Third Annual Report

of the

RIO GRANDE COMPACT COMMISSION

1941

TO THE GOVERNORS OF

Colorado, New Mexico and Texas

Rio Grande Compact Commission

HIS EXCELLENCY, RALPH L. CARR
Governor of the State of Colorado

HIS EXCELLENCY, JOHN E. MILES
Governor of the State of New Mexico

HIS EXCELLENCY, COKE R. STEVENSON
Governor of the State of Texas

Sirs:

The second annual meeting of the Rio Grande Compact Commission was held in Santa Fe, on February 24 and 25, 1941. Two other meetings were held in Denver and Santa Fe during the year.

At the second annual meeting, the Commission reviewed and adopted as official records of deliveries and releases, which disclosed that Colorado had an accrued debit in its 1940 deliveries at the Colorado-New Mexico State-line of 19,300 acre-feet, and New Mexico an accrued debit of 58,900 acre-feet at San Marcial, and that the annual release of water from project storage was 55,500 acre-feet less than normal.

The records of deliveries and releases for 1941 show accrued credits to Colorado and New Mexico of 127,000 acre-feet and 49,400 acre-feet, respectively. The accrued departure from normal release from project storage was 138,100 acre-feet less than allowed by the Compact.

In January the Commissioner for Texas requested the release of debit water in storage in Colorado and in New Mexico in accordance with Article VIII of the Compact. Due to the small amount of water involved and to the inaccessibility of the reservoirs in Colorado, debit water was not released. About 10,000 acre-feet of water was released from El Vado reservoir between February 1st and 14th in accord with the obligation of New Mexico. Project storage reached 600,000 acre-feet on February 14th and remained above this amount through April 30th; hence further releases by New Mexico were not required.

Debit water was released by Colorado from two small reservoirs for use in Colorado during August, without the prior authorization of the Commission, under the assumption that at the time Colorado's debit of 19,300 acre-feet had been cancelled as a result of unusual runoff. The Commissioners for New Mexico and Texas protested this action under Article VI of the Compact.

The expenses of administration of the Compact during the fiscal year ending June 30, 1941 were $18,391.72, of which $5,800.00 was borne by the United States under cooperative agreements. The balance was borne equally by the three states in the amount of $4,197.24 each.

Factual data and records bearing upon the administration of the Compact are submitted herewith.

Respectfully yours,

S/ M. C. Hinderlider
M. C. HINDERLIDER
Rio Grande Compact Commissioner
for the State of Colorado

S/ Thomas M. McClure
THOMAS M. McCLURE
Rio Grande Compact Commissioner
for the State of New Mexico

S/ J. E. Quaid
J. E. QUAID
Rio Grande Compact Commissioner
for the State of Texas

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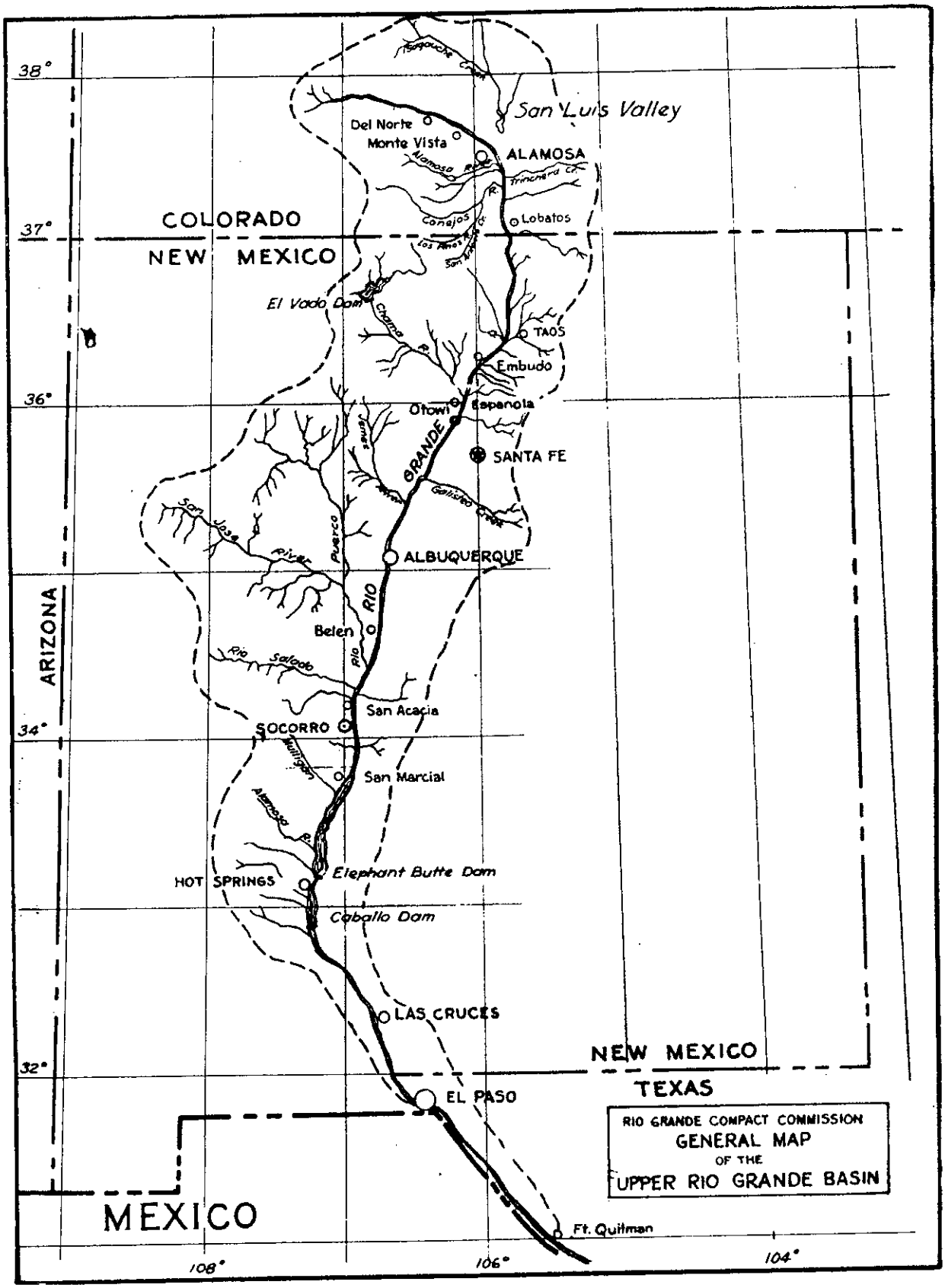
38°
37°
36°
34°
32°
108°
106°
104°
COLORADO
NEW MEXICO
ARIZONA
NEW MEXICO
TEXAS
MEXICO
San Luis Valley
Del Norte
Monte Vista
ALAMOSA
Alamosa R.
Trinchera Cr.
Conejos R.
Lobatos
El Vado Dam
Chama R.
TAOS
Embudo
Otowi
Espanola
RIO GRANDE
SANTA FE
Galisteo Creek
San Jose River
Puerco
ALBUQUERQUE
RIO
Belen
Rio Salado
San Acacia
SOCORRO
San Marcial
Alamosa R.
HOT SPRINGS
Elephant Butte Dam
Caballo Dam
LAS CRUCES
EL PASO
Ft. Quitman
RIO GRANDE COMPACT COMMISSION
GENERAL MAP
OF THE
UPPER RIO GRANDE BASIN

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 considertions 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 contributes to the flow of the Rio Grande.

(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 ac-

tual 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 Reservoir 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 gaging 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 mouth 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 gaging 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 gaging stations shall be equipped, maintained and operated by the Commission directly or in cooperation 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 of Conejos River at the U. S. G. S. gaging station near Mogote during the calendar year, plus the natural flow of Los Pinos River at the U. S. G. S. gaging station near Ortiz and the natural flow of San Antonio River at the U. S. G. S. gaging 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. gaging 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

Rio Grande at Del Norte (3)	Rio Grande at Lobatos less Conejos at Mouths (4)
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. gaging 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. gaging 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 gaging stations; (b) any new or increased depletion of the runoff above inflow index gaging 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 percent 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. gaging 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 gaging 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 gaging stations; (b) depletion after 1929 in New Mexico

(53 Stat. 973

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, by 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 gaging stations herein referred to, such stations may, with the unanimous approval of the Commission, be abandoned, and with such approval another station, or others 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 year.

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 debit 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 authorize 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 found 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 or quality of the water of the Rio Grande are composed and settled; 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 Unied 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 request of any member of the Commission; provided, however, that 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 loses 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 herein contained establishes any general principle or precedent applicable to other interstate streams.

ARTICLE XVI

Nothing in this Compact shall be construed as affect-

ing 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.

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.

(Sgd.) M. C. HINDERLIDER,
(Sgd.) THOMAS M. McCLURE,
(Sgd.) FRANK B. CLAYTON.

APPROVED:
(Sgd.) S. O. HARPER.

RULES AND REGULATIONS FOR ADMINISTRATION OF THE RIO GRANDE COMPACT

A Compact, known as the Rio Grande Compact, between the States of Colorado, New Mexico and Texas, having become effective on May 31, 1939, by consent of the Congress of the United States, which equitably apportions the waters of the Rio Grande above Fort Quitman and permits each State to develop its water resources at will, subject only to its obligations to deliver water in accordance with the schedules set forth in the Compact, the following Rules and Regulations have been adopted for its administration by the Rio Grande Compact Commission; to be and remain in force and effect only so long as the same may be satisfactory to each and all members of the Commission, and provided always that on the objection of any member of the Commission, in writing, to the remaining two members of the Commission after a period of sixty days from the date of such objection, the sentence, paragraph or any portion or all of these rules to which any such objection shall be made, shall stand abrogated and shall thereafter have no further force and effect; it being the intent and purpose of the Commission to permit these rules to obtain and be effective only so long as the same may be satisfactory to each and all of the Commissioners.

Gaging Stations

Responsibility for the equipping, maintenance and operation of the stream gaging stations and reservoir gaging stations required by the provisions of Article II of the Compact shall be divided among the signatory states as follows:

(a) Gaging stations on streams and reservoirs in the Rio Grande Basin above the Colorado-New Mexico boundary shall be equipped, maintained, and operated by Colorado in cooperation with the United States Geological Survey.

(b) Gaging stations on streams and reservoirs in the Rio Grande Basin below Lobatos and above San Marcial shall be equipped, maintained and operated by New Mexico in cooperation with the U. S. Geological Survey; the gaging station on the Rio Grande at San Marcial shall likewise be the responsibility of New Mexico to the extent that this station is not maintained and operated by the International Boundary Commission, or some other federal agency.

(c) Gaging stations on Elephant Butte Reservoir and on Caballo Reservoir, and the stream gaging stations on

the Rio Grande below those reservoirs shall be equipped maintained and operated by or on behalf of Texas through the agency of the U. S. Bureau of Reclamation.

The equipment, method and frequency of measurements at each gaging station shall be sufficient to obtain records at least equal in accuracy to those classified as "good" by the U. S. Geological Survey. Water stage recorders on the reservoirs specifically named in Article II of the Compact shall have sufficient range below maximum reservoir level to record major fluctuations in storage. Staff gages may be used to determine fluctuations below the range of the water stage recorders on these and other large reservoirs, and staff gages may be used upon approval of the Commission in lieu of water stage recorders on small reservoirs, provided that the frequency of observations is sufficient in each case to establish any material changes in water levels in such reservoirs.

Reservoir Capacities

Colorado shall file with the Commission a table of areas and capacities for each reservoir in the Rio Grande Basin above Lobatos constructed after 1937; New Mexico shall file with the Commission a table of areas and capacities for each reservoir in the Rio Grande Basin between Lobatos and San Marcial constructed after 1929; and Texas shall file with the Commission tables of areas and capacities for Elephant Butte Reservoir and for all other reservoirs actually available for the storage of water between Elephant Butte and the first diversion to lands under the Rio Grande Project.

Whenever it shall appear that any table of areas and capacities is in error by more than five percent, the Commission shall use its best efforts to have a re-survey made and a corrected table of areas and capacities to be substituted as soon as practicable. To the end that the records of flow of the Rio Grande at San Marcial, at San Acacia, and below Elephant Butte Reservoir may be correlated, the Commission shall use its best efforts to have the rate of accumulation and the place of deposition of silt in Elephant Butte Reservoir checked at least every three years.

Evaporation Losses

The Commission shall encourage the equipping, maintenance and operation, in cooperation with the United States Weather Bureau or other appropriate agency, of evaporation stations at Elephant Butte Reservoir and at or near each major reservoir in the Rio Grande Basin within Colorado constructed after 1937 and in New Mexico con-

structed after 1929. The net loss by evaporation from a reservoir surface shall be taken as the difference between the actual evaporation loss and the evapo-transpiration losses which would have occurred naturally, prior to the construction of such reservoir. Changes in evapo-transpiration losses along stream channels below reservoirs may be disregarded.

Adjustments of Records

The Commission shall keep a record of the location and description of each gaging station and evaporation station, and, in the event of change in location of any stream gaging station for any reason, it shall ascertain tne increment in flow or decrease in flow between such locations for all stages. Wherever practicable, concurrent records shall be obtained for one year before abandonment of the previous station.

New or Increased Depletions

In the event any works are constructed which alter or may be expected to alter the flow at any of the Index Gaging Stations mentioned in the Compact, or which may otherwise necessitate adjustments in the application of the schedules set forth in the Compact, it shall be the duty of the Commissioner specifically concerned to file with the Commission all available information pertaining thereto, and appropriate adjustments shall be made in accordance with the terms of the Compact; provided, however, that any such adjustments shall in no way increase the burden imposed upon Colorado or New Mexico under the schedules of deliveries established by the Compact.

Trans-Mountain Diversions

In the event any works are constructed for the delivery of waters into the drainage basin of the Rio Grande from any stream system outside of the Rio Grande Basin, such waters shall be measured at the point of delivery into the Rio Grande Basin and proper allowance shall be made for losses in transit from such points to the Index Gaging Station on the stream with which the imported waters are commingled.

Quality of Water

In the event that delivery of water is made from the Closed Basin into the Rio Grande, sufficient samples of such water shall be analyzed to ascertain whether the quality thereof is within the limits established by the Compact.

Secretary

The Commission shall employ a secretary who shall be a registered professional engineer, or a Corporate Member of the American Society of Civil Engineers, experienced in irrigation, agricultural or hydraulic engineering. The period of employment of the secretary shall be at the pleasure of the Commission but not exceeding one year, at the end of which period his services shall automatically terminate; provided, however, that the Commission, upon unanimous agreement, may extend his employment for a period not exceeding one year following the year within which his employment has been automatically terminated, or may employ another individual under like conditions with respect to period of employment; it being the intent and puprose of the Commission to limit the term of employment of any such appointee so that any re-appointment, or the appointment of any successor, can be made for a period of but one year, and then only by the unanimous action of the Commission.

The salary of the secretary shall be determined by the Commission. He shall be reimbursed for his necessary traveling expenses incurred in performing his official duties, as may be determined by the Commission.

Each of the respective states, at its own expense, shall provide adequate office facilities for the use of the secretary of the Commission.

It shall be the duty of the secretary to collect and correlate all factual data and other records having a bearing upon the administration of the Compact, and to keep each Commissioner advised thereof. It shall be the further duty of the secretary to inspect all gaging stations maintained by the Commission, and to make recommendations to the Commission as to any changes or improvements to existing stations, and for the addition of new stations, to the end that reliable records may be had for the proper carrying out of the provisions of the Compact.

The secretary shall report to each Commissioner by letter on or before the fifteenth day of each month, except January, a summary of all hydrographic data then available for the current year — on forms prescribed by the Commission — pertaining to:

(a) Deliveries by Colorado at State Line;

(b) Deliveries by New Mexico at San Marcial; and

(c) Release and Spill from Project Storage.

He shall also compile a complete report covering his secretarial activities, and a summary of all factual data required by the Compact during the preceding calendar year, and submit the same to the Commission at its regular meeting in February, first following the calendar year covered by such report.

The secretary shall carry on such other duties as the Commission may assign to him from time to time, and shall devote his entire time to the duties of his office. He shall execute and deliver a surety bond satisfactory to the Commission, conditioned upon the faithful performance of the duties of his office.

Costs

In February of each year the Commission shall adopt a budget for the ensuing fiscal year beginning July first.

Such budget shall set forth the total cost of maintenance and operation of gaging stations, of evaporation stations, the cost of engineering and clerical aid, and all other necessary expenses excepting the salaries and personal expenses of the Rio Grande Compact Commissioners.

Contributions made directly by the United States and the cost of services rendered by the United States without cost shall be deducted from the total budget amount; the remainder shall then be allocated equally to Colorado, New Mexico, and Texas.

Expenditures made directly by any State for purposes set forth in the budget shall be credited to that State; contributions in cash or in services by any State under a cooperative agreement with any Federal agency shall be credited to such state, but the amount of the Federal contribution shall not so be credited; in event any State, through contractual relationships, causes work to be done in the interest of the Commission, such State shall be credited with the cost thereof, unless such cost is borne by the United States.

The secretary shall present to each participating state through the Commissioner of such State, a certified statement of one-third of the cost of his salary, traveling expense, the expense incident to the maintenance of the offices of the Commission, and each Commissioner shall arrange for the prompt payment thereof by the appropriate agency of his state.

The Commissioner of each state shall report at the

annual meeting each year the amount of money expended during the year by the state which he represents, as well as the portion thereof contributed by all cooperating federal agencies, and the Commission shall arrange for such proper reimbursement in cash or credits between states as may be necessary to equalize the contributions made by each state in the equipment, maintenance and operation of all gaging stations authorized by the Commission and established under the terms of the Compact.

It shall be the duty of each Commissioner to endeavor to secure from the Legislature of his state an appropriation of sufficient funds with which to meet the obligations of his state, as provided by the Compact.

Meetings of Commission

The Commission shall meet in February of each year for the consideration and adoption of the annual report for the calendar year preceding, and for the transaction of any other business consistent with its authority. The annual meeting in 1940 shall be held at Monte Vista, Colorado, and thereafter rotate alphabetically according to the states, the place in each state to be designated by the Commissioner from that state. Other meetings as may be deemed necessary shall be held at any time and place set by mutual agreement, for the consideration of data collected and for the transaction of any business consistent with its authority.

No action of the Commission shall be effective until approved by the Commissioner from each of the three signatory States.

(Signed) M. C. Hinderlider
M. C. HINDERLIDER
Commissioner for Colorado

(Signed) Thomas M. McClure
THOMAS M. McCLURE,
Commissioner for New Mexico

(Signed) Julian P. Harrison
JULIAN P. HARRISON
Commissioner for Texas

Adopted: December 19, 1939.

RECORDS OF DELIVERIES AND RELEASES

Schedules of deliveries by Colorado and New Mexico are set forth in Article III and IV of the Compact. Normal releases from project storage are fixed by the Compact at 790,000 acre-feet per year. In February of each year the Commission holds its annual meeting, at which time records of deliveries and releases for the previous year are reviewed and adopted as official. The records adopted by the Commission for 1941 are shown on the following three pages.

Deliveries by Colorado at the Colorado-New Mexico state line produced an annual credit for 1941 of 146,300 acre-feet after adjustments provided for in the Compact were made. From this credit the accrued debit of 19,300 acre-feet carried over from 1940 is deducted with the resulting accrued credit at the end of 1941 of 127,000 acre-feet.

Deliveries by New Mexico at San Marcial resulted in an annual credit of 108,300 acre-feet after adjustments provided for in the Compact were made. The accrued debit of 58,900 acre-feet is deducted from the annual credit to produce an accrued credit at the end of 1941 of 49,400 acre-feet.

The annual departure from normal release of water from project storage for 1941 was 82,600 acre-feet after adjustments were made for evaporation. The accrued departure from normal release at the end of 1940 of 55,500 acre-feet added to the annual departure of 1941, resulted in an accrued departure at the end of 1941 of 138,100 acre-feet less than the average allowed by the Compact.

Cooperation in supplying data necessary to making required adjustments to the schedules of deliveries and releases has been received from the Soil Conservation Service, Agricultural Adjustment Administration, Forest Service, Bureau of Agricultural Economics, Grazing Service, United Pueblos Agency, Weather Bureau, State Engineer, and the Special Deputy State Engineer of Colorado at Monte Vista. The Rio Grande Compact Commission wishes to acknowledge this cooperation.

RIO GRANDE COMPACT DELIVERIES BY COLORAO AT STATE LINE, YEAR 1941

Quantities in Thousands of Acre-Feet to Nearest Hundred

Month	Conejos Index Supply						Rio Grande Supply			Stored Water		Deliveries and Credits			
	Measured Stream Flow				Adjustments per Compact	Conejos Index Supply	Recorded flow near Del Norte	Adjustments per Compact	Rio Grande Index supply	Gain (+) or Loss (−) in storage	Total quantity in storage at end of month	Conejos River at mouths near Las Sauces	Total flow at Lobatos less Conejos River	Actual delivery at Lobatos gage	Adjustments per Compact
	Conejos River at Mogote	Los Pinos River Near Ortiz	San Antonio River at Ortiz	Total measured flow											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Jan.	2.9	.....	.....	2.9	.....	2.9	9.7	.....	9.7	.....	.....	4.2	8.8	13.0	.....
Feb.	2.9	.....	.....	2.9	.....	2.9	8.9	.....	8.9	.....	.....	4.8	8.4	13.2	.....
Mar.	4.2	.....	.....	4.2	.....	4.2	13.4	.....	13.4	.....	.....	11.1	20.7	31.8	.....
1st Qtr.	10.0	.....	.....	10.0	.....	10.0	32.0	.....	32.0	.....	.....	20.1	37.9	58.0	.....
Apr.	8.4	4.4	3.8	16.6	.....	16.6	25.3	.....	25.3	.....	.....	5.8	12.9	18.7	.....
May	117.1	78.4	31.2	226.7	.....	226.7	233.3	b+ 0.5	233.8	+ 0.5	0.5	144.8	118.6	263.4	.....
Jun.	126.5	38.9	3.2	168.6	.....	168.6	301.7	.....	301.7	0	0.5	96.8	169.2	266.0	.....
2nd Qtr.	252.0	121.7	38.2	411.9	.....	411.9	560.3	b+ 0.5	560.8	+ 0.5	.....	247.4	300.7	548.1	.....
July	77.6	11.2	0.3	89.1	.....	89.1	175.3	a− 0.1	175.2	0	0.5	47.6	75.8	123.4	.....
Aug.	18.0	2.6	0.2	20.8	.....	20.8	88.9	ab− 0.3	88.6	− 0.1	0.4	1.7	8.7	10.4	.....
Sept.	11.2	2.1	0.2	13.5	.....	13.5	41.7	a− 0.1	41.6	0	0.4	2.1	7.9	10.0	.....
3rd Qtr.	106.8	15.9	0.7	123.4	.....	123.4	305.9	ab− 0.5	305.4	− 0.1	.....	51.4	92.4	143.8	.....
Oct.	22.4	5.0	0.4	27.8	.....	27.8	72.7	.....	72.7	0	0.4	18.9	67.2	86.1	.....
Nov.	7.3	.....	.....	7.3	.....	7.3	42.9	.....	42.9	0	0.4	9.5	61.9	71.4	.....
Dec.	3.3	.....	.....	3.3	.....	3.3	11.9	b+ 0.1	12.0	+ 0.1	0.5	4.5	42.4	46.9	.....
4th Qtr.	33.0	5.0	0.4	38.4	.....	38.4	127.5	b+ 0.1	127.6	+ 0.1	.....	32.9	171.5	204.4	.....
Year	401.8	142.6	39.3	583.7	.....	583.7	1,025.7	ab+ 0.1	1,025.8	+ 0.5	.....	351.8	602.5	954.3	.....

REMARKS: Storage in reservoirs constructed after 1937 only.

a: Adjustment for transmountain diversions.

b: Adjustment for change in storage.

SUMMARY OF DEBITS AND CREDITS

	ITEM	Debit	Credit	Balance	
CI	Balance at beginning of year	.....	.....	dr.	19.3
C2	Scheduled delivery from Conejos River	357.7	.....		.....
C3	Scheduled delivery from Rio Grande	458.4	.....	dr.	837.4
C4	Actual del. at Lobatos plus 10,000 acre-feet	.....	964.3	cr.	126.9
C5	Adjustments per Compact — Item 16	.....	.....		.....
C6	Reduction of credits per Article VI	.....	.....		.....
C7	Reduction of debits per Article VI	.....	0.1	cr.	127.0
C8	Balance at end of year	.....	.....	cr.	127.0

RIO GRANDE COMPACT DELIVERIES BY NEW MEXICO AT SAN MARCIAL, YEAR 1941

Quantities in Thousands of Acre-feet to Nearest Hundred

Month	Otowi Index Supply					Storage of Water in Reservoirs					Deliveries and Credits				
						Lobatos to Otowi		Otowi - San Mar.					Adjustments Acct Depletion during July, Aug. Sept.		
	Recorded Flow at Otowi Bridge	Adj. Acct. Storage Above Otowi	Other adjustments per Compact	Equiv. flow at Otowi under 1929 conditions	Otowi Index supply	Gain (+) or Loss (—)	Total at end of month	Gain (+) or Loss (—)	Total at end of month	Total in storage at end of month	Recorded flow at San Marcial gage	Act. Del. during schedule months	Lobatos to Otowi	Tributaries below Otowi	Other Adjustments per Compact
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Jan.	36.8	+ 4.7	.....	41.5	41.5	+ 4.7	26.4	+ 0.3	1.1	27.5	47.5	47.5	.....	.....	.....
Feb.	51.8	- 9.9	.....	41.9	41.9	— 9.9	16.5	+ 0.3	1.4	17.9	67.0	67.0	.....	.....	.....
Mar.	83.3	+ 29.0	.....	112.3	112.3	+ 29.0	45.5	+ 0.2	1.6	47.1	91.7	91.7	.....	.....	.....
1st Qtr.	171.9	+ 23.8	.....	195.7	195.7	+ 23.8	.....	+ 0.8	.....	.....	206.2	206.2	.....	.....	.....
Apr.	128.8	+ 81.2a	.....	210.0	210.0	+ 81.0	126.5	+ 0.3	1.9	128.4	129.0	129.0	.....	.....	.....
May	896.8	+ 57.8a	.....	954.6	954.6	+ 56.9	183.4	0	1.9	185.3	994.0	994.0	.....	.....	.....
June	609.2	+ 12.1a	b + 0.1	621.4	621.4	+ 11.7	195.1	— 0.2	1.7	196 8	609.0	609.0	.....	.....	.....
2nd Qtr.	1,634.8	+ 151.1a	+ 0.1	1,786.0	1,786.0	+ 149.6	.....	+ 0.1	.....	.....	1,732.0	1,732.0	.....	.....	.....
July	240.0	+ 1.7a	.....	242.1	.....	+ 0.3	195.4	— 0.5	1.2	196.6	246.0	.....	b 0.1	b 0.5	.....
Aug.	88.7	— 42.0a	.....	46.7	.....	— 43.0	152.4	— 0.4	0.8	153.2	76.8	.....	.....	.....	.....
Sept.	70.0	— 18.8a	.....	51.2	.....	— 18.9	133.5	+ 0.2	1.0	134.5	83.8	.....	.....	.....	.....
3rd Qtr.	399.1	— 59.1a	.....	340.0	.....	— 61.6	.....	— 0.7	.....	.....	406.6	.....	0.1	0.5	.....
Oct.	165.1	— 6.1	.....	159.0	159.0	— 6.1	127.4	+ 0.1	1.1	128.5	221.0	221.0	.....	.....	.....
Nov.	144.0	— 19.0a	.....	125.0	125.0	— 19.1	108.3	+ 0.2	1.3	109.6	171.0	171.0	.....	.....	.....
Dec.	77.9	+ 3.2	.....	81.1	81.1	+ 3.2	111.5	+ 0.5	1.8	113.3	95.3	95.3	.....	.....	.....
4th Qtr.	387.0	— 21.9	.....	365.1	365.1	— 22.0	.....	+ 0.8	.....	.....	487.3	487.3	.....	.....	.....
Year	2,592.8	+ 93.9	+ 0.1	2,686.8	2,346.8	+ 89.8	.....	+ 1.0	.....	.....	2,832.1	2,425.5	0.1	0.5	.....

REMARKS: Storage in reservoirs constructed after 1929 only.

a: Adjusted for evaporation.

b: Adjustment for depletion by stock tanks.

SUMMARY OF DEBITS AND CREDITS

	ITEM	Debit	Credit	Balance	
NM1	Balance at beginning of year	.....	.....	dr.	58.9
NM2	Scheduled delivery at San Marcial	2,318.5	.....	dr.	2,377.4
NM3	Actual delivery in schedule months	.....	2,425.5	cr.	48.1
NM4	Adj. acct. deple. in July, Aug., Sept.	0.6	.....	cr.	47.5
NM5	Other adjustments — Item 16	.....	.....	....	.....
NM6	Reduction of credits per Article VI	.....	.....	....	.....
NM7	Reduction of debits per Article VI	.....	1.9	cr.	49.4
NM8	Balance at end of year	.....	.....	cr.	49.4

RIO GRANDE COMPACT RELEASE AND SPILL FROM PROJECT STORAGE, YEAR 1941

Quantities in Thousands of Acre-feet to Nearest Hundred

Month	Total project storage capacity available at end of month	Usable Water			Unfilled capacity of project storage at end of month	Credit Water			Flood water in storage and dead storage at end of month	Total water in project storage at end of month	Recorded Flow Rio Grande Below Elephant Butte	Release and Spill			
		Stored in Elephant Butte Reservoir	Stored in Caballo Reservoir	Total in Storage at End of Month		Colorado Credit Water in Storage	New Mexico Credit Water in Storage	Total in Storage at End of Month				Rio Grande Below Caballo			
												Release of Usable Water	Spill of Flood or Credit Water	Actual Spill of Usable Water	Total Recorded Flow
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Jan.	2,564.9	485.5	88.2	573.7	1,991.2	0	0	0	0	573.7	54.7	0.1	0	0	0.1
Feb.	2,564.9	501.6	124.1	625.7	1,839.2	0	0	0	0	625.7	48.6	7.3	0	0	7.3
Mar.	2,564.9	534.0	124.6	658.6	1,906.3	0	0	0	0	658.6	51.5	49.3	0	0	49.3
1st Qtr.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	154.8	56.7	0	0	56.7
Apr.	2,564.9	595.7	67.7	663.4	1,901.5	0	0	0	0	663.4	57.2	115.3	0	0	115.3
May	2,564.9	1,390.6	51.9	1,442.5	1,122.4	0	0	0	0	1,442.5	73.1	93.1	0	0	93.1
June	2,564.9	1,850.2	18.2	1,868.4	696.5	0	0	0	0	1,868.4	82.0	117.3	0	0	117.3
2nd Qtr.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	212.3	325.7	0	0	325.7
July	2,564.9	1,924.0	18.5	1,942.5	622.4	0	0	0	0	1,942.5	125.2	129.1	0	0	129.1
Aug.	2,564.9	1,863.8	15.1	1,878.9	686.0	0	0	0	0	1,878.9	99.2	110.5	0	0	110.5
Sept.	2,564.9	1,855.1	27.3	1,882.4	682.5	0	0	0	0	1,882.4	62.3	62.4	0	0	62.4
3rd Qtr.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	286.7	302.0	0	0	302.0
Oct.	2,564.9	1,968.6	85.3	2,053.9	511.0	0	0	0	0	2,053.9	72.1	4.2	0	0	4.2
Nov.	2,564.9	1,949.7	216.8	2,166.5	398.4	0	0	0	0	2,166.5	158.4	5.7	0	0	5.7
Dec.	2,564.9	1,937.7	277.3	2,215.0	349.9	0	0	0	0	2,215.0	87.3	10.5	0	0	10.5
4th Qtr.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	317.8	20.4	0	0	20.4
Year	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	971.6	704.8	0	0	704.8

Remarks: Total project storage capacity available at end of month includes 100,000 acre-feet of flood control capacity in Caballo reservoir.

ACCRUED DEPARTURE FROM NORMAL RELEASE

	ITEM	Debit	Credit	Balance	
P1	Accrued Departure at beginning of year	.....	.....	cr.	55.5
P2	Actual Release during year	704.8	.....	dr.	659.3
P3	Normal Release for year	.....	790.0	cr.	140.7
P4	Actual Net Evaporation Loss in year	112.9	.....	cr.	27.8
P5	Evaporation Loss if no departures	.....	110.3	cr.	138.1
P6	Accrued Departure at end of year	.....	.....	cr.	138.1

WATER SUPPLY

The year 1941 was an abnormally wet year on the Rio Grande watershed. At some Compact gaging stations the discharge was more than any previously recorded discharge. At no previous time has there been so much water in project storage on December 31st, and only once (1935, the first year of storage) has El Vado reservoir had more water in storage on this date.

ACCURACY OF RECORDS

The rules and regulations of the Compact Commission state that the equipment, method and frequency of measurements at each gaging station shall be sufficient to obtain records at least equal in accuracy to those classified as "good" by the U. S. Geological Survey. Within the physical limitations of stream gaging the agencies obtaining records at Compact gaging stations have complied with these regulations.

The station description includes a statement in regard to the general accuracy of the records. "Excellent" indicates that, in general, the daily records are accurate within 5 percent; "good", within 10 percent; "fair", within 15 percent; and "poor", within 20 or a higher percent. These standards of accuracy are the same as those followed by the Geological Survey.

ACKNOWLEDGMENTS

Water supply data contained in the following pages of this report have been supplied by Federal and State agencies, and by several individuals. The office of the State Engineer of Colorado furnished records of the discharge of the Rio Grande near Del Norte, Rio Grande near Lobatos, Conejos River near Mogote, Conejos River near Las Sauses, San Antonio River at Ortiz, and Los Pinos River near Ortiz. Records of storage in Troutvale No. 2 reservoir, Squaw Lake reservoir, and Fuchs reservoir were supplied by D. H. Mathias, Special Deputy State Engineer at Monte Vista, Colorado, with the cooperation of the owners, Earl Brown, Craton Sanderson, and Fred Fuchs, respectively. The United States Geological Survey in cooperation with the New Mexico Interstate Stream Commission furnished records of the discharge of the Rio Grande at Otowi Bridge near San Ildefonso, Rio Grande at San Acacia, and Rio Chama below El Vado Dam near Tierra Amarilla. The Geological Survey in cooperation with the New Mexico Interstate Stream Commission also furnished records of storage in Carson reservoir, El Vado reservoir

(and in cooperation with the Middle Rio Grande Conservancy District), and San Mateo reservoir. The United Pueblos Agency supplied records of storage in Acomita and Paguate reservoirs. The United States Section of the International Boundary Commission furnished records of discharge of the Rio Grande at San Marcial. The United States Bureau of Reclamation furnished records of discharge of the Rio Grande below Elephant Butte Dam and Rio Grande below Caballo Dam, and also furnished records of storage in Elephant Butte reservoir and Caballo reservoir. The Rio Grande Compact Commission wishes to acknowledge the cooperation received from these agencies.

RIO GRANDE NEAR DEL NORTE, COLO.

LOCATION — Water-stage recorder, lat. 37 degrees 41 min., long. 106 degrees 28 min., near east line of sec. 30, T. 40 N., R. 5 E., 5 miles upstream from Pinos Creek and 6 miles west of Del Norte. Zero of gage is 7,982.21 feet above mean sea level (general adjustment of 1929).

DRAINAGE AREA — 1,320 square miles.

RECORDS AVAILABLE — July 1889 to November 1906 (at site 4 miles downstream), April 1908 to September 1913, and October 1933 to December 1941, in reports of Geological Survey. July 1889 to December 1906 and April 1908 to December 1941 in reports of State Engineer. January 1941 to December 1941 in report of Rio Grande Compact Commission. May to September 1907 (at site 4 miles downstream), unpublished in files of office of State Engineer.

EXTREMES — Maximum discharge during year, 7,960 second-feet June 20 (gage height, 5.56 feet); minimum daily discharge, 140 second-feet Jan. 3.
1889-1941: Maximum discharge, about 18,000 second-feet Oct. 5, 1911 (gage height, 6.80 feet), from rating curve extended above 6,000 second-feet; minimum daily discharge 90 second-feet Dec. 3, 1934.

REMARKS — Records excellent except those for periods of ice effect, Jan. 1 to Apr. 4, Dec. 23 to 31, which were computed on the basis of nine discharge measurements and weather records and are good. Small diversions above station for irrigation. Flow regulated by three main reservoirs (total capacity, 117,600 acre-feet) and several smaller ones.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	185	155	172	338	1,280	4,110	4,110	1,810	834	706	1,140	356
2	174	150	178	331	1,290	4,110	3,990	1,690	826	650	1,140	280
3	140	145	175	340	1,590	3,860	3,970	1,660	762	938	1,070	270
4	150	148	175	338	1,520	3,780	4,010	1,530	682	1,160	1,030	280
5	150	150	180	380	1,460	3,700	4,710	1,450	650	982	993	225
6	155	150	180	326	1,980	3,620	4,240	1,630	642	905	960	186
7	160	150	185	308	2,370	3,950	3,800	1,830	666	802	894	235
8	160	152	190	308	2,410	4,410	3,680	2,080	698	802	826	260
9	160	154	185	332	2,640	3,900	3,290	2,030	650	770	872	220
10	165	156	180	386	3,020	3,480	3,250	1,980	596	730	834	220
11	170	160	175	356	3,580	3,290	3,250	1,890	554	722	786	240
12	170	165	170	362	4,320	3,190	3,340	1,740	470	714	754	178
13	175	165	170	368	5,600	3,190	3,290	1,620	440	1,360	786	200
14	170	168	180	356	5,810	3,380	2,970	1,490	642	2,050	730	178
15	160	168	190	380	5,170	3,680	2,550	1,690	596	1,560	722	166
16	145	170	210	404	4,520	4,070	2,260	1,590	519	1,410	706	178
17	150	165	240	410	4,630	5,030	2,260	1,600	505	1,300	722	178
18	150	162	260	380	4,980	6,380	2,520	1,630	554	1,210	722	170
19	150	163	280	350	4,820	7,590	2,430	1,530	690	1,170	658	154
20	155	160	300	344	4,280	7,620	2,570	1,390	810	1,190	596	147
21	155	165	315	374	4,180	7,360	2,370	1,340	1,220	1,360	533	154
22	160	165	295	368	4,490	7,280	2,140	1,210	834	1,550	512	166
23	155	162	295	362	4,430	7,360	2,030	1,120	1,210	1,450	422	162
24	150	165	280	362	4,560	7,510	2,100	960	894	1,390	440	150
25	150	168	250	398	4,960	7,050	2,100	894	746	1,530	526	152
26	155	165	225	446	5,240	6,670	2,050	949	666	1,550	526	142
27	155	165	210	540	4,960	6,280	1,940	927	610	1,420	477	145
28	155	168	215	706	4,820	6,060	1,890	894	568	1,430	440	149
29	160	.....	218	938	4,490	5,440	1,770	905	666	1,370	416	156
30	165	.....	222	1,180	4,220	4,760	1,770	883	834	1,270	386	162
31	160	.....	234	.....	4,010	.....	1,740	861	.....	1,180	.....	167

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	4,914	185	140	159	9,750
February	4,479	170	145	160	8,880
March	6,734	315	170	217	13,360
April	12,771	1,180	308	426	25,330
May	117,630	5,810	1,280	3,795	233,300
June	152,110	7,620	3,190	5,070	301,700
July	88,390	4,710	1,740	2,851	175,300
August	44,803	2,080	861	1,445	88,870
September	21,034	1,220	440	701	41,720
October	36,631	2,050	650	1,182	72,660
November	21,619	1,140	386	721	42,880
December	6,026	356	142	194	11,950
Year	517,141	7,620	140	1,417	1,025,700

RIO GRANDE NEAR LOBATOS, COLO.

LOCATION—Water-stage recorder, lat. 37 deg. 5 min., long. 105 deg. 45 min., in sec. 22, T. 33 N., R. 11 E., 6 miles north of Colorado-New Mexico State line, 7 miles downstream from Culebra Creek, and 10 miles east of Lobatos. Zero of gage is 7,426.79 feet above mean sea level (general adjustment of 1929).

DRAINAGE AREA — 7,700 square miles (includes 2,940 square miles in closed basin).

RECORDS AVAILABLE — June 1899 to September 1913 and October 1933 to December 1941 in reports of Geological Survey. June 1899 to December 1941 in reports of State Engineer. January 1941 to December 1941 in report of Rio Grande Compact Commission.

EXTREMES — Maximum discharge during year, 8,090 second-feet May 16 (gage height 6.83 feet); minimum daily discharge, 93 second-feet Sept. 10, 11.
1899-1941: Maximum daily discharge 13,100 second-feet (estimated) June 8, 1905; minimum daily discharge, 6 second-feet July 19, 20, 22, Aug. 3, 4, 1934.

REMARKS — Records excellent except those for periods of ice effect, Jan. 1 to March 16 and Dec. 19 to 31, which are computed on basis of eleven discharge measurements and weather records and are good. Diversions above station for irrigation. Flow regulated by reservoirs on headwaters.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1	230	220	305	537	460	4,390	5,650	247	143	440	1,830	964
2	230	210	315	501	682	4,100	4,910	209	134	658	1,750	937
3	210	205	340	447	928	3,960	3,940	186	134	690	1,690	937
4	200	200	360	440	1,190	4,010	3,150	159	127	746	1,660	937
5	195	200	410	421	1,390	3,880	2,940	123	123	919	1,600	955
6	200	195	420	389	1,520	3,610	3,210	110	120	1,110	1,530	928
7	200	200	400	364	1,840	3,270	3,580	130	116	1,120	1,470	892
8	205	205	380	324	2,310	3,480	3,720	116	110	1,090	1,390	848
9	205	205	370	302	2,820	4,200	3,260	143	96	1,040	1,330	822
10	215	210	350	302	3,480	4,390	2,750	130	93	991	1,270	866
11	220	215	340	313	3,930	4,090	2,140	213	93	955	1,280	831
12	225	220	340	313	4,540	3,560	1,970	223	96	910	1,270	822
13	230	220	360	308	5,440	3,160	1,980	204	106	892	1,220	805
14	230	220	410	308	6,360	2,790	2,050	172	120	1,000	1,160	840
15	225	220	450	282	7,430	2,580	1,970	155	127	1,510	1,150	788
16	220	225	460	276	7,890	2,620	1,800	151	123	1,910	1,090	780
17	205	225	522	266	7,600	2,610	1,580	177	127	1,920	1,050	797
18	200	225	588	232	6,610	2,850	1,370	223	138	1,850	1,040	772
19	195	240	619	237	6,140	3,300	1,250	209	116	1,780	1,010	740
20	200	250	674	266	6,300	3,960	1,130	177	113	1,700	973	730
21	205	260	690	252	5,600	4,810	1,180	190	130	1,640	946	720
22	210	270	698	247	4,540	5,420	1,120	186	120	1,630	946	730
23	210	280	698	252	4,010	6,150	1,040	200	218	1,720	857	730
24	220	300	730	247	3,940	6,420	901	186	266	1,850	788	700
25	215	310	730	237	4,220	6,480	780	168	313	1,900	857	670
26	205	315	755	242	4,540	6,610	682	151	414	1,890	901	640
27	205	310	755	237	5,030	7,180	580	138	353	1,910	937	560
28	200	305	730	237	5,540	7,180	494	138	282	1,950	991	510
29	205	.....	674	292	5,960	6,810	421	138	287	1,920	1,010	470
30	205	.....	611	359	5,610	6,240	364	138	318	1,900	982	460
31	210	.....	573	.....	4,960	.....	308	143	.....	1,890	.....	460

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	6,530	230	195	211	12,950
February	6,660	315	195	238	13,210
March	16,057	755	305	518	31,850
April	9,430	537	232	314	18,700
May	132,810	7,890	460	4,284	263,400
June	134,110	7,180	2,580	4,470	266,000
July	62,220	5,650	308	2,007	123,400
August	5,233	247	110	169	10,380
September	5,056	414	93	169	10,030
October	43,431	1,950	440	1,401	86,140
November	35,978	1,830	788	1,199	71,360
December	23,641	964	460	763	46,890
Year	481,156	7,890	93	1,318	954,310

RIO GRANDE AT OTOWI BRIDGE NEAR SAN ILDEFONSO, N. MEX.

LOCATION — Water-stage recorder, lat. 35 degrees 52 min., long. 106 degrees 9 min., in San Ildefonso Pueblo Grant, at Denver and Rio Grande Western Railroad bridge 2 miles southwest of San Ildefonso and 3 miles downstream from Rio Pojoaque. Datum of gage is 5,488.48 feet above mean sea level (datum of 1929).

DRAINAGE AREA — 14,300 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colorado).

RECORDS AVAILABLE — February 1895 to December 1905, June 1909 to December 1914, October 1930 to December 1941 in reports of Geological Survey. February 1895 to December 1905, June 1909 to December 1931 in reports of State Engineer. January 1941 to December 1941 in report of Rio Grande Compact Commission.

AVERAGE DISCHARGE — 14 years (1927-41), 1,548 second-feet.

EXTREMES — Maximum discharge during year, 22,500 second-feet May 16; maximum gage height, 13.70 feet May 14; minimum daily discharge, 341 second-feet Nov. 14. 1930-41: Maximum discharge, that of May 16, 1941; maximum gage height, that of May 14, 1941; minimum daily discharge, 128 second-feet June 21, 1934.

REMARKS — Records good. Flow partially regulated by operation of El Vado Reservoir on upper Rio Chama which stores water for irrigation. Diversions above station for irrigation.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1	680	530	827	2,200	3,860	13,500	9,030	1,130	1,060	1,230	3,940	1,520
2	644	518	841	2,010	6,020	12,300	8,150	1,210	1,080	1,080	3,850	1,420
3	632	1,460	883	1,950	6,400	11,800	7,090	1,270	1,090	1,280	3,760	1,470
4	530	1,110	869	2,460	7,020	11,800	5,670	1,520	1,010	1,000	3,680	1,470
5	505	869	922	2,740	7,670	12,000	5,670	1,520	990	1,680	3,680	1,470
6	555	898	1,050	2,400	9,080	12,300	5,670	1,780	990	1,620	3,680	1,380
7	560	962	1,070	1,950	10,700	12,300	5,670	1,900	1,030	1,730	3,190	1,270
8	525	970	1,070	1,950	11,500	12,800	5,670	1,900	742	2,030	2,320	1,320
9	555	922	1,000	2,010	13,000	14,000	5,670	1,950	694	2,590	2,190	1,310
10	545	978	938	2,200	14,200	13,000	5,100	1,780	694	2,660	2,130	1,380
11	566	986	869	1,950	14,800	12,500	4,550	1,620	694	2,590	2,070	1,470
12	626	1,000	841	1,720	16,500	10,600	4,370	1,570	735	2,520	2,320	1,470
13	626	954	834	2,460	19,400	9,030	3,850	2,010	1,180	3,020	2,380	1,520
14	608	736	898	2,260	21,400	7,930	3,680	1,840	1,320	3,550	2,380	1,420
15	632	722	938	2,010	21,700	7,510	3,600	1,780	1,380	2,800	2,320	1,330
16	614	799	962	2,070	22,000	7,090	3,510	1,840	1,330	2,960	2,260	1,330
17	578	1,080	1,210	2,330	21,700	7,090	3,350	1,780	1,230	3,350	2,190	1,290
18	566	862	1,280	2,330	20,600	6,670	3,030	1,780	1,310	3,430	2,380	1,250
19	584	938	1,410	2,010	19,300	6,670	2,961	1,680	1,330	3,550	2,260	1,270
20	620	978	1,510	1,660	18,000	7,090	2,880	1,920	2,020	3,270	2,070	1,200
21	644	978	1,610	1,610	17,200	7,930	2,800	2,000	1,460	3,190	2,010	1,200
22	614	1,030	1,830	1,460	15,500	8,810	2,660	1,570	1,180	3,190	2,070	1,200
23	608	1,050	1,660	1,610	14,200	9,470	2,380	1,020	2,410	3,320	1,900	1,160
24	620	1,000	1,950	1,890	13,700	10,400	2,320	950	1,190	2,590	1,840	1,130
25	644	1,030	2,200	1,780	14,000	11,100	2,320	868	926	2,800	1,780	974
26	650	994	2,140	2,010	14,000	10,600	1,900	798	868	3,030	1,730	840
27	620	922	2,010	2,460	15,000	10,400	1,840	721	882	2,800	1,730	1,090
28	596	834	2,010	2,960	16,000	10,600	1,680	658	974	2,960	1,420	990
29	608	.....	2,140	3,280	16,700	10,400	1,520	634	1,700	3,940	1,520	926
30	602	.....	2,200	3,200	16,000	9,470	1,380	676	1,780	3,110	1,570	1,080
31	590	.....	2,010	.....	15,000	.....	1,220	1,050	.....	3,680	.....	1,080

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	18,547	680	505	598	36,790
February	26,110	1,460	518	932	51,790
March	41,982	2,200	827	1,354	83,270
April	64,930	3,280	1,460	2,164	128,800
May	452,150	22,000	3,860	14,590	896,800
June	307,160	14,000	6,670	10,240	609,200
July	121,190	9,030	1,220	3,909	240.400
August	44,725	2,010	634	1,443	88,710
September	35,279	2,410	694	1,176	69,970
October	83,250	3,940	1,080	2,685	165,100
November	72,620	3,940	1,420	2,421	144,000
December	39,260	1,520	840	1,266	77,870
Year	1,307,203	22,000	505	3,581	2,593,000

RIO GRANDE AT SAN ACACIA, N. MEX.

LOCATION — Water-stage recorders at right and left banks, lat. 34 degrees 15 min., long. 106 degrees 53 min., in NE¼ sec. 1, T. 1 S., R. 1 W., 0.2 mile downstream from San Acacia diversion dam, half a mile east of San Acacia, and 2 miles downstream from Rio Salado. Datum of right bank gage is 4,662.56, left bank gage 4,660.16 (revised) feet above mean sea level (datum of 1929).

DRAINAGE AREA — 26,770 square miles (includes 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.)

RECORDS AVAILABLE — April 1936 to December 1941 in reports of Geological Survey. February to December 1925, January to September 1927 (gage height and discharge measurements only) in reports of State Engineer. January 1941 to December 1941 in report of Rio Grande Compact Commission.

EXTREMES — Maximum discharge during year, 25,400 second-feet May 18; maximum gage height 7.00 feet Sept. 24; minimum daily discharge, 82 second-feet Nov. 17.
1936-41: Maximum discharge, 27,400 second-feet Aug. 5, 1936 (gage height, 8.35 feet), from rating curve extended above 18,000 second-feet by logarithmic plotting; minimum daily discharge, 1 second-foot June 23, 1939.

REMARKS — Records good. Socorro main canal north diverts 0.2 mile above gage. Diversions for irrigation above station.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	820	1,060	990	2,490	4,720	16,200	8,500	592	2,110	2,960	3,840	1,550
2	854	905	939	2,060	6,480	15,400	7,910	507	973	1,960	5,200	1,690
3	990	820	854	2,060	8,160	13,600	6,810	411	990	1,880	4,230	1,780
4	905	657	922	2,040	9,980	12,400	6,550	411	579	3,970	4,420	1,760
5	905	1,390	973	1,730	13,500	12,800	5,700	382	485	4,910	3,880	1,690
6	790	1,690	922	1,930	11,700	12,000	6,130	335	402	2,640	3,620	1,950
7	685	1,290	1,040	2,440	11,300	12,800	4,930	485	312	2,040	3,730	2,010
8	670	1,170	1,230	1,730	12,000	11,600	4,350	485	305	1,830	3,020	1,570
9	760	1,270	1,190	1,440	14,700	12,800	3,840	1,450	402	1,830	3,370	1,570
10	670	1,250	1,250	1,440	15,700	13,200	4,030	1,850	312	1,730	2,700	1,450
11	605	1,010	1,010	1,760	15,700	12,000	4,230	3,560	175	2,490	2,290	1,960
12	775	1,190	905	2,120	16,200	12,000	4,440	1,440	122	2,890	2,340	1,930
13	905	1,100	990	2,150	17,200	9,650	5,510	2,000	130	2,610	2,230	1,910
14	922	973	1,080	2,340	17,800	9,130	4,340	2,840	175	2,090	2,200	1,880
15	956	1,100	1,080	2,310	20,400	7,350	2,990	1,990	160	3,240	2,120	2,060
16	760	1,040	1,170	1,960	22,000	6,940	3,620	1,860	328	4,150	2,350	1,590
17	618	1,100	1,210	1,640	23,200	6,420	2,490	1,330	474	2,930	2,550	1,550
18	644	1,390	1,690	1,960	23,700	6,050	2,230	1,800	592	2,960	2,200	1,780
19	618	1,370	1,270	2,370	23,200	5,460	2,260	1,460	888	3,730	2,290	1,690
20	618	1,310	1,440	2,400	21,000	5,350	2,470	1,030	1,070	3,370	2,470	1,390
21	579	1,310	1,520	2,340	21,500	5,930	3,380	854	1,770	2,960	2,550	1,410
22	592	1,390	1,990	1,710	22,000	7,220	2,140	1,370	3,190	3,090	2,340	1,410
23	805	1,590	2,230	1,760	19,900	7,910	2,330	1,590	4,970	3,230	2,040	1,390
24	700	1,550	2,060	1,780	19,900	7,910	1,940	1,860	8,630	3,550	2,230	1,410
25	730	1,480	2,170	1,410	17,200	8,810	1,860	939	2,340	5,570	1,880	1,270
26	715	1,350	2,700	2,090	16,200	10,200	1,710	760	1,230	9,970	1,940	1,370
27	700	1,330	3,060	2,990	14,200	9,130	2,010	411	888	4,150	1,660	1,370
28	805	1,250	2,520	3,400	15,200	9,800	2,730	305	991	3,470	1,690	1,290
29	820	.....	1,710	3,650	16,700	10,200	1,440	1,170	5,680	3,650	1,830	1,190
30	905	.....	2,120	4,190	17,800	10,200	805	1,160	4,750	5,000	1,830	1,230
31	888	.....	2,150	.....	18,300	.....	670	939	.....	4,110	.....	1,370

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	23,709	990	579	765	47,030
February	34,335	1,690	657	1,226	68,100
March	46,385	3,060	854	1,496	92,000
April	65,690	4,190	1,410	2,190	130,300
May	507,540	23,700	4,720	16,370	1,007,000
June	300,460	16,200	5,350	10,020	596,000
July	114,345	8,500	670	3,689	226,800
August	37,576	3,560	305	1,212	74,530
September	45,423	8,630	122	1,514	90,100
October	104,960	9,970	1,730	3,386	208,200
November	81,040	5,200	1,660	2,701	160,700
December	49,470	2,060	1,190	1,596	98,120
Year	1,410,933	23,700	122	3,866	2,799,000

RIO GRANDE AT SAN MARCIAL, N. MEX.

LOCATION — Two water-stage recorders, lat. 33 degrees 41 min., long. 106 degrees 58 min., at Atchison, Topeka and Santa Fe Railway bridge in Pedro Armendaris grant 34, 1.1 miles downstream from San Marcial, Socorro County. One recorder on downstream end of south abutment of bridge, zero of gage 4,459.08 feet above mean sea level; the other recorder on upstream end of first bridge pier from south abutment of bridge, zero of gage 4,455.38 feet above mean sea level.

DRAINAGE AREA — 27,700 square miles (including 2,940 square miles in closed basin in northern part of San Luis Valley, Colo.)

RECORDS AVAILABLE — January 1895 to December 1941 in reports of Geological Survey. January 1895 to December 1931 in reports of State Engineer. January 1931 to December 1941 in reports of International Boundary Commission. January 1941 to December 1941 in report of Rio Grande Compact Commission. Records prior to January 1922 at site 0.3 mile upstream; those for January 1922 to February 1932 at site at highway bridge half a mile northeast of San Marcial and 1.8 miles upstream from present site.

EXTREMES — Maximum discharge during year, 24,600 second-feet May 17 (gage height, 9.73 feet); minimum daily discharge, 154 second-feet Sept. 16.
1895-1941: Maximum discharge about 50,000 second-feet Oct. 11, 1904; no flow at times.

REMARKS: Records good. Recorder moved from site at upstream end of first bridge pier from south abutment to site at downstream end of south abutment on May 17; returned to former site on June 19. Diversions for irrigation above station.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	793	877	1,330	2,150	4,200	18,100	9,630	868	1,240	5,280	4,430	1,600
2	823	979	1,130	2,250	5,020	16,900	8,510	727	1,870	3,280	4,250	1,670
3	856	842	987	2,160	6,260	15,200	7,540	623	1,110	2,370	4,420	1,560
4	890	831	974	2,300	7,910	13,500	6,790	593	977	3,320	4,310	1,640
5	939	762	971	2,200	9,630	13,500	6,030	523	698	6,110	4,070	1,640
6	852	881	1,040	1,950	12,800	13,200	5,510	461	566	4,260	4,030	1,740
7	818	1,650	1,110	2,040	13,300	12,400	5,550	396	587	2,520	4,000	2,000
8	749	1,520	1,080	2,530	11,700	12,500	4,870	416	489	1,850	3,700	1,780
9	598	1,320	1,170	2,280	12,300	12,300	4,570	554	325	1,900	3,440	1,680
10	652	1,210	1,280	1,620	14,300	12,400	4,360	1,320	321	1,940	3,200	1,560
11	707	1,160	1,280	1,520	15,300	13,000	4,360	2,110	346	2,360	2,600	1,630
12	766	1,060	1,220	1,600	16,300	12,000	4,210	3,190	244	2,590	2,370	1,870
13	803	1,080	923	1,990	17,500	11,200	4,180	1,990	200	2,600	2,220	1,820
14	747	1,110	898	2,170	17,500	9,800	4,830	2,250	178	2,710	2,390	1,730
15	780	1,120	1,000	2,110	18,000	8,730	3,650	2,540	159	2,640	2,420	1,770
16	851	1,120	1,080	2,250	21,300	7,630	3,290	1,920	154	3,640	2,500	1,750
17	777	1,070	1,260	2,150	23,900	7,050	3,470	1,820	324	3,630	2,560	1,720
18	781	953	1,100	1,850	23,200	6,490	2,900	1,380	496	3,130	2,580	1,600
19	795	1,110	1,300	1,980	22,300	6,010	2,820	1,600	570	3,350	2,550	1,590
20	729	1,180	1,410	2,360	21,300	5,500	2,760	1,420	853	3,490	2,680	1,540
21	681	1,380	1,490	2,430	23,400	5,560	3,450	1,170	1,230	3,390	2,700	1,520
22	646	1,530	1,690	2,340	23,000	5,630	3,450	963	2,070	3,200	2,540	1,460
23	646	1,530	1,930	1,930	21,600	6,350	2,600	1,310	3,360	3,510	2,420	1,410
24	644	1,560	1,700	1,780	20,100	7,300	2,530	1,440	4,940	3,910	2,420	1,410
25	701	1,480	2,280	1,940	20,100	8,020	2,190	1,540	4,680	3,950	2,340	1,450
26	697	1,620	2,350	1,970	17,500	8,750	1,940	951	1,550	7,120	2,180	1,250
27	752	1,500	2,450	2,290	16,500	9,810	1,880	756	1,080	6,010	1,920	1,200
28	795	1,320	2,850	2,640	13,100	9,680	1,850	472	1,320	4,020	1,580	1,150
29	939	.....	2,550	3,130	16,400	9,270	1,960	356	3,540	3,620	1,640	1,040
30	913	.....	2,310	3,240	17,000	9,170	1,470	1,570	6,760	3,850	1,680	1,090
31	841	.....	2,080	.....	18,200	.....	990	1,470	.....	5,670	.....	1,200

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	23,961	939	598	773	47,500
February	33,755	1,650	762	1,210	67,000
March	46,223	2,850	898	1,490	91,700
April	65,150	3,240	1,520	2,170	129,000
May	500,920	23,900	4,200	16,200	994,000
June	306,950	18,100	5,500	10,200	609,000
July	124,140	9,630	990	4,000	246,000
August	38,699	3,190	356	1,250	76,800
September	42,237	6,760	154	1,410	83,800
October	111,220	7,120	1,850	3,590	221,000
November	86,140	4,430	1,580	2,870	171,000
December	48,070	2,000	1,040	1,550	95,300
Year	1,427,465	23,900	154	3,911	2,832,100

RIO GRANDE BELOW ELEPHANT BUTTE DAM, N. MEX.

LOCATION — Water-stage recorder, lat. 33 degrees 9 min., long. 107 degrees 11 min., in NE¼ sec. 25, T. 13 S., R. 4 W., (surveys by Bureau of Reclamation), 1,800 feet downstream from Elephant Butte Dam in Pedro Armendaris grant. Prior to January 1, 1941, water-stage recorder at site 128 feet downstream, prior to January 17, 1939 at site 400 feet upstream, both gages at different data. Zero of gage is 4,241.39 feet above mean sea level.

RECORDS AVAILABLE — October 1916 to December 1941.

EXTREMES — Maximum daily discharge during year, 3,410 second-feet November 19; minimum daily discharge, 467 second-feet April 10.
1916-41: Maximum daily discharge, 3,410 second-feet Nov. 19, 1941; no flow at times.

REMARKS — Records excellent. Considerable diversion upstream for irrigation. Flow regulated by storage in Elephant Butte Reservoir (capacity when constructed, 2,638,000 acre-feet).

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1	897	1,010	882	919	1,320	1,020	1,750	2,240	1,890	798	1,230	1,380
2	1,027	714	604	910	1,300	1,070	1,740	2,280	1,490	949	1,040	1,410
3	991	973	868	908	1,320	1,070	1,860	1,960	1,210	1,110	1,420	1,430
4	1,000	1,020	878	894	1,190	1,050	2,190	1,430	1,110	1,090	2,010	1,290
5	700	983	888	879	1,250	877	2,250	2,040	1,070	980	2,560	1,400
6	950	901	836	624	1,270	1,070	2,100	2,250	1,090	1,110	2,570	1,410
7	956	890	863	833	1,270	1,040	2,140	2,250	958	1,210	2,910	1,290
8	948	932	856	877	1,250	953	2,190	2,260	1,010	1,120	3,030	1,860
9	938	644	587	863	1,200	1,060	2,010	2,190	899	1,230	3,070	1,960
10	902	903	868	467	1,240	1,070	2,300	2,150	1,070	1,260	3,170	1,480
11	896	933	905	881	1,230	1,090	2,500	1,940	1,070	1,000	3,250	1,480
12	555	942	891	856	1,250	1,120	2,530	1,760	1,070	1,160	3,220	1,460
13	880	916	896	613	1,230	1,050	2,210	1,030	1,090	1,250	3,300	1,440
14	948	949	886	876	1,210	1,200	1,850	1,000	836	1,260	3,340	1,360
15	931	919	851	898	1,240	1,010	1,490	1,030	1,240	1,240	3,340	1,420
16	921	634	604	909	1,230	1,110	1,780	1,010	1,190	1,320	3,190	1,430
17	940	840	868	892	1,210	1,130	2,090	948	1,100	1,300	3,250	1,420
18	904	893	905	931	1,140	1,130	2,810	1,050	1,080	1,250	3,380	1,420
19	556	881	903	985	1,170	1,130	2,300	1,070	1,080	1,140	3,410	1,420
20	914	873	890	921	1,180	1,050	2,190	1,080	1,010	1,220	3,330	1,420
21	934	880	901	1,135	1,170	2,260	2,160	1,370	851	1,120	3,210	1,330
22	938	858	889	1,210	1,160	2,300	2,080	1,800	705	1,210	3,350	1,380
23	895	573	794	1,260	865	2,310	1,470	1,550	1,070	1,190	3,220	1,430
24	912	873	887	1,240	1,120	2,130	1,880	1,280	1,090	1,300	3,080	1,300
25	900	903	817	1,150	944	2,080	2,010	1,720	809	1,270	2,360	1,260
26	598	888	869	1,180	1,120	2,120	2,020	1,850	1,080	1,080	2,200	1,330
27	848	895	870	895	1,210	1,980	2,190	1,690	736	1,230	2,190	1,360
28	958	893	877	1,170	1,150	1,450	1,780	1,670	998	1,250	1,620	1,300
29	952	.....	863	1,260	1,150	1,690	1,530	1,510	909	1,220	1,380	1,370
30	950	.....	609	1,380	1,140	1,740	1,800	1,190	606	1,230	1,230	1,390
31	960	.....	850	.....	1,140	.....	1,920	1,400	.....	1,230	.....	1,400

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	27,599	1,027	555	890	54,740
February	24,513	1,020	573	875	48,620
March	25,955	905	587	837	51,480
April	28,816	1,380	467	961	57,160
May	36,869	1,320	865	1,189	73,130
June	41,360	2,310	877	1,379	82,040
July	63,120	2,810	1,470	2,036	125,200
August	49,998	2,280	948	1,613	99,170
September	31,417	1,890	606	1,047	62,310
October	36,327	1,320	798	1,172	72,050
November	79,870	3,410	1,040	2,662	158,420
December	44,030	1,960	1,260	1,420	87,330
Year	489,874	2,810	467	1,342	971,650

RIO GRANDE BELOW CABALLO DAM, N. MEX.

LOCATION — Water-stage recorder, lat. 32 degrees 53 min., long. 107. degrees 18 min., in NE¼SW¼ sec. 30, T. 16 S., R. 4 W., Bureau of Reclamation surveys, 600 feet upstream from Bojorquez Bridge, 4,200 feet downstream from Cabello Dam, 1¼ miles downstream from Apache Canyon, 1⅓ miles upstream from Percha Diversion Dam, 3 miles northeast of Arrey, and 5 miles south of Caballo. Prior to Oct. 7, 1938, water-stage recorder at site 50 feet upstream, datum 2 feet higher; Oct. 7-13, 1938, at site 50 feet upstream, datum 1 foot higher; Oct. 13 to Nov. 9, 1938, at site 50 feet upstream present datum. Zero of gage is 4,145.9 feet above mean sea level

RECORDS AVAILABLE -- January 1938 to December 1941.

EXTREMES — Maximum daily discharge during the year, 2,360 second-feet July 10; minimum daily discharge, 1.4 second-feet January 1-6 and 16-22.

REMARKS — Records good. Considerable diversion above station for irrigation. Flow regulated by Caballo Reservoir (capacity when constructed, 345,900 acre-feet) and Elephant Butte Reservoir (capacity when constructed, 2,638,000 acre-feet). Total runoff in acre-feet includes runoff for Bonita ditch, which is not shown in daily discharge or total second-foot-days.

Discharge, in second-feet, 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1	1.4	2.2	361	1,850	1,380	1,670	2,000	1,980	1,880	5.8	4.0	8.8
2	1.4	2.1	193	1,960	1,310	1,660	1,740	2,080	1,770	5.8	4.2	9.2
3	1.4	2.0	4.2	1,960	1,260	1,770	1,840	2,070	1,590	4.9	4.3	10.7
4	1.4	2.0	3.9	1,990	1,250	1,810	1,840	2,070	1,550	4.5	4 3	11.1
5	1.4	2.0	3.9	2,110	1,250	1,810	2,000	2,070	1,590	4.0	4.4	259
6	1.4	2.0	3.9	2,180	1,270	1,810	2,170	2,070	1,700	3.7	4.4	835
7	1.5	2.1	3.9	2,210	1,530	1,810	2,110	1,980	1,680	3.1	4.4	738
8	1,5	2.1	3.9	2,120	1,540	1,810	2,100	1,900	1,680	3.1	4.5	678
9	1.5	2.2	3.9	2,050	1,690	1,810	2,180	2,250	1,660	104	220	678
10	1.5	2.2	3.9	1,940	1,770	1,810	2,360	2,130	1,530	330	770	673
11	1.5	2.3	512	1,930	1,730	1,790	2,290	2,120	1,480	330	647	558
12	1.5	2.3	842	2,150	1,730	1,770	2,290	2,180	1,400	330	618	19.9
13	1.5	2.3	971	2,150	1,660	1,750	2,280	1,530	1,290	330	4.8	19.9
14	1.5	2.3	1,090	2,160	1,880	1,640	2,150	1,150	1,270	296	8.1	21.2
15	1.5	2.3	1,080	2,140	1,850	2,030	2,110	1,170	1,270	203	7.1	25.1
16	1.4	2.2	1,030	2,110	1,770	2,030	2,170	1,510	1,210	124	5.6	26.4
17	1.4	2.2	790	2,110	1,690	2,120	2,180	1,610	1,080	3.3	5.8	29
18	1.4	2.2	546	2,110	1,650	2,300	2,190	1,560	1,040	3.3	5.8	32
19	1.4	2.2	715	2,090	1,690	2,340	2,270	1,500	1,030	3.3	5.1	35
20	1.4	2.2	871	1,990	1,630	2,280	2.260	1,560	1,170	3.3	5.3	38
21	1.4	27.3	947	1,990	1,640	2,310	2,180	1,570	871	3.3	5.5	42.5
22	1.4	631	1,110	1,990	1,630	2,350	2,100	1,700	12.2	3.0	5.8	45.7
23	1.5	631	1,210	2,050	1,430	2,270	2,010	1,780	6.4	3.1	5.8	50.8
24	1.6	557	1,310	1,780	1,100	2,190	2,110	1,690	171	3.3	6.0	55.9
25	1.6	379	1,420	1,740	1,200	2,060	2,070	1,650	233	3.4	6 0	57.6
26	1.6	470	1,510	1,500	1,120	2,020	2,080	1,670	312	3.2	6.5	55.9
27	1.6	470	1,490	1,400	1,210	2,020	2,050	1,770	529	3.3	6.8	59.3
28	1.8	453	1,520	1,400	1,370	2,020	1,940	1,770	424	3.7	6.8	57.6
29	2.5	.....	1,700	1,480	1,470	2,020	1,960	1,800	13.3	3.7	7.4	61
30	2.5	.....	1,750	1,440	1,510	2,020	1,960	1,900	6.4	3.7	8.4	62.7
31	2.5	.....	1,860	.....	1,650	.....	2,020	1,900	.....	3.8	.....	62.7

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	48.9	2.5	1.4	1.6	97
February	3,661.7	631	2	131	7,273
March	24,859.5	1,860	3.9	802	49,323
April	58,080	2,210	1,400	1,936	115,317
May	46,860	1,880	1,100	1,512	93,063
June	59,100	2,350	1,640	1,970	117,306
July	65,010	2,360	1,740	2,097	129,124
August	55,690	2,250	1,150	1,796	110,531
September	31,448.3	1,880	6.4	1,048	62 394
October	2,132.6	330	3	68.8	4,230
November	2,855.3	647	4	95.2	5.660
December	5,317	835	8.8	171	10,550
Year	355,063.3	2,360	1.4	973	704,795

CONEJOS RIVER NEAR MOGOTE, COLO.

LOCATION — Water-stage recorder, lat. 37 degrees 3 min., long. 106 degrees 11 min., in SE¼ sec. 34, T. 33N., R. 7 E., three-quarters of a mile downstream from Fox Creek and 5½ miles west of Mogote.

DRAINAGE AREA — 282 square miles.

RECORDS AVAILABLE — September 1899 to March 1900, April 1903 to September 1913, and October 1933 to December 1941 in reports of Geological Survey. September 1899 to March 1900 and April 1903 to December 1941 in reports of State engineer. January 1941 to December 1941 in report of Rio Grande Compact Commission.

EXTREMES — Maximum discharge during year, 3,740 second-feet May 14 (gage height, 5.08 feet); minimum daily discharge, 31 second-feet Dec. 29.
1899-1900, 1903-41: Maximum discharge, 6,000 second-feet (estimated) Oct. 5, 1911; minimum not determined.

REMARKS — Records excellent, except those during periods of ice effect, January 1 to March 3, and December 22 to 31, which were computed on basis of seven discharge measurements and weather records and are good. No diversions or regulation above the station.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	50	50	56	130	378	1,920	2,050	378	133	318	211	78
2	50	47	60	114	399	2,010	1,960	361	125	277	206	69
3	48	48	58	116	526	2,190	1,910	328	118	344	191	73
4	46	49	57	111	556	2,100	1,940	294	109	389	186	70
5	45	50	72	133	628	2,150	2,090	294	102	339	179	45
6	46	48	57	114	938	1,950	2,100	313	98	318	172	49
7	46	48	62	109	1,210	2,200	1,780	298	92	268	154	69
8	47	48	54	121	1,430	2,230	1,720	294	86	298	139	70
9	47	48	58	138	1,700	1,780	1,710	453	98	281	149	69
10	47	50	55	176	2,040	1,460	1,460	429	94	252	141	72
11	46	52	56	150	2,400	1,260	1,480	366	88	236	133	70
12	47	55	64	133	2,810	1,250	1,420	361	82	220	123	53
13	48	52	69	136	3,340	1,260	1,460	302	84	453	133	52
14	49	51	63	114	3,350	1,310	1,260	334	228	740	123	55
15	49	51	62	127	3,050	1,450	1,140	608	248	562	123	48
16	47	54	57	147	2,720	1,490	1,050	429	200	498	121	50
17	45	48	65	160	2,720	1,800	1,020	350	167	470	123	59
18	44	52	69	138	2,920	2,200	1,220	366	186	441	116	52
19	44	55	71	119	2,810	2,580	1,090	302	206	424	82	54
20	45	56	76	107	2,180	2,760	1,350	260	260	412	79	54
21	45	58	81	114	1,610	2,800	1,180	248	424	401	84	60
22	46	59	76	109	1,570	2,800	1,050	248	289	401	78	51
23	47	58	76	107	1,500	2,640	900	208	355	401	73	46
24	44	59	76	93	1,700	2,700	820	186	289	401	65	41
25	45	60	65	111	1,920	2,770	750	169	244	389	74	35
26	45	58	68	121	2,230	2,910	692	156	208	344	86	40
27	45	55	75	170	2,500	2,700	632	143	186	334	86	37
28	46	54	78	216	2,270	2,650	548	137	174	318	79	33
29	48	....	84	292	1,940	2,370	498	133	289	285	84	31
30	49	....	83	326	1,870	2,100	441	158	395	260	78	33
31	50	....	95	.....	1,800	.....	406	149	.....	236	....	35

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	1,446	50	44	46.6	2,870
February	1,473	60	47	52.6	2,920
March	2,098	95	54	67.7	4,160
April	4,252	326	93	142	8,430
May	59,015	3,350	378	1,904	117,100
June	63,790	2,910	1,250	2,126	126,500
July	39,127	2,100	406	1,262	77,610
August	9,055	608	133	292	17,960
September	5,657	424	82	189	11,220
October	11,310	740	220	365	22,430
November	3,671	211	65	122	7,280
December	1,653	78	31	53.3	3,280
Year	202,547	3,350	31	554.9	401,760

000999

CONEJOS RIVER NEAR LA SAUSES, COLO.

LOCATION — Two water-stage recorders, lat. 37 degrees 23 min., long. 105 degrees 45 min, in sec. 2, T. 35 N., R. 11 E., half a mile upstream from mouth and 2 miles north of La Sauses.

DRAINAGE AREA — 887 square miles.

RECORDS AVAILABLE — October 1933 to December 1941 in reports of Geological Survey. March 1921 to December 1941 in reports of State Engineer. January 1941 to December 1941 in report of Rio Grande Compact Commission.

EXTREMES — Maximum discharge during year, 3,890 second-feet May 15; minimum daily discharge, 10 second-feet Aug. 10.
1921-41: Maximum discharge, 3,890 second-feet May 15, 1941; no flow July 21 to Sept. 8, 1934.

REMARKS — Records excellent except those for periods of ice effect, Jan. 2 to 22, Feb. 5 and 6, and Dec. 5-14, all of which are good. Diversions above station for irrigation.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	73	73	103	169	280	1,920	1,280	43	21	207	302	86
2	72	70	113	161	457	1,920	1,160	29	20	192	285	83
3	66	69	122	142	602	1,900	1,010	16	20	194	277	83
4	66	72	131	130	820	2,010	957	13	18	253	261	86
5	66	75	152	121	878	1,890	1,040	10	18	253	256	67
6	60	78	136	120	1,050	1,820	1,300	11	18	230	246	71
7	64	71	135	101	1,540	1,680	1,370	12	17	224	236	79
8	64	69	122	89	1,980	1,970	1,230	12	16	207	226	84
9	67	72	115	90	2,340	2,310	1,200	21	17	210	215	82
10	67	72	104	103	2,680	1,880	1,080	25	18	204	198	83
11	62	74	108	117	2,990	1,510	977	31	17	191	195	79
12	69	77	107	104	3,170	1,280	993	30	16	189	190	77
13	72	81	106	104	3,430	1,130	1,030	25	17	183	170	74
14	71	84	110	108	3,720	996	984	24	24	374	159	75
15	71	84	128	83	3,820	946	900	24	25	514	151	69
16	72	86	150	81	3,760	944	818	32	26	451	144	69
17	69	88	167	70	3,510	952	730	46	30	413	136	73
18	65	93	194	65	3,310	1,090	651	44	30	391	134	71
19	65	93	237	73	3,350	1,320	630	40	29	370	123	64
20	68	93	264	67	3,370	1,570	628	40	24	362	95	65
21	67	95	289	53	2,680	1,760	724	38	22	358	91	72
22	66	93	286	52	2,180	1,780	613	39	47	362	84	82
23	66	98	271	54	2,120	1,820	547	41	52	357	75	78
24	65	99	276	53	1,950	1,740	474	37	69	370	72	85
25	68	107	273	49	2,100	1,810	409	32	69	351	72	64
26	69	114	297	52	2,330	1,880	344	29	71	368	74	71
27	68	110	283	57	2,540	1,920	276	28	64	357	79	69
28	69	103	253	83	2,770	1,820	230	27	59	353	83	62
29	70	.....	217	139	2,760	1,730	188	23	77	360	88	54
30	72	.....	194	209	2,420	1,520	132	23	129	338	88	59
31	71	.....	180	.....	2,100	.....	85	22	.....	321	....	62

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	2,100	73	60	67.1	4,170
February	2,393	114	69	85.5	4,750
March	5,623	297	103	181	11,150
April	2,899	209	49	96.6	5,750
May	73,007	3,820	280	2,355	144,800
June	48,818	2,310	944	1,627	96,830
July	23,990	1,370	85	774	47,580
August	867	46	10	28.0	1,720
September	1,080	129	16	36.0	2,140
October	9,507	514	183	307	18,860
November	4,805	302	72	160	9,530
December	2,278	86	54	73.5	4,520
Year	177,367	3,820	10	485.9	351,800

SAN ANTONIO RIVER AT ORTIZ, COLO.

LOCATION — Water-stage recorder, lat. 37 degrees 00 min., long. 106 degrees 2 min., in New Mexico, in sec. 19, T. 32 N., R. 9 E., a quarter of a mile south of Colorado-New Mexico State line, half a mile south of Ortiz, and half a mile upstream from Los Pinos Creek.

DRAINAGE AREA — 110 square miles.

RECORDS AVAILABLE — October 1933 to October 1941 (except winters) in reports of Geological Survey. January to October 1915, May 1919 to October 1920, and October 1924 to October 1941 (except winters) in reports of State Engineer. April 1941 to October 1941 (Compact months only) in reports of Rio Grande Compact Commission.

EXTREMES — Maximum discharge during year, 1,380 second-feet May 13 (gage height, 4.75 feet); no flow Sept. 1-14.
1915, 1919-20, 1924-41: Maximum discharge, 1,750 second-feet April 15, 1937 (gage height 5.38 feet), from rating curve extended above 1,100 second-feet; no flow for periods in nearly every year.

REMARKS — Records good except those for periods of ice effect, April 1-5 (computed on basis of one discharge measurement and weather records), which are fair. Diversions above station for irrigation.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1	.....	.....	.....	8.0	320	117	7.4	3.0	0	8.0	.....	.....
2	.....	.....	.....	19	367	105	6.9	1.4	0	5.1	.....	.....
3	.....	.....	.....	18	461	93	5.9	1.1	0	4.7	.....	.....
4	.....	.....	.....	23	424	88	3.8	0.9	0	5.9	.....	.....
5	.....	.....	.....	41	458	70	2.6	0.9	0	6.3	.....	.....
6	.....	.....	.....	39	589	59	5.1	3.4	0	5.1	.....	.....
7	.....	.....	.....	34	640	58	4.7	2.2	0	3.8	.....	.....
8	.....	.....	.....	34	677	83	3.4	1.7	0	3.4	.....	.....
9	.....	.....	.....	49	751	113	3.4	3.4	0	3.4	.....	.....
10	.....	.....	.....	69	778	95	2.6	4.7	0	2.2	.....	.....
11	.....	.....	.....	55	823	88	3.0	4.7	0	2.0	.....	.....
12	.....	.....	.....	69	972	80	3.0	3.0	0	1.9	.....	.....
13	.....	.....	.....	58	1,050	70	4.2	10	0	1.9	.....	.....
14	.....	.....	.....	38	970	61	9.2	8.6	0	9.7	.....	.....
15	.....	.....	.....	47	810	54	4.7	2.6	0.1	14.0	.....	.....
16	.....	.....	.....	58	652	58	6.9	1.7	1.2	7.4	.....	.....
17	.....	.....	.....	77	585	47	6.9	13	0.8	5.1	.....	.....
18	.....	.....	.....	59	578	40	7.4	10	0.6	3.8	.....	.....
19	.....	.....	.....	47	492	30	5.5	3.8	0.5	3.0	.....	.....
20	.....	.....	.....	38	314	24	13	2.2	0.6	3.0	.....	.....
21	.....	.....	.....	40	281	22	11	1.9	1.6	3.4	.....	.....
22	.....	.....	.....	39	342	21	16	3.8	3.4	6.9	.....	.....
23	.....	.....	.....	39	308	20	9.2	2.6	26	8.0	.....	.....
24	.....	.....	.....	36	327	21	3.8	1.9	12	9.2	.....	.....
25	.....	.....	.....	50	370	24	4.2	1.2	5.5	8.6	.....	.....
26	.....	.....	.....	77	324	21	2.0	0.8	3.0	11.0	.....	.....
27	.....	.....	.....	120	284	17	3.4	0.5	1.9	10	.....	.....
28	.....	.....	.....	181	284	14	3.0	0.3	1.6	11	.....	.....
29	.....	.....	.....	215	230	10	1.7	0.2	4.2	12	.....	.....
30	.....	.....	.....	248	183	8.0	1.6	0.1	16	14	.....	.....
31	.....	.....	.....	.....	143	.....	1.4	0.1	.....	13	.....	.....

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....
April	1,925	248	8.0	64.2	3 820
May	15,737	1,050	143	508	31 210
June	1,611	117	8.0	53.7	3,200
July	166.9	16	1.4	5.38	331
August	95.7	13	0.1	3.09	19)
September	79.0	26	0	2.63	157
October	206.8	14	1.9	6.7	4 0
November	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....
Year	19,821.4	1,050	0	92.6	39,318

LOS PINOS RIVER NEAR ORTIZ, COLO.

LOCATION — Water-stage recorder, lat. 36 degrees 58 min., long. 106 degrees 3 min., in New Mexico, in N½ sec. 34, T. 32 N., R. 8 E., 1 mile south of Colorado-New Mexico State line, 2 miles southwest of Ortiz, and 2½ miles upstream from mouth.

DRAINAGE AREA — 167 square miles.

RECORDS AVAILABLE — October 1933 to October 1941 (except winters) in reports of Geological Survey. January 1914 to November 1920 and October 1924 to October 1941 (except winters) in reports of State Engineer. April 1941 to October 1941 (Compact months only) in report of Rio Grande Compact Commission.

EXTREMES -- Maximum discharge during year, 3,160 second-feet May 12 (gage height 5.77 feet); minimum daily discharge recorded, 17 second-feet September 12, but may have been less during periods of January to March and November and December. 1914-20, 1924-41: Maximum discharge, 3,160 second-feet May 12, 1941; minimum daily discharge, 5 second-feet August 11, Sept. 19, 1934.

REMARKS — Records good. During periods of missing gage heights June 22 to 28, July 20 to 23, discharge computed on basis of two discharge measurements and comparison with a related station. Diversions above station for irrigation.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	52	303	893	389	42	24	60	.....	.....
2	.....	.....	.....	45	370	845	366	38	24	46	.....	.....
3	.....	.....	.....	46	503	857	334	36	22	45	.....	.....
4	.....	.....	.....	45	558	800	317	34	20	52	.....	.....
5	.....	.....	.....	50	652	724	320	34	20	52	.....	.....
6	.....	.....	.....	50	875	682	303	36	18	58	.....	.....
7	.....	.....	.....	48	1,080	806	276	60	18	45	.....	.....
8	.....	.....	.....	55	1,290	875	247	38	18	55	.....	.....
9	.....	.....	.....	68	1,360	703	234	77	21	50	.....	.....
10	.....	.....	.....	79	1,430	632	210	77	20	43	.....	.....
11	.....	.....	.....	70	1,590	604	196	53	19	42	.....	.....
12	.....	.....	.....	68	2,040	554	190	46	17	38	.....	.....
13	.....	.....	.....	70	2,410	541	182	46	18	57	.....	.....
14	.....	.....	.....	60	2,270	536	176	48	52	166	.....	.....
15	.....	.....	.....	66	1,830	536	173	60	42	112	.....	.....
16	.....	.....	.....	70	1,580	545	163	53	30	105	.....	.....
17	.....	.....	.....	77	1,620	572	173	52	27	96	.....	.....
18	.....	.....	.....	68	1,780	637	158	53	26	87	.....	.....
19	.....	.....	.....	60	1,540	682	132	42	24	87	.....	.....
20	.....	.....	.....	57	1,160	703	150	37	42	102	.....	.....
21	.....	.....	.....	58	1,010	682	120	36	79	100	.....	.....
22	.....	.....	.....	57	1,140	650	160	48	42	100	.....	.....
23	.....	.....	.....	57	1,150	640	137	36	70	100	.....	.....
24	.....	.....	.....	55	1,260	650	85	31	55	114	.....	.....
25	.....	.....	.....	68	1,360	680	83	27	37	117	.....	.....
26	.....	.....	.....	75	1,440	620	77	26	30	117	.....	.....
27	.....	.....	.....	100	1,460	560	71	24	27	110	.....	.....
28	.....	.....	.....	140	1,320	500	64	22	26	107	.....	.....
29	.....	.....	.....	173	1,150	477	57	22	81	98	.....	.....
30	.....	.....	.....	237	1,040	416	50	27	100	92	.....	.....
31	.....	.....	.....	.....	968	.....	45	25	.....	92	.....	.....

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....
April	2,224	237	45	74.1	4,410
May	39,539	2,410	303	1,275	78,420
June	19,602	893	416	653	38,880
July	5,638	389	45	182	11,180
August	1,286	77	22	41.5	2,550
September	1,049	100	17	35.0	2,080
October	2,545	166	38	82	5,050
November	.....	.....	.....	.....	.....
December	.....	.....	.....	.....	.....
Year	71,883	2,410	17	335.9	142,570

RIO CHAMA NEAR TIERRA AMARILLA, N. MEX.

LOCATION — Water-stage recorder, lat. 36 deg. 34 min., long. 106 deg. 43 min., in NW¼ sec 15, T. 27 N., R. 2 E. (projected survey), 1.5 miles downstream from El Vado Dam, 2.7 miles upstream from Rio Nutrias, and 13 miles southwest of Tierra Amaralla.

RECORDS AVAILABLE — October 1935 to December 1941; October 1913 to November 1916, unregulated records at site 1.5 miles upstream and to independent datum, published as Rio Chama near El Vado and near Tierra Amarilla, all in reports of Geological Survey. October 1913 to September 1916, February 1920 to December 1924 in reports of State Engineer. January 1941 to December 1941 in report of Rio Grande Compact Commission.

EXTREMES — Maximum discharge during year, 6,010 second-feet May 17 (gage height 6.89 feet); minimum daily, 1.3 second-feet Nov. 26.
1934-41 (regulated): Maximum discharge, that of May 17, 1941; maximum gage height, 9.63 feet May 30, 1937, former site and datum; minimum daily discharge, 1.2 second-feet Dec. 3, 1939. During period of unregulated records, there was a peak of 4,860 second-feet May 10, 1916, former site and datum.

REMARKS — Records good except those for periods of ice effect, which are fair. Flow regulated by storage in El Vado Reservoir (capacity, 200,342 acre-feet at gage height of 6,902.0 feet, which is top of spillway gate). Diversions for irrigation above station.

Discharge, in second-feet, calendar year 1941

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.8	512	8.2	18	20	3,280	887	430	698	128	1,270	92
2	3.8	980	8.7	340	24	3,280	601	681	686	128	1,270	92
3	3.8	631	8.7	837	176	3,280	500	958	656	134	1,270	92
4	3.8	425	9.2	1,030	724	3,280	974	1,130	674	131	1,270	92
5	3.6	420	11	676	1,850	3,280	966	1,450	680	128	1,270	95
6	3.8	420	9.8	328	2,330	3,700	958	1,390	585	131	975	95
7	3.8	415	9.2	328	2,820	4,400	852	1,450	405	539	248	92
8	3.6	410	8.7	332	3,200	4,310	782	1,220	395	998	248	92
9	3.8	410	8.7	139	3,520	4,310	782	1,070	415	990	248	95
10	3.8	405	8.2	16	3,690	4,220	602	1,070	395	990	337	95
11	3.8	400	8.2	16	3,950	3,180	516	1,030	547	990	532	95
12	3.8	174	8.7	16	4,220	2,260	516	1,030	817	990	527	95
13	3.8	8.2	8.7	17	4,500	1,800	516	1,070	817	1,010	527	95
14	3.6	8.2	9.2	17	5,080	1,590	516	1,070	817	998	527	95
15	3.6	8.7	11	17	5,800	1,590	516	1,070	817	990	527	92
16	3.8	8.7	11	17	6,010	1,440	510	1,070	810	990	527	92
17	3.8	8.2	11	17	6,010	1,070	516	1,070	810	990	527	92
18	4.7	8.7	11	19	5,800	777	456	1,070	810	990	527	92
19	4.7	8.7	11	19	5,800	729	420	1,030	810	990	532	92
20	4.7	9.8	11	19	5,590	953	420	1,070	518	990	532	92
21	4.7	11	14	19	4,680	1,230	420	852	305	982	527	92
22	4.7	9.8	11	20	3,860	1,230	425	310	305	672	532	95
23	4.7	11	12	23	3,860	1,150	425	310	243	138	532	92
24	4.7	11	12	18	3,950	982	425	300	128	138	538	92
25	4.7	11	227	19	4,040	1,280	425	296	128	134	538	92
26	4.7	8.7	375	19	4,680	1,450	430	292	128	134	275	92
27	4.7	8.7	380	25	5,590	1,500	425	292	128	134	84	92
28	4.7	8.7	430	22	5,800	1,190	425	282	128	138	90	90
29	4.7	.....	246	20	5,180	887	425	392	138	134	90	90
30	4.7	.....	19	20	4,590	887	425	716	128	822	90	90
31	35	.....	18	.....	4,040	.....	430	692	.....	1,270	.....	90

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
January	159.9	35	3.6	5.16	317
February	5,751.1	980	8.2	205	11,410
March	1,935.2	430	8.2	62.4	3,840
April	4,423	1,030	16	147	8,770
May	121,384	6,010	20	3,916	240,800
June	64,515	4,400	729	2,150	128,000
July	17,486	974	420	564	34,680
August	26,163	1,450	282	844	51,890
September	14,921	817	128	497	29,600
October	18,921	1,270	128	610	37,530
November	16,987	1,270	84	566	33,690
December	2,871	95	90	92.6	5,690
Year	295,517.2	6,010	3.6	810	586,200

RESERVOIRS IN RIO GRANDE BASIN, COLORADO AND NEW MEXICO

COLORADO

Troutvale No. 2 Reservoir—In Sec. 10, T. 41 N., R. 3 W., on South Clear Creek. Total capacity of reservoir, 251 acre-feet. Water is used for fish culture and irrigation.

Squaw Lake Reservoir—About in Sec. 12, T. 39 N., R. 4 W., on Squaw Lake. Total capacity of reservoir, 158 acre-feet. Water used for irrigation of lands below Del Norte gaging station.

Fuchs Reservoir—About in Sec. 25, T. 38 N., R. 4 E., on Pinos Creek. Total capacity of reservoir, 211 acre-feet. Water used for irrigation of lands above Del Norte gaging station.

NEW MEXICO

Carson Reservoir—In S½ NW¼ sec. 12, T. 25 N., R. 10 E., an Aqueja de la Petaca. Total capacity of the reservoir, 5,684 acre-feet. Water is used for irrigation of lands in the Carson Reclamation District.

El Vado Reservoir—In SW¼ sec. 4, T. 27 N., R. 2 E., on the Rio Chama. Total capacity of reservoir, 200,340 acre-feet. Water is used for irrigation of lands in the Middle Rio Grande Conservancy District.

San Mateo Reservoir—In SE¼ sec. 25, T. 13 N., R. 8 W., on Rio San Mateo. Total capacity of reservoir, 57.3 acre-feet. Water used for the irrigation of Indian lands in the vicinity of San Mateo, New Mexico.

Acomita Reservoir—In SE¼ sec. 29, T. 10 N., R. 7 W., filled from Rio San Jose. Total capacity of reservoir, 850 acre-feet. Water used for the irrigation of Indian lands on the Acoma and Laguna reservations.

Paguate Reservoir—In NE¼ sec. 26, T. 10 N., R. 5 W., on Paguate creek. Total capacity of reservoir, 976 acre-feet. Water used for the irrigation of Indian lands.

Elephant Butte Reservoir—In NW¼ sec. 30, T. 13 S., R. 3 W., on Rio Grande. Total capacity of reservoir, 2,219,000 acre-feet by partial survey and estimate of 1940. Water is used for irrigation and power in New Mexico and Texas.

Caballo Reservoir—In SE¼ SW¼ sec. 19, T. 16 S., R. 4 W., on Rio Grande. Total capacity of reservoir, 345,872 acre-feet including 100,000 acre-feet of flood control storage. Water used for irrigation of lands in New Mexico and Texas.

Project Storage—The combined storage in Elephant Butte and Caballo Reservoirs. Total project storage capacity, 2,564,872 acre-feet, of which 100,000 acre-feet in Caballo reservoir is for flood control.

Gage height, and contents, calendar year 1941

COLORADO

Colorado — Date	Troutvale No. 2			Squaw Lake			Fuchs					
	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Jan. 30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Feb. 28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mar. 31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April 30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
May 31	5.5	138	.....	9.0	158	.....	16.0	211	.....	.....	.....	.....
June 30	5.5	138	0	9.0	158	0	16.0	211	0	.....	.....	.....
July 31	6.1	168	+ 30	9.0	158	0	16.0	211	0	.....	.....	.....
Aug. 31	7.5	251	+ 83	0	0	−158	14.7	182	− 29	.....	.....	.....
Sep. 30	7.5	251	0	0	0	0	11.3	116	− 66	.....	.....	.....
Oct. 31	7.5	251	0	0	0	0	11.5	119	+ 3	.....	.....	.....
Nov. 30	7.5	251	0	0	0	0	12.5	138	+ 19	.....	.....	.....
Dec. 31	7.5	251	0	0	0	0	16.0	211	+ 73	.....	.....	.....
Cal. yr.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

RESERVOIRS IN RIO GRANDE BASIN, COLORADO AND NEW MEXICO
(Continued)

Gage height and contents, calendar year 1941, New Mexico

New Mexico — Date	Carson			El Vado			San Mateo			Acomita		
	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Jan. 31	....	0	0	6811.0	26,410	+ 4,560	35.2	60	+ 3	.....	670	+254
Feb. 28	....	0	0	6798.6	16,540	− 9,870	31.3	42	−18	.....	815	+145
Mar. 31	....	106	+ 106	6829.1	45,420	+28,880	32.1	45	+ 3	.....	810	− 5
April 30	....	2025	+1919	75.4	124,500	+79,080	33.2	50	+ 5	.....	830	+ 20
May 31	24.3	1090	− 935	96.4	182,300	+57,800	34.3	56	+ 6	.....	850	+ 20
June 30	8.2	2	−1088	6900.4	195,100	+12,800	35.6	62	+ 6	.....	822	− 28
July 31	....	0	− 2	00.5	195,400	+ 300	31.3	42	−20	.....	473	−349
Aug. 31	....	0	0	6886.3	152,400	−43,000	24.3	17	−25	.....	203	−270
Sept. 30	....	0	0	79.1	133,500	−18,900	22.4	12	− 5	.....	45	−158
Oct. 31	....	0	0	76.6	127,400	− 6,100	26.1	22	+10	118.3	131	+ 86
Nov. 30	....	0	0	68.1	108,300	−19,100	28.1	29	+ 7	.....	340	+209
Dec. 31	....	0	0	69.6	111,500	+ 3,200	28.9	32	+ 3	.....	765	+425
Cal. yr.	....	.....	0	.....	.....	+89,650	.....	....	−25	.....	.....	+349

RESERVOIRS IN RIO GRANDE BASIN, COLORADO AND NEW MEXICO, (Continued)

Gage height and contents, calendar year 1941, New Mexico

New Mexico — Date	Paguate			Elephant Butte			Caballo			Project Storage		
	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Jan. 31		406	+ 33	4,328.8	485,500	— 3,100	4,150.5	88,210	+ 46,110		573,710	+ 43,010
Feb. 28		493	+ 87	30.1	501,600	+ 16,100	56.8	124,060	+ 35,850		625,660	+ 51,950
March 31		780	+287	32.7	534,000	+ 32,400	56.9	124,620	+ 560		658,620	+ 32,960
April 30		976	+196	37.4	595,700	+ 61,700	46.0	67,700	— 56,920		663,400	+ 4,780
May 31		976	0	80.7	1,390,600	+ 794,900	41.7	51,880	— 15,820		1,442,480	+ 779,080
June 30		852	—124	96.6	1,850,200	+ 459,600	29.0	18,160	— 33,720		1,868,360	+ 425,880
July 31		716	—136	98.8	1,924,000	+ 73,800	29.2	18,530	+ 370		1,942,530	+ 74,170
Aug. 31		597	—119	97.0	1,863,800	— 60,200	27.5	15,130	— 3,400		1,878,930	— 63,600
Sept. 30		976	+379	96.7	1,855,100	— 8,700	33.1	27,260	+ 12,130		1,882,360	+ 3,430
Oct. 31		976	0	4,400.1	1,968,600	+ 113,500	50.0	85,320	+ 58,060		2,053,920	+ 171,560
Nov. 30		976	0	4,399.6	1,949,700	— 18,900	69.2	216,820	+ 131,500		2,166,520	+ 112,600
Dec. 31		976	0	99.2	1,937,700	— 12,000	75.6	277,290	+ 60,470		2,214,990	+ 48,470
Cal. year			+603			+1,449,100			+ 235,190			+1,684,290

EVAPORATION AND PRECIPITATION

Records of evaporation at five stations in Colorado and New Mexico are shown on the following pages. Evaporation is shown in inches of water evaporated from a circular land pan 4 feet in diameter and 10 inches deep, set on a wooden platform on top of the ground. Water in the pan is kept at about 7 to 8 inches depth. Measurements are made by a micrometer hook gage.

Precipitation records at the five evaporation stations and the three precipitation stations shown on the following pages have been obtained by daily readings of a standard rain gage 8 inches in diameter.

The evaporation and precipitation stations at Elephant Butte dam and El Vado dam, and precipitation stations at Caballo dam, Pankey Ranch, and San Marcial were in operation prior to the effective date of the Compact. The evaporation and precipitation stations near Wagon Wheel Gap, near Conejos dam (lower damsite), and at Summitville were installed by the U. S. Weather Bureau at the request of the Compact Commission.

The Rio Grande Compact Commission wishes to acknowledge the cooperation of the United States Weather Bureau in furnishing the records of evaporation and precipitation contained in this report.

EVAPORATION AND PRECIPITATION, RIO GRANDE BASIN, COLORADO AND NEW MEXICO

COLORADO

Wagon Wheel Gap (near) — In Mineral county, Colorado, lat. 37 degrees 47 min., long. 106 degrees 49 min., near South Fork, Colorado. Standard land pan, anemometer, maximum and minimum thermometers, and standard 8 in. rain gage.

Conejos Dam (near) — In Conejos county, Colorado, lat. 37 degrees 4 min., long. 106 degrees 16 min., near Antonito, Colorado. Standard land pan, anemometer, maximum and minimum thermometers, and standard 8 in. rain gage.

NEW MEXICO

El Vado Dam — In Rio Arriba county, New Mexico, lat. 36 degrees 37 min., long. 106 degrees 47 min., at El Vado dam. Standard land pan, anemometer, maximum and minimum thermometers, standard 8 in. rain gage, and recording rain gage.

San Marcial — In Socorro county, New Mexico, lat. 33 degrees 41 min., long. 106 degrees 58 min., at San Marcial railroad station. Standard 8 in. rain gage, and maximum and minimum thermometers.

Pankey Ranch — In Sierra county, New Mexico, lat. 33 degrees 28 min., long. 107 degrees 15 min., at Pankey ranch. Standard 8 in. rain gage.

Elephant Butte Dam — In Sierra county, New Mexico, lat. 33 degrees, long. 107 degrees, at Elephant Butte Dam, New Mexico. A standard land pan, anemometer, maximum and minimum thermometers, and standard 8 in. rain gage.

Caballo Dam — In Sierra county, New Mexico, lat. 32 degrees 54 min., long. 107 degrees 18 min., at Caballo dam. Standard 8 in. rain gage, and maximum and minimum thermometers.

Monthly evaporation and precipitation, in inches, calendar year 1941

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Wagon Wheel Gap (near)						Colorado							
Evaporation					7.316	6.438	6.044	5.884	5.044				30.726
Precipitation	0.86	0.55	1.16	1.56	1.24	1.95	0.94	1.81	1.84	4.73		0.53	
Conejos Dam (near)													
Evaporation					9.606	5.308	5.715	7.109	7.059				34.797
Precipitation	1.68		1.40	1.56	1.70	1.38	2.00	1.90	2.03				
El Vado Dam						New Mexico							
Evaporation					7.982	6.853	8.735	7.604	6.177	3.699			41.050
Precipitation	1.87	1.11	2.23	2.84	1.53	3.08	0.82	1.14	3.78	3.29	0.39	1.49	23.57
San Marcial													
Evaporation													
Precipitation	1.62	0.80	0.04	0.63	1.83		0.32	1.81	3.65	2.09		0.63	
Pankey Ranch													
Evaporation													
Precipitation	2.20	0.43	0.71	1.09	0.95		1.99		3.66	0.66	0.21		
Elephant Butte Dam													
Evaporation	2.716	3.910	6.975	10.858	14.381	15.369	13.101	12.306	9.652	7.159	4.000	3.542	103.969
Precipitation	1.83	0.31	0.68	0.62	0.28	2.06	2.82	2.67	3.46	1.04	0.26	0.67	16.70
Caballo Dam													
Evaporation													
Precipitation	2.13	0.50	0.79	0.97	0.33	1.40	1.92	4.06	4.76	0.88	0.16	0.92	18.82

COST OF OPERATION

At the first annual meeting of the Commission held in El Paso, on February 28 and 29, 1940, a budget was adopted for the fiscal year 1940-1941, which ended June 30, 1941. The total amount of the budget was $13,800 for operation of gaging stations and administration, with an estimated cost to each state of $4,600. The budget for 1940-1941 fiscal year was as follows:

RIO GRANDE COMPACT COMMISSION BUDGET FOR FISCAL YEAR 1940-41

Item	Total Cost	Distribution of Costs: United States U. S. G. S.	United States I. B. C.	Colorado	N. Mex.	Texas
GAGING STATIONS						
In Colorado	$ 3,500.00	$ 1,700.00	$	$ 1,800.00	$	$
In New Mexico						
Above El. Butte	7,100.00	2,900.00	1,200.00		3,000.00	
Below San Mar.	2,500.00					2,500.00
Sub-Total	13,100.00	4,600.00	1,200.00	1,800.00	3,000.00	2,500.00
Adminis.	6,500.00			2,166.00	2,167.00	2,167.00
Total cost	$19,600.00	$ 4,600.00	$ 1,200.00	$ 3,966.00	$ 5,167.00	$ 4,667.00
Net to States	13,800.00			3,966.00	5,167.00	4,667.00
Cash Adj.				Dr.$ 634.00	Cr.$ 567.00	Cr.$ 67.00
Adjusted net	$13,800.00			$ 4,600.00	$ 4,600.00	$ 4,600.00

The cost of operation for the fiscal year was $12,591.72 or a cost to each state of $4,197.24. This amounts to a saving by each state of $402.76. The cost of operation is shown in the following table:

Cost of Operation Fiscal Year Ending June 30, 1941

Item	Total Cost	Borne by United States U. S. G. S.	Borne by United States I. B. C.	Borne by Compact States Colorado	Borne by Compact States N. Mex.	Borne by Compact States Texas
GAGING STATIONS						
In Colorado	$ 3,500.00	$ 1,700.00		$ 1,800.00		
In New Mexico						
Above El. Butte	7,100.00	2,900.00	1,200.00		3,000.00	
Below San Mar.	2,500.00					2,500.00
Sub-total	13,100.00	4,600.00	1,200.00	1,800.00	3,000.00	2,500.00
Adminis.	5,291.72			1,763.91	1,763.91	1,763.90
Total	18,391.72	4,600.00	1,200.00	3,563.91	4,763.91	4,263.90
Borne by States	12,591.72			3,563.91	4,763.91	4,263.90
Share of each	12,591.72			4,197.24	4,197.24	4,197.24
Cash Adj.				Dr. 633.33	Cr. 566.67	Cr. 66.66

At the second annual meeting of the Commission held in Santa Fe, on February 24 and 25, 1941, a budget in the same amount as the 1940-1941 budget was adopted for the 1941-1942 fiscal year ending June 30, 1942.