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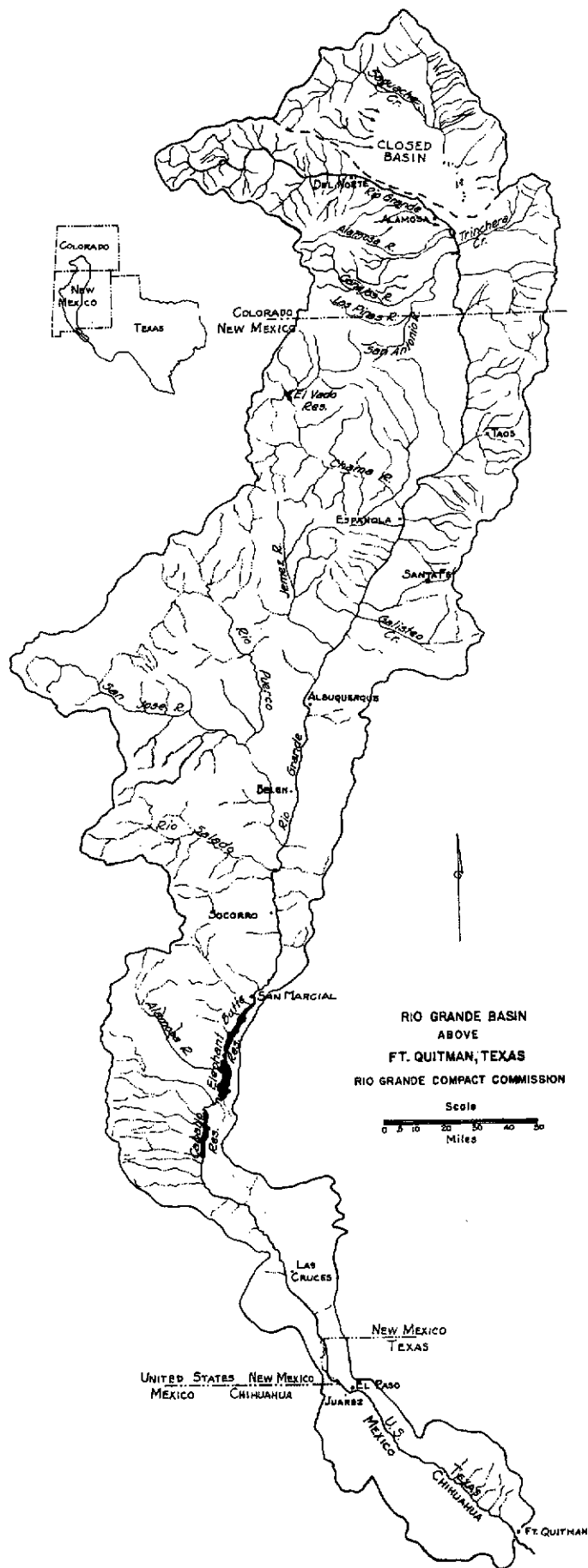
REPORT
of the
RIO GRANDE COMPACT
COMMISSION

1952 - 1958



TO THE GOVERNORS OF
Colorado, New Mexico and Texas

002873



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Map, Rio Grande basin above Ft. Quitman, Tex.	Frontispiece
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REPORT OF RIO GRANDE COMPACT COMMISSION, 1952-58

INTRODUCTION

For each year from 1939 to 1951 inclusive, the Rio Grande Compact Commission has published an annual report which contained all data pertinent to the administration of the Compact for that year.

Publication of the annual reports for 1952 and succeeding years was deferred because of litigation, but annual reports to the Governor of each of the signatory States, as prescribed by Article XII of the Compact, were made in letter form after each annual meeting.

At the Twentieth Annual Meeting, February 1959, the Commission approved the publication of annual reports for the years 1952-58 in one volume. This report is the result of the authority granted at that meeting. The annual reports to the Governors are reproduced in this consolidated report.

RIO GRANDE COMPACT COMMISSION REPORT

RIO GRANDE COMPACT

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

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

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

ARTICLE I

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

(b) "The Commission" means the agency created by this Compact for the administration thereof.

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

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

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

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

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

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

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

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

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

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

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

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

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

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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 mouths near La Sauses;
- (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. (Note: See Resolution of Commission printed elsewhere in this report.)

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

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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 La Sauses 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

RIO GRANDE COMPACT COMMISSION REPORT

DISCHARGE OF RIO GRANDE EXCLUSIVE OF CONEJOS RIVER--Con.

Quantities in thousands of acre-feet

Rio Grande at Del Norte (3)	Rio Grande at Lobatos less Conejos at Mouths (4)
550	144
600	162
650	182
700	204
750	229
800	257
850	292
900	335
950	380
1,000	430
1,100	540
1,200	640
1,300	740
1,400	840

Intermediate quantities shall be computed by proportional parts.

(3) Rio Grande at Del Norte is the recorded flow of the Rio Grande at the U.S.G.S. 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.

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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
1,000	742
1,100	839
1,200	939
1,300	1,042
1,400	1,148
1,500	1,257
1,600	1,370
1,700	1,489
1,800	1,608
1,900	1,730
2,000	1,856
2,100	1,985
2,200	2,117
2,300	2,253

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.

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(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 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. (Note: See Resolution of Commission printed elsewhere in this report.)

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 other stations, shall be established and new measurements shall be substituted which, in the unanimous opinion of the Commission, will result in substantially the same results, so far as the rights and obligations to deliver water are concerned, as would have existed if such substitution of stations and measurements had not been so made. (Note: See Resolution of Commission printed elsewhere in this report.)

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

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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.

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

ARTICLE VII

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

ARTICLE VIII

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

ARTICLE IX

Colorado agrees with New Mexico that in event the United States or the State of New Mexico decides to construct the necessary works for diverting the waters of the San Juan River, or any of its tributaries, into the Rio Grande, Colorado hereby consents to the construction of said works and the diversion of waters from the San Juan

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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 United States, if so designated by the President, shall act as Chairman of the Commission without vote.

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

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

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

ARTICLE XIII

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

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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 affecting the obligations of the United States of America to Mexico under existing treaties, or to the Indian Tribes, or as impairing the rights of the Indian Tribes.

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.

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RIO GRANDE COMPACT COMMISSION REPORT

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

RATIFIED BY:

Colorado, February 21, 1939
New Mexico, March 1, 1939
Texas, March 1, 1939

Passed Congress as Public Act No. 96, 76th Congress,
Approved by the President May 31, 1939.

RESOLUTION ADOPTED BY RIO GRANDE COMPACT
COMMISSION AT THE ANNUAL MEETING HELD AT
EL PASO, TEXAS, FEBRUARY 22-24, 1948,
CHANGING GAGING STATIONS AND MEASUREMENTS
OF DELIVERIES BY NEW MEXICO

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R E S O L U T I O N

Whereas, at the Annual Meeting of the Rio Grande Compact Commission in the year 1945, the question was raised as to whether or not a schedule for delivery of water by New Mexico during the entire year could be worked out, and

Whereas, at said meeting the question was referred to the Engineering Advisers for their study, recommendations and report, and

Whereas, said Engineering Advisers have met, studied the problems and under date of February 24, 1947, did submit their Report, which said Report contains the findings of said Engineering Advisers and their recommendations, and

Whereas, the Compact Commission has examined said Report and finds that the matters and things therein found and recommended are proper and within the terms of the Rio Grande Compact, and

Whereas, the Commission has considered said Engineering Advisers' Report and all available evidence, information and material and is fully advised:

Now, Therefore, Be it Resolved:

The Commission finds as follows:

- (a) That because of change of physical conditions, reliable records of the amount of water passing San Marcial are no longer obtainable at the stream gaging station at San Marcial and that the same should be abandoned for Compact purposes.
- (b) That the need for concurrent records at San Marcial and San Acacia no longer exists and that the gaging station at San Acacia should be abandoned for Compact purposes.
- (c) That it is desirable and necessary that the obligations of New Mexico under the Compact to deliver water in the months of July, August, September, should be scheduled.

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- (d) That the change in gaging stations and substitution of the new measurements as hereinafter set forth will result in substantially the same results so far as the rights and obligations to deliver water are concerned, and would have existed if such substitution of stations and measurements had not been so made.

Be it Further Resolved:

That the following measurements and schedule thereof shall be substituted for the measurements and schedule thereof as now set forth in Article IV of the Compact:

"The obligation of New Mexico to deliver water in the Rio Grande into Elephant Butte Reservoir during each calendar year shall be measured by 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
ELEPHANT BUTTE EFFECTIVE SUPPLY

Quantities in thousands of acre-feet

Otowi Index Supply (5)	Elephant Butte Effective Index Supply (6)
100	57
200	114
300	171
400	228
500	286
600	345
700	406
800	471
900	542
1,000	621
1,100	707
1,200	800
1,300	897
1,400	996
1,500	1,095
1,600	1,195
1,700	1,295
1,800	1,395
1,900	1,495
2,000	1,595

RESOLUTION OF COMMISSION

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DISCHARGE OF RIO GRANDE AT OTOWI BRIDGE AND
ELEPHANT BUTTE EFFECTIVE SUPPLY--Continued

Quantities in thousands of acre-feet

Otowi Index Supply (5)	Elephant Butte Effective Index Supply (6)
2,100	1,695
2,200	1,795
2,300	1,895
2,400	1,995
2,500	2,095
2,600	2,195
2,700	2,295
2,800	2,395
2,900	2,495
3,000	2,595

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, corrected for the operation of reservoirs constructed after 1929 in the drainage basin of the Rio Grande between Lobatos and Otowi Bridge.
- (6) Elephant Butte Effective Index Supply is the recorded flow of the Rio Grande at the gaging station below Elephant Butte Dam during the calendar year plus the net gain in storage in Elephant Butte Reservoir during the same year or minus the net loss in storage in said reservoir, as the case may be.

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 of the natural runoff at Otowi Bridge; and (c) any transmountain diversions into the Rio Grande between Lobatos and Elephant Butte Reservoir."

Be it Further Resolved:

That the gaging stations at San Acacia and San Marcial be, and the same are hereby abandoned for Compact purposes.

Be it Further Resolved:

That this Resolution has been passed unanimously and shall be effective January 1, 1949, if within 120 days from this date the Commissioner for each State shall have received from the Attorney General of the State represented by him, an opinion approving this Resolution, and shall have so advised the Chairman of the Commission, otherwise, to be of no force and effect.

(Note: The following paragraph appears in the Minutes of the Annual Meeting of the Commission held at Denver, Colorado, February 14-16, 1949:

"The Chairman announced that he had received, pursuant to the Resolution adopted by the Commission at the Ninth Annual Meeting on February 24, 1948, opinions from the Attorneys General of Colorado, New Mexico and Texas that the substitution of stations and measurements of deliveries by New Mexico set forth in said resolution was within the powers of the Commission").

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 1

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 U.S. Geological Survey.
- (b) Gaging stations on streams and reservoirs in the Rio Grande Basin below Lobatos and above Caballo Reservoir shall be equipped, maintained and operated by New Mexico in cooperation with the U.S. Geological Survey to the extent that such stations are not maintained and operated by 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.

1 Amended at Eleventh Annual Meeting, February 23, 1950.

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 observation is sufficient in each case to establish any material changes in water levels in such reservoirs.

RESERVOIR CAPACITIES /1

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 per cent, 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 Elephant Butte effective supply may be computed accurately, 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.

ACTUAL SPILL /2

(a) Water releases from Elephant Butte in excess of Project requirements, which is currently passed through Caballo Reservoir, prior to the time of spill, shall be deemed to have been Usable Water released in anticipation of spill, or Credit Water if such release shall have been authorized.

/1 Amended at Eleventh Annual Meeting, February 23, 1950.
/2 Adopted at Fourth Annual Meeting, February 24, 1943.

RULES AND REGULATIONS

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(b) Excess releases from Elephant Butte Reservoir, as defined in (a) above, shall be added to the quantity of water actually in storage in that reservoir, and Actual Spill shall be deemed to have commenced when this sum equals the total physical capacity of that reservoir, to the level of the uncontrolled spillway, i.e. -2,219,000 acre-ft in 1942.

(c) All water actually spilled at Elephant Butte Reservoir, or released therefrom, in excess of Project requirements, which is currently passed through Caballo Reservoir, after the time of spill, shall be considered as Actual Spill, provided that the total quantity of water then in storage in Elephant Butte Reservoir exceeds the physical capacity of that reservoir at the level of the sill of the spillway gates, i.e. -1,830,000 acre-ft in 1942.

(d) Water released from Caballo Reservoir in excess of Project requirements and in excess of water currently released from Elephant Butte Reservoir, shall be deemed Usable Water released, excepting only flood water entering Caballo Reservoir from tributaries below Elephant Butte Reservoir.

DEPARTURES FROM NORMAL RELEASES /3

For the purpose of computing the time of Hypothetical Spill required by Article VI and for the purpose of the adjustment set forth in Article VII, no allowance shall be made for the difference between Actual and Hypothetical Evaporation, and any under-release of usable water from Project Storage in excess of 150,000 acre-ft in any year shall be taken as equal to that amount.

EVAPORATION LOSSES /4, /5, /6

The Commission shall encourage the equipping, maintenance and operation, in cooperation with the U.S. 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 constructed 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.

- /3 Adopted June 2, 1959; made effective January 1, 1952.
- /4 Amended at Tenth Annual Meeting, February 15, 1949.
- /5 Amended at Twelfth Annual Meeting, February 24, 1951.
- /6 Amended June 2, 1959.

Net losses by evaporation, as defined above, shall be used in correcting Index Supplies for the operation of reservoirs upstream from Index Gaging Stations as required by the provisions of Article III and Article IV of the Compact.

In the application of the provisions of the last unnumbered paragraph of Article VI of the Compact:

(a) Evaporation losses for which accrued credits shall be reduced shall be taken as the difference between the gross evaporation from the water surface of Elephant Butte Reservoir and rainfall on the same surface.

(b) Evaporation losses for which accrued debits shall be reduced shall be taken as the net loss by evaporation as defined in the first paragraph.

ADJUSTMENT 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 the 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.

TRANSMOUNTAIN 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 allowances shall be made for losses in transit from such points to the Index Gaging Station on the stream with which the imported waters are comingled.

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 7

The Commission, subject to the approval of the Director, U.S. Geological Survey, to a cooperative agreement for such purposes shall employ the U.S. Geological Survey on a yearly basis, to render such engineering and clerical aid as may reasonably be necessary for administration of the Compact. Said agreement shall provide that the Geological Survey shall:

(1) Collect and correlate all factual data and other records having a material bearing on the administration of the Compact and keep each Commissioner advised thereof.

(2) Inspect all gaging stations required for administration of the Compact and make recommendations to the Commission as to any changes or improvements in methods of measurement or facilities for measurement which may be needed to insure that reliable records be obtained.

(3) 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
- (b) Deliveries by New Mexico
- (c) Operation of Project Storage

(4) Make such investigations as may be requested by the Commission in aid of its administration of the Compact.

(5) Act as Secretary to the Commission and submit to the Commission at its regular meeting in February a report on its activities and a summary of all data needed for determination of debits and credits and other matters pertaining to administration of the Compact.

7 The substitution of this section for the section titled "Reports to Commissioners" was adopted at Ninth Annual Meeting, February 22, 1948.

COSTS /1

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 operating 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.

