation, costing an estimated $5 million, pumping in the Basin was reduced so that water

---

[47]Estimates given the authors of litigation costs indicate $1.5 million has probably already been spent with an upward estimate of over $4 million to resolve the numerous legal issues.

[48]For a discussion of these three situations in California, see Meyers and Tarlock, Water Resources Management, Foundation Press, 1971, pp. 604-628.

[49]Pasadena vs. Alhambra, 207 P 2d 17, Cal. 1949.

was withdrawn according to priority of water rights, but salt water intrusion persisted. Having exhausted the litigation route, the water users turned to an institutional/management solution. The State Legislature passed the Water Replenishment District Act in 1955 which enabled a district to determine the amount of annual overdraft and then assess pumpers for costs of importing water to replenish the overdraft volume. Four years later, the Central and West Basin Replenishment District was formed to carry out the management through assessments and importation of water in the Basin.

The same solution was adopted in Orange County, California (which encompasses a large part of what is now the Greater Los Angeles Metropolitan Area) but without expensive litigation and polarization of numerous parties which causes a barrier to cooperation for years to come. The Orange County Water District was formed in 1949 to manage the ground and surface water in the district's boundaries. The water rights in the district were deliberately not adjudicated. Instead, in 1953, with enlarged powers to manage water, the district undertook a positive management program to provide financial capability that could ensure an adequate water supply at reasonable costs. The program focuses upon the economics of water supply through a system of five different types of water charges. These charges affect different types of water users in order to maintain equity among the basin's water producers. In addition, the district provides incentives to achieve a conjunctive use of ground and surface waters.

When the Orange County District was formed, agricultural water use was between 65 and 70 percent of diversions. With the rapid urbanization in the Los Angeles area, agricultural uses now amount to about 13 percent. But, the important point is, the district was formed to resolve conflicts

within the County and between Orange County and two upstream counties over water use (over 9,000 defendants). Although an initial lawsuit was filed, the matter was resolved by negotiation and stipulation rather than litigation.

As these situations relate to the San Luis Valley, they illustrate that management of existing resources and with the objective of providing an adequate supply of water can be achieved by (a) litigation or (b) negotiation and a willingness to cooperate in reaching a common objective. The Orange County experience is closest in facts to the San Luis Valley situation, and the key to the management program of the Orange County District is effective conjunctive use of both surface and ground water supplies. As Meyers and Tarlock conclude,

> Regulating the conjunctive use of ground and imported water supplies is the only real management capability the Water District has; the tool is economic incentive. The Water District manages the basin not by enforcing use limitations, but by exerting the indirect influence of economic incentives to control the patterns of use.[50]

Water users in California also have the advantage of one other legal concept which has not been clarified in Colorado. This legal rule provides that an underground basin can be used as a natural storage for surface water injected into it.[51] The rule greatly facilitates maximizing the value of conjunctively used surface and ground waters.

With the insight into the experience of other water users facing problems similar to those in the San Luis Valley, we suggest a program which would capitalize upon these experiences in an effort to arrive at a "least-

---

[50] Ibid., Meyers and Tarlock, pp. 621-622.

[51] City of Los Angeles vs. City of Glendale, 142 P2d 289, Cal. 1943.

cost" solution to the Valley's problems. Granted, there are many differences between the situations examined in California and that in the Valley. There are hydro-geological differences, different constraints upon water use as a result of different laws, a compact commitment imposed upon Colorado water users on the Rio Grande, and a different state of technology existing today compared to the period when the problems occurred in California. But, inspite of the differences, the similarities enable some benefit to be realized by the California experiences.

It is proposed that a long range goal of total water management in the Valley be adopted.[52] As a first step, it is suggested that a group of influential people from the Valley visit the three areas in California to discuss and observe (a) the nature of their problem, (b) the approaches taken to resolve them, (c) the soil and economic consequences of the various actions taken, and (d) the present state of affairs. This group of people should include representatives from several ditch companies, irrigation, conservation and conservancy districts, local bankers who provide agricultural loans and others in the Valley who are looked upon as valuable decision-makers. The authors have contacted the Orange County Water District and its management indicates its willingness to host the visit and arrange visits to San Gabriel and San Fernando Valleys.

Upon returning from the California trip, it will be important to assess the impact of the visit upon the group, and then to spell out the strategy for achieving an acceptable and workable water management scheme in the

---

[52]Several studies have been completed to look at management potential. See: Irrigation Water Management Study of the San Luis Valley, Colorado, by the SCS, USDA for the 4 Corners Regional Commission, December 1969, and The Economics of Water Management to Reduce Waterlogging and Salinity: San Luis Valley, Colorado, an unpublished Ph.D. Dissertation by Sam Houston Johnson, III, Department of Economics, Colorado State University, September, 1975.

the Valley. Management powers may require legislative action as well as changes in the law to allow water diversion, storage and delivery consistent with a management program that will stabilize the use of water while not necessarily diverting to each water user based upon his specific water right. In fact, it may be preferable to pool all water rights in the Valley and have the management entity deliver according to need and availability. This would allow maximum use of the surface and ground water supply while minimizing waste. Provisions would be made to protect the water rights from abandonment claims.

Once a management plan is prepared which takes into account all available supplies and the water needs (not necessarily the demands) of the Valley, the economic and legal incentives and sanctions will have to be developed. The five classifications of water user charges applied by the Orange County Water District illustrates the flexibility in approach. Then it must be decided whether an existing entity, i.e., district, should be designated the organization with authority to manage the water, or whether a totally new entity should be created to perform this task. There are many pro's and con's for either position. Undoubtedly, the management approach proposed would allow a reduction in costs to many water users by enabling the elimination of some existing entities with overlapping jurisdiction.

The management approach must also include a research and educational program for inhabitants in the Valley. At present, there is much confusion over what the law is, what the hydrological conditions and complexities are, what alternatives are available to assist the water users, and what are their consequences.

The San Luis Valley, not being a wealthy community of Coloradoans, needs to make the best out of its limited natural and human resources. This is not to say many litigable issues do not exist, it is only to suggest the long-run interests of the Valley be in cooperation, collaboration and negotiation rather than an adversary approach.

APPENDIX A

March 5, 1974

OPERATING CRITERIA

GENERAL CRITERIA - RIO GRANDE AND CONEJOS RIVER (Separate Administration)

I

These operating criteria shall affect all surface and underground water tributary to the Rio Grande at Lobatos gaging station and as defined in Section 148-21-3(3) and (4), Colorado Revised Statutes 1963, as amended, as follows:

> "(3) 'Waters of the state' means all surface and underground water in or tributary to all natural streams within the State of Colorado, except waters referred to in 148-18-2(3).
>
> (4) 'Underground water' as applied in this act for the purpose of defining the waters of a natural stream, means that 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. Such 'underground water' is considered different from 'designated ground water' as defined in 148-18-2(3)."

except water withdrawn from wells, such as domestic and livestock, exempted from administration under Section 148-21-45, Colorado Revised Statutes 1963, as amended.

II

Administration of all water, both surface and underground, will be based on the fact that the delivery of certain quantities of water pursuant to

the Rio Grande Compact constitutes the most senior water commitment in the Rio Grande Basin. As a result, all water rights, whether deriving from surface water or underground water, may be regulated at those times and to the extent necessary to deliver the amount of water required pursuant to the terms of that compact.

III

Any diversion of water from an aquifer hydraulically connected to surface streams shall be prohibited except at those times, and in those quantities necessary for the permitted beneficial use of such water. Such times shall be described as follows: for irrigation purposes, those times during which direct flow diversions are allowed from the Rio Grande or Conejos River or their tributaries, whichever is applicable; for stock or domestic uses as exempted by Section 148-21-45, Colorado Revised Statutes 1963, as amended, only in those quantities allowed by said section, and necessary for such uses; for all other purposes, including fish and wildlife propagation, only at those times and in those quantities necessary for the application thereof to permitted beneficial use, and when such does not constitute waste of water. Further, the diversion of ground water from aquifers hydraulically connected to surface streams shall be prohibited on each Sunday during the periods outlined above.

IV

Any injury to senior vested rights by appropriators of underground water must be reasonably lessened in order for the appropriator to continue

to divert water. Appropriation of all or part of such junior right may be permitted if the Division Engineer approves a written plan submitted to him whereby the amount of the injury caused by that junior right will be reasonably lessened.

V

Any appropriator may elect to treat any well or wells under a temporary plan of augmentation for part or all of any decreed surface right or any other valid water right, upon the approval of a written plan therefor by the Division Engineer; provided that no material injury occurs to any other vested right.

VI

All compact index stations will be rated by state hydrographers as often as needed to maintain a currently accurate record and records will be adjusted accordingly.

VII

The water users of the Rio Grande and Conejos River and their tributaries are encouraged to utilize either an existing entity such as the Rio Grande Water Conservation District or another entity to make full use of these operating criteria to augment the runoff at the Lobatos Gaging Station and to attempt to remedy injury by junior appropriators so that maximum utilization can be made of all the waters available in the San Luis Valley. The Office of the State Engineer will give whatever assistance possible to implement plans of augmentation or replacement water.

VIII

In recognition of the depletion of stream flows caused by the extraction of ground water, both shallow and artesian, this depletion falling most heavily on the Conejos River, the State Engineer's Office shall pursue in cooperation with any local agency or agencies studies and projects which will help provide equity to those surface water users so injured.

IX

Based upon evaluation of the distribution of return flows below Alamosa, the following division of return flow credits shall be utilized as between the Rio Grande and Conejos:

a. In the reach between the gaging stations "Rio Grande above La Jara Creek" and "Rio Grande below Trinchera Creek", sixty percent (60%) of the return flow shall be credited to the Conejos River and forty percent (40%) to the Rio Grande.

b. In the reach between the gaging stations "Rio Grande below Trinchera Creek" and "Rio Grande east of Manassa", one hundred percent (100%) of the return flow shall be credited to the Conejos River.

c. In the reach between the gaging stations "Rio Grande east of Manassa" and "Rio Grande at Lobatos" the gain or loss shall be prorated between the Conejos River and Rio Grande on the basis of total contribution at the gaging station "Rio Grande east of Manassa".

X

In recognition of the serious depletion caused to the Conejos River by ground water diversions from both the shallow and confined aquifers, 7,000 acre-feet of the 10,000 acre-foot credit given Colorado under the provisions of the Rio Grande Compact shall be credited to the Conejos River delivery schedule and 3,000 acre-feet shall be credited to the Rio Grande delivery schedule.

XI

In recognition of the approximately 34,000 acre-feet of flood water currently in storage in Platoro Reservoir, said water being stored during calendar year 1973, fifty (50) percent of that water shall be considered as a credit to the 1974 Rio Grande delivery schedule and fifty (50) percent shall be considered as a credit to the 1974 Conejos River delivery schedule. This water shall be released from Platoro Reservoir for delivery to Lobatos as soon as possible. Delivery schedules of the Conejos River and Rio Grande will be adjusted to reflect these credits at such time as the water is actually delivered to La Sauses.

DETAILED CRITERIA - RIO GRANDE AND ITS TRIBUTARIES EXCEPT THE CONEJOS RIVER

1. Runoff Estimate

a. Estimate total annual runoff at Del Norte from Soil Conservation Service and other estimates for April - September on May 1, and, using a long term average monthly runoff pattern, extend the estimate to a full year.

2. January, February and March

a. There will be no direct flow diversions from the Rio Grande or its tributaries during the months of January, February and March except for those rights decreed for use throughout the year. Storage in pre-compact reservoirs will be permitted during this period provided that 15 percent of all water stored shall be considered as stored out of priority in accordance with the Colorado Revised Statutes, chapter 148-11-25, as amended. This water may be called by the State Engineer for compact commitments if required, but any water so stored and carried over to January 1 of the following year will revert to absolute ownership of the reservoir in which it was held. In the event any reservoir should spill, the out-of-priority water will be the first to spill.

3. April through October

a. Direct flow diversions may commence upon a date to be determined annually by the State Engineer after consultation with the Rio Grande Water Conservation District, the Rio Grande Water Users Association, and other interested entities.

b. Actual runoff at the Del Norte Index Station for the months of January, February and March and the estimated runoff for November and December will be combined to provide an estimated supply at the index station during the non-irrigation months of the calendar year. The actual Rio Grande deliveries at the Lobatos Gaging Station, less the Conejos at La Sauses, for

January, February and March will be combined with the estimated Rio Grande deliveries, less the Conejos at La Sauses, at that station for November and December and deducted from the estimated annual requirements to provide an estimated compact delivery requirement for the remainder of the year.

c. From the estimated monthly runoff pattern at the Del Norte Index Station, as computed in 1a and 3b above, monthly delivery requirements will be projected for the months of April through October.

d. If the total annual estimated index at Del Norte is 700,000 acre feet or greater, deliveries to Colorado appropriators will commence at 85 percent of the amount of the discharge at the Del Norte Index Station. This amount will be distributed to decrees on the main stem and tributaries in order of priority until the entire amount is delivered.

e. If the total annual estimated index at Del Norte is less than 600,000 acre feet, deliveries to Colorado appropriators will commence at 100 percent of the amount of the discharge at the Del Norte Station. This amount will be distributed to decrees on the main stem and tributaries in order of priority until the entire amount is delivered

f. If the total annual estimated index at Del Norte is between 600,000 acre feet and 700,000 acre feet, deliveries to Colorado appropriators will commence at a percentage determined by proportional parts beginning with 100% for an estimate of 600,000 acre feet and 85% for an estimate of 700,000 acre feet.

g. If at any time, this delivery schedule results in a flow at Alamosa in excess of 2,000 cubic feet per second, delivery to Colorado appropriators may be increased temporarily to include deliveries to additional decrees within the priority system to prevent flooding at Alamosa.

h. Every ten days throughout this period, a status report will be made by the Division Engineer to reflect the accuracy of the monthly and annual estimates of both the supply at the Del Norte Index Station and the delivery at the Lobatos Gaging Station and deliveries to Colorado appropriators adjusted, when necessary. When adjustments of 10% or more are proposed, the Division Engineer will notify the President of the Board of Directors of the Rio Grande Water Users Association.

i. Storage in pre-compact reservoirs will be permitted during this period as follows:

1. During the months of April and May, 15 percent of all water stored shall be considered as stored out of priority in accordance with CRS 148-11-25, as amended. This water may be called by the State Engineer for compact commitments if required, but any water so stored and carried over to January 1 of the following year will revert to absolute ownership of the reservoir in which it was held. In the event any reservoir should spill, the out-of-priority water will be the first to spill.

2. During the months of June through October when deliveries to direct-flow users are at or less than 100% of the Del Norte Index, "pre-compact" reservoirs may be permitted to store out of priority under the following provisions:

   (a) Reservoirs will store quantities of water not to exceed the amount of return flow developed below the Del Norte gaging station and above the New Ditch headgate near Alamosa. This storage will be determined on a daily basis and the daily amount so stored will be added to the following days Del Norte index to ensure that junior rights in priority are not deprived of legally available water.

   (b) The amount of storage on any given day will be determined by the availability of return flows to satisfy those decrees actually in priority and upon the actual inflow to the reservoirs.

   (c) Daily records of such storage will be maintained to permit determination of all operations and water entitlements.

   (d) All storage under these provisions will be considered as out-of-priority storage. On October 1, the State Engineer will determine the amount of such storage required for the compact commitment and shall require delivery of that amount. The amount called from the several reservoirs shall be pro-rated on the basis of

the total amount of such water stored under these provisions.

(e) Any portion of water stored under these provisions that is not required for compact commitments shall revert to the sole ownership of the reservoir in which it is stored on January 1 of the following year.

(f) No water stored under these provisions shall be available for use by any water user until the determination is made by the State Engineer (d above) as to the Compact requirements.

(g) In the event any reservoir should spill, the out-of-priority water shall be deemed to be the first to spill.

(h) While water is in storage under these provisions, no evaporation losses shall be charged to such water needed for Compact commitments.

4. November and December

a. There will be no direct flow or ground water diversions from the Rio Grande or its tributaries during the months of November and December (except for those rights decreed for use throughout the year) unless it is determined that such curtailment is not necessary to meet compact delivery requirements at the Lobatos Gaging Station.

DETAILED CRITERIA - CONEJOS RIVER AND ITS TRIBUTARIES

1. Runoff Estimate

a. Estimate total runoff from Soil Conservation Service and other estimates for April through September on May 1 and using

the long term average monthly runoff pattern, extend the estimate for the index stations to a full year.

2. January, February and March

a. There will be no direct flow diversions from the Conejos River and its tributaries during the months of January, February and March except for those rights decreed for use throughout the year. In the event of unusual hydrologic or climatic conditions, limited diversions may be permitted in March on a case by case basis upon concurrence of the Division Engineer, the Conejos River Water Conservancy District, and any other affected water user organization.

3. April through October

a. Direct flow diversions may commence upon a date to be determined annually by the State Engineer after consultation with the Conejos Water Conservancy District and other interested entities.

b. Actual runoff at the Mogote Index Stations for the months of January, February and March and the estimated runoff for November and December will be combined to provide an estimated supply at that station during the non-irrigation season. The actual Conejos River deliveries at La Sauses gaging station for January, February and March will be combined with the estimated deliveries at La Sauses for November and December, and deducted from the estimated annual delivery requirement to provide an estimated delivery requirement for the remainder of the year.

c. From the estimated monthly runoff pattern at the Conejos River near Mogote, the Los Pinos near Ortiz and the San Antonio River at Ortiz, monthly delivery requirements at the La Sauses gaging station will be projected for the months of April through October.

d. Deliveries to Colorado appropriators will total 110% of the amount of discharge at the Conejos, Los Pinos and San Antonio River index stations less the percentage of the remaining amount (April through October, 3b above) to be delivered to La Sauses in the current year. This amount will be distributed to decrees in order of priority until the entire amount is delivered.

e. If, at any time, this delivery schedule results in a flow in the Conejos River Channel in excess of its capacity, without flooding, delivery to Colorado appropriators may be increased temporarily to include deliveries to additional decrees within the priority system to prevent such flooding.

f. Every ten days throughout this period, a status report will be made by the Division Engineer to reflect the accuracy of the monthly and annual estimates of the supply at the three index stations and the delivery at the La Sauses gaging station and the deliveries adjusted when necessary. When adjustments of 10% or more are proposed, the Division Engineer will notify the President of the Conejos River Water Conservancy District.

4. November and December

a. There will be no direct flow or ground water diversions from the Conejos River or its tributaries during the months of November

and December (except for those rights decreed for use throughout the year provided there is no other source of supply available) unless it is determined that such curtailment is not required to meet compact delivery requirements at the La Sauses gaging station.

APPENDIX B

IN THE MATTER OF RULES AND REGULATIONS GOVERNING THE USE, CONTROL, AND PROTECTION OF WATER RIGHTS FOR BOTH SURFACE AND UNDERGROUND WATER LOCATED IN THE RIO GRANDE AND CONEJOS RIVER BASINS AND THEIR TRIBUTARIES.	)	Proposed Rules and Regulations of the State Engineer

IT IS ORDERED that the following proposed rules and regulations be adopted and approved as the rules and regulations of the State Engineer in accordance with Section 37-92-501, Colorado Revised Statutes, 1973.

Any person desiring to protest any of these proposed rules and regulations may do so in the manner provided in Section 37-92-304, CRS 1973. Any protests to said proposed rules and regulations must be filed with the Water Clerk in and for the District Court of Water Division III, Alamosa, Colorado, by the end of the month following the month in which said proposed rules and regulations are published.

PROPOSED RULES AND REGULATIONS

I. Definitions and Citations

A. These proposed rules and regulations shall affect all "waters of the state" as defined in Section 37-92-103 (13), CRS 1973, which states as follows:

> "(13) 'Waters of the state' means all surface and underground water in or tributary to all natural streams within the state of Colorado, except waters referred to in section 37-90-103 (6)."

and underground water is defined in Section 37-92-103 (11), CRS 1973, as follows:

> "(11) 'Underground water' as applied in this article for the purpose of defining the waters of a natural stream, means that 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 of direction of movement of the water in that alluvial aquifer or natural stream. Such 'underground water' is considered different from 'designated ground water' as defined in section 37-90-103 (6)."

Wells as defined in Section 37-92-602, CRS 1973, such as those used for domestic and stock watering, shall be exempt from the provisions of these rules and regulations except for Rule III F.

B. The "Compact" referred to in these rules and regulations means the Rio Grande River Compact, as specified in Section 37-66-101, CRS 1973.

C. The stipulation agreed to by Texas, New Mexico and Colorado before the United States Supreme Court in the case of Texas, et. al. v. Colorado, Original No. 29, October term, 1966, of the Supreme Court and the resultant Order cited in 391 U. S. 901 (May 6, 1968) is that stipulation wherein the the states agreed to a continuance of the case, providing in paragraph 1 as follows:

> "The State of Colorado undertakes to deliver water at the Colorado-New Mexico state line to meet every year the delivery obligation established by the schedules of Article II of the Rio Grande Compact. To this end the State of Colorado shall exercise its best efforts and use all available administration and legal powers including, if necessary, the curtailment of diversions enforced by agents of the State. The State of Colorado shall make frequent and regular reports to the plaintiffs of all measures taken to effect compliance." (emphasis added)

D. In those instances where the Compact is deficient in establishing standards for administration within Colorado, the provisions of Section 37-80-104, CRS 1973, which state as follows, shall be applicable:

> "Compact requirements - state engineer's duties. The state engineer shall make and enforce such regulations with respect to deliveries of water as will enable the state of Colorado to meet its compact commitments. In those cases where the compact is deficient in establishing standards for administration within Colorado to provide for meeting its terms, the state engineer shall make such regulations as will be legal and equitable to regulate distribution among the appropriators within Colorado obligated to curtail diversions to meet compact commitments, so as to restore lawful use conditions as they were before the effective date of the compact insofar as possible."

E. The term "hydraulic divide" means that ridge in the ground water table which lies north of the Rio Grande in Colorado and which extends generally

from northwest of Monte Vista to east of Alamosa. It is the approximate southern boundary of the Closed Basin as shown on Plate 1, Colorado Water Resources Circular 18, U.S. Geological Survey. Its location is subject to change as more information becomes available. This ridge prevents the natural movement of unconfined ground water from the Closed Basin into the Rio Grande mainstem and instead causes such ground water to move toward the sump area of the Closed Basin.

F. The term "confined aquifer" means that aquifer deriving its principal recharge from peripheral inflow to the Rio Grande Basin in Colorado. The confined aquifer is separated from the unconfined aquifers of the Rio Grande Basin by an aquiclude generally referred to as the blue-clay layer. The approximate limits of the blue-clay layer is as shown on Plate 2, Colorado Water Resources Circular 18, U. S. Geological Survey. These limits are subject to change as more information becomes available.

G. The term "tributary water" means any water occurring either on the surface or underground which influences the rate or direction of movement of water in a stream system.

H. The term "percentage curtailment" means that percentage of the flow at the upper index stations; i.e., Rio Grande near Del Norte, Conejos River near Mogote, Los Pinos River near Ortiz and San Antonio River at Ortiz, determined by the state engineer to be necessary to meet Compact commitments as measured at gaging stations located on the Rio Grande near Lobatos and on the Conejos River at its mouths near Los Sauces.

II. Surface Water Administration

A. Administration of all surface water tributary to the Rio Grande or the Conejos River will be based on the fact that the delivery of certain quantities of water pursuant to the Compact constitutes the most senior water commitment

in the Rio Grande and Conejos River Basins. As a result, all surface water diversions from the aforementioned systems may be regulated at those times and to the extent necessary to deliver the amount of water required pursuant to the terms of the Compact.

B. The diversion of surface water from the Conejos River and its tributaries shall be in accordance with the doctrine of prior appropriation provided that curtailment of any or all decrees in the Conejos River system may be required in order to assure that the delivery requirement as set forth in Article III of the Compact is satisfied. The contribution of the Conejos River system to meet Compact commitments shall be determined as being the combined discharge of the branches of the Conejos River as measured at its mouths near Los Sauces. The water required for Compact delivery on a calendar year basis for the Conejos River shall be as defined in the first table of Article III of the Compact except as modified in E and F below.

C. The diversions of surface water from the Rio Grande and its tributaries, except the Conejos River, shall be in accordance with the doctrine of prior appropriation provided that curtailment of any or all decrees in the Rio Grande system may be required in order to assure that the delivery requirement as set forth in Article III of the Rio Grande Compact is satisfied. The contribution of the Rio Grande system to meet Compact commitments shall be determined as being the discharge of the Rio Grande near Lobatos less the discharge of the Conejos River at its mouths near Los Sauces. The water required for Compact delivery on a calendar year basis for the Rio Grande system, less the Conejos River, shall be as defined in the second table of Article III of the Compact except as modified in E and F below.

D. Diversion of surface waters from the Rio Grande and Conejos River systems and their tributaries shall be prohibited during the months of January, February, March, November and December except for storage in pre-compact

reservoirs and for those rights decreed for beneficial use throughout the year. In the event of unusual hydrologic or climatic conditions, limited diversions during the above months may be permitted by the Division Engineer on a case by case basis.

E. The 10,000 acre-foot credit established in Article III of the Compact for credit to Colorado shall be allocated to the Conejos River and Rio Grande systems on the same percentage that each river system's delivery requirement (as determined by Article III of the Compact) to said Compact bears to the sum of such requirements. The required delivery by the Conejos River system at the mouths near Los Sauces shall be reduced by that portion of the 10,000 acre-foot credit allocable to the Conejos River and the required delivery by the Rio Grande system at the gaging station near Lobatos shall be reduced by that portion of the 10,000 acre-foot credit allocable to the Rio Grande.

F. If, because of unusual hydrologic or climatic conditions which may occur in a particular year, either the Conejos River system or the Rio Grande system appears to be unavoidably exceeding its required delivery to the Compact as defined in the respective tables in Article III of the Compact, the State Engineer may elect to credit any over-delivery at the gaging station on the Rio Grande near Lobatos.

G. Streams in the Rio Grande Basin which are found by the State Engineer to be non-tributary either on the surface or underground to either the Conejos River or to the Rio Grande shall be administered in the priority system under separate priority tabulations and shall not be required to provide water to meet Compact commitments.

H. In order to maximize the amount of water available for use by Colorado appropriators and still meet the requirements of the Compact, the State Engineer may authorize pre-compact reservoirs to store water which otherwise would have been delivered for credit at the gaging station on the Rio Grande near Lobatos; provided, that such water will remain in storage under administrative

control of the State Engineer until he determines that said water is not required to meet Compact commitments. If such determination is made, the water stored for anticipated Compact delivery requirements shall revert to the ownership of the reservoir which captured such water.

If the State Engineer determines that water stored for anticipated Compact delivery requirements is needed to meet Compact requirements, such water shall be released upon demand of the State Engineer and shall be allowed to flow downstream unimpeded in any manner in the gaging station on the Rio Grande near Lobatos.

I. All water stored in pre-compact reservoirs prior to the start of the direct flow irrigation season shall be subject to the percentage curtailment in effect at the time such stored water is measured at the gaging station on the Rio Grande near Del Norte.

III. Underground Water Administration

A. Administration of all underground water tributary to the Rio Grande or the Conejos River will be based on the fact that the delivery of certain quantitites of water pursuant to the Compact constitutes the most senior water commitment in the Rio Grande Basin. As a result, all tributary underground water diversions from the aforementioned systems may be regulated at those times and to the extent necessary to deliver the amount of water required pursuant to the terms of the Compact.

B. Diversion of underground water from an aquifer hydraulically connected to surface streams (whether said aquifer be confined or unconfined) shall be permitted at those times and in those quantities necessary for the permitted beneficial use of such water except as provided in C below. Such times shall be defined as follows: For irrigation purposes, those times during which direct flow diversions are allowed from the Rio Grande or Conejos River or their

tributaries, whichever is applicable; for stock or domestic uses, as exempted by Section 37-92-602, CRS 1973, only in those quantities allowed by said section, and necessary for such uses; for municipal use, on a year-round basis; for all other beneficial uses, including fish and wildlife propagation, only at those times and in those quantities necessary for the application thereof to permitted beneficial use, and when such does not constitute waste of water.

C. Unless provision is made pursuant to D and E below, the diversion of underground water from aquifers hydraulically connected to surface streams will be limited to the following schedule to provide for a reasonable lessening of material injury to senior surface appropriators.

1. During calendar year 1976 pumping will be allowed on Monday, Tuesday, Wednesday, Thursday, and Friday.

2. During calendar year 1977 pumping will be allowed on Monday, Tuesday, Wednesday, and Thursday.

3. During calendar year 1978 pumping will be allowed on Monday, Tuesday, and Wednesday.

4. During calendar year 1979 pumping will be allowed on Monday and Tuesday.

5. During calendar year 1980 pumping will be allowed on Monday only.

6. During calendar year 1981 and thereafter, pumping will be totally curtailed.

This schedule shall apply to all uses of underground water, except those exempted in Section 37-92-602, CRS 1973. Water rights deriving their supply from drains or any structure or device used for the purpose or with the effect of obtaining underground water for beneficial use from an aquifer are considered to be in the same category as diversion of underground water by wells and are subject to the provisions of this section. Upon approval of a written plan, the Division Engineer shall administer this curtailment schedule so that an underground water appropriator may have a cycle of operation to make more efficient use of the water available; provided, that senior

appropriators are not materially injured thereby.

D. Underground water diversions shall be curtailed as provided under C, above, unless the underground water appropriator submits proof to the Divison Engineer and upon the basis of that proof the Division Engineer shall find:

1. That the well or wells are operating pursuant to a decreed plan of augmentation or to a decree as an alternate point of diversion, or that a change in point of diversion to the well has been decreed for a surface water right. The well or wells will then be administered in the priority system on the basis of the seniority of the associated surface decree; or

2. That the underground water appropriation can be operated under its own priority within the priority system without impairing the right of a senior appropriator or

3. That the water produced by a well does not come within the definition of underground water as found in Section 73-92-103 (11), CRS 1973, as set forth in paragraph I-A of these rules and regulations.

E. Any underground water appropriator affected by these rules and regulations may use a part or all of the water produced by his well or wells without curtailment described in III-C, above, to the extent that such diversion is in compliance with a temporary plan of augmentation approved in accordance with Section 37-92-307, CRS 1973, as amended.

F. All owners or users of flowing wells located in the Rio Grande Basin shall ensure that any such well be equipped with a suitable control device or be permanently capped or plugged to prevent the unlawful waste of water from such well.

The effective date of these rules and regulations is January 1, 1976.

Dated this 21st date of August, 1975.

C. J. Kuiper
State Engineer

APPENDIX C

IN THE DISTRICT COURT IN AND FOR

WATER DIVISION 3

STATE OF COLORADO

Case No. W-3466

IN THE MATTER OF RULES AND REGULATIONS GOVERNING THE USE, CONTROL, AND PROTECTION OF WATER RIGHTS FOR BOTH SURFACE AND UNDERGROUND WATER LOCATED IN THE RIO GRANDE AND CONEJOS RIVER BASINS AND THEIR TRIBUTARIES.	)	O R D E R

The State Engineer of the State of Colorado filed with the Water Court on September 18, 1975, Proposed Rules and Regulations of the State Engineer in accordance with C.R.S. 1973, 37-92-501. The Water Court ordered the publication of the Proposed Rules and Regulations in the designated publications in Water Division 3, and any persons or entities desiring to protest the Proposed Rules and Regulations were given through November 30, 1975, in which to file applicable protests as provided by C.R.S. 1973, 37-92-304. Seventy-five separate protests were filed within the designated statutory period. The Protestants consist of individual water users, towns, cities, municipalities, conservancy districts, a conservation district, water and sanitation districts, ditch companies, drainage districts and well owners. The protestants appear through nineteen (19) separate attorneys or law firms, and numerous persons have individually filed their pro se protests.

Due to the complex legal issues as presented by the protests and the many attorneys involved, the Court ordered a pre-hearing conference to determine if the legal issues could be condensed or simplified. The legal and jurisdictional issues were defined and counsel were requested to file briefs relating to the points designated. Such have now been filed and considered by the Court.

There is no question that the administration of water in Water Division 3 and the San Luis Valley is an extremely complex and complicated problem. The records of this court and prior adjudications disclose this complexity. Like no other area in the State of Colorado, we are confronted with the attendant problems of senior surface appropriators, junior surface appropriators, pre-compact reservoirs, post-compact reservoirs, trans-mountain diversions, irrigation districts, both surface and underground municipal uses, an interstate compact and obligations thereunder, numerous and varied confined and unconfined aquifers, rechange areas for confined aquifers, drains and drainage districts, numerous areas where artesian flows are present, irrigation and other wells in close proximity to streams as well as extreme distances from streams, difficulties in establishing and defining hydrologic boundaries, transmissivity of water, varying hydraulic connections between aquifers and streams and a very large area commonly referred to as the Closed Basin. It is therefore very understandable that water owners and users and entities concerned with legal administration would become extremely concerned with the Proposed Rules and Regulations as submitted.

The numerous protests and objections as filed herein to the proposed Rules and Regulations are directed to claimed legal as well as factual deficiencies. The Water Court must therefore make a close analyzation of the Proposed Rules and Regulations in order to determine if such are in legal compliance with the statutory provisions of C.R.S. 1973, 37-92-501 and 502. The Court has not considered the factual objections because a consideration of such must of necessity require an evidentiary hearing. There are certain factual realities which the Court can consider in light of the statutory provisions because it is for sure the legislative intent was not to the effect that the Court should operate in an intellectual vacuum totally disassociated with obvious realities.

The Water Court has considered through this date numerous applications under the Water Right Determination and Administration Act of 1969, C.R.S. 1973, (As Amended) 37-92-101, et seq., Cases totaling 3,558 have been filed requesting adjudication for 11,996 wells. Decrees of adjudication have been entered affecting 9216 wells, leaving 2,780 wells presently undecided. The location of such underground sources from court records and the adjudicated flows therefrom give insight into the enormity of the problems. Approximately 95% of all beneficial economical crop irrigation in the San Luis Valley is directly dependent upon supplemental irrigation waters from underground sources, if the adjudication records, locations and uses of previously determined cases are valid. The Proposed Rules and Regulations would in substance dispense with any needed further consideration of pending cases because by the year 1981 there would be a total cessation of the use of "pumped" irrigation wells. The State Engineer has classified drains and other similar structures obtaining underground water for beneficial use in the same category as wells so they would be similarly affected without regard to priority or location.

The Rules and Regulations have been carefully examined with specific reference to the statutes which provide for their promulgation. Such is necessitated at the onset because the Court can readily perceive that the water users of this division are expending horrendous sums of money in the preparation for hearings, evidentiary compilations, expert witnesses and legal expense. The Court has an option to first conduct hearings and then determine the entire issue, both factually and legally. On the other hand, if such Rules and Regulations are so legally deficient as to obviate the necessity of such extended evidentiary hearings, then the Court should recognize this at an early date and thereby spare the State and the objecting water users of this division this expense which no doubt will entail the expenditure of thousands of dollars.

The protestants in the various protests that have been filed have consistently raised the issue of the State Engineer's assertion that compact deliveries constitute the most senior water commitment in the Rio Grande and Conejos River basins. Regulation II, A, states "Administration of all surface water tributary to the Rio Grande or the Conejos River will be based on the fact that the delivery of certain quantities of water pursuant to the Compact constitutes the most senior water commitment in the Rio Grande and Conejos River Basins." Regulations III, A, also states "Administration of all underground water tributary to the Rio Grande or the Conejos River will be based on the fact that the delivery of certain quantities of water pursuant to the Compact constitutes the most senior water commitment in the Rio Grande Basin." It is interesting to note the State Engineer did not include the Conejos River Basin at the end of the first sentence of Regulation III, A. Protests were heard and determined in accordance with the applicable provisions of C.R.S. 1973, 37-92-304 and the Court can confirm, modify, reverse, or reverse and remand. The duty on the Water Court is therefore clear and all portions of the Proposed Rules and Regulations must be taken into consideration separately and as a whole in determining statutory compliance and legal soundness and conformance. If the Water Court is to approve the Rules and Regulations in whole or part, a determination must of necessity be made as to the validity of all assumptions made by the State Engineer. The Water Court in this proceeding has jurisdiction over the parties and subject matter of the action and likewise has jurisdiction over all water users within this division who have not appeared but who are no doubt subject to the orders of this Court pursuant to applicable notice provisions of the 1969 act. The approvals or acceptances as made will no doubt have a significant effect on future administrative practices. It is therefore imperative to determine if such factual assumption

of "most senior commitment" is correct. The Court concludes that such assumption is in error. The Rio Grande River Compact as set forth in C.R.S. 1973, 37-66-101 et seq. makes no such provision and there is no case law to support such an assumption. The doctrine of equitable apportionment as set forth in Hinderlider v. La Plata River and Cherry Creek Ditch Co., 304 U. S. 92 (1938) likewise makes no such pronouncement. There is no question but what the State of Colorado has a responsibility to deliver certain quantities of water to the States of New Mexico and Texas as provided by the compact but such deliveries are not the most senior commitments. Such deliveries have equal priority but do not have the status of senior commitment. The State Engineer in his brief states it is a question of sematics and was only included as an attempt to explain to the state's citizens the importance of compact fulfillment but the Court cannot approve or acquiese in such erroneous assumption of fact.

The protests raise practically every conceivable legal objection which this Court could reasonable perceive as being capable of contest. Basically, the Proposed Rules and Regulations are divided into three parts with Part I consisting of definitions, Part II consisting of regulations for surface water administration and Part III consisting of rules and regulations for underground water administration. As a whole, there is only a slight difference between the Proposed Rules and Regulations as contrasted to previous operating critera as annually supplied to the Court by the State Engineer for informational purposes.

Even though the jurisdiction of the Water Court has been placed in issue by numerious protests, the protestants have not seriously pursued this point and there is no question but what the Water Court has jurisdiction over rules and regulations as are authorized and legally promulgated pursuant to the provisions of C.R.S. 1973, 37-92-501. See Kuiper vs. Well Owners Conservation

Association 176 Colo. 119, 490 P2d 268 (1971).

Numerious protests have been filed to the Proposed Rules and Regulations as based on the alleged deficiency that the State Engineer failed to follow the necessary procedures as set forth in the State Administrative Procedure Act, C.R.S. 1973, 24-4-101 et seq. This purely legal point has not been actively pursued and does not appear to be seriously contested. The office of the State Water Engineer is no doubt an agency of the state having state-wide territorial jurisdiction and the act is applicable except for the specific exception as contained in C.R.S. 1973, 24-4-107 which provides in part as follows:

> "..... where there is a conflict between this article and a specific statutory provision relating to a specific agency, such specific statutory provision shall control as to such agency."

The authorization for the adoptions of rules and regulations on the part of the State Engineer is specifically set forth in C.R.S. 1973, 37-92-501 and a distinct procedure, differing from the State Administrative Procedure Act is set forth. It should be noted that such is applicable only to those Rules and Regulations as are in conformity with in the guidelines and in keeping with the standards of the "Water Right Determination and Administration Act of 1969." The legislative intent is specifically expressed in C.R.S. 1973, 37-92-501 (1) and it is clear to the Court that the State Administrative Procedure Act is not applicable to rules and regulations adopted pursuant to the "Water Right Determination and Administration Act of 1969." The Court does not arrive at the same conclusion as it relates to rules and regulations for compact commitments but such will be more fully discussed in other portions of this opinion.

The State Engineer has further concluded in Regulation III, C., that water rights deriving their supply from drains or any structure or device used for the purpose or with the effect of obtaining underground water for beneficial use from an aquifer, are considered to be in the same category as diver-

sions of underground water by wells. Such conclusions as it relates to drains, seepage and waste ditches is erroneous on the part of the State Engineer and rules and regulations as based upon such errors cannot stand. The applicable provisions of C.R.S. (1973) 37-21-114 (1) and 37-82-102 make it clear that drains, seepage and waste collection ditches or similar structures are subject to the priority system and should be administered as such. A reclassification of drains and similar structures as proposed in the Rules and Regulations is contrary to existing decrees and materially affects the vested rights of the water users that have historically been utilized for years. The established decrees of previous water adjudications cannot be jeopardized or the status altered by the rule making power of the State Engineer, except insofar as administrative authority is applied through the priority system.

The Court is aware that the parties to this action in general, desire for the Court to decide all ancillary matters that may be connected with water administration in the San Luis Valley. It is clear that a determination is sought as to the meaning of Article III of the Rio Grande River Compact, C.R.S. 1973, 37-66-101, under the guise that such is properly covered under the provisions of C.R.S. 1973, 37-92-501 and 502. The Court concludes that such is not properly before the Court in this preceeding, and is a matter for separate determination in a properly brought action. Rules and regulations designed and intended to facilitate compliance by the State of Colorado with the Rio Grande Compact, which is referred to in the statute as the Rio Grande River Compact, are authorized under C.R.S. 1973, 37-80-102 (1) (a) and 37-80-104, both sections in their present content having been enacted in 1969 at the same time. Prior to 1969, there appears to have been no legislation empowering the State Engineer to promulgate regulations to insure compliance by Colorado with the Rio Grande Compact. It is critical to this decision,

however, that the legislature saw fit to enact what is now C.R.S. 1973, 37-80-104 granting that power under a separate bill and not incorporated or a part of the Water Right Determination and Administration Act of 1969. Reference to the appropriate laws show that both acts were signed on the same day and appear to become effective the same day with identical safety clauses.

The Court must, therefore, conclude that it was the legislative intent that the making of rules and regulations by the State Engineer to enforce compliance with interstate compacts, or any of them, should be an administrative process separate and apart from the rules and regulations for the administration of water rights and priorities between individual owners or users of water rights within the State of Colorado.

This conclusion is further enhanced by the fact the Water Right Determination and Administration Act of 1969 did not have at the time of initial enactment detailed standards for the making of rules and regulations but by separate and amended acts in 1971, Sections 37-92-501 and 502, exacting requirements and standards relative to the promulgation of rules and regulations affecting water rights as between underground and surface appropriators were carefully set forth. There is no suggestion anywhere that either by the original Water Right Determination and Administration Act of 1969 or its carefully documented amendment of 1971 that Section 37-80-102 or in particular Section 37-80-104 had been repealed. Therefore, Section 37-80-104 with its peculiar and particular requirements which are completely different from those found in the 1971 amendment of the Water Right Determination and Administration Act of 1969 must be found by this Court to be in full force and effect.

We must particularly refer to the requirement in 37-80-104 which established the duty on the State Engineer to make such regulations as are legal and equitable to carry out the terms of the compact, the word "equitable" opening

up the possibility of the duty or right of the State Engineer to make rules and regulations which might by-pass at certain times the strict enforcement of the priority system for compact commitments. The rule making power rests exclusively with the State Engineer in its inception, but the jurisdiction to confirm, modify, reverse, or reverse and remand any or all of the Proposed Rules and Regulations lies with this Court by virtue of statute.

The Proposed Rules and Regulations with which we are concerned, although set up in separate paragraphs, nevertheless have inextricable co-mingled regulations relating to meeting compact obligations with other provisions as to surface rights and underground rights between Colorado users. The attempted merger is of such a nature that the Court feels and finds that the only orderly and proper way to determine whether the separate restrictions, limitations and duties of the State Engineer with respect to Sections 37-80-104 and 37-80-102 (1) (a) are properly set forth must be separately promulgated and adopted. This is not a finding that any regulation as presented herein as to compact commitments is either approved or disapproved.

On the other hand, C.R.S. 1973, Sections 37-92-501 and 502, require the State Engineer to adopt rules and regulations for the administration of individual water rights, both underground and surface, with very strict guidelines and standards established by the legislature for the administration of individual water rights between individual appropriators. The deficiencies relative to the failure of the Proposed Rules and Regulations relative to conformity with these standards will be discussed later in this opinion.

Obviously the Legislature never intended that the rule making authority under the Compact provisions should be co-mingled in one proposed set of rules, even though some attempt might be made to departmentalize within the set of rules, the different requirements, but it is clear that each set of rules

for the purposes and within the requirements and limitations should be set up separately, to the end that the separate requirements are carefully set forth and delineated.

Accordingly, the Court is of the opinion and so finds that the State Engineer has improperly co-mingled regulations for the purpose of insuring compliance with the Rio Grande Compact with rules and regulations adopted under the authority of C.R.S. 1973, 37-92-501 and 502 which must under the statutory standards and limitations, be limited to the regulation of the water of this state to satisfy individual water rights.

Additionally, the Court does not find that the Rules and Regulations as proposed meet the requirement of C.R.S. 1973, 37-92-502 and 503. The Rules and Regulations should be specific to the degree that a water user should be able to determine from such as to whether any rule or regulation is applicable to that water user and the extent of applicability. That is not the situation in this case because the State Engineer has wholly failed to set forth what streams he considers to be tributary, the location of aquifers, the interconnection of aquifers, the hydraulic characteristic of such, the interrelationship of surface and subsurface uses of a common owner, the regulation of uses in times of unusual hydrologic or climatic conditions and standards to determine the use permitted, regulations for the control of waste, regulations relating to beneficial use and control of excess application and the State Engineer in general has proposed Rules and Regulations that are vague, indefinite and uncertain to the degree that an intelligent user cannot be apprised as to what the State Engineer might or might not determine to do in a given situation. Rules and regulations are for the purpose of establishing requirements for a course of conduct and action in the future and informing the general public of such course, and such should not be designed to confuse those entitled to rely upon them. The statutes contemplate water

planning as based upon available supplies and water users are entitled to know how the administration of such waters is to be made. Water users must by necessity be able to rely upon certain projected deliveries in order to adjust their crops needs accordingly and cannot blindly plant without knowing with reasonable certainty that a harvest is expected. The Proposed Rules and Regulations give no such assurance.

The Rules and Regulations must, therefore, be remanded to the State Engineer for the purpose of separating the Rules and Regulations into separate bodies of rules and regulations lawfully adopted pursuant to and in conformance with the authority of the two different statutes as aforementioned.

IT IS, THEREFORE, ORDERED, ADJUDGED AND DECREED that the Rules and Regulations as tendered for approval are remanded to the State Engineer for the purpose of separating the Rules and Regulations into separate bodies of rules and regulations as previously mentioned. The Court does not by this opinion infer that rules and regulations need be adopted for purposes of compact compliance but is only saying that if such are so adopted then such regulations should be separate from the rules and regulations as authorized under the provisions of C.R.S. 1973, 37-92-501 and 502 and should be in conformity with the statute so authorizing the same.

IT IS FURTHER ORDERED that the Rules and Regulations in their present form and content are disapproved and such shall not become effective until proper and lawful rules and regulations have been adopted in conformance with the applicable statutes and approved by this Court.

DONE AND SIGNED in open Court this 23rd day of June A.D., 1976.

BY THE COURT

Donald G. Smith, Water Judge
Water Division 3

ARTICLE 66

Rio Grande River Compact

37-66-101. Rio Grande River compact.-- The general assembly hereby approves the compact between the states of Colorado, New Mexico, and Texas, designated as the "Rio Grande compact", signed at the city of Santa Fe, state of New Mexico, on the 18th day of March, A.D. 1938, by M. C. Hinderlider, commissioner for the state of Colorado; Thomas M. McClure, commissioner for the state of New Mexico; Frank B. Clayton, commissioner for the state of Texas, and approved by S. O. Harper, representative of the President of the United States, which said compact is as follows:

RIO GRANDE COMPACT

The state of Colorado, the state of New Mexico, and the state of Texas, desiring to remove all causes of present and future controversy among these states and between citizens of one of these states and citizens of another state with respect to the use of the waters of the Rio Grande above Fort Quitman, Texas, and being moved by considerations of interstate comity, and for the purpose of effecting an equitable apportionment of such waters, have resolved to conclude a compact for the attainment of these purposes, and to that end, through their respective governors, have named as their respective commissioners:

For the state of Colorado--M. C. Hinderlider
For the state of New Mexico--Thomas M. McClure
For the state of Texas--Frank B. Clayton

who, after negotiations participated in by S. O. Harper, appointed by the President as the representative of the United States of America, have agreed upon the following articles, to-wit:

ARTICLE I

(a) The state of Colorado, the state of New Mexico, the state of Texas, and the United States of America, are hereinafter designated "Colorado," "New Mexico," "Texas," and the "United States," respectively.

(b) "The commission" means the agency created by this compact for the administration thereof.

(c) The term "Rio Grande basin" means all of the territory drained by the Rio Grande and its tributaries in Colorado, in New Mexico, and in Texas above Fort Quitman, including the closed basin in Colorado.

(d) The "closed basin" means that part of the Rio Grande basin in Colorado where the streams drain into the San Luis lakes and adjacent territory, and do not normally contribute to the flow of the Rio Grande.

(e) The term "tributary" means any stream which naturally

(f) "Transmountain diversion" is water imported into the drainage basin of the Rio Grande from any stream system outside of the Rio Grande basin, exclusive of the closed basin.

(g) "Annual debits" are the amounts by which actual deliveries in any calendar year fall below scheduled deliveries.

(h) "Annual credits" are the amounts by which actual deliveries in any calendar year exceed scheduled deliveries.

(i) "Accrued debits" are the amounts by which the sum of all annual debits exceeds the sum of all annual credits over any common period of time.

(j) "Accrued credits" are the amounts by which the sum of all annual credits exceeds the sum of all annual debits over any common period of time.

(k) "Project storage" is the combined capacity of Elephant Butte reservoir and all other reservoirs actually available for the storage of usable water below Elephant Butte and above the first diversion to lands of the Rio Grande project, but not more than a total of 2,638,860 acre-feet.

(l) "Usable water" is all water, exclusive of credit water, which is in project storage and which is available for release in accordance with irrigation demands, including deliveries to Mexico.

(m) "Credit water" is that amount of water in project storage which is equal to the accrued credit of Colorado, or New Mexico, or both.

(n) "Unfilled capacity" is the difference between the total physical capacity of project storage and the amount of usable water then in storage.

(o) "Actual release" is the amount of usable water released in any calendar year from the lowest reservoir comprising project storage.

(p) "Actual spill" is all water which is actually spilled from Elephant Butte reservoir, or is released therefrom for flood control, in excess of the current demand on project storage and which does not become usable water by storage in another reservoir; provided, that actual spill of usable water cannot occur until all credit water shall have been spilled.

(q) "Hypothetical spill" is the time in any year at which usable water would have spilled from project storage if 790,000 acre-feet had been released therefrom at rates proportional to the actual release in every year from the starting date to the end of the year in which hypothetical spill occurs, in computing hypothetical spill the initial condition shall be the amount of usable water in project storage at the beginning of the calendar year following the effective date of this compact, and thereafter the initial condition shall be the amount of usable water in project storage at the beginning of the calendar year following each actual spill

ARTICLE II

The commission shall cause to be maintained and operated a stream gauging station equipped with an automatic water stage recorder at each of the following points, to-wit:

(a) On the Rio Grande near Del Norte above the principal points of diversion to the San Luis valley;

(b) On the Conejos river near Mogote;

(c) On the Los Pinos river near Ortiz;

(d) On the San Antonio river at Ortiz;

(e) On the Conejos river at its mouths near Los Sauces;

(f) On the Rio Grande near Lobatos;

(g) On the Rio Chama below El Vado reservoir;

(h) On the Rio Grande at Otowi bridge near San Ildefonso;

(i) On the Rio Grande near San Acacia;

(j) On the Rio Grande at San Marcial;

(k) On the Rio Grande below Elephant Butte reservoir;

(l) On the Rio Grande below Caballo reservoir.

Similar gauging stations shall be maintained and operated below any other reservoir constructed after 1929, and at such other points as may be necessary for the securing of records required for the carrying out of the compact; and automatic water stage recorders shall be maintained and operated on each of the reservoirs mentioned, and on all others constructed after 1929.

Such gauging stations shall be equipped, maintained and operated by the commission directly or in co-operation with an appropriate federal or state agency, and the equipment, method and frequency of measurement at such stations shall be such as to produce reliable records at all times.

ARTICLE III

The obligation of Colorado to deliver water in the Rio Grande at the Colorado-New Mexico state line, measured at or near Lobatos, in each calendar year, shall be ten thousand acre-feet less than the sum of those quantities set forth in the two following tabulations of relationship, which correspond to the quantities at the upper index stations:

Discharge of Conejos River
Quantities in Thousands of Acre-Feet

Conejos Index Supply (1)	Conejos River at Mouths (2)
100	0
150	20
200	45
250	75
300	109
350	147
400	188
450	232
500	278
550	326
600	376
650	426
700	476

Intermediate quantities shall be computed by proportional parts.

(1) Conejos index supply is the natural flow Conejos river at the U. S. G. S. gauging station near Mogote during the calendar year, plus the natural flow of Los Pinos river at the U. S. G. S. gauging station near Ortiz and the natural flow of San Antonio river at the U. S. G. S. gauging station at Ortiz, both during the months of April to October, inclusive.

(2) Conejos river at mouths is the combined discharge of branches of this river at the U. S. G. S. gauging stations near Los Sauces during the calendar year.

Discharge of Rio Grande Exclusive of Conejos River
Quantities in Thousands of Acre-Feet

Rio Grande at Del Norte (3)	Rio Grande at Lobatos Less Conejos at Mouths (4)
200	60
250	65
300	75
350	86
400	98
450	112
500	127
550	144
600	162
650	182
700	204
750	229
800	257
850	292
900	335
950	380
1,000	430
1,100	540
1,200	640
1,300	740
1,400	840

Intermediate quantities shall be computed by proportional parts.

(3) Rio Grande at Del Norte is the recorded flow of the Rio Grande at the U. S. G. S. gauging station near Del Norte during the calendar year (measured above all principal points of diversion to San Luis Valley) corrected for the operation of reservoirs constructed after 1937.

(4) Rio Grande at Lobatos less Conejos at mouths is the total flow of the Rio Grande at the U. S. G. S. gauging station near Lobatos, less the discharge of Conejos river at its mouths, during the calendar year.

The application of these schedules shall be subject to the provisions hereinafter set forth and appropriate adjustments shall be made for (a) any change in location of gauging stations; (b) any new or increased depletion of the runoff above inflow index gauging stations; and (c) any transmountain diversions into the drainage basin of the Rio Grande above Lobatos.

In event any 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 forty-five per cent of the total positive ions in that water when the total dissolved solids in such water exceeds three hundred fifty parts per million.

ARTICLE IV

The obligation of New Mexico to deliver water in the Rio Grande at San Marcial, during each calendar year, exclusive of the months of July, August and September, shall be that quantity set forth in the following tabulation of relationship, which corresponds to the quantity at the upper index station:

Discharge of Rio Grande at Otowi Bridge
And at San Marcial Exclusive of July,
August and September
Quantities in Thousands of Acre-Feet

Otowi Index Supply (5)	San Marcial Index Supply (6)
100	0
200	65
300	141
400	219
500	300
600	383
700	469
800	557
900	648
1000	742
1100	839
1200	939
1300	1042
1400	1148
1500	1257
1600	1370
1700	1489
1800	1608
1900	1730
2000	1856
2100	1985
2200	2117
2300	2253

Intermediate quantities shall be computed by proportional parts.

(5) The Otowi index supply is the recorded flow of the Rio Grande at the U. S. G. S. gauging station at Otowi Bridge near San Ildefonso (formerly station near Buckman) during the calendar year, exclusive of the flow during the months of July, August and September, corrected for the operation of reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and Otowi Bridge.

(6) San Marcial index supply is the recorded flow of the Rio Grande at the gauging station at San Marcial during the calendar year exclusive of the flow during the months of July, August and September.

The application of this schedule shall be subject to the provisions hereinafter set forth and appropriate adjustments shall be made for (a) any change in location of gauging stations; (b) depletion after 1929 in New Mexico at any time of the year of the natural runoff at Otowi Bridge; (c) depletion of the runoff during July, August and September of tributaries between Otowi Bridge and San Marcial, works constructed after 1937; and (d) any transmountain diversions into the Rio Grande between Lobatos and San Marcial.

Concurrent records shall be kept of the flow of the Rio Grande at San Marcial, near San Acacia, and of the release from Elephant Butte reservoir, to the end that the records at these three stations may be correlated.

ARTICLE V

If at any time it should be the unanimous finding and determination of the commission that because of changed physical conditions, or for any other reason, reliable records are not obtainable, or cannot be obtained, at any of the stream gauging stations herein referred to, such stations may, with the unanimous approval of the Commission, be abandoned, and with such approval another station, or other stations, shall be established and new measurements shall be substituted which, in the unanimous opinion of the commission, will result in substantially the same results, so far as the rights and obligations to deliver water are concerned, as would have existed if such substitution of stations and measurements had not been so made.

ARTICLE VI

Commencing with the year following the effective date of this compact, all credits and debits of Colorado and New Mexico shall be computed for each calendar year; provided, that in a year of actual spill no annual credits nor annual debits shall be computed for that

In the case of Colorado, no annual debit nor accrued debit shall exceed 100,000 acre-feet, except as either or both may be caused by holdover storage of water in reservoirs constructed after 1937 in the drainage basin of the Rio Grande above Lobatos. Within the physical limitations of storage capacity in such reservoirs, Colorado shall retain water in storage at all times to the extent of its accrued debit.

In the case of New Mexico, the accrued debit shall not exceed 200,000 acre-feet at any time, except as such debit may be caused by holdover storage of water in reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and San Marcial. Within the physical limitations of storage capacity in such reservoirs, New Mexico shall retain water in storage at all times to the extent of its accrued debit. In computing the magnitude of accrued credits or debits, New Mexico shall not be charged with any greater debt in any one year than the sum of 150,000 acre-feet and all gains in the quantity of water in storage in such year.

The commission by unanimous action may authorize the release from storage of any amount of water which is then being held in storage by reason of accrued debits of Colorado or New Mexico; provided, that such water shall be replaced at the first opportunity thereafter.

In computing the amount of accrued credits and accrued debits of Colorado or New Mexico, any annual credits in excess of 150,000 acre-feet shall be taken as equal to that amount.

In any year in which actual spill occurs, the accrued credits of Colorado, or New Mexico, or both, at the beginning of the year shall be reduced in proportion to their respective credits by the amount of such actual spill; provided, that the amount of actual spill shall be deemed to be increased by the aggregate gain in the amount of water in storage, prior to the time of spill, in reservoirs above San Marcial constructed after 1929; provided, further, that if the commissioners for the states having accrued credits authorized the release of part, or all, of such credits in advance of spill, the amount so released shall be deemed to constitute actual spill.

In any year in which there is actual spill of usable water, or at the time of hypothetical spill thereof, all accrued debits of Colorado or New Mexico, or both, at the beginning of the year shall be cancelled.

In any year in which the aggregate of accrued debits of Colorado and New Mexico exceeds the minimum unfilled capacity of project storage, such debits shall be reduced proportionally to an aggregate amount equal to such minimum unfilled capacity.

To the extent that accrued credits are impounded in reservoirs between San Marcial and Courchesne, and to the extent that accrued debits are impounded in reservoirs above San Marcial, such credits and debits shall be reduced annually to compensate for evaporation losses in the proportion that such credits or debits bore to the total amount of water in such reservoirs during the year.

ARTICLE VII

Neither Colorado nor New Mexico shall increase the amount of water in storage in reservoirs constructed after 1929 whenever there is less than 400,000 acre-feet of usable water in project storage; provided, that if the actual releases of usable water from the beginning of the calendar year following the effective date of this compact, or from the beginning of the calendar year following actual spill, have aggregated more than an average of 790,000 acre-feet per annum, the time at which such minimum stage is reached shall be adjusted to compensate for the difference between the total actual release and releases at such average rate; provided, further, that Colorado or New Mexico, or both, may relinquish accrued credits at any time, and Texas may accept such relinquished water, and in such event the state, or states, so relinquishing shall be entitled to store water in the amount of the water so relinquished.

ARTICLE VIII

During the month of January of any year the commissioner for Texas may demand of Colorado and New Mexico, and the commissioner for New Mexico may demand of Colorado, the release of water from storage reservoirs constructed after 1929 to the amount of the accrued debits of Colorado and New Mexico, respectively, and such releases shall be made by each at the greatest rate practicable under the conditions then prevailing, and in proportion to the total debit of each, and in amounts, limited by their accrued debits, sufficient to bring the quantity of usable water in project storage to 600,000 acre-feet by March first and to maintain this quantity in storage until April thirtieth, to the end that a normal release of 790,000 acre-feet may be made from project storage in that year.

ARTICLE IX

Colorado agrees with New Mexico that in event the United States or the state of New Mexico decides to construct the necessary works for diverting the waters of the San Juan river, or any of its tributaries, into the Rio Grande, Colorado hereby consents to the construction of said works and the diversion of waters from the San Juan river, or the tributaries thereof, into the Rio Grande in New Mexico, provided the present and prospective uses of water in Colorado by other diversions from the San Juan river, or its tributaries are protected.

ARTICLE X

In the event water from another drainage basin shall be imported into the Rio Grande basin by the United States or Colorado or New Mexico, or any of them jointly, the state having the right to the use of such water shall be given proper credit therefor in the application of the schedules.

ARTICLE XI

New Mexico and Texas agree that upon the effective date of this compact all controversies between said states relative to the quantity

however, nothing herein shall be interpreted to prevent recourse by a signatory state to the supreme court of the United States for redress should the character or quality of the water, at the point of delivery, be changed hereafter by one signatory state to the injury of another. Nothing herein shall be construed as an admission by any signatory state that the use of water for irrigation causes increase of salinity for which the user is responsible in law.

ARTICLE XII

To administer the provisions of this compact there shall be constituted a commission composed of one representative from each state, to be known as the Rio Grande compact commission. The state engineer of Colorado shall be ex officio the Rio Grande compact commissioner for Colorado. The state engineer of New Mexico shall be ex officio the Rio Grande compact commissioner for New Mexico. The Rio Grande compact commissioner for Texas shall be appointed by the governor of Texas. The President of the United States shall be requested to designate a representative of the United States to sit with such commission, and such representative of the United States, if so designated by the President, shall act as chairman of the commission without vote.

The salaries and personal expenses of the Rio Grande compact commissioners for the three states shall be paid by their respective states, and all other expenses incident to the administration of this compact, not borne by the United States, shall be borne equally by the three states.

In addition to the powers and duties hereinbefore specifically conferred upon such commission, and the members thereof, the jurisdiction of such commission shall extend only to the collection, correlation and presentation of factual data and the maintenance of records having a bearing upon the administration of this compact, and, by unanimous action, to the making of recommendations to the respective states upon matters connected with the administration of this compact. In connection therewith, the commission may employ such engineering and clerical aid as may be reasonably necessary within the limit of funds provided for that purpose by the respective states. Annual reports compiled for each calendar year shall be made by the commission and transmitted to the governors of the signatory states on or before March first following the year covered by the report. The commission may, by unanimous action, adopt rules and regulations consistent with the provisions of this compact to govern their proceedings.

The findings of the Commission shall not be conclusive in any court or tribunal which may be called upon to interpret or enforce this compact.

ARTICLE XIII

At the expiration of every five year period after the effective date of this compact, the commission may, by unanimous consent, review any provisions hereof which are not substantive in character and which do not affect the basic principles upon which the compact is founded, and shall meet for the consideration of such questions on

the provisions hereof shall remain in full force and effect until changed and amended within the intent of the compact by unanimous action of the commissioners, and until any changes in this compact are ratified by the legislatures of the respective states and consented to by the congress, in the same manner as this compact is required to be ratified to become effective.

ARTICLE XIV

The schedules herein contained and the quantities of water herein allocated shall never be increased nor diminished by reason of any increase or diminution in the delivery or loss of water to Mexico.

ARTICLE XV

The physical and other conditions characteristic of the Rio Grande and peculiar to the territory drained and served thereby, and to the development thereof, have actuated this compact and none of the signatory states admits that any provisions herin contained establishes any general principle or precedent applicable to other interstate streams.

ARTICLE XVI

Nothing in this compact shall be construed as affecting the obligations of the United States of America to Mexico under existing treaties, or to the Indian tribes, or as impairing the rights of the Indian tribes.

U-5

ARTICLE XVII

This compact shall become effective when ratified by the legislatures of each of the signatory states and consented to by the congress of the United States. Notice of ratification shall be given by the governor of each state to the governors of the other states and to the President of the United States, and the President of the United States is requested to give notice to the governors of each of the signatory states of the consent of the congress of the United States.

IN WITNESS WHEREOF, the commissioners have signed this compact in quadruplicate original, one of which shall be deposited in the archives of the Department of State of the United States of America and shall be deemed the authoritative original, and of which a duly certified copy shall be forwarded to the governor of each of the signatory states.

Done at the city of Santa Fe, in the state of New Mexico, on the 18th day of March, in the year of our Lord, One Thousand Nine Hundred and Thirty-eight.

M. C. Hinderlider
Thomas M. McClure
Frank B. Clayton

Approved:
S. O. Harper

37-66-102. Compact to be ratified.-- Said compact shall not become binding or operative unless and until the same has been ratified by the legislature of each of the signatory states and consented to by the congress of the United States, and the governor of the state of Colorado shall give notice of the approval of said compact to the governor of the state of New Mexico, to the governor of the state of Texas, and to the president of the United States, in conformity with article XVII of said compact.

RECLAMATION PROJECT AUTHORIZATION ACT OF 1972

PUBLIC LAW 92-514; 86 STAT. 964

[S. 520]

An Act to authorize the Secretary of the Interior to construct, operate, and maintain various Federal reclamation projects, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That:

This Act shall be known as the Reclamation Project Authorization Act of 1972.

TITLE I

CLOSED BASIN DIVISION, SAN LUIS VALLEY PROJECT, COLORADO

Sec. 101. The Secretary of the Interior is authorized to construct, operate, and maintain the closed basin division, San Luis Valley project, Colorado, including channel rectification of the Rio Grande

between the uppermost point of discharge into the river of waters salvaged by the project, and the Colorado-New Mexico State line, so as to provide for the carriage of water so salvaged without flooding of surrounding lands, to minimize losses of waters through evaporation, transpiration, and seepage, and to provide a conduit for the reception of waters salvaged by drainage projects undertaken in the San Luis Valley below Alamosa, Colorado, in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), and as otherwise provided in this Act, for the principal purposes of salvaging, regulating, and furnishing water from the closed basin area of Colorado; transporting such water into the Rio Grande; making water available for fulfilling the United States obligation to the United States of Mexico in accordance with the treaty dated May 21, 1906 (34 Stat. 2953); furnishing irrigation water, industrial water, and municipal water supplies to water deficient areas of Colorado, New Mexico, and Texas through direct diversion and exchange of water; establishing the Mishak National Wildlife Refuge and furnishing a water supply for the operation of the Mishak National Wildlife Refuge and the Alamosa National Wildlife Refuge and for conservation and development of other fish and wildlife resources; providing outdoor recreational opportunities; augmenting the flow of the Rio Grande; and other useful purposes, in substantial accordance with the engineering plans set out in the report of the Secretary of the Interior on this project: *Provided*, That no wells of the project, other than observation wells, shall be permitted to penetrate the aquiclude, or first confining clay layer.

(b) Construction of the project may be undertaken in such units or stages as in the determination of the Secretary will best serve project requirements and meet water needs: *Provided*, That construction of each of the successive units or stages after stage 1 of said project shall be undertaken only with the consent of the Colorado Water Conservation Board and the Rio Grande Water Conservation District of the State of Colorado.

(c) The closed basin division, San Luis Valley project, Colorado, shall be operated in such manner that the delivery of water to the river and return flows of water will not cause the Rio Grande system to be in violation of water quality standards promulgated pursuant to the Water Quality Act of 1965 (79 Stat. 903).

Sec. 102. (a) Prior to commencement of construction of any part of the project, except channel rectification, there shall be incorporated into the project plans a control system of observation wells, which shall be designed to provide positive identification of any fluctuations in the water table of the area surrounding the project attributable to operation of the project or any part thereof. Such control system, or so much thereof as is necessary to provide such positive identification with respect to any stage of the project, shall be installed concurrently with such stage of the project.

(b) The Secretary shall operate project facilities in a manner that will not cause the water table available for any irrigation or domestic

wells in existence prior to the construction of the project to drop more than two feet and in a manner that will not cause reduction of artesian flows in existence prior to the construction of the project.

Sec. 103. There is hereby established an operating committee consisting of one member appointed by the Secretary, one member appointed by the Colorado Water Conservation Board, and one member appointed by the Rio Grande Water Conservation District, which is authorized to determine from time to time whether the requirements of section 102 of this Act are being complied with. The committee shall inform the Secretary if the operation of the project fails to meet the requirements of section 102 or adversely affects the beneficial use of water in the Rio Grande Basin in Colorado as defined in article I(c) of the Rio Grande compact (53 Stat. 785). Upon receipt of such information the Secretary shall modify, curtail, or suspend operation of the project to the extent necessary to comply with such requirements or eliminate such adverse effect.

Sec. 104. (a) Except as hereinafter provided, project costs shall be nonreimbursable.

(b) After the project or any phase thereof has been constructed and is operational, the Secretary shall make water available in the following listed order of priority:

(1) To assist in making the annual delivery of water at the gaging station on the Rio Grande near Lobatos, Colorado, as required by article III of the Rio Grande compact: *Provided,* That the total amount of water delivered for this purpose shall not exceed an aggregate of six hundred thousand acre-feet for any period of ten consecutive years reckoned in continuing progressive series beginning with the first day of January next succeeding the year in which the Secretary determined that the project authorized by this Act is operational.

(2) To maintain the Alamosa National Wildlife Refuge and the Mishak National Wildlife Refuge: *Provided,* That the amount of water delivered to the Alamosa National Wildlife Refuge shall not exceed five thousand three hundred acre-feet annually, and the water delivered to the Mishak National Wildlife Refuge shall not exceed twelve thousand five hundred acre-feet annually.

(3) To apply to the reduction and elimination of any accumulated deficit in deliveries by Colorado as is determined to exist by the Rio Grande Compact Commission under article VI of the Rio Grande compact at the end of the compact water years in which the Secretary first determines the project to be operational.

(4) For irrigation or other beneficial uses in Colorado: *Provided,* That no water shall be delivered until agreements between the United States and water users in Colorado, or the Rio Grande Water Conservation District acting for them, have been executed providing for the repayment of such costs as in the opinion of the Secretary are appropriate and within the ability of the users to pay.

Sec. 105. Construction of the project shall not be started until the State of Colorado agrees that it will, as its participation in the project, convey to the United States easements and rights-of-way

over lands owned by the State that are needed for wells, channels, laterals, and wildlife refuge areas, as identified in the project plan. Acquisition of privately owned land shall, where possible and consistent with the development of the project, be restricted to easements and rights-of-way in order to minimize the removal of land from local tax rolls.

Sec. 106. Conservation and development of the fish and wildlife resources and the enhancement of recreation opportunities in connection with the closed basin division of the San Luis Valley project works authorized by this Act shall be accordance with the provisions of the Federal Water Project Recreation Act (70 Stat. 213).

Sec. 107. The Secretary is authorized to transfer to the State of Colorado or to any qualified agency or political subdivision of the State, or to a water users' organization, responsibility for the care, operation, and maintenance of the project works, or any part thereof. The agency or organization assuming such obligation shall obligate itself to operate the project works in accordance with regulations prescribed by the Secretary.

Sec. 108. Nothing contained in this Act shall be construed to abrogate, amend, modify, or be in conflict with any provisions of the Rio Grande compact; or to shift any legal burden of delivery from the Rio Grande or the Conejos River to the closed basin.

Sec. 109. There is hereby authorized to be appropriated for construction of the closed basin division of the San Luis Valley project the sum of $18,246,000 (April 1972 prices), plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuation in construction costs as indicated by engineering cost indexes applicable to the types of construction involved herein, and such additional sums as may be required for operation and maintenance of the project.

APPENDIX F

A. Water Conservation and Water Conservancy Districts

Rio Grande Water Conservation District
Mr. Franklin Eddy, Manager
Alamosa, CO 81101

Conejos Water Conservancy District
Mr. Leland Holman, Secretary
Manassa, CO 81141

San Luis Valley Conservation District
Mr. William DeSouchet, Attorney
Alamosa, CO 81101

Trinchera Water Conservancy District
Mr. Carl Escheman, Secretary
Blanca, CO 81123

B. Ditch Companies and Irrigation Districts

Antonito Ditch Company	Felix F. Gallegos Antonito, CO
Arroya Springs Ditch Company	Joe A. Martinez LaJara, CO
Billings Ditch Company	Mrs. Elma Christensen Alamosa, CO
Bountiful Lateral Ditch Company	Edwin T. Boice Romeo, CO
Canon Ditch Company	L. M. Gonzales Antonito, CO
Capulin Ditch Company	Joseph H. Chavez, Sec. LaJara, CO
Centennial Canal Company	Maurice Stillings Alamosa, CO
Centennial Irrigating Company	Warren Deacon Monte Vista, CO
Commonwealth Irrigation Company	Wilbur Wiescamp Alamosa, CO
Conejos and San Rafael Ditch Company	F. W. Smith Antonito, CO
Consolidated Ditch and Headgate Company	Rowe & Gunnison Monte Vista, CO
Costilla Ditch Company	George S. Myers Alamosa, CO
Cotton Creek Water Company	Mrs. Elsie Neese Moffat, CO
Ephraim Ditch Company	Bruce Reynolds Sanford, CO
Excelsior Ditch Company	Ed Loman Alamosa, CO
Farmers Union Ditch Company	Don Spencer Center, CO

Guadalupe Main Ditch Company	Leland R. Holman Manassa, CO
Head Overflow Ditch Company	D. E. Shawcroft Alamosa, CO
Jaroso Mutual Ditch Company	Dave Barker Jaroso, CO
Lariat Irrigation Company	Hugh Garrison Monte Vista, CO
Los Rincones Ditch Company	Gordy L. Bagwell Manassa, CO
Los Sauces Ditch Company	Nick Espinoza Sanford, CO
Manassa Land & Irrigation Company	Leland R. Holman Manassa, CO
McDonald Ditch Company	Leo Stoeber Monte Vista, CO
Medano & Zapata Ranches Ditches	Malcolm G. Steward, Jr. Hooper, CO
Miller Ditch Company	Clark Hutchinson LaJara, CO
Mogote-Northeastern Consolidated Ditch Co.	Robert McCarroll LaJara, CO
Monte Vista Canal Company	Edgar Ryker Alamosa, CO
Mosca Irrigation Company	Thomas H. Rees Alamosa, CO
Morgan Ditch Company	Maurice Smith LaJara, CO
New Cenicero Ditch Company	
New Union Ditch Company	Joseph H. Chavez, Sec. LaJara, CO
Oklahoma Company Ditches	Ralph Curtis Saguache, CO
Plano Vista Ditch Company	W. W. Platt Alamosa, CO
Prairie Ditch Company	L. B. Casselman Mosca, CO
Prairie Irrigation Company	LaVern Hart Monte Vista, CO
Richfield Canal Company	Dan Guymon, Supt. LaJara, CO
Richfield Ditch Company	Ray Shawcroft LaJara, CO
Rio Grande-San Luis Irrigation Company	Rowe & Gunnison Monte Vista, CO
Rio Grande & Piedro Valley Ditch Company	Dick Postel Monte Vista, CO
Romero Ditch Company	Leland R. Holman Manassa, CO
Romero Irrigation Company	Robert McCarroll LaJara, CO
Sanchez Ditch & Reservoir Company	Frank Barker San Acacio, CO
Sanford Canal Company	H. LaMont Morgan Sanford, CO

San Juan & San Rafael Ditch Company	Antonio Lucero Conejos, CO
San Luis Valley Canal Company	Roy Outcalt Alamosa, CO
San Luis Valley Irrigation District	W. O. Souder Center, CO
Santa Maria Reservoir Company	Barry Nelson, Engr. Monte Vista, CO
Scandinavian Ditch Company	Edgar Ryker Alamosa, CO
Servietta Ditch Company	Leland R. Holman Manassa, CO
South Side Arroya Ditch Company	Dan Guyman LaJara, CO
Sanford Ditch Company	Clayton Peterson, Pres. Sanford, CO
Terrace Irrigation Company	Phil Skinner, Pres. LaJara, CO
Trinchera Irrigation Company	Lyle Smith, Pres.

APPENDIX G

TEXAS AND NEW MEXICO v. COLORADO

MOTION FOR CONTINUANCE

COME NOW the States of Colorado, Texas and New Mexico and respectfully move the Court to issue its order continuing this cause until such time as the plaintiff states may advise this Court of their desire that the cause should proceed toward judgment and as their grounds therefor submit the attached memorandum.

The States of Colorado, Texas and New Mexico advise the Court that the following agreement has been reached among the parties in this cause.

1. The State of Colorado undertakes to deliver water at the Colorado—New Mexico state line to meet every year the delivery obligation established by the schedules of Article III of the Rio Grande Compact. To this end the State of Colorado shall exercise its best efforts and use all available administrative and legal powers including, if necessary, the curtailment of diversions enforced by agents of the State. The State of Colorado shall make frequent and regular reports to the plaintiffs of all measures taken to effect compliance.

2. The State of Colorado desires to request that the Court continue this matter until such time as the plaintiff states may advise the Court that the continuance should terminate and the cause proceed toward judgment.

3. The States of Texas and New Mexico advise the Court of their concurrence in the request for the continuance in order to provide to the State of Colorado an opportunity to demonstrate its willingness and ability to deliver water at the Colorado-New Mexico state line annually in accordance with Article III, subject to the condition that such continuance terminate whenever the plaintiff states shall communicate in writing to the State of Colorado and to the Court their belief that the defendant has failed to deliver water at the Colorado-New Mexico state line in accordance with the undertaking set out in Paragraph 1 above, or that the State of Colorado has failed to take effective actions reasonably calculated to implement that undertaking. After the giving of such notice, the plaintiff states shall have sixty (60) days within which to reply to the Colorado counterclaim or to otherwise plead as may be appropriate.

Nothing contained herein shall be construed to waive any right, claim or defense already pleaded by any party, or which may be pleaded hereafter by any party in the event the continuance is terminated.

The States of Colorado, Texas and New Mexico, therefore, join in requesting that the Court continue this matter pursuant to the terms of the agreement set out above.

ORDER

391 U.S. 901 (May 6, 1968.)

No 29. Orig. Texas et al. v. Colorado. Motion of the United States for leave to intervene as plaintiff granted. Joint motion of Texas, New Mexico, and Colorado for continuance granted. Mr. Justice Marshall took no part in the consideration or decision of these motions. Solicitor General Griswold on the motion for the United States. Crawford C. Martin, Attorney General, for the State of Texas, Boston E. Witt, Attorney General, for the State of New Mexico, and Duke W. Dunbar, Attorney General, for the State of Colorado, on the joint motion.

APPENDIX H

ohn D. Vanderhoof
Governor

C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

Department of Natural Resources
300 Columbine Building
1845 Sherman Street
Denver, Colorado 80203

December 4, 1973

TO WHOM IT MAY CONCERN

FROM: C. J. Kuiper, State Engineer

SUBJECT: Administrative Problems in the San Luis Valley

Recent legislation, the U. S. Supreme Court Stipulation dated April 17, 1968 on the Texas and New Mexico lawsuit, the requirement for rigid administration to meet compact commitments, studies on the relationship of ground and surface water, and complaints by various diverse interests in the valley have made it imperative that a complete analysis be made of administrative procedures in the San Luis Valley. Disagreements among many water user entities are manifested by protests to the Governor, to the State Engineer and to the Director of the Department of Natural Resources on past administration of the waters of the San Luis Valley. It is the purpose of this memorandum to outline the many issues, present both sides of the controversy as related by adversary parties, and the State Engineer's position. A further purpose of this memorandum is to encourage the many diverse interests to assist the State Engineer in resolving these differences through negotiation and arbitration without resorting to litigation. There is a strong feeling among administrative water officials, major water user groups and attorneys that some of these issues could be resolved with a memorandum of this type and/or administrative hearings. The advantages of administrative hearing, prefaced by the assertion that an appeal to Court would not preclude a de novo trial, rather than Court litigation are many:

1. The expense to the water user entity is much less.

2. The State Engineer's office could make full disclosure of all of the engineering studies and facts for the benefit of the water user groups who can ill afford to duplicate these type studies and compilation of data.

3. The State Engineer could ascertain all of the facts and contentions which each water user entity could present in the testimony.

4. It appears to be the best means by which the State Engineer's office can make available to the water user groups all of the data and studies which are public information; and

5. Negotiation and arbitration in an administrative hearing are much easier to accomplish and could be the vehicle to prevent a multitude of damaging lawsuits which may result.

ISSUE NO. 1

Should the Conejos River and the Rio Grande and all of the tributaries be administered under one priority system?

YES

1. The Rio Grande Compact did not repeal the Colorado Constitutional doctrine of prior appropriation or its system of administering waters under the priority system.

2. The compact commitment is the number one water right on the system and that "call" is at the Lobatos Gaging Station.

3. With the "call" at the Lobatos Gaging Station, which is below the confluence of the Conejos, Rio Grande and their tributaries, Colorado water law requires that upstream water rights shall be curtailed in reverse order of priority, if such curtailment will satisfy that "call" or a portion thereof.

4. Recent studies have indicated that most of the water in the San Luis Valley meets the definitions in Section 148-21-3(3) and (4).

5. The special delivery schedules for the Conejos and the Rio Grande as outlined in the compact are nothing more than mathematical calculations to determine Colorado's obligations to deliver water at the New Mexico state line.

6. It is contrary to Colorado water law to shut off a decreed water right on the Conejos which is senior to a decreed water right on the Rio Grande which is permitted to continue to divert when the "call" is below the confluence of the two rivers.

NO

1. Special delivery schedules for the Conejos River and the Rio Grande, as a part of the compact, require administration as two separate rivers.

2. Historically, these rivers have been administered as separate entities in accordance with the delivery schedules outlined in the compact.

3. Intrastate negotiations at the time of the promulgation of the compact anticipated separate administration of the two rivers according to compact schedules.

4. Article I (e) defines a "tributary" as any stream which naturally contributes to the flow of the Rio Grande.

STATE ENGINEER'S POSITION

The State Engineer's position is to be determined after an administrative hearing on the issue.

ISSUE NO. 2

Should Trinchera, La Jara, Alamoso Creeks and all other tributary streams be subject to administration under the compact "call"?

YES

1. There is no provision in the Rio Grande Compact, nor any evidence that the compact repealed Colorado water law or the Constitutional Doctrine of Prior Appropriation.

2. Article I (e) defines "tributary" as any stream that naturally contributes to the flow of the Rio Grande.

3. Section 148-21-2(1) and (2) declare that underground and surface water must be used conjunctively and maximize the beneficial use of all of the waters of the state.

4. Section 138-21-3 declares all surface and underground water in or tributary to all natural streams as "waters of the state".

5. 148-21-3(4) defines "underground water" as water in the unconsolidated alluvial aquifer and other sedimentary materials and all other waters hydraulically connected thereto influencing movement of water in that aquifer or natural stream.

6. In the case of Trinchera, La Jara and Alamosa Creeks, evidence strongly supports the contention that these streams are tributary to the Rio Grande if not by direct surface flow, certainly by the tributary underground water as defined in Section 148-21-3(4).

7. Failure to administer tributary streams is contrary to Section 148-21-35(2) and 148-21-17(3).

8. It is inconceivable that the compact negotiators did not recognize and take cognizance of the fact that there was inflow to the Rio Grande between the index stations and the Lobatos Gaging Station. The fact that these streams are not provided with index gaging stations is immaterial.

NO

1. If the compact negotiators had intended tributary streams such as Trinchera, La Jara and Alamosa Creeks to be subject to the compact, index stations would have been provided on these streams.

2. These streams are not tributary in the surface channel.

3. No tributaries to the Rio Grande have been subject to administration historically with the compact "call".

4. Administration of these tributary streams would disrupt the economy and interfere with historic farming practices.

5. Winter irrigation is not being recognized as a beneficial use.

STATE ENGINEER'S POSITION

The State Engineer is required to administer the waters under state and federal statutes, the constitution and court decrees. Nothing in the statutes can be found to justify curtailing a decree on the main stem of the river and permitting junior decrees on a tributary to continue to divert. It is therefore the position of the State Engineer that tributaries to the main stem are subject to administration under Section 148-21-35(2).

ISSUE NO. 3

Should junior tributary underground water appropriators be curtailed when senior surface water rights are curtailed under the compact "call" or injured during periods of low surface run off?

YES

1. Section 148-21-3(4) defines defines underground water hydraulically connected to the natural stream to be a part of that natural stream.

2. Being subjected to the same priority system as the surface water rights makes it imperative that the State Engineer administer those underground water appropriations within the priority system.

3. By intercepting return flow to the river, or directly depleting surface flow, wells not only deplete the surface flow in times of need by senior surface water rights but also diminish the delivery of compact commitments at the state line requiring further curtailment of senior surface rights.

4. The Water Law enacted in 1969 made ample provision for underground water appropriations to be decreed and provided for augmentation, exchange or replacement water to remedy injury to senior water rights.

NO

1. A tremendous economy has been built on the use of underground water in the San Luis Valley and it would be disastrous to destroy this economy by shutting off wells.

2. Well pumping does not interfere with the surface flows in the stream and it would serve no useful purpose to curtail wells.

STATE ENGINEER'S POSITION

The 1969 Water Rights Determination and Administration Act, referred to as Article 148-21 or Senate Bill 81, provided that tributary underground water and the surface stream are a common source of supply and would be administered as such. The economic impact of rigid enforcement of the priority system without providing for a transition time would result in serious economic difficulty in the San Luis Valley. A gradual increase of curtailment of tributary underground water appropriations will provide well owners an opportunity to

organize plans of augmentation, obtain decrees as alternate points of diversion or provide some means of compensation for the injury to senior appropriators. Efforts are being made to provide an entity and procedures for accomplishing remedy of this injury and wells will be curtailed progressively more each year until complete remedy of injury is accomplished or they must shut off completely in the priority system.

ISSUE NO. 4

Should storage decrees be curtailed or regulated to provide for some contribution to the compact deliveries?

YES

1. The compact commitments for delivery of water to the New Mexico state line is an obligation of each and every water right in the San Luis Valley, including the junior storage rights.

2. By permitting upstream storage even during the off-irrigation season, downstream senior rights are injured because had that water not been stored, it would have contributed to the deliveries at the Lobatos Gaging Station and relieved senior water rights of curtailment during the irrigation season.

NO

1. The economic impact of complete shut off of storage would be disastrous to the San Luis Valley.

2. When water is stored in priority, such water, under Colorado Water Law, belongs to the owner of the storage right.

3. Without this stored water for late season use, irrigated agriculture economy of the San Luis Valley would be irreparably damaged.

4. Storage water when released and applied to irrigated acreages through surface ditches maintain the ground water table so that those areas dependent on ground water withdrawal can survive.

5. By proper manipulation of upstream storage space, damaging floods downstream can be mitigated or eliminated.

STATE ENGINEER'S POSITION

Storage decrees unquestionably are obligated to contribute to compact deliveries at the state line. The advantages of upstream storage are many, including extension of the irrigation season to grow crops which would otherwise not be possible. The State Engineer's position is that a percentage of this stored water should be declared to be stored "out of priority" according to Section 148-11-25(1). This would provide a "cushion" which could be used in the latter part of the irrigation season or during the fall and winter months if the water was needed to meet compact commitments.

ISSUE NO. 5

Is the confined aquifer (artesian) tributary to the Rio Grande stream system and subject to administration accordingly?

YES

1. U. S. Geological Survey Circular No. 18 estimates upward leakage from the confined to the unconfined aquifer in the amount of six-tenths to eight-tenths acre-feet per acre each year.

2. Circular No. 18 attributes diminishing flows of artesian springs in the valley to the increased withdrawal of water from the confined aquifer with this decline in flow estimated to be about 22,000 acre-feet per year since 1951.

3. The Circular states that it is likely that water from the Conejos River, in the reach between Mogote and Manassa, has been induced into the confined aquifer because of the reduced pressures in the confined aquifer as a result of increased pumping.

4. The bulletin states that apparently there is a hydraulic connection between the Conejos River and the confined aquifer along the fault and/or depositional contact of the valley fill and the volcanic San Luis Hills and that the timing of depletion and flow of the Conejos River correlate with increased withdrawal of water from the confined aquifer.

5. The confined aquifer derives its recharge supply from surface water around the periphery of the stratum of blue clay.

6. Every indication is that depletion from the confined aquifer has seriously affected the flows of the Conejos River, other surface streams, and the availability of water in the unconfined aquifer.

7. The fact that the confined aquifer is tributary, appropriators from this aquifer should be required to remedy injury to senior vested rights, including the compact "call" at Lobatos.

NO

1. The confined aquifer in the San Luis Valley is not, and historically has never been, considered as tributary in that it does not naturally contribute to the flow of the Rio Grande.

2. Administration of diversions from the confined aquifer would be a serious detriment to the economy of the San Luis Valley.

3. The considerable cost of the drilling and equipping of artesian wells would be wasted if appropriations from that aquifer were administered in the priority system.

4. Water in the confined aquifer does not fit the definition of "underground water" under Section 148-21-3(3) and (4).

5. Historically diversions from the confined aquifer have not been administered and should not be administered now because of Section 148-21-27(1)(vi).

6. Contributions to the compact commitments at the state line by appropriators from the confined aquifer were never anticipated by the negotiators of that compact.

STATE ENGINEER'S POSITION

The confined aquifer is tributary to surface streams in the sense that it derives its water from surface streams, is hydraulically connected to the surface streams and influences the movement of water of the natural streams. A water right can not be acquired in Colorado by adverse possession and appropriations from the confined aquifer are subject to all of the provisions of Article 148-21. A reasonable lessening of material injury to prior vested rights must be made by appropriators from the confined aquifer in increasing amounts over a transition period to permit those appropriators to continue to pump from the confined aquifer.

ISSUE NO. 6

Should the surface water appropriators be given preference in the granting of wells in the unconfined aquifer?

YES

1. The recharge of the unconfined aquifer comes primarily from application of water by surface decree holders.

2. Granting of well permits to persons who do not irrigate by surface water diversions deplete the aquifer and interfere with sub-irrigation as historically practiced for many years.

3. All of the water, including that in the unconfined aquifer, is already appropriated and further appropriations are injurious to existing water users.

4. In some cases, well permits granted intercept return flow to the surface stream diminishing the water available for delivery to the compact thereby increasing the obligation to senior water rights.

5. If wells are granted indiscriminately to non-surface water irrigators, the water level in the unconfined aquifer is lowered, lessening the pressure differential between the confined and unconfined aquifers and permitting additional leakage from the confined aquifer.

NO

1. Under Colorado Water Law, return flow from surface application of irrigation water reverts to the ownership of the public and the right to divert unappropriated water can not be denied.

2. Sub-irrigation is wasteful of water since the higher water table increases evaporation and non-beneficial consumptive use, renders many thousands of acres of land unusable because of salt deposits, and encourages the growth of phreatophytes.

3. In areas where ground water withdrawal lowers the water table, land can be reclaimed and put back into production benefitting the economy of the San Luis Valley.

4. Water in the unconfined aquifer in areas of extremely shallow water table could be salvaged from evaporation and non-beneficial consumptive use.

STATE ENGINEER'S POSITION

The very nature of this problem is so complex that different areas must be treated in a different way in order to accomplish the intent of the legislature, namely, to maximize the beneficial use of all of the waters of the state and by the same token protect existing water rights. New well permits, other than those granted for alternate points of diversion or changes in point of diversion are not being granted in areas south of the "hydraulic divide" (approximately three miles north of the Rio Grande) since these wells would intercept return flow to the natural stream, diminishing the surface run off at Lobatos Gaging Station to the detriment of prior vested rights. New well permits, except as alternate points of diversion or changes in points of diversion, are not being granted above the periphery of the confining blue clay stratum because this area is considered to be the source of recharge for the confined or artesian aquifer. New well permits are being granted in areas of the closed basin where the lowering of the water table will provide salvage water and not be injurious to a prior vested water right.

John D. Vandenhoof
~~JOHN A. LOVE~~
Governor

C. J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

Department of Natural Resources
300 Columbine Building
1845 Sherman Street
Denver, Colorado 80203

January 8, 1974

TO WHOM IT MAY CONCERN

FROM: C. J. Kuiper, State Engineer

SUBJECT: Supplement to Administrative Problems in the San Luis Valley as outlined by the memorandum of December 4, 1973

Enclosed please find five more issues, numbered 7 through 11, in addition to those issues outlined by the above referenced memorandum.

These issues will be considered along with the others in the Administrative Hearings to be held in Carson Auditorium, Adams State College, Alamosa, Colorado on January 23, 24, 25 and 26, 1974. The Legal Notice on these hearings is being forwarded to the county newspapers in the affected areas as of this date.

C. J. Kuiper

CJK:grl

enclosure

ISSUE NO. 7

Is the present formula for distributing return flows above the Lobatos Gaging Station acceptable to water users diverting from the Rio Grande and those diverting from the Conejos River?

YES

1. From the best information available, the formula is satisfactory to the water users in the Conejos River.

NO

1. From the best information available, the formula is not satisfactory to the water users diverting from the Rio Grande.

STATE ENGINEER'S POSITION

The State Engineer's position is to be determined after an administrative hearing on the issue.

ISSUE NO. 8

Should surface streams which are north of the "Hydraulic Divide" be administered in a common priority list with the Rio Grande system?

YES

1. Streams north of the "Hydraulic Divide" generally originate in the encircling mountain areas and are tributary to the confined (artesian) aquifer which is, in turn, tributary to the surface stream system.

NO

1. Although these streams are the sources of recharge to the confined aquifer, the surface water in the stream, if diversions were shut off would flow into the Closed Basin and even to the sump area. Evaporation and non-beneficial consumptive use would waste this water.

2. By permitting diversions and irrigation above the blue clay layer, the recharge to the confined aquifer is increased.

3. Irrigation from the surface stream below the edge of the blue clay is put to a beneficial use whereby permitting it to proceed to the sump area would amount to a waste of water.

STATE ENGINEER'S POSITION

The peripheral streams encircling the Closed Basin north of the "Hydraulic Divide" should not be administered in a single priority system with the surface stream system if it would constitute a waste of water. Each individual stream should be analyzed individually to ascertain whether or not such administration with the surface stream system of the Rio Grande would constitute waste or non-beneficial use of water.