Costs incurred by the Commission under any cooperative agreement between the Commission and any U.S. Government Agency, not borne by the United States, shall be apportioned equally to each State, and each Commissioner shall arrange for the prompt payment of one-third thereof by 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.

/1 Amended at Eleventh Annual Meeting, February 23, 1950.

RULES AND REGULATIONS

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MEETING OF COMMISSION 1, 8

The Commission shall meet in Santa Fe, New Mexico, on the third Thursday of 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; provided that the Commission may agree to meet elsewhere. 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. Hinderlinder
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.

- 1 Amended at Eleventh Annual Meeting, February 23, 1950.
8 Amended at Thirteenth Annual Meeting, February 25, 1952..

002901

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RIO GRANDE COMPACT COMMISSION

OFFICE OF THE SECRETARY
POST OFFICE BOX 277
SANTA FE, NEW MEXICO

February 21, 1953

His Excellency, Edwin L. Mechem
Governor of the State of New Mexico
Santa Fe, New Mexico

His Excellency, Allan Shivers
Governor of the State of Texas
Austin, Texas

His Excellency, Dan Thornton
Governor of the State of Colorado
Denver, Colorado

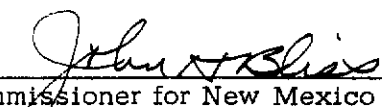
Sirs:

The Fourteenth Annual Meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico, on February 19, 20, and 21, 1953.


During this meeting the Commission considered the report of the Secretary covering records of stream flow and storage in reservoirs. No action was taken by the Commission relative thereto and no computations were made of debits and credits and releases.

The expenses for administration of the Compact during the fiscal year ending June 30, 1952 were \$18,006 of which \$7,800 was borne by the United States and the balance of \$10,206 was borne equally by the three states.

Respectfully yours,



Commissioner for New Mexico



Commissioner for Texas



Commissioner for Colorado

NIO GRANDE COMPACT DELIVERIES BY COLORADO AT STATE LINE

002902

YEAR 1952

REPORTS - CALENDAR YEAR 1952

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Quantities in Thousands of Acre Feet to Nearest Hundred

CONCEJOS INDEX SUPPLY													RIO GRANDE INDEX SUPPLY										DELIVERIES					
MONTH	MEASURED FLOW					ADJUSTMENTS					SUPPLY			RECORDED FLOW NEAR DEL MONTE	ADJUSTMENTS						SUPPLY			CONCEJOS RIVER AT MOUTHS MEAS. LOS SAUCES	RIO GRANDE LESS CONCEJOS RIVER	RIO GRANDE AT LOBATOS	ACCUMULATED LOBATOS	TOTAL
	CONCEJOS AT MOGOTE	LOS PINOS ONITE	NEAR ONITE	SAN ANTONIO ONITE	TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE		TRANSFORMER DIVERSIONS	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26			
					0.7					0		0.3																
JAN	2.5	-	-	-	.7	0	0	0	2.5	2.5	9.7	.4	+0.1	0	0	+0.1	9.8	9.8	2.6	11.9	14.5	14.5	14.5	14.5	14.5			
FEB	2.5	-	-	-	.7	0	0	0	2.5	5.0	9.5	.4	0	0	0	0	9.5	19.3	2.3	10.4	32.7	27.2	27.2	27.2	27.2			
MAR	3.1	-	-	-	2.0	+1.3	0	+1.3	4.4	9.4	9.6	.5	+1.1	0	0	+1.1	9.7	29.0	2.7	15.9	18.6	45.8	45.8	45.8	45.8			
APR	25.9	21.4	17.9	65.2	3.8	+1.8	0	+1.8	67.0	76.4	62.0	.6	+1.1	0	0	+1.1	62.1	91.1	2.7	15.9	18.6	45.8	45.8	45.8	45.8			
MAY	105.0	82.4	22.4	209.8	3.2	-6	+1	+2	209.3	285.7	187.0	.6	0	0	0	0	187.0	278.1	114.3	34.7	149.0	225.8	225.8	225.8	225.8			
JUN	114.1	46.5	2.9	163.5	36.9	+33.7	+2	+33.9	197.4	483.1	273.3	.6	0	-1	0	-1	273.2	551.3	71.9	58.1	130.0	355.8	355.8	355.8	355.8			
JUL	65.5	8.8	.2	74.5	19.6	-17.3	+1	-17.2	57.3	540.4	131.6	.6	0	-3	0	-3	131.3	682.6	15.5	12.3	27.8	583.6	583.6	583.6	583.6			
AUG	38.5	2.5	.3	41.3	0	-19.6	0	-19.6	21.7	562.1	70.2	.4	-2	0	0	-2	70.0	752.6	25.4	10.8	36.2	419.8	419.8	419.8	419.8			
SEPT	7.1	1.2	.1	8.4	0	0	0	0	0	8.4	570.5	.4	0	0	0	0	27.2	779.8	2.2	8.0	10.2	430.0	430.0	430.0	430.0			
OCT	4.1	.9	0	5.0	0	0	0	0	0	5.0	575.5	.4	0	0	0	0	20.5	800.3	1.3	6.3	7.6	437.6	437.6	437.6	437.6			
NOV	2.9	-	-	2.9	0	0	0	0	0	2.9	578.4	.3	-1	0	0	0	13.5	813.8	1.6	10.7	12.3	449.9	449.9	449.9	449.9			
DEC	2.8	-	-	2.8	0	0	0	0	0	2.8	581.2	.3	0	0	0	0	12.2	826.0	3.3	15.2	18.5	468.4	468.4	468.4	468.4			
YEAR	374.0	163.7	43.8	581.5	-7	+4	+4	-3	581.2	826.4	826.4	0	0	-4	0	-4	826.0	826.0	262.0	206.4	468.4	468.4	468.4	468.4	468.4			

REMARKS:

Storage in Platoro Reservoir, while Project Storage was less than 400,000 acre-ft, equalled 9,000 acre-ft.

SUMMARY OF DEBITS AND CREDITS				
ITEM		DEBIT	CREDIT	BALANCE
C1	Balance at Beginning of Year			0.9
C2	Scheduled Delivery from Concejos River	357.2		356.3
C3	Scheduled Delivery from Rio Grande	275.2		631.5
C4	Actual Delivery at Lobatos plus 10,000 Acre Feet		478.4	153.1
C5	Reduction of Debits % Evaporation		0	153.1
C6	Reduction of Credits % Evaporation	.2		152.9
C7				152.9
C8	Balance at End of Year			152.9

REMARKS:

Storage in Platoro Reservoir, while Project Storage was less than 400,000 acre-ft, equalled 9,000 acre-ft.

SUMMARY OF DEBITS AND CREDITS

ITEM		DEBIT	CREDIT	BALANCE
C1	Balance at Beginning of Year	—	—	Dr 0.9
C2	Scheduled Delivery from Concejos River	357.2	—	Dr 356.3
C3	Scheduled Delivery from Nio Grande	275.2	—	Dr 631.5
C4	Actual Delivery at Lobatos plus 10,000 Acre Feet	—	478.4	Dr 153.1
C5	Reduction of Debits % Evaporation	—	0	Dr 153.1
C6	Reduction of Credits % Evaporation	.2	—	Dr 153.3
C7	Balance at End of Year	—	—	Dr 153.3

DELIVERIES BY NEW MEXICO AT ELEPHANT BUTTE

YEAR 1952

Quantities in Thousands of Acre Feet to Nearest Hundred

NATURAL FLOW AT OTOMI BRIDGE															ELEPHANT BUTTE EFFECTIVE SUPPLY														
MONTH	RECORDED FLOW AT OTOMI BRIDGE			STORAGE IN RESERVOIRS LOCATED TO OTOMI			OTHER ADJUSTMENTS PER ARTICLE IV	OTOMI INDI SUPPLY		TOTAL WATER STOCKED IN NEW MEXICO ABOVE SAN MARCIAL AT END OF MONTH	STORAGE IN ELEPHANT BUTTE RESERVOIR		RECORDED FLOW BELOW ELEPHANT BUTTE DAM	ADJUSTMENT OF MEASUREMENTS	ACTUAL EFFECTIVE SUPPLY														
	TOTAL AT END OF MONTH	CHANGE GAIN (+) LOSS (-)	EVAPORATION DURING MONTH	DURING MONTH (2+4+5+6)	ACCUMULATED TOTAL	AT END OF MONTH		CHANGE GAIN (+) LOSS (-)	DURING MONTH (11+12+13)		ACCUMULATED TOTAL																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15															
	—	0	—	—	—	—	0	0.6	36.5	—	—	0	—	0	—	0													
JAN	46.7	0	0	0	0	46.7	46.7	.8	36.5	0	32.6	0	32.6	32.6	59.4														
FEB	34.6	0	0	0	0	34.6	81.3	1.0	17.3	-19.2	46.0	0	26.8	59.4															
MAR	64.3	7.3	+7.3	0	0	71.6	152.9	8.7	18.9	+1.6	27.2	0	28.8	88.2															
APR	166.5	42.5	+35.2	+2	0	201.9	354.8	44.8	59.3	+40.4	42.3	0	82.7	170.9															
MAY	378.8	139.1	+96.6	+5	0	475.9	830.7	141.9	259.0	+199.7	85.2	0	284.9	455.8															
JUN	335.5	121.8	-17.3	+8	0	319.0	1,149.7	124.4	421.2	+162.2	103.8	0	266.0	721.8															
JUL	148.2	55.0	-66.8	+4	*+1	81.9	1,231.6	57.6	390.7	-30.5	117.4	0	86.9	808.7															
AUG	109.1	9.2	-45.8	0	*+1	63.4	1,295.0	11.5	385.7	-5.0	58.6	0	53.6	862.3															
SEPT	29.3	8.4	-8.8	0	0	28.5	1,323.5	10.4	360.9	-24.8	29.0	0	4.2	866.5															
OCT	24.7	8.6	+2	0	0	24.9	1,348.4	10.4	357.2	-3.7	.9	0	-2.8	863.7															
NOV	30.2	9.0	+4	0	0	30.6	1,379.0	10.5	355.3	-1.9	1.9	0	0	863.7															
DEC	40.3	12.9	+3.9	0	0	44.2	1,423.2	14.9	376.9	+21.6	12.3	0	33.9	897.6															
YEAR	1,408.2	—	+12.9	+1.9	*+2	1,423.2	—	—	—	+340.4	557.2	0	897.6	—															

REMARKS:

* Depletion due to stock tanks.
+ No Reduction of Debits; all water in El Vado Reservoir was impounded while water in Project Storage was less than 400,000 acre-ft.

SUMMARY OF DEBITS AND CREDITS			
ITEM	DEBIT	CREDIT	BALANCE
WM1	Balance at Beginning of Year	—	Dr 331.8
WM2	Scheduled Delivery of Elephant Butte	1,019.0	Dr 1,350.8
WM3	Actual Elephant Butte Effective Supply	—	Dr 453.2
WM4	Reduction of Debits % Evaporation	—	Dr 453.2
WM5	Reduction of Credits % Evaporation	0	Dr 453.2
WM6			
WM7			
WM8	Balance at End of Year	—	Dr 453.2

REMARKS:
 * Depletion due to stock tanks.
 † No Reduction of Debits; all water in El Vado Reservoir was impounded while water in Project Storage was less than 400,000 acre-ft.

RIO GRANDE COMPACT
RELEASE AND SPILL FROM PROJECT STORAGE

MONTH	USABLE WATER IN STORAGE						CREDIT WATER IN STORAGE				NIO GRANDE BELOW CADALLO DAM							
	TOTAL PROJECT STORAGE CAPACITY AVAILABLE AT END OF MONTH	ELEPHANT BUTTE RESERVOIR	CADALLO RESERVOIR	TOTAL AT END OF MONTH	UNFILLED CAPACITY OF PROJECT STORAGE AT END OF MONTH	COLONADO CREDIT WATER	NEW MEXICO CREDIT WATER	TOTAL AT END OF MONTH	FLOOD WATER IN STORAGE IN CADALLO RESERVOIR AT END OF MONTH	TOTAL WATER IN PROJECT STORAGE AT END OF MONTH	MEASURED FLOW AT CADALLO GAGING STATION	INTERVENING DIVERSIONS TO CANALS	TOTAL RELEASE AND SPILL	CREDIT FLOOD WATER	SPILL FROM STORAGE	USABLE WATER	NET DRAINING MONTH	ACCUMULATED TOTAL
JAN	2,520.0	11.5	15.3	26.8	2,499.5	25.0	0	25.0	0	51.8	—	—	—	—	—	—	—	—
FEB	2,520.0	35.6	46.0	81.6	2,438.4	.9	0	.9	0	82.5	0.0	0.0	0.0	0	0	0	0	0
MAR	2,520.0	16.4	86.6	103.0	2,417.0	.9	0	.9	0	103.9	.1	0	.1	0	0	0	.1	.1
APR	2,520.0	58.4	78.2	96.2	2,423.8	.9	0	.9	0	97.1	34.0	.2	34.2	0	0	0	0	0.0
MAY	2,520.0	258.1	79.7	337.8	2,182.2	.9	0	.9	0	118.5	62.7	.1	62.8	0	0	0	62.8	34.3
JUN	2,520.0	420.3	81.6	501.9	2,018.1	.9	0	.9	0	338.7	58.9	.4	59.3	0	0	0	59.3	97.1
JUL	2,520.0	389.8	80.8	470.6	2,049.4	.9	0	.9	0	502.8	100.7	.3	101.0	0	0	0	101.0	156.4
AUG	2,520.0	384.8	24.0	408.8	2,111.2	.9	0	.9	0	471.5	115.9	.5	116.4	0	0	0	116.4	257.4
SEPT	2,520.0	360.0	9.9	369.9	2,150.1	.9	0	.9	0	409.7	123.7	.6	124.3	0	0	0	124.3	373.8
OCT	2,520.0	356.3	13.8	370.1	2,149.9	.9	0	.9	0	370.8	47.9	.2	48.1	0	0	0	48.1	498.1
NOV	2,520.0	354.4	17.4	371.8	2,148.2	.9	0	.9	0	371.0	.1	0	.1	0	0	0	.1	546.2
DEC	2,520.0	376.0	30.3	406.3	2,113.7	.9	0	.9	0	372.7	0	0	0	0	0	0	0	546.3
YEAR	—	—	—	—	—	—	—	—	—	—	544.0	2.3	546.3	0	0	0	546.3	—

REMARKS:

ITEM		DEBIT	CREDIT	BALANCE
P1	Accrued Debiture at Beginning of Year	—	—	Gr 362.3
P2	Actual Release during Year	—	—	Dr 184.0
P3	Normal Release for Year	546.3	—	—
P4	Under-release in Excess of 150.0	93.7	—	Cr 512.3
P5	—	—	—	—
P6	—	—	—	—
P7	Accrued Debiture at End of Year	—	—	Gr 512.3

TIME OF HYPOTHEMETICAL SPILL Did not occur

RIO GRANDE COMPACT COMMISSION REPORT

COST OF OPERATION, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1952
Adopted at the Fourteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	3,500	1,700	1,800		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	8,000 2,200	5,600 100		2,400	2,100
Sub-total	13,700	7,400	1,800	2,400	2,100
ADMINISTRATION					
U.S.G.S. Contract.....	4,000	400	1,200	1,200	1,200
Other expense.....	306		102	102	102
Sub-total	4,306	400	1,302	1,302	1,302
TOTAL.....	18,006	7,800	3,102	3,702	3,402
EQUAL SHARES OF STATES.....			3,402	3,402	3,402
CASH ADJUSTMENT BETWEEN STATES.....			Dr 300	Cr 300	0

BUDGET, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1954
Adopted at the Fourteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	3,500	1,700	1,800		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	8,000 2,200	5,600 100		2,400	2,100
Sub-total	13,700	7,400	1,800	2,400	2,100
ADMINISTRATION					
U.S.G.S. Contract.....	4,330	430	1,300	1,300	1,300
Other expense.....	1,200		400	400	400
Sub-total	5,530	430	1,700	1,700	1,700
TOTAL.....	19,230	7,830	3,500	4,100	3,800
EQUAL SHARES OF STATES.....			3,800	3,800	3,800
CASH ADJUSTMENT BETWEEN STATES.....			Dr 300	Cr 300	0

002906

RIO GRANDE COMPACT COMMISSION

OFFICE OF THE SECRETARY
POST OFFICE BOX 277
SANTA FE, NEW MEXICO

31

February 19, 1954

His Excellency, Allan Shivers
Governor of the State of Texas
Austin, Texas

His Excellency, Dan Thornton
Governor of the State of Colorado
Denver, Colorado

His Excellency, Edwin L. Mechem
Governor of the State of New Mexico
Santa Fe, New Mexico

Sirs:

The Fifteenth Annual Meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico, on February 18, 19, 1954.

During this meeting the Commission considered the report of the Secretary covering records of stream flow and storage in reservoirs. No action was taken by the Commission relative thereto and no computations were made of debits and credits and releases.

The expenses for administration of the Compact during the fiscal year ending June 30, 1953 were \$19,200 of which \$7,800 was borne by the United States and the balance of \$11,400 was borne equally by the three states.

Respectfully yours,

Lewis A. Smith
Commissioner for Texas

O. G. Appleby
Commissioner for Colorado

John R. Erickson
Commissioner for New Mexico

RIO GRANDE COMPACT DELIVERIES BY COLORADO AT STATE LINE

002907

YEAR 1953

Quantities in Thousands of Acre Feet to Nearest Hundred

DELIVERIES																								
RIO GRANDE INDEX SUPPLY											CONJOS RIVER													
MONTH	MEASURED FLOW				ADJUSTMENTS				SUPPLY			RECORDED FLOW NEAR DEL NORTE	ADJUSTMENTS						SUPPLY		CONJOS RIVER AT MOUNTAIN NEAR LOS SAUCES	RIO GRANDE LESS CONJOS RIVER	RIO GRANDE AT LOBATOS	ACCUMULATED AT LOBATOS
	CONJOS AT MOQUITO	LOS PINOS	NEAR ONTIZ	SAN ANTONIO ONTIZ	TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL		STORAGE AT END OF MONTH	CHANGE IN STORAGE	TRANSFERRING DIVERSIONS	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
												0.3												
JAN	2.8	-	-	2.8	0	0	0	0	2.8	2.8	11.2	.3	0	0	0	0	11.2	11.2	4.3	16.3	20.6	20.6		
FEB	2.8	-	-	2.8	0	0	0	0	2.8	5.6	9.8	.4	0	0	0	0	9.9	21.1	4.2	14.6	18.8	39.4		
MAR	5.2	-	-	5.2	0	0	0	0	5.2	10.8	15.4	.4	0	0	0	0	15.4	36.5	3.6	10.2	13.8	53.2		
APR	22.6	14.3	3.5	40.4	0	0	0	0	40.4	51.2	32.8	.4	0	0	0	0	32.8	69.3	4.7	7.8	12.5	65.7		
MAY	40.5	16.6	2.1	59.2	1.0	1.0	0	1.0	60.2	111.4	78.2	.4	0	0	0	0	78.2	147.5	5.4	5.5	10.9	76.6		
JUN	62.2	9.1	.1	71.4	0	-1.0	0	-1.0	70.4	181.8	146.9	.4	0	-2.2	0	-2.2	146.7	294.2	3.7	8.9	12.6	89.2		
JUL	11.2	1.5	0	12.7	0	0	0	0	12.7	194.5	41.3	.3	-1.1	0	0	-1.1	41.2	335.4	.1	3.1	3.2	92.4		
AUG	4.2	.8	0	5.0	0	0	0	0	5.0	199.5	21.8	.3	0	0	0	0	21.8	357.2	0	1.9	1.9	94.3		
SEPT	2.0	.5	0	2.5	0	0	0	0	2.5	202.0	12.0	.3	0	0	0	0	12.0	369.2	.1	1.7	1.8	96.1		
OCT	2.5	.9	.1	3.5	0	0	0	0	3.5	205.5	11.8	.3	0	0	0	0	11.8	381.0	.2	3.7	3.9	100.0		
NOV	3.2	-	-	3.2	0	0	0	0	3.2	208.7	10.4	.3	0	0	0	0	10.4	391.4	1.2	6.3	7.5	107.5		
DEC	2.7	-	-	2.7	0	0	0	0	2.7	211.4	9.9	.3	0	0	0	0	9.9	401.3	2.4	12.2	14.6	122.1		
YEAR	161.9	43.7	5.8	211.4	-	0	0	0	211.4	-	401.5	-	0	-2.2	0	-2.2	401.3	-	29.9	92.2	122.1	-		
SUMMARY OF DEBITS AND CREDITS																								
ITEM											DEBIT		CREDIT		BALANCE									
C1 Balance of Beginning of Year											-		-		Dr 153.3									
C2 Scheduled Delivery from Conchos River											51.8		-		Dr 205.1									
C3 Scheduled Delivery from Rio Grande											98.4		-		Dr 303.5									
C4 Actual Delivery of Lobatos plus 10,000 Acre Feet											-		132.1		Dr 171.4									
C5 Reduction of Debits % Evaporation											0		-		Dr 171.4									
C6 Reduction of Credits % Evaporation											-		-		Dr 171.4									
C7											-		-		Dr 171.4									
C8 Balance of End of Year											-		-		Dr 171.4									
REMARKS:																								

SUMMARY OF DEBITS AND CREDITS

ITEM	DEBIT	CREDIT	BALANCE
C1 Balance at Beginning of Year	-	-	Dr 153.3
C2 Scheduled Delivery from Conchos River	51.8	-	Dr 205.1
C3 Scheduled Delivery from Rio Grande	98.4	-	Dr 303.5
C4 Actual Delivery of Lobatos plus 10 000 Acre Feet	-	132.1	Dr 171.4
C5 Reduction of Debits 4% Evaporation	0	0	Dr 171.4
C6 Reduction of Credits 4% Evaporation	-	-	Dr 171.4
C7	-	-	-
C8 Balance at End of Year	-	-	Dr 171.4

REMARKS:

DELIVERIES BY NEW MEXICO AT ELEPHANT BUTTE

YEAR 1953

002908

REPORTS - CALENDAR YEAR 1953

002

Quantities in Thousands of Acre Feet to Nearest Hundred

NATURAL FLOW AT OTOMI BRIDGE													ELEPHANT BUTTE EFFECTIVE SUPPLY									
MONTH	RECORDED FLOW AT OTOMI BRIDGE	STORAGE IN RESERVOIRS - LOBATOS TO OTOMI				OTHER ADJUSTMENTS PER ARTICLE IV	OTOMI INDEX SUPPLY		TOTAL WATER STORED IN NEW MEXICO ABOVE SAN MARCIAL AT END OF MONTH	STORAGE IN ELEPHANT BUTTE RESERVOIR		RECORDED FLOW BELOW ELEPHANT BUTTE DAM	ADJUSTMENT OF MEASUREMENTS	ACTUAL EFFECTIVE SUPPLY								
		TOTAL AT END OF MONTH	CHANGE GAIN (+) LOSS (-)	EVAPORATION DURING MONTH	DURING MONTH (2+4+5+6)		ACCUMULATED TOTAL	AT END OF MONTH		CHANGE GAIN (+) LOSS (-)	DURING MONTH (1+12+13)			ACCUMULATED TOTAL								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15								
JAN	42.1	12.9	—	—	—	—	—	14.9	376.9	—	—	—	—	—								
FEB	47.3	15.8	+2.9	0	0	45.0	45.0	17.4	351.6	-25.3	64.2	0	38.9	38.9								
MAR	58.9	10.5	-5.3	0	0	42.0	87.0	12.1	311.8	-39.8	83.6	0	43.8	82.7								
APR	61.6	0	-10.5	0	0	48.4	135.4	1.8	277.4	-34.4	83.9	0	49.5	132.2								
MAY	66.4	17.4	+17.4	-1	0	78.9	214.3	19.0	232.3	-45.1	58.4	0	13.3	145.5								
JUN	115.4	53.4	+36.0	+2	0	102.6	316.9	55.1	228.7	-3.6	24.4	0	20.8	166.3								
JUL	25.5	14.6	-38.8	+1	0	76.7	393.6	16.1	209.2	-19.5	64.3	0	44.8	211.1								
AUG	24.8	11.7	-2.9	0	*+1	22.7	416.3	13.0	162.8	-46.4	65.2	0	18.8	229.9								
SEPT	11.4	0	-11.7	-1	0	13.0	429.3	1.0	109.6	-53.2	72.6	0	19.4	249.3								
OCT	17.5	0	0	-3	0	11.1	440.4	.8	88.5	-21.1	22.1	0	1.0	250.3								
NOV	27.7	.4	+4	+1	0	17.6	458.0	.8	90.6	+2.1	.3	0	2.4	252.7								
DEC	31.7	4.8	+4.4	0	0	28.2	486.2	1.4	93.9	+3.3	.4	0	3.7	256.4								
YEAR	530.3	—	-8.1	0	+1	522.3	522.3	6.3	110.6	+16.7	.4	0	17.1	273.5								
REMARKS: *																						
* Depletion due to stock tanks.																						
SUMMARY OF DEBITS AND CREDITS																						
ITEM																						
NM1	Balance at Beginning of Year											DEBIT	CREDIT	BALANCE								
NM2	Scheduled Delivery at Elephant Butte											299.2	—	Dr	453.2							
NM3	Actual Elephant Butte Effective Supply											—	273.5	Dr	752.4							
NM4	Reduction of Debits % Evaporation											—	0	Dr	478.9							
NM5	Reduction of Credits % Evaporation											0	—	Dr	478.9							
NM6												—	—	—	—							
NM7												—	—	—	—							
NM8	Balance at End of Year											—	273.5	Dr	478.9							

* Depletion due to stock tanks.

RIO GRANDE COMPACT RELEASE AND SPILL FROM PROJECT STORAGE

YEAR 1953

Quantities in Thousands of Acre Feet to Nearest Hundred

MONTH	TOTAL STORAGE CAPACITY AVAILABLE AT END OF MONTH	USABLE WATER IN STORAGE			CREDIT WATER IN STORAGE			FLOOD WATER IN STORAGE IN CABALLO RESERVOIR AT END OF MONTH		TOTAL WATER IN PROJECT STORAGE AT END OF MONTH		MEASURED FLOW AT CABALLO GAGING STATION	INTERVENING DIVERSIONS TO CANALS	TOTAL RELEASE AND SPILL	SPILL FROM STORAGE			USABLE RELEASE	
		ELEPHANT BUTE RESERVOIR	CABALLO RESERVOIR	TOTAL AT END OF MONTH	COLORADO CREDIT WATER	NEW MEXICO CREDIT WATER	TOTAL AT END OF MONTH	AT END OF MONTH	AT END OF MONTH	AT END OF MONTH	AT END OF MONTH				CABALLO FLOOD WATER	CREDIT WATER	USABLE WATER	NET DURING MONTH	ACCUMULATED TOTAL
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	2,520.0	376.9	50.3	407.2	2,112.8	0	0	0	0	407.2	—	—	—	—	—	—	—	—	—
JAN	2,515.0	351.6	87.0	438.6	2,076.4	0	0	0	0	438.6	0	0	0	0	0	0	0	0	0
FEB	2,515.0	311.8	156.8	468.6	2,046.4	0	0	0	0	468.6	.1	0	.1	0	0	0	.1	.1	.1
MAR	2,515.0	277.4	136.9	414.3	2,100.7	0	0	0	0	414.3	99.3	.3	99.6	0	0	0	99.6	99.6	99.7
APR	2,515.0	232.3	132.5	364.8	2,150.2	0	0	0	0	364.8	58.0	.1	58.1	0	0	0	58.1	157.8	157.8
MAY	2,515.0	228.7	107.7	336.4	2,178.6	0	0	0	0	336.4	47.4	.1	47.5	0	0	0	47.5	205.3	205.3
JUN	2,515.0	209.2	88.8	298.0	2,217.0	0	0	0	0	298.0	78.4	.6	79.0	0	0	0	79.0	284.3	284.3
JUL	2,515.0	162.8	60.0	222.8	2,292.2	0	0	0	0	222.8	93.9	.6	94.5	0	0	0	94.5	378.8	378.8
AUG	2,515.0	109.6	27.5	137.1	2,377.9	0	0	0	0	137.1	105.6	.4	106.0	0	0	0	106.0	484.8	484.8
SEPT	2,515.0	88.5	6.6	95.1	2,419.9	0	0	0	0	95.1	45.9	.3	46.2	0	0	0	46.2	531.0	531.0
OCT	2,515.0	90.6	9.4	100.0	2,415.0	0	0	0	0	100.0	0	0	0	0	0	0	0	531.0	531.0
NOV	2,515.0	93.9	11.8	105.7	2,409.3	0	0	0	0	105.7	0	0	0	0	0	0	0	531.0	531.0
DEC	2,515.0	110.6	14.1	124.7	2,390.3	0	0	0	0	124.7	0	0	0	0	0	0	0	531.0	531.0
YEAR	—	—	—	—	—	—	—	—	—	—	528.6	2.4	531.0	0	0	0	531.0	—	—

ACCUMULATED DEPARTURE FROM NORMAL RELEASE									
ITEM									
P1	Accrued Departure at Beginning of Year	—	—	—	—	—	—	—	—
P2	Actual Release during Year	—	—	—	—	—	—	—	—
P3	Normal Release for Year	—	—	—	—	—	—	—	—
P4	Under-release in Excess of 150.0	—	—	—	—	—	—	—	—
P5	—	—	—	—	—	—	—	—	—
P6	—	—	—	—	—	—	—	—	—
P7	Accrued Departure at End of Year	—	—	—	—	—	—	—	—
TIME OF THEORETICAL SPILL									
Did not occur									

REMARKS:

002910

REPORTS - CALENDAR YEAR 1953

35

COST OF OPERATION, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1953
Adopted at the Fifteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	3,500	1,700	1,800		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	8,000 2,200	5,600 100		2,400	2,100
Sub-total	13,700	7,400	1,800	2,400	2,100
ADMINISTRATION					
U.S.G.S. Contract.....	4,300	400	1,300	1,300	1,300
Other expense.....					
Sub-total	4,300	400	1,300	1,300	1,300
TOTAL.....	18,000	7,800	3,100	3,700	3,400
EQUAL SHARES OF STATES.....			3,400	3,400	3,400
CASH ADJUSTMENT BETWEEN STATES			Dr 300	Cr 300	0

BUDGET, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1955
Adopted at Fifteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	6,700	3,900	2,800		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	9,000 2,900	6,200 100		2,800	2,800
Sub-total	18,600	10,200	2,800	2,800	2,800
ADMINISTRATION					
U.S.G.S. Contract.....	4,330	430	1,300	1,300	1,300
Other expense.....	1,500		500	500	500
Sub-total	5,830	430	1,800	1,800	1,800
TOTAL.....	24,430	10,630	4,600	4,600	4,600
EQUAL SHARES OF STATES.....			4,600	4,600	4,600
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

RIO GRANDE COMPACT COMMISSION

OFFICE OF THE SECRETARY
POST OFFICE BOX 277
SANTA FE, NEW MEXICO

February 25, 1955

His Excellency, Edwin C. Johnson
Governor of the State of Colorado
Denver, Colorado

His Excellency, John F. Simms
Governor of the State of New Mexico
Santa Fe, New Mexico

His Excellency, Allan Shivers
Governor of the State of Texas
Austin, Texas

Sirs:

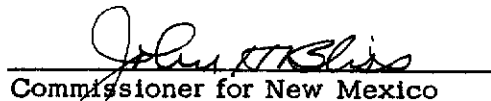
The Sixteenth Annual Meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico, on February 24, 25, 1955.

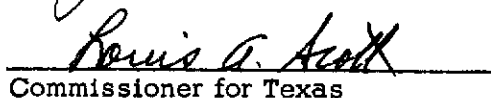
During this meeting the Commission reviewed the report of the Secretary covering records of stream flow at Compact stations and storage in reservoirs and considered computations of debits and credits made by the Secretary. No action was taken relative thereto.

The expenses of administration of the Compact during the fiscal year ending June 30, 1954 were \$18,015 of which \$7,800 was borne by the United States and the balance of \$10,215 was borne equally by the three states party to the Compact.

Respectfully yours,


Commissioner for Colorado


Commissioner for New Mexico


Commissioner for Texas

NJO GRANDE COMPACT
DELIVERIES BY COLORADO AT STATE LINE

YEAR 1954

002912

REPORTS - CALENDAR YEAR 1954

37

CONEJOS INDEX SUPPLY													NJO GRANDE INDEX SUPPLY													DELIVERIES			
MONTH	MEASURED FLOW				ADJUSTMENTS					SUPPLY				RECORDED FLOW NEAR DEL MONTE	ADJUSTMENTS						SUPPLY			CONEJOS RIVER AT MOUTHS NEAR LOS SAUCES	NJO GRANDE CONCEJOS RIVER	NJO GRANDE AT LOBATOS	TOTAL ACCUMULATED LOBATOS		
	CONCEJOS AT MOUTHS	LOS PINOS	NEAR ONITZ	SAN ANTONIO AT ONITZ	TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE		TRANSMOUNTAIN DIVERSIONS	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
					0					0		0.3										0							
JAN	2.0	-	-	-	2.0	0	0	0	2.0	2.0	9.1	.3	0	0	0	0	9.1	9.1	2.7	9.0	11.7	11.7	0						
FEB	2.6	-	-	-	2.6	0	0	0	2.6	4.6	11.9	.3	0	0	0	0	11.9	21.0	3.0	11.6	14.6	26.3	0						
MAR	3.5	-	-	-	3.5	0	0	0	3.5	8.1	10.2	.3	0	0	0	0	10.2	31.2	1.8	5.7	7.5	33.8	0						
APR	25.5	17.8	4.8	48.1	0	0	0	0	48.1	56.2	45.7	.3	0	0	0	0	45.7	76.9	1.2	2.4	3.6	37.4	0						
MAY	48.5	15.4	1.5	65.4	1	+1	0	+1	65.5	121.7	108.1	.3	0	0	0	0	108.1	185.0	.7	2.5	3.2	40.6	0						
JUN	26.1	3.8	0	29.9	0	-1	0	-1	29.8	151.5	65.6	.3	0	-1	0	-1	65.5	250.5	.2	1.0	1.2	41.8	0						
JUL	8.6	1.4	.1	10.1	0	0	0	0	10.1	161.6	40.4	.3	0	-1	0	-1	40.3	290.8	.1	.7	.8	42.6	0						
AUG	5.9	1.2	0	7.1	0	0	0	0	7.1	168.7	28.6	.3	0	0	0	0	28.6	319.4	0	.8	.8	43.4	0						
SEPT	4.2	.8	0	5.0	0	0	0	0	5.0	173.7	19.1	.3	0	0	0	0	19.1	338.5	.1	2.2	2.3	45.7	0						
OCT	3.9	.8	0	4.7	0	0	0	0	4.7	178.4	22.7	.3	0	0	0	0	22.7	361.2	.4	2.5	2.9	48.6	0						
NOV	2.6	-	-	2.6	0	0	0	0	2.6	181.0	11.7	.3	0	0	0	0	11.7	372.9	.9	2.6	3.5	52.1	0						
DEC	2.2	-	-	2.2	0	0	0	0	2.2	183.2	8.2	.3	0	0	0	0	8.2	381.1	1.7	5.8	7.5	59.6	0						
YEAR	135.6	41.2	6.4	183.2	—	0	0	0	183.2	—	381.3	—	0	-2	0	-2	381.1	—	12.8	46.8	59.6	—	—						

REMARKS:
Column 13 does not include 200 acre-ft of transmountain water stored in Alberta Park Reservoir.

SUMMARY OF DEBITS AND CREDITS			
ITEM	DEBIT	CREDIT	BALANCE
C1 Balance of Beginning of Year	—	—	Dr 171.4
C2 Scheduled Delivery from Conejos River	36.6	—	Dr 208.0
C3 Scheduled Delivery from Njo Grande	93.5	—	Dr 301.5
C4 Actual Delivery of Lobatos plus 10 000 Acre Feet	—	69.6	Dr 231.9
C5 Reduction of Debits % Evaporation	—	0	Dr 231.9
C6 Reduction of Credits % Evaporation	0	—	Dr 231.9
C7 Balance of End of Year	—	—	Dr 231.9

REMARKS:
Column 13 does not include 200 acre-ft of transmountain water stored in Alberta Park Reservoir.

RIO GRANDE COMPACT DELIVERIES BY NEW MEXICO AT ELEPHANT BUTTE

YEAR 1954

Quantities in Thousands of Acre Feet to Nearest Hundred

NATURAL FLOW AT OTOWI BRIDGE										ELEPHANT BUTTE EFFECTIVE SUPPLY									
MONTH	RECORDED FLOW AT OTOWI BRIDGE	STORAGE IN RESERVOIRS LOCATED TO OTOWI			OTHER ADJUSTMENTS PER ARTICLE II	OTOWI INDEX SUPPLY		TOTAL WATER STORED IN NEW MEXICO ABOVE SAN MARCIAL AT END OF MONTH	STORAGE IN ELEPHANT BUTTE RESERVOIR			RECORDED FLOW BELOW ELEPHANT BUTTE DAM	ADJUSTMENT OF MEASUREMENTS	ACTUAL EFFECTIVE SUPPLY					
		TOTAL AT END OF MONTH	CHANGE GAIN (+) LOSS (-)	EVAPORATION DURING MONTH		DURING MONTH (2+4+5+6)	ACCUMULATED TOTAL		AT END OF MONTH	CHANGE GAIN (+) LOSS (-)	DURING MONTH (1+12+13)			ACCUMULATED TOTAL					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
	—	4.8	—	—	—	—	—	6.3	110.6	—	—	—	—	—					
JAN	30.6	7.9	+3.1	0	0	33.7	33.7	9.0	137.2	+26.6	0.6	0	27.2	27.2					
FEB	38.3	6.1	-1.8	0	0	36.5	70.2	7.4	166.8	+29.6	.3	0	29.9	57.1					
MAR	36.8	4.4	-1.7	0	0	35.1	105.3	6.1	138.5	-28.3	45.5	0	17.2	74.3					
APR	55.3	53.3	+48.9	+1	0	104.3	209.6	55.3	87.0	-51.5	67.2	0	15.7	90.0					
MAY	95.4	49.6	-3.7	+3	0	92.0	301.6	51.8	90.6	+3.6	32.1	0	35.7	125.7					
JUN	37.3	34.3	-15.3	+2	0	22.2	323.8	36.0	59.6	-31.0	34.9	0	3.9	129.6					
JUL	36.6	13.8	-20.5	0	+1	16.2	340.0	15.0	13.8	-45.8	54.0	0	8.2	137.8					
AUG	16.8	15.2	+1.4	0	0	18.2	358.2	16.0	32.9	+19.1	9.5	0	28.6	166.4					
SEPT	26.6	0	-15.2	0	0	11.4	369.6	.5	55.6	+22.7	.2	0	22.9	189.3					
OCT	19.1	0	0	0	0	19.1	388.7	.5	76.1	+20.5	.3	0	20.8	210.1					
NOV	19.2	0	0	0	0	19.2	407.9	.5	80.8	+4.7	.2	0	4.9	215.0					
DEC	23.4	0	0	0	0	23.4	431.3	.7	97.6	+16.8	.2	0	17.0	232.0					
YEAR	435.4	—	-4.8	+6	+1	431.3	—	—	—	-13.0	245.0	0	232.0	—					

SUMMARY OF DEBITS AND CREDITS

ITEM	DEBIT	CREDIT	BALANCE
NM1 Balance of Beginning of Year	—	—	Dr 478.9
NM2 Scheduled Delivery at Elephant Butte	246.2	—	Dr 725.1
NM3 Actual Elephant Butte Effective Supply	—	232.0	Dr 493.1
NM4 Reduction of Debits % Evaporation (a)	—	0	Dr 493.1
NM5 Reduction of Credits % Evaporation	0	—	Dr 493.1
NM6 Adjustment a/c Revision 1949 (b)	4.6	—	Dr 497.7
NM7	—	—	Dr 497.7
NM8 Balance at End of Year	—	—	Dr 497.7

NOTES:

* Depletion due to stock tanks.

a No reduction of debits as storage was unauthorized.

b Rio Grande at Otowi Bridge for June 1949 revised from 366,000 acre-ft to 370,700 acre-ft.

REMARKS:
 * Depletion due to stock tanks.
 a No reduction of debits as storage was unauthorized.
 b Rio Grande at Otowi Bridge for June 1949 revised from 366,000 acre-ft to 370,700 acre-ft.

002913

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REPORTS - CALENDAR YEAR 1954

MONTH	USABLE WATER IN STORAGE				UNFILLED CAPACITY OF PROJECT STORAGE AT END OF MONTH	CREDIT WATER IN STORAGE			TOTAL WATER IN STORAGE IN CADALLO RESERVOIR AT END OF MONTH	TOTAL WATER IN PROJECT STORAGE AT END OF MONTH	NIO GRANDE BELOW CADALLO DAM							
	TOTAL PROJECT STORAGE AVAILABLE AT END OF MONTH	ELEPHANT BUTTE RESERVOIR	CADALLO RESERVOIR	TOTAL AT END OF MONTH		COLORADO CREDIT WATER	NEW MEXICO CREDIT WATER	TOTAL AT END OF MONTH			WEIRFORD FLOW AT CADALLO GAGING STATION	INTERFLOWING DIVERSIONS TO CANALS	TOTAL RELEASE AND SPILL	SPILL FROM STORAGE			USABLE RELEASE	
														CADALLO FLOOD WATER	CREDIT WATER	USABLE WATER		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
JAN	2,515.0	110.6	14.1	124.7	2,390.3	0	0	0	0	124.7	—	—	—	—	—	—	—	19
FEB	2,515.0	137.2	16.5	153.7	2,361.3	0	0	0	0	153.7	0	0	0	0	0	0	0	
MAR	2,515.0	166.8	17.7	184.5	2,330.5	0	0	0	0	184.5	.1	0	.1	0	0	0	0	
APR	2,515.0	138.5	28.4	166.9	2,348.1	0	0	0	0	166.9	31.9	.3	32.2	0	0	0	.1	
MAY	2,515.0	87.0	33.4	120.4	2,394.6	0	0	0	0	120.4	58.5	0	58.5	0	0	0	32.2	
JUN	2,515.0	90.6	34.5	125.1	2,389.9	0	0	0	0	125.1	30.2	.1	30.3	0	0	0	58.5	
JUL	2,515.0	59.6	19.1	78.7	2,436.3	0	0	0	0	78.7	46.9	.3	47.2	0	0	0	30.3	
AUG	2,515.0	13.8	22.3	36.1	2,478.9	0	0	0	0	36.1	48.4	.4	48.8	0	0	0	47.2	
SEPT	2,515.0	32.9	16.5	49.4	2,465.6	0	0	0	0	49.4	20.5	.1	20.6	0	0	0	48.8	
OCT	2,515.0	55.6	10.6	66.2	2,448.8	0	0	0	0	66.2	7.7	.1	7.8	0	0	0	20.6	
NOV	2,515.0	76.1	15.4	91.5	2,423.5	0	0	0	0	91.5	0	0	0	0	0	0	7.8	
DEC	2,515.0	80.8	16.5	97.3	2,417.7	0	0	0	0	97.3	0	0	0	0	0	0	0	
YEAR	2,515.0	97.6	17.5	115.1	2,399.9	0	0	0	0	115.1	244.2	1.3	245.5	0	0	0	245.5	

REMARKS:

ACCUMULATED DEBIT FROM NORMAL RELEASE			
ITEM	DEBIT	CREDIT	BALANCE
P1 Actual Debiture at Beginning of Year	—	—	—
P2 Actual Release during Year	—	—	—
P3 Normal Release for Year	245.5	—	245.5
P4 Under-release in Excess of 150.0	394.5	—	790.0
P5	—	—	—
P6	—	—	—
P7 Actual Debiture at End of Year	—	—	812.3

TIME OF HYDROTHERMAL SPILL Did not occur

RIO GRANDE COMPACT COMMISSION REPORT

COST OF OPERATION, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1954
 Adopted at the Sixteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	3,500	1,700	1,800		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	8,000 2,200	5,600 100		2,400	2,100
Sub-total	13,700	7,400	1,800	2,400	2,100
ADMINISTRATION					
U.S.G.S. Contract.....	4,300	400	1,300	1,300	1,300
Other expense (stationery).....	15			15	
Sub-total	4,315	400	1,300	1,315	1,300
TOTAL.....	18,015	7,800	3,100	3,715	3,400
EQUAL SHARES OF STATES.....			3,405	3,405	3,405
CASH ADJUSTMENT BETWEEN STATES			Dr 305	Cr 310	Dr 5

BUDGET, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1956
 Adopted at the Sixteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	6,700	3,900	2,800		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	9,000 2,900	6,200 100		2,800	2,800
Sub-total	18,600	10,200	2,800	2,800	2,800
ADMINISTRATION					
U.S.G.S. Contract.....	4,330	430	1,300	1,300	1,300
Other expense.....	1,800		600	600	600
Sub-total	6,130	430	1,900	1,900	1,900
TOTAL.....	24,730	10,630	4,700	4,700	4,700
EQUAL SHARES OF STATES.....			4,700	4,700	4,700
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

002916

RIO GRANDE COMPACT COMMISSION

OFFICE OF THE SECRETARY
POST OFFICE BOX 277
SANTA FE, NEW MEXICO

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February 17, 1956

His Excellency, John F. Simms
Governor of the State of New Mexico
Santa Fe, New Mexico

His Excellency, Allan Shivers
Governor of the State of Texas
Austin, Texas

His Excellency, Edwin C. Johnson
Governor of the State of Colorado
Denver, Colorado

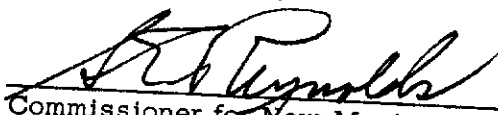
Sirs:

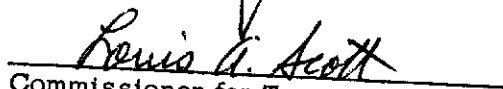
Pursuant to the provisions of Article XII of the Rio Grande Compact, the 17th Annual meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico on February 16 and 17, 1956.

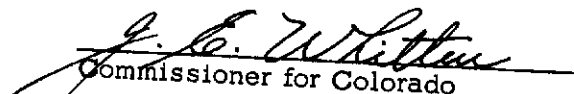
During this meeting the Commission reviewed the report of the Secretary covering records of stream flow at Compact stations and storage in reservoirs and considered computations of debits and credits made by the Secretary. No action was taken relative thereto.

Expenses of administration of Rio Grande Compact during the fiscal year ending June 30, 1955 were \$18,774.67 of which \$8,730.00 was borne by the United States and the balance of \$10,044.67 was borne equally by the three states party to the Compact.

Respectfully yours,


Commissioner for New Mexico


Commissioner for Texas


Commissioner for Colorado

RIO GRANDE COMPACT DELIVERIES BY COLORADO AT STATE LINE

YEAR - 1955 -

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RIO GRANDE COMPACT COMMISSION REPORT

002917

Quantities in Thousands of Acre Feet to Nearest Hundred

COMEJOS INDEX SUPPLY													RIO GRANDE INDEX SUPPLY													DELIVERIES				
MONTH	MEASURED FLOW				ADJUSTMENTS					SUPPLY		RECORDED FLOW NEAR DEL MONTE	ADJUSTMENTS						SUPPLY		COMEJOS RIVER AT MOUTHS NEAR LOS SAUCES	RIO GRANDE LESS COMEJOS RIVER	RIO GRANDE AT LOBATOS	ACCUMULATED TOTAL AT LOBATOS						
	COMEJOS AT MOGOTE	LOS PINOS NEAR ONITE	SAN ANTONIO AT ONITE	TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL	TRANS-MOUNTAIN DIVERSIONS		OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
					0					4		0.6						4				4								
JAN	2.8	-	-	2.8	0	0	0	0	2.8	2.8	8.3	.6	0	0		0	8.3	8.3	2.2	8.5	10.7	10.7								
FEB	2.5	-	-	2.5	0	0	0	0	2.5	5.3	8.5	.7	+1	0		+1	8.6	16.9	2.0	9.0	11.0	21.7								
MAR	3.4	-	-	3.4	0	0	0	0	3.4	8.7	10.6	.8	+1	0		+1	10.7	27.6	2.1	7.9	10.0	31.7								
APR	8.3	4.2	1.8	14.3	0	0	0	0	14.3	23.0	22.5	.8	0	0	/	0	22.5	50.1	1.1	2.4	3.5	35.2								
MAY	35.8	22.7	4.5	63.0	0	0	0	0	63.0	86.0	84.6	.8	0	0		0	84.6	134.7	3.1	2.9	6.0	41.2								
JUN	49.5	11.5	.3	61.3	1.2	+1.2	0	+1.2	62.5	148.5	125.6	.8	0	-1.1		-1	125.5	260.2	1.0	2.9	3.9	45.1								
JUL	11.1	1.9	0	13.0	1.2	0	0	0	13.0	161.5	34.9	.8	0	0		0	34.9	295.1	.1	.6	.7	45.8								
AUG	9.7	1.9	.6	12.2	1.2	0	+1.1	+1.1	12.3	173.8	31.0	.5	-3	0		-3	30.7	325.8	.1	1.2	1.3	47.1								
SEPT	3.7	.7	0	4.4	1.2	0	0	0	4.4	178.2	14.2	.5	0	0		0	14.2	340.0	.1	1.0	1.1	48.2								
OCT	2.5	.6	0	3.1	1.2	0	0	0	3.1	181.3	10.5	.5	0	0		0	10.5	350.5	.1	1.6	1.7	49.9								
NOV	3.5	-	-	3.5	0	-1.2	0	-1.2	2.3	183.6	8.9	.6	+1	0		+1	9.0	359.5	1.4	3.2	4.6	54.5								
DEC	2.7	-	-	2.7	0	0	0	0	2.7	186.3	8.9	.7	+1	0		+1	9.0	368.5	1.7	6.9	8.6	63.1								
YEAR	135.5	43.5	7.2	186.2		0	+1.1	+1.1	186.3		368.5		+1	-1.1		0	368.5		15.0	48.1	63.1									
SUMMARY OF DEBITS AND CREDITS																														
DEBITS													CREDITS																	
ITEM													BALANCE																	
C1 Balance of Beginning of Year													Dr 231.9																	
C2 Scheduled Delivery from Conchos River													Dr 270.1																	
C3 Scheduled Delivery from Rio Grande													Dr 360.5																	
C4 Actual Delivery of Lobatos plus 10000 Acre Feet													Dr 287.4																	
C5 Reduction of Debits % Evaporation													Dr 287.3																	
C6 Reduction of Credits % Evaporation													Dr 287.3																	
C7 Correction " 1954 Rio Grande Index Supply													Dr 287.2																	
C8 Balance at End of Year													Dr 287.2																	

REMARKS:

Column 13 includes 184 acre-ft of transmountain water.
Exceptions as set forth in transcript of Annual Meeting, February 1956.

REMARKS:

Column 13 includes 184 acre-ft of transmountain water.
Exceptions as set forth in transcript of Annual Meeting, February 1956.

SUMMARY OF DEBITS AND CREDITS

ITEM	DEBIT	CREDIT	BALANCE
C1 Balance at beginning of Year	-	-	Dr 231.9
C2 Scheduled Delivery from Conchos River	38.2	-	Dr 270.1
C3 Scheduled Delivery from Rio Grande	90.4	-	Dr 360.5
C4 Actual Delivery at Lobatos plus 10,000 Acre Feet	-	73.1	Dr 287.4
C5 Reduction of Debits % Evaporation	-	.1	Dr 287.3
C6 Reduction of Credits % Evaporation	0	-	Dr 287.3
C7 Correction " 1954 Rio Grande Index Supply	-	.1	Dr 287.2
C8 Balance at end of Year	-	-	Dr 287.2

YEAR 1955-

002918

* Depletion due to stock tanks.
a Debits exceeded storage; storage requested by Secretary of the Interior. Exceptions to report as set forth in transcript of Annual Meeting, February 1956.

RIO GRANDE COMPACT RELEASE AND SPILL FROM PROJECT STORAGE

002919

YEAR 1955-

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RIO GRANDE COMPACT COMMISSION REPORT

Quantities in Thousands of Acre Feet to Nearest Hundred

MONTH	USABLE WATER IN STORAGE				UNFILLED CAPACITY OF PROJECT STORAGE AT END OF MONTH	CREDIT WATER IN STORAGE			FLOED WATER IN STORAGE IN CADALLO RESERVOIR AT END OF MONTH	TOTAL WATER IN PROJECT STORAGE AT END OF MONTH	RIO GRANDE BELOW CADALLO DAM						USABLE RELEASE	
	ELPHANT BUTTE RESERVOIR	CADALLO RESERVOIR	TOTAL AT END OF MONTH	COLORADO CREDIT WATER		NEW MEXICO CREDIT WATER	TOTAL AT END OF MONTH	MEASURED FLOW AT CADALLO GAGING STATION			INTERFERING DIVERSIONS TO CANALS	TOTAL RELEASE AND SPILL	CADALLO FLOOD WATER	CREDIT WATER	USABLE WATER	NET DURING MONTH	ACCUMULATED TOTAL	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	2,510.0	97.6	17.5	115.1	2,394.9	0	0	0	0	115.1								4
JAN	2,510.0	125.1	18.9	144.0	2,366.0	0	0	0	0	144.0	0	0	0	0	0	0	0	0
FEB	2,510.0	150.3	19.6	169.9	2,340.1	0	0	0	0	169.9	0	0	0	0	0	0	0	0
MAR	2,510.0	141.1	14.3	155.4	2,354.6	0	0	0	0	155.4	29.6	.1	29.7	0	0	0	29.7	29.7
APR	2,510.0	121.1	8.2	129.3	2,380.7	0	0	0	0	129.3	29.3	.2	29.5	0	0	0	29.5	59.2
MAY	2,510.0	131.9	7.0	138.9	2,371.1	0	0	0	0	138.9	5.3	.1	5.4	0	0	0	5.4	64.6
JUN	2,510.0	97.6	13.0	110.6	2,399.4	0	0	0	0	110.6	37.0	.3	37.3	0	0	0	37.3	101.9
JUL	2,510.0	73.0	29.8	102.8	2,407.2	0	0	0	0	102.8	28.2	.2	28.4	0	0	0	28.4	130.3
AUG	2,510.0	120.8	21.2	142.0	2,368.0	0	0	0	0	142.0	49.0	.1	49.1	0	0	0	49.1	179.4
SEPT	2,510.0	112.3	5.4	117.7	2,392.3	0	0	0	0	117.7	40.8	.2	41.0	0	0	0	41.0	220.4
OCT	2,510.0	122.8	6.9	129.7	2,380.3	0	0	0	0	129.7	0	0	0	0	0	0	0	220.4
NOV	2,510.0	130.4	7.8	138.2	2,371.8	0	0	0	0	138.2	0	0	0	0	0	0	0	220.4
DEC	2,510.0	155.0	9.1	164.1	2,345.9	0	0	0	0	164.1	0	0	0	0	0	0	0	220.4
YEAR											219.2	1.2	220.4	0	0	0	220.4	

ACCUMULATED DEBIT FROM NORMAL RELEASE					
ITEM		DEBIT	CREDIT	BALANCE	
P1	Accrued Debit at Beginning of Year			Gr	812.3
P2	Actual Release during Year	220.4		Gr	591.9
P3	Normal Release for Year		790.0	Gr	1,381.9
P4	Under-release in Excess of 150.0	419.6		Gr	962.3
P5					
P6					
P7	Accrued Debit at End of Year			Gr	962.3

REMARKS: * 2,515 used for 1954; estimated 5,000 acre-ft depletion from silt in 1955. Exceptions to report as set forth in transcript of Annual Meeting, February 1956.

TIME OF HYDROLOGICAL SPILL Did not occur

REMARKS:

* 2,515 used for 1954; estimated 5,000 acre-ft depletion from silt in 1955. Exceptions to report as set forth in transcript of Annual Meeting, February 1956.

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REPORTS - CALENDAR YEAR 1955

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COST OF OPERATION, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1955
 Adopted at the Seventeenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	4,400	2,200	2,200		
In New Mexico above Caballo Reservoir. Caballo Reservoir and below.....	8,800 2,600	6,000 100		2,800	2,500
Sub-total	15,800	8,300	2,200	2,800	2,500
ADMINISTRATION					
U.S.G.S. Contract.....	2,974.67	430	881.43	863.25	799.99
Other expense.....					
Sub-total	2,974.67	430	881.43	863.25	799.99
TOTAL.....	18,774.67	8,730	3,081.43	3,663.25	3,299.99
EQUAL SHARES OF STATES.....			3,348.22	3,348.23	3,348.22
CASH ADJUSTMENT BETWEEN STATES.....			Dr 266.79	Cr 315.02	Dr 48.23

BUDGET, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1957
 Adopted at the Seventeenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	6,000	3,200	2,800		
In New Mexico, above Caballo Reservoir.. Caballo Reservoir and below.....	9,000 2,900	6,200 100		2,800	2,800
Sub-total	17,900	9,500	2,800	2,800	2,800
ADMINISTRATION					
U.S.G.S. Contract.....	4,030	430	1,200	1,200	1,200
Other expense.....	1,500		500	500	500
Sub-total	5,530	430	1,700	1,700	1,700
TOTAL.....	23,430	9,930	4,500	4,500	4,500
EQUAL SHARES OF STATES.....			4,500	4,500	4,500
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

002921

46

RIO GRANDE COMPACT COMMISSION

OFFICE OF THE SECRETARY
POST OFFICE BOX 277
SANTA FE, NEW MEXICO

February 22, 1957

His Excellency, Price Daniel
Governor of the State of Texas
Austin, Texas

His Excellency, Stephen L. R. McNichols
Governor of the State of Colorado
Denver, Colorado

His Excellency, Edwin L. Mechem
Governor of the State of New Mexico
Santa Fe, New Mexico

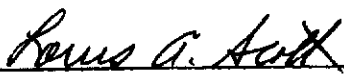
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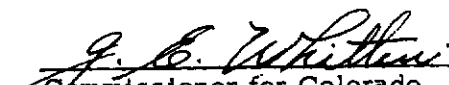
Pursuant to the provisions of Article XII of the Rio Grande Compact, the 18th annual meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico on February 21, 22, 1957.

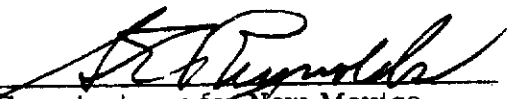
During this meeting the Commission reviewed the report of the Secretary covering records of stream flow at Compact stations and storage in reservoirs, and considered computations of debits and credits made by the Secretary. No action was taken relative thereto.

Expenses of administration of the Rio Grande Compact during the fiscal year ending June 30, 1956 were \$24,100, of which \$10,525 was borne by the United States and the balance of \$13,575 was borne equally by the three states party to the Compact.

Respectfully,


Commissioner for Texas


Commissioner for Colorado


Commissioner for New Mexico

RIO GRANDE COMPACT DELIVERIES BY COLORADO AT STATE LINE

YEAR 1956

002922

REPORTS - CALENDAR YEAR 1956

47

Quantities in Thousands of Acre Feet to Nearest Hundred

CONCEJOS INDEX SUPPLY												RIO GRANDE INDEX SUPPLY												DELIVERIES				
MONTH	MEASURED FLOW				ADJUSTMENTS				SUPPLY				RECORDED FLOW NEAR DEL MONTE	ADJUSTMENTS						SUPPLY		CONCEJOS RIVER NEAR LOS SAUCES	RIO GRANDE CONCEJOS RIVER	AT RIO GRANDE	LOBOS	TOTAL ACCUMULATED		
	CONCEJOS AT MOUTHS	LOS PINOS NEAR MOUTHS	SAN ANTONIO AT MOUTHS	TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL	CHANGE AT END OF MONTH	STORAGE IN MONTH		DIVERSIONS	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26			
					0					4		0.7						4						4				
JAN	2.7	-	-	2.7	0	0	0	0	2.7	2.7	9.9	.7	0	0	0	0	9.9	9.9	2.3	9.9	12.2	12.2						
FEB	2.3	-	-	2.3	0	0	0	0	2.3	5.0	8.4	.8	+1.1	0	0	+1.1	8.5	18.4	2.5	8.8	11.3	23.5						
MAR	7.0	-	-	7.0	0	0	0	0	7.0	12.0	13.5	.8	0	0	0	0	13.5	31.9	2.7	6.3	9.0	32.5						
APR	16.8	13.5	4.8	35.1	0	0	0	0	35.1	47.1	25.2	.8	0	0	0	0	25.2	57.1	1.7	2.6	4.3	36.8						
MAY	66.8	25.7	2.2	94.7	1.5	+1.5	0	+1.5	96.2	143.3	107.9	.7	-1.1	0	0	-1.1	107.8	164.9	5.9	3.8	9.7	46.5						
JUN	51.9	7.9	.1	59.9	3.5	+2.0	+1.1	+2.1	62.0	205.3	106.5	.9	+2.2	-3.3	0	-1.1	106.4	271.3	8.8	5.5	14.3	60.8						
JUL	7.2	1.2	0	8.4	3.5	0	0	0	8.4	213.7	21.3	.7	-2.2	0	+2.2	0	21.3	292.6	0	.7	.7	61.5						
AUG	3.4	.8	0	4.2	3.5	0	0	0	4.2	217.9	11.7	.4	-3.3	0	0	-3.3	11.4	304.0	0	.2	.2	61.7						
SEPT	1.6	.5	0	2.1	3.5	0	+1.1	+1.1	2.2	220.1	8.0	.3	-1.1	0	0	-1.1	7.9	311.9	0	.1	.1	61.8						
OCT	2.1	.6	0	2.7	3.5	0	0	0	2.7	222.8	8.2	.3	0	0	0	0	8.2	320.1	.8	.8	.8	62.6						
NOV	2.2	-	-	2.2	3.5	0	0	0	2.2	225.0	6.8	.3	0	0	0	0	6.8	326.9	.8	2.9	3.7	66.3						
DEC	1.8	-	-	1.8	3.5	0	0	0	1.8	226.8	6.5	.4	+1.1	0	0	+1.1	6.6	333.5	1.6	2.7	4.3	70.6						
YEAR	165.8	50.2	7.1	223.1	-	+3.5	+2.2	+3.7	226.8	-	333.9	-	-3.3	-3.3	+2.2	-4.4	333.5	-	26.3	44.3	70.6	-	-	-	-			

REMARKS:
Revision of Concejos Index Supply for 1955 from 186.3 to 186.4 does not increase scheduled delivery for 1956.
The 184 acre-ft of transmountain water stored in Alberta Park Reservoir since June 1954 was released before Sept. 30, 1956. (See transcript for exceptions by Commissioners.) Checked by Engineer Advisers Feb. 21, 1957, except evaporation.

SUMMARY OF DEBITS AND CREDITS			
ITEM	DEBIT	CREDIT	BALANCE
C1	Balance at Beginning of Year		Dr 287.2
C2	Scheduled Delivery from Concejos River	61.1	Dr 348.3
C3	Scheduled Delivery from Rio Grande	82.4	Dr 430.7
C4	Actual Delivery of Lobos plus 10 000 Acre Feet		Dr 350.1
C5	Reduction of Debits % Evaporation	80.6	Dr 349.9
C6	Reduction of Credits % Evaporation	.2	Dr 349.9
C7			Dr 349.9
C8	Balance at End of Year		Dr 349.9

RIO GRANDE COMPACT DELIVERIES BY NEW MEXICO AT ELEPHANT BUTTE

YEAR 1956

Quantities in Thousands of Acre Feet to Nearest Hundred

NATURAL FLOW AT OTOMI BRIDGE															ELEPHANT BUTTE EFFECTIVE SUPPLY														
MONTH	RECORDED FLOW AT OTOMI BRIDGE	STORAGE IN RESERVOIRS LOCATED TO OTOMI				OTHER ADJUSTMENTS PER ARTICLE II	OTOMI INDEX SUPPLY		TOTAL WATER STORED IN NEW MEXICO ABOVE SAN MARCIAL AT END OF MONTH	STORAGE IN ELEPHANT BUTTE RESERVOIR		RECORDED FLOW BELOW ELEPHANT BUTTE DAM	ADJUSTMENT OF MEASUREMENTS	ACTUAL EFFECTIVE SUPPLY															
		TOTAL AT END OF MONTH	CHANGE GAIN (+) LOSS (-)	EVAPORATION DURING MONTH	DURING MONTH (2+4+5+6)		ACCUMULATED TOTAL	AT END OF MONTH		CHANGE GAIN (+) LOSS (-)	DURING MONTH (1+12+14)			ACCUMULATED TOTAL															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15															
		0.3					9	1.9	1135.5					9															
JAN	33.6	.3	0	0	-	33.6	33.6	1.8	166.1	+30.6	0.3	-	30.9	30.9															
FEB	30.8	.5	+2	0	-	31.0	64.6	2.0	195.3	+29.2	.3	-	29.5	60.4															
MAR	42.0	.9	+4	0	-	42.4	107.0	2.6	163.0	-32.3	57.9	-	25.6	86.0															
APR	59.4	9.5	+8.6	0	-	68.0	175.0	10.9	143.9	-19.1	39.3	-	20.2	106.2															
MAY	57.4	34.0	+24.5	0	-	81.9	256.9	35.3	156.9	+13.0	1.8	-	14.8	121.0															
JUN	37.1	28.5	-5.5	+1	-	31.7	288.6	29.3	108.2	-48.7	53.8	-	5.1	126.1															
JUL	18.2	17.7	-10.8	0	-	7.4	296.0	18.3	63.5	-44.7	47.9	-	3.2	129.3															
AUG	16.6	9.0	-8.7	0	-	7.9	303.9	10.0	40.1	-23.4	35.0	-	11.6	140.9															
SEPT	15.2	.3	-8.7	0	-	6.5	310.4	.6	27.1	-13.0	16.1	-	3.1	144.0															
OCT	10.3	.5	+2	0	-	10.5	320.9	.9	28.9	+1.8	.3	-	2.1	146.1															
NOV	16.7	.5	0	0	-	16.7	337.6	1.3	31.3	+2.4	.3	-	2.7	148.8															
DEC	22.2	.5	0	0	-	22.2	359.8	1.5	35.1	+3.8	.4	-	4.2	153.0															
YEAR	359.5		+2	+1	-	359.8				-100.4	253.4	-	153.0																
REMARKS:															SUMMARY OF DEBITS AND CREDITS														
															ITEM		DEBIT	CREDIT	BALANCE										
															WM1	Balance at Beginning of Year													
															WM2	Scheduled Delivery of Elephant Butte			Dr 477.3										
															WM3	Actual Elephant Butte Effective Supply	205.1		Dr 682.4										
															WM4	Reduction of Debits % Evaporation		153.0	Dr 529.4										
															WM5	Reduction of Credits % Evaporation	0	0	Dr 529.4										
															WM6				Dr 529.4										
															WM7														
															WM8	Balance at End of Year			Dr 529.4										
† Based on new capacity table. Reported in 1955 as 155.0. (See transcript for Exceptions by Commissioners.) Checked by Engineer Advisers (except Evaporation) Feb. 21, 1957.																													

002924

Quantities in Thousands of Acre Feet to Nearest Hundred

49

* Based on new capacity table. Reported in 1955 as 155.0 a Approximate, subject to revision when silt survey is completed. (See transcript for exceptions by Commissioners.)

RIO GRANDE COMPACT COMMISSION REPORT

COST OF OPERATION, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1956
 Adopted at the Eighteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	6,450	3,225	3,225		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	9,730 3,590	6,505 365		3,225	3,225
Sub-total	19,770	10,095	3,225	3,225	3,225
ADMINISTRATION					
U.S.G.S. Contract.....	4,330	430	1,300	1,300	1,300
Other expense.....					
Sub-total	4,330	430	1,300	1,300	1,300
TOTAL.....	24,100	10,525	4,525	4,525	4,525
EQUAL SHARES OF STATES.....			4,525	4,525	4,525
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

BUDGET, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1958
 Adopted at the Eighteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	6,840	3,420	3,420		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	10,320 3,800	6,900 380		3,420	3,420
Sub-total	20,960	10,700	3,420	3,420	3,420
ADMINISTRATION					
U.S.G.S. Contract.....	3,300	450	950	950	950
Other expense.....	1,800		600	600	600
Sub-total	5,100	450	1,550	1,550	1,550
TOTAL.....	26,060	11,150	4,970	4,970	4,970
EQUAL SHARES OF STATES.....			4,970	4,970	4,970
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

002926

RIO GRANDE COMPACT COMMISSION

51

OFFICE OF THE SECRETARY
POST OFFICE BOX 277
SANTA FE, NEW MEXICO

February 21, 1958

His Excellency, Stephen L. R. McNichols
Governor of the State of Colorado
Denver, Colorado

His Excellency, Edwin L. Mechem
Governor of the State of New Mexico
Santa Fe, New Mexico

His Excellency, Price Daniel
Governor of the State of Texas
Austin, Texas

Sirs:

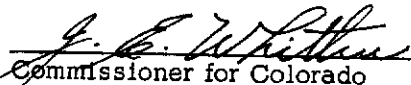
Pursuant to the provisions of Article XII of the Rio Grande Compact, the 19th annual meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico, on February 20 and 21, 1958.

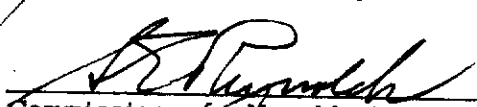
The Commission reviewed the reports of the Secretary relative to streamflow at Compact gaging stations and storage in reservoirs. The Commission found:

- (1) Deliveries by Colorado amounted to 444,900 acre feet; the scheduled delivery was 601,100 acre feet. Colorado incurred an annual debit of 156,200 acre feet including 27,800 acre feet gain in water stored. The accrued debit of Colorado, after minor adjustments required by the Compact, amounted to 506,200 acre feet on December 31, 1957.
- (2) Deliveries by New Mexico amounted to 1,127,900 acre feet; the scheduled delivery was 1,068,500 acre feet. New Mexico had an annual credit of 59,400 acre feet and gained 7,700 acre feet of water in storage. The accrued debit of New Mexico, after minor adjustments required by the Compact, was 473,900 acre feet on December 31, 1957.
- (3) Releases from Project Storage amounted to 398,000 acre feet in 1957. The quantity of usable water in Project Storage was less than 400,000 acre feet until July 31, 1957 and it amounted to 789,700 acre feet on December 31, 1957.

Expenses of administration of the Rio Grande Compact during the fiscal year ending June 30, 1957, were \$23,650, of which \$10,525 was borne by the United States and the balance of \$13,125 was borne equally by the three states party to the Compact.

Respectfully,


Commissioner for Colorado


Commissioner for New Mexico

RIO GRANDE COMPACT DELIVERIES BY COLORADO AT STATE LINE

YEAR 1957

Quantities in Thousands of Acre Feet to Nearest Hundred

CONJOS INDEX SUPPLY												RIO GRANDE INDEX SUPPLY												DELIVERIES				
MONTH	MEASURED FLOW				ADJUSTMENTS				SUPPLY				NEAR DEL. MONTH	ADJUSTMENTS						SUPPLY		CONJOS RIVER AT MOUNTAIN NEAR LOS SAUCES	RIO GRANDE LESS CONJOS RIVER	RIO GRANDE AT LOBATOS	ACCUMULATED TOTAL LOBATOS			
	CONJOS AT MOUNTAIN	LOS RIOS ONITE	SAN ANTONIO ONITE	TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE		TRANSMOUNTAIN DIVERSIONS	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
					3.5					4		0.4						4				4						
JAN	3.9	-	-	3.9	1.0	-2.5	0	-2.5	1.4	1.4	6.6	.4	0	0	0	0	6.6	6.6	2.6	2.0	4.6	4.6						
FEB	2.6	-	-	2.6	1.0	0	0	0	2.6	4.0	7.8	.5	+1	0	0	+1	7.9	14.5	2.1	3.6	5.7	10.3						
MAR	3.8	-	-	3.8	1.0	0	0	0	3.8	7.8	11.3	.5	0	0	0	0	11.3	25.8	1.5	2.6	4.1	14.4						
APR	15.2	8.0	4.8	28.0	1.0	0	0	0	28.0	35.8	37.8	.6	+1	0	0	+1	37.9	63.7	1.9	2.0	3.9	18.3						
MAY	46.2	39.4	18.1	103.7	3.6	+2.6	0	+2.6	106.3	142.1	82.9	.7	+1	-3	0	-2	82.7	146.4	31.9	9.5	41.4	59.7						
JUN	117.8	60.8	6.4	185.0	42.9	+39.3	+2	+39.5	224.5	366.6	271.4	.9	+2	-2	+1	+1	271.5	417.9	75.2	43.8	119.0	178.7						
JUL	92.3	15.8	.7	108.8	50.4	+7.5	+1	+7.6	116.4	483.0	212.2	1.1	+2	0	0	+2	212.4	630.3	69.6	53.2	122.8	301.5						
AUG	27.0	6.2	1.1	34.3	50.4	0	+1	+1	34.4	517.4	107.3	1.1	0	0	0	0	107.3	737.6	16.4	35.4	51.8	353.3						
SEPT	10.7	2.1	.2	13.0	50.4	0	+1	+1	13.1	530.5	42.4	1.1	0	0	0	0	42.4	780.0	3.4	17.7	21.1	574.4						
OCT	11.7	1.6	.2	13.5	44.3	-6.1	0	-6.1	7.4	537.9	26.3	1.1	0	0	0	0	26.3	806.3	5.0	5.0	10.0	384.4						
NOV	18.4	-	-	18.4	31.3	-13.0	0	-13.0	5.4	543.3	22.3	1.1	0	0	0	0	22.3	828.6	17.3	19.7	37.0	421.4						
DEC	4.1	-	-	4.1	31.3	0	0	0	4.1	547.4	15.1	1.1	0	0	0	0	15.1	843.7	5.1	18.4	23.5	444.9						
YEAR	353.7	133.9	31.5	519.1		+27.8	+5	+28.3	547.4		843.4		+7	-5	+1	+3	843.7		232.0	212.9	444.9							

SUMMARY OF DEBITS AND CREDITS				
ITEM	DEBIT	CREDIT	BALANCE	
C1	Balance at Beginning of Year		Dr	349.9
C2	Scheduled Delivery from Conchos River	323.5	Dr	673.4
C3	Scheduled Delivery from Rio Grande	237.6	Dr	961.0
C4	Actual Delivery at Lobatos plus 10,000 Acre Feet		454.9	506.1
C5	Reduction of Debits % Evaporation		.4	505.7
C6	Reduction of Credits % Evaporation	0		505.7
C7	Revisions - Lobatos (4)	.5		506.2
C8	Balance at End of Year		Dr	506.2

REMARKS:

Column 6--Platoro Reservoir only through May; then inclusive of 900 acre-ft in Trujillo Meadows Reservoir which was stored when Project Storage was less than 400,000 acre-ft.

Column 13 includes 598 acre-ft of transmountain water stored in Alberta Park Reservoir through exchange.

a Includes 100 acre-ft evaporation from Trujillo Meadows Reservoir.

b Evaporation from Alberta Park Reservoir.

c Rio Grande at Lobatos for 1956 revised from 70.6 to 70.1

REMARKS:

Column 6--Platoro Reservoir only through May; then inclusive of 900 acre-ft in Trujillo Meadows Reservoir which was stored when Project Storage was less than 400,000 acre-ft.
Column 13 includes 598 acre-ft of transmountain water stored in Alberta Park Reservoir through exchange.
a Includes 100 acre-ft evaporation from Trujillo Meadows Reservoir.
b Evaporation from Alberta Park Reservoir.
c Rio Grande at Lobatos for 1956 revised from 70.6 to 70.1

SUMMARY OF DEBITS AND CREDITS

ITEM	DEBIT	CREDIT	BALANCE
C1 Balance at Beginning of Year	323.5	—	Dr 349.9
C2 Scheduled Delivery from Conchos River	287.6	—	Dr 673.4
C3 Scheduled Delivery from Rio Grande	—	454.9	Dr 961.0
C4 Actual Delivery at Lobatos plus 10,000 Acre Feet	—	.4	Dr 508.1
C5 Reduction of Debits % Evaporation	0	—	Dr 505.7
C6 Reduction of Credits % Evaporation	—	—	Dr 505.2
C7 Revisions - Lobatos (4)	—	—	—
C8 Balance at End of Year	—	—	—

Quantities in Thousands of Acre Feet to Nearest Hundred

NATURAL FLOW AT OTOMI BRIDGE

MONTH	RECORDED FLOW AT OTOMI BRIDGE	STORAGE IN RESERVOIRS LOCATED TO OTOMI				OTHER ADJUSTMENTS PER ARTICLE IV	OTOMI WATER SUPPLY		TOTAL WATER STORED IN NEW MEXICO ABOVE SAN MARCIAL AT END OF MONTH	ELEPHANT BUTTE RESERVOIR				RECORDED FLOW BELOW ELEPHANT BUTTE DAM	ADJUSTMENT OF MEASUREMENTS	ACTUAL EFFECTIVE SUPPLY	
		TOTAL AT END OF MONTH	CHANGE GAIN (+) LOSS (-)	EVAPORATION DURING MONTH	DURING MONTH (2+4+5+6)		ACCUMULATED TOTAL	AT END OF MONTH		CHANGE GAIN (+) LOSS (-)	DURING MONTH (11+12+13)	ACCUMULATED TOTAL					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
JAN	24.7	0.5	—	—	—	—	—	1.5	32.9	—	—	—	—	—			
FEB	30.6	.6	+0.1	0	0	24.8	24.8	1.6	47.3	+14.4	0.4	—	—	—			
MAR	30.1	.7	+1.1	0	0	30.7	55.5	1.7	68.4	+21.1	.3	—	14.8	14.8			
APR	69.4	.8	+1.1	+1.1	0	30.3	85.8	1.8	64.3	-4.1	22.3	—	21.4	36.2			
MAY	217.5	2.8	+2.0	0	0	71.4	157.2	4.7	50.2	-14.1	29.8	—	18.2	54.4			
JUN	300.7	50.7	+47.9	+1.1	0	265.5	422.7	54.2	160.6	+110.4	.5	—	15.7	70.1			
JUL	266.4	166.7	+116.0	+6	0	417.3	840.0	170.1	267.4	+106.8	81.3	—	110.9	181.0			
AUG	203.4	100.5	-66.2	+3	0	200.5	1,040.5	103.6	381.0	+113.6	104.3	—	188.1	369.1			
SEPT	105.4	56.9	-43.6	+2	+	160.1	1,200.6	61.5	509.3	+128.3	99.6	—	217.9	587.0			
OCT	58.0	18.4	-38.5	0	0	66.9	1,267.5	21.7	556.1	+46.8	44.9	—	227.9	814.9			
NOV	99.5	16.6	-1.8	+1	0	56.3	1,323.8	20.2	635.9	+79.8	.4	—	91.7	906.6			
DEC	58.3	.4	-16.2	0	0	83.3	1,407.1	4.1	731.5	+95.6	.4	—	80.2	986.8			
YEAR	1,464.0	8.2	+7.8	0	0	66.1	1,473.2	12.0	776.1	+44.6	.5	—	96.0	1,082.8			
REMARKS:			+7.7	+1.4	+1.1	1,473.2				+743.2	384.7		45.1	1,127.9			

* Depletion due to stock tanks.
NW6 Recomputation of change in Elephant Butte Reservoir storage using revised capacity curve for 1956.

SUMMARY OF DEBITS AND CREDITS

ITEM			DEBIT	CREDIT	BALANCE
NW1	Balance of Beginning of Year		—	—	Dr 529.4
NW2	Scheduled Delivery of Elephant Butte		1,068.5	—	Dr 1,597.9
NW3	Actual Elephant Butte Effective Supply		—	1,127.9	Dr 470.0
NW4	Reduction of Debits % Evaporation		—	1.4	Dr 468.6
NW5	Reduction of Credits % Evaporation		0	—	Dr 468.6
NW6	Reduction of Credits a/c Revisions 1956	4.2	—	—	Dr 472.8
NW7	Cancellation of Evap. Cr. 1955	1.1	—	—	Dr 473.9
NW8	Balance at End of Year		—	—	Dr 473.9

* Depletion due to stock tanks.
 NM6 Recomputation of change in Elephant Butte Reservoir storage using revised capacity curve for 1956.

SUMMARY OF DEBITS AND CREDITS

ITEM	DEBIT	CREDIT	BALANCE
NM1 Balance at Beginning of Year	—	—	Dr 529.4
NM2 Scheduled Delivery of Elephant Butte	—	—	Dr 1,597.9
NM3 Actual Elephant Butte Effective Supply	1,088.5	—	Dr 1,597.9
NM4 Reduction of Debits % Evaporation	—	1,127.9	Dr 470.0
NM5 Reduction of Credits % Evaporation	—	1.4	Dr 468.6
NM6 Reduction of Credits a/c Revisions 1956	4.2	—	Dr 472.8
NM7 Cancellation of Evap. Cr. 1955	1.1	—	Dr 473.9
NM8 Balance at End of Year	—	—	Dr 473.9

RIO GRANDE COMPACT

RELEASE AND SPILL FROM PROJECT STORAGE

YEAR 1957

Quantities in Thousands of Acre Feet to Nearest Hundred

MONTH	USABLE WATER IN STORAGE				CREDIT WATER IN STORAGE				FLOOD WATER IN STORAGE		TOTAL WATER IN PROJECT STORAGE		RIO GRANDE BELOW CABALLO DAM				USABLE RELEASE	
	TOTAL PROJECT STORAGE CAPABILITY AT END OF MONTH (a)	ELEPHANT BUTTE RESERVOIR	CABALLO RESERVOIR	TOTAL AT END OF MONTH	UNFILLED CAPACITY OF PROJECT STORAGE AT END OF MONTH	COLORADO CREDIT WATER	NEW MEXICO CREDIT WATER	TOTAL AT END OF MONTH	FLOOD WATER IN CABALLO RESERVOIR AT END OF MONTH	TOTAL WATER IN PROJECT STORAGE AT END OF MONTH	MEASURED FLOW AT CABALLO GAGING STATION	INTERFERING DIVERSIONS TO CANALS	TOTAL RELEASE AND SPILL	CABALLO FLOOD WATER	CREDIT WATER	USABLE WATER	NET DRAINING MONTH	ACCUMULATED TOTAL
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	2,547.7	632.9	6.8	39.72,508.0	0	0	0	0	0	39.7	—	—	—	—	—	—	—	0
JAN	2,547.7	47.3	7.8	55.12,492.6	0	0	0	0	0	55.1	0	0	0	0	0	0	0	0
FEB	2,547.7	68.4	8.7	77.12,470.6	0	0	0	0	0	77.1	0	0	0	0	0	0	0	0
MAR	2,547.7	64.3	4.2	68.52,479.2	0	0	0	0	0	68.5	24.9	.2	25.1	0	0	0	25.1	25.1
APR	2,547.7	50.2	3.3	53.52,494.2	0	0	0	0	0	53.5	31.3	.1	31.4	0	0	0	31.4	56.5
MAY	2,547.7	160.6	4.7	165.32,382.4	0	0	0	0	0	165.3	.1	0	.1	0	0	0	.1	56.6
JUN	2,547.7	287.4	9.2	276.62,271.1	0	0	0	0	0	276.6	70.7	.2	70.9	0	0	0	70.9	127.5
JUL	2,547.7	381.0	19.6	400.62,147.1	0	0	0	0	0	400.6	91.3	.2	91.5	0	0	0	91.5	219.0
AUG	2,547.7	509.3	21.5	530.82,016.9	0	0	0	0	0	530.8	113.6	.2	113.8	0	0	0	113.8	332.8
SEPT	2,547.7	556.1	3.9	560.01,987.7	0	0	0	0	0	560.0	65.1	0	65.1	0	0	0	65.1	397.9
OCT	2,547.7	635.9	9.9	645.81,901.9	0	0	0	0	0	645.8	.1	0	.1	0	0	0	.1	398.0
NOV	2,547.7	731.5	11.7	743.21,804.5	0	0	0	0	0	743.2	0	0	0	0	0	0	0	398.0
DEC	2,547.7	776.1	13.6	789.71,758.0	0	0	0	0	0	789.7	0	0	0	0	0	0	0	398.0
YEAR	—	—	—	—	—	—	—	—	—	—	397.1	.9	398.0	0	0	0	398.0	—

ACCUMULATED DEPARTURE FROM NORMAL RELEASE									
ITEM	DEBIT	CREDIT	DRAINAGE						
P1	Accrued Departure at Beginning of Year	—	—	Gr	1,112.3				
P2	Actual Release during Year	—	—	Gr	714.3				
P3	Normal Release for Year	—	—	Gr	790.0				
P4	Under-release in Excess of 150.0	242.0	—	Gr	1,504.3				
P5	—	—	—	Gr	1,262.3				
P6	—	—	—	Gr	1,262.3				
P7	Accrued Departure at End of Year	—	—	Gr	1,262.3				

TIME OF HYPOTHETICAL SPILL		Did not occur	
—	—	—	—

REMARKS:

a Revised on basis of 1957 silt survey.

b Revised on basis of new capacity table. Reported in 1956 as 35.1

002930

REPORTS - CALENDAR YEAR 1957

55

COST OF OPERATION, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1957
 Adopted at the Nineteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	6,450	3,225	3,225		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	9,730 3,590	6,505 365		3,225	
Sub-total	19,770	10,095	3,225	3,225	3,225
ADMINISTRATION					
U.S.G.S. Contract.....	3,880	430	1,150	1,150	1,150
Other expense.....					
Sub-total	3,880	430	1,150	1,150	1,150
TOTAL.....	23,650	10,525	4,375	4,375	4,375
EQUAL SHARES OF STATES.....			4,375	4,375	4,375
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

BUDGET, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1959
 Adopted at the Nineteenth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	7,400	3,700	3,700		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	11,180 4,110	7,480 410		3,700	
Sub-total	22,690	11,590	3,700	3,700	3,700
ADMINISTRATION					
U.S.G.S. Contract.....	3,450	450	1,000	1,000	1,000
Other expense.....	1,800		600	600	600
Sub-total	5,250	450	1,600	1,600	1,600
TOTAL.....	27,940	12,040	5,300	5,300	5,300
EQUAL SHARES OF STATES.....			5,300	5,300	5,300
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

RIO GRANDE COMPACT COMMISSION

OFFICE OF THE SECRETARY
POST OFFICE BOX 277
SANTA FE, NEW MEXICO

February 20, 1959

His Excellency, John M. Burroughs
Governor of the State of New Mexico
Santa Fe, New Mexico

His Excellency, Price Daniel
Governor of the State of Texas
Austin, Texas

His Excellency, Stephen L. R. McNichols
Governor of the State of Colorado
Denver, Colorado

Sirs:

The 20th Annual Meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico, on February 19 and 20, 1959.

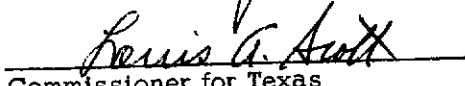
The Commission reviewed the reports of the Secretary relative to stream flow at Compact gaging stations and storage in reservoirs. The Commission found that:

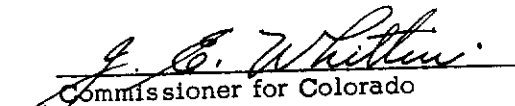
- (a) The actual delivery of water by Colorado at Lobatos in 1958 was 362,500 acre feet, which was 13,100 acre feet greater than the scheduled delivery. The accrued debit of Colorado was 492,400 acre feet as of December 31, 1958.
- (b) The actual delivery of water by New Mexico, measured by the Elephant Butte Effective Supply, was 1,103,900 acre feet in 1958 which was 1,800 acre feet greater than the scheduled delivery. The accrued debit of New Mexico was 468,700 acre feet as of December 31, 1958.
- (c) Releases of usable water from project storage amounted to 738,000 acre feet in 1958, which was 52,000 acre feet less than the normal release defined by the Compact. The total quantity of water in project storage was 1,134,800 acre feet on December 31, 1958.

Expenses of administration of the Rio Grande Compact were \$25,200 during the fiscal year ending June 30, 1958; of which \$11,550 were borne by the United States and the balance of \$13,650 was borne equally by the three states party to the Compact.

Respectfully,


Commissioner for New Mexico


Commissioner for Texas


Commissioner for Colorado

002932

REPORTS - CALENDAR YEAR 1958

CONJOS INDEX SUPPLY															RIO GRANDE INDEX SUPPLY															DELIVERIES				
MONTH	MEASURED FLOW					ADJUSTMENTS					SUPPLY					RECORDED FLOW	ADJUSTMENTS					SUPPLY					CONJOS AVEA. NEAR LOS SAUCES	RIO GRANDE LESS CONJOS AVEA.	AT GRANDE	AT LOBATOS	ACCUMULATED AT LOBATOS			
	CONJOS AT MOGOTE	LOS RINOS ORITZ	SAN RAMON ORITZ	TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	OTHER ADJUSTMENTS	NET ADJUSTMENT	SUPPLY IN MONTH	ACCUMULATED TOTAL	STORAGE AT END OF MONTH	CHANGE IN STORAGE	TRANS-MOUNTAIN DIVERSIONS	OTHER ADJUSTMENTS	NET ADJUSTMENT		SUPPLY IN MONTH	ACCUMULATED TOTAL	CONJOS AVEA. NEAR LOS SAUCES	RIO GRANDE LESS CONJOS AVEA.	AT GRANDE	AT LOBATOS	ACCUMULATED AT LOBATOS											
JAN	3.3	-	-	3.3	31.3	0	0	0	3.3	3.3	10.1	81.1	0	0	0	0	0	10.2	10.2	4.4	11.3	15.7	15.7	4	-	-	-							
FEB	4.0	-	-	4.0	31.3	0	0	0	4.0	7.3	12.2	1.2	0	0	0	0	0	12.2	22.4	4.5	13.8	18.3	34.0	-	-	-	-							
MAR	5.1	-	-	5.1	31.3	0	0	0	5.1	12.4	13.1	1.2	0	0	0	0	0	13.1	35.5	4.3	20.2	24.5	58.5	-	-	-	-							
APR	13.3	8.4	8.5	30.2	31.3	0	+2	+2	30.4	42.8	42.2	1.2	0	0	0	0	0	42.2	77.7	16.6	25.1	41.7	100.2	-	-	-	-							
MAY	73.4	55.2	18.6	147.2	54.0	+22.7	+2	+22.9	170.1	212.9	233.3	1.8	+6	0	0	0	0	233.9	311.6	67.7	91.4	159.1	259.3	-	-	-	-							
JUN	75.8	16.1	.6	92.5	54.9	+9	+4	+1.3	93.8	306.7	199.4	1.8	0	0	0	0	0	199.4	511.0	23.3	48.1	71.4	30.7	-	-	-	-							
JUL	25.2	1.8	0	27.0	39.0	-15.9	+2	-15.7	11.3	318.0	104.9	1.1	-7	-2	+1	-8	0	104.1	615.1	.2	4.2	4.4	35.1	-	-	-	-							
AUG	10.7	1.3	.1	12.1	34.9	-4.1	0	-4.1	8.0	326.0	48.5	.6	-5	0	+3	-2	0	48.3	663.4	0	2.0	2.0	37.1	-	-	-	-							
SEPT	8.0	1.2	0	7.2	34.9	0	+1	+1	7.3	333.3	23.4	.3	-3	0	+2	-1	0	23.3	686.7	0	1.8	1.8	38.9	-	-	-	-							
OCT	4.3	.9	.1	5.3	34.9	0	+1	+1	5.4	338.7	17.0	.3	0	0	0	0	0	17.0	703.7	.1	2.9	3.0	41.9	-	-	-	-							
NOV	3.4	-	-	3.4	34.9	0	0	0	3.4	342.1	10.7	.3	0	0	0	0	0	10.7	714.4	1.3	6.2	7.5	49.4	-	-	-	-							
DEC	3.2	-	-	3.2	34.9	0	0	0	3.2	345.3	9.4	.4	+1	0	0	+1	0	9.5	723.9	2.0	11.1	13.1	362.5	-	-	-	-							
YEAR	227.7	84.9	27.9	340.5	-	+3.6	+1.2	+4.8	345.3	-	724.2	-	-7	-2	+6	-3	723.9	-	124.4	238.1	382.5	-	-	-	-	-	-							

REMARKS:

Column 6 includes 913 acre-ft in Trujillo Meadows Reservoir.

a Exclusive of Rito Hondo Reservoir.

b Includes 100 acre-ft evaporation.

c The 598 acre-ft of transmountain water stored by exchange in Alberta Park Reservoir was released during July, August and September.

Note.--No adjustments a/c evaporation are applied to Rio Grande Index Supply.

SUMMARY OF DEBITS AND CREDITS

ITEM	DEBIT	CREDIT	BALANCE
C1 Balance at Beginning of Year			506.2
C2 Scheduled Delivery from Conchos River	143.4		649.6
C3 Scheduled Delivery from Rio Grande	216.0		865.6
C4 Actual Delivery of Tobollos plus 10,000 Acre Feet		372.5	493.1
C5 Reduction			

Column 6 includes 913 acre-ft in Trujillo Meadows Reservoir.
a Exclusive of Rito Hondo Reservoir.
b Includes 100 acre-ft evaporation.
c The 598 acre-ft of transmountain water stored by exchange in Alberta Park Reservoir was released during July, August and September.
Note.--No adjustments a/c evaporation are applied to Rio Grande Index Supply.

DELIVERIES BY NEW MEXICO AT ELEPHANT BUTTE

YEAR 1958

Quantities in Thousands of Acre Feet to Nearest Hundred

Quantities in Thousands of Acre Feet to Nearest Hundred

MONTH	NATURAL FLOW AT OTOWI BRIDGE										ELEPHANT BUTTE EFFECTIVE SUPPLY							
	STORAGE IN RESERVOIRS LODAMOS TO OTOWI			OTHER ADJUSTMENTS PER ARTICLE III	OTOWI INDEX SUPPLY		TOTAL WATER STORED IN NEW MEXICO ABOVE SAN MARCIL AT END OF MONTH	STORAGE IN ELEPHANT BUTTE RESERVOIR		RECORDED FLOW BELOW ELEPHANT BUTTE DAM	ADJUSTMENT OF MEASUREMENTS	ACTUAL EFFECTIVE SUPPLY						
	RECORDED FLOW AT OTOWI BRIDGE	TOTAL AT END OF MONTH	CHANGE GAIN (+) LOSS (-)		EVAPORATION DURING MONTH	AT END OF MONTH		CHANGE GAIN (+) LOSS (-)	DURING MONTH (2+4+5+6)			ACCUMULATED TOTAL	DURING MONTH (11+12+13)	ACCUMULATED TOTAL				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15				
			8.2				Φ	12.0	776.1					Φ				
JAN	45.4	13.0	+4.8	0	0	50.2	50.2	16.9	773.1	-3.0	43.1	-	40.1	40.1				
FEB	55.0	24.0	+11.0	0	0	66.0	116.2	27.8	753.3	-19.8	69.7	-	49.9	90.0				
MAR	70.9	38.6	+14.6	+2	0	85.7	201.9	42.9	705.9	-47.4	118.5	-	71.1	161.1				
APR	242.3	84.0	+45.4	+3	0	288.0	489.9	127.3	776.3	+70.4	102.7	-	173.1	334.2				
MAY	537.4	192.4	+108.4	+9	0	646.7	1,136.6	265.4	1,097.9	+321.6	81.2	-	402.8	737.0				
JUN	235.0	170.6	-21.8	+1.2	0	214.4	1,351.0	183.0	1,209.3	+111.4	113.2	-	224.6	961.6				
JUL	31.8	158.3	-12.3	+9	0	20.4	1,371.4	161.2	1,093.3	-116.0	113.9	-	-2.1	959.5				
AUG	52.6	128.1	-30.2	+5	+1	23.0	1,394.4	130.6	977.6	-115.7	107.8	-	-7.9	951.6				
SEPT	39.7	112.3	-15.8	+4	0	24.3	1,418.7	114.8	951.2	-26.4	40.2	-	13.8	965.4				
OCT	23.9	112.1	-2	+3	0	24.0	1,442.7	114.7	925.0	-26.2	31.2	-	5.0	970.4				
NOV	97.1	42.1	-70.0	0	0	27.1	1,469.8	44.7	954.3	+29.3	33.2	-	62.5	1,032.9				
DEC	77.0	2.4	-39.7	0	0	37.3	1,507.1	5.1	988.8	+34.5	36.5	-	71.0	1,103.9				
YEAR	1,508.1		-5.8	+4.7	+1	1,507.1				+212.7	891.2	-	1,103.9					

SUMMARY OF DEBITS AND CREDITS

ITEM	DEBIT	CREDIT	BALANCE
NM1 Balance of Beginning of Year			Dr 473.9
NM2 Scheduled Delivery at Elephant Butte	1,102.1		Dr 1,576.0
NM3 Actual Elephant Butte Effective Supply		1,103.9	Dr 472.1
NM4 Reduction of Debits % Evaporation		3.0	Dr 469.1
NM5 Reduction of Credits % Evaporation	0		Dr 469.1
NM6 Reduction of Debits a/c Revisions 1957 (a)		.4	Dr 468.7
NM7			Dr 468.7
NM8 Balance at End of Year			Dr 468.7

REMARKS:

* Depletion due to stock tanks.
a Rio Grande at Otowi Bridge November 1957 revised from 99,500 acre-ft
to 99,100 acre-ft.

REMARKS:

* Depletion due to stock tanks.
 a Rio Grande at Otowi Bridge November 1957 revised from 99,500 acre-ft.
 to 99,100 acre-ft.

RELEASE AND SPILL FROM PROJECT STORAGE

YEAR 1958

Quantities in Thousands of Acres Feet to Nearest Hundred

Quantities in Thousands of Acres Feet to Nearest Hundred

MONTH	USABLE WATER IN STORAGE				UNFILLED CAPACITY OF PROJECT STORAGE AT END OF MONTH	CREDIT WATER IN STORAGE			FLOOD WATER IN STORAGE IN CABALLO RESERVOIR AT END OF MONTH	TOTAL WATER IN PROJECT STORAGE AT END OF MONTH	MEASURED FLOW AT CABALLO GAGING STATION	RIO GRANDE BELOW CABALLO DAM				SPILL FROM STORAGE		USABLE RELEASE
	ELEPHANT BUTTE RESERVOIR	CABALLO RESERVOIR	TOTAL AT END OF MONTH	NEW MEXICO CREDIT WATER		COLORADO CREDIT WATER	TOTAL AT END OF MONTH	INTERVENING DIVERSIONS TO CANALS				TOTAL RELEASE AND SPILL	CABALLO FLOOD WATER	CREDIT WATER	USABLE WATER	NET DURING MONTH	ACCUMULATED TOTAL	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
JAN	2,550.8	776.1	611.9	788.0	1,762.8	0	0	0	0	788.0	—	—	—	—	—	—	—	—
FEB	2,550.8	773.1	47.5	820.6	1,730.2	0	0	0	0	820.6	0	0	0	0	0	0	0	0
MAR	2,550.8	753.3	104.2	857.5	1,693.3	0	0	0	0	857.5	.1	0	.1	0	0	0	0	0
APR	2,550.8	776.3	135.4	911.7	1,639.1	0	0	0	0	829.0	96.6	.2	96.8	0	0	0	96.8	96.9
MAY	2,550.8	1,087.9	118.5	1,216.4	1,334.4	0	0	0	0	911.7	88.1	.1	88.2	0	0	0	88.2	185.1
JUN	2,550.8	1,209.3	100.6	1,309.9	1,240.9	0	0	0	0	1,216.4	93.4	.1	93.5	0	0	0	93.5	278.6
JUL	2,550.8	1,093.3	60.9	1,154.2	1,396.6	0	0	0	0	1,309.9	128.8	.1	128.9	0	0	0	128.9	407.5
AUG	2,550.8	977.6	50.7	1,028.3	1,522.5	0	0	0	0	1,154.2	153.4	.3	153.7	0	0	0	153.7	561.2
SEP	2,550.8	951.2	48.9	1,000.1	1,550.7	0	0	0	0	1,028.3	119.3	.1	119.4	0	0	0	119.4	680.6
OCT	2,550.8	925.0	82.2	1,007.2	1,543.6	0	0	0	0	1,000.1	57.0	0	57.0	0	0	0	57.0	737.6
NOV	2,550.8	954.3	113.0	1,067.3	1,483.5	0	0	0	0	1,007.2	.1	0	.1	0	0	0	.1	737.7
DEC	2,550.8	988.8	146.0	1,134.8	1,416.0	0	0	0	0	1,067.3	.1	0	.1	0	0	0	.1	737.8
YEAR	—	—	—	—	—	—	—	—	—	1,134.8	.2	0	.2	0	0	0	.2	738.0
										737.1	.9	9	738.0	0	0	0	738.0	—
REMARKS:																		
a From new capacity tables based on 1957 survey for Elephant Butte Reservoir and 1958 survey for Caballo Reservoir.																		
b From new capacity table; reported as 13.6 in 1957.																		
ACCUMULATED DEBITMENT FROM NORMAL RELEASE																		
ITEM																		
P1	Accrued Debiture at Beginning of Year					DEBIT					CREDIT				BALANCE			
P2	Actual Release during Year																	
P3	Normal Release for Year																738.0	Cr 1,262.3
P4	Under-release in Excess of 150.0																790.0	Cr 524.3
P5																	0	Cr 1,314.3
P6																	—	Cr 1,514.3
P7	Accrued Debiture at End of Year																—	Cr 1,314.3
TIME OF HYPOTHEMETICAL SPILL Did not occur																		

002935

RIO GRANDE COMPACT COMMISSION REPORT

COST OF OPERATION, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1958
 Adopted at the Twentieth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	7,100	3,550	3,550		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	10,700 3,950	7,150 400		3,550	3,550
Sub-total	21,750	11,100	3,550	3,550	3,550
ADMINISTRATION					
U.S.G.S. Contract.....	3,450	450	1,000	1,000	1,000
Other expense.....					
Sub-total	3,450	450	1,000	1,000	1,000
TOTAL.....	25,200	11,550	4,550	4,550	4,550
EQUAL SHARES OF STATES.....			4,550	4,550	4,550
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

BUDGET, IN DOLLARS, FOR FISCAL YEAR ENDING JUNE 30, 1960
 Adopted at the Twentieth Annual Meeting

ITEM	Total Cost	Borne by United States	Borne by States		
			Colorado	New Mexico	Texas
GAGING STATIONS					
In Colorado.....	7,500	3,750	3,750		
In New Mexico, above Caballo Reservoir. Caballo Reservoir and below.....	11,500 4,250	7,750 500		3,750	3,750
Sub-total	23,250	12,000	3,750	3,750	3,750
ADMINISTRATION					
U.S.G.S. Contract.....	3,450	450	1,000	1,000	1,000
Other expense.....	1,800		600	600	600
Sub-total	5,250	450	1,600	1,600	1,600
TOTAL.....	28,500	12,450	5,350	5,350	5,350
EQUAL SHARES OF STATES.....			5,350	5,350	5,350
CASH ADJUSTMENT BETWEEN STATES.....			0	0	0

Except for 1952, the drought conditions persisted through 1956. The severe depletion of all water resources caused by this continued deficient runoff is reflected in the increase in debits and under-releases from Project Storage during the period 1952 to 1956. Record low annual runoff for Rio Grande near Del Norte, Colorado, occurred in 1902 before the construction of some of the larger reservoirs. Record low annual runoff for Rio Grande near Lobatos occurred in 1954. The record low for Rio Grande at Otowi Bridge occurred in 1956.

The above-normal runoff during 1957 and 1958 brought some relief. Project Storage increased from a low of 31,600 acre-feet on Sept. 30, 1956, to 1,134,800 acre-feet on Dec. 31, 1958.

Accuracy of records

The Rules and Regulations of the Commission state that the equipment, method, and frequency of measurement 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 the records at Compact gaging stations have complied with these regulations.

The station description states the degree of accuracy of the records. "Excellent" indicates that, in general, the error in the daily records is believed to be less than 5 percent; "good" less than 10 percent; "fair", less than 15 percent; and "poor", probably more than 15 percent. The records of monthly runoff are, in general, more accurate than the daily records. These standards of accuracy are the same as those followed by the U.S. Geological Survey.

Acknowledgements

The water-supply data contained in this report have been furnished by various Federal and State Agencies.

The office of the State Engineer of Colorado furnished records of discharge on the following:

- Rio Grande near Del Norte, Colo.
- Conejos River near Mogote, Colo.
- San Antonio River at Ortiz, Colo.
- Los Pinos River near Ortiz, Colo.
- Conejos River near La Sauses, Colo.
- Rio Grande near Lobatos, Colo.

Records of 6 transmountain diversions and of storage in Squaw, Trout, Shaw, and Poage Lakes, Rito Hondo, Troutvale No. 2, Jumper Creek, Alberta Park, Beaver Park, Mill Creek, Fuchs, and Trujillo Meadows Reservoirs were also furnished by the office of the State Engineer of Colorado.

The U.S. Bureau of Reclamation, Monte Vista, Colo., furnished records for Platoro Reservoir and for Conejos River below Platoro Reservoir.

The U.S. Geological Survey supplied the record for Rio Grande below Elephant Butte Dam and, in cooperation with the New Mexico Interstate Streams Commission, also furnished the following:

- Storage in Carson Reservoir near Carson, N. Mex.
- Storage in El Vado Reservoir near Tierra Amarilla, N. Mex.
- Rio Chama below El Vado Dam, N. Mex.
- Rio Grande at Otowi Bridge, near San Ildefonso, N. Mex.
- Storage in McClure Reservoir near Santa Fe, N. Mex.
- Santa Fe River near Santa Fe, N. Mex.
- Storage in Nichols Reservoir near Santa Fe, N. Mex.

The Corps of Engineers, Albuquerque, N. Mex. furnished the record of storage in Jemez Canyon Reservoir and, in cooperation with the U.S. Geological Survey, also furnished the record for Jemez River below Jemez Canyon Dam, N. Mex.

The United Pueblos Agency, Albuquerque, N. Mex. supplied the records of storage for the following:

- Acomita Reservoir near San Fidel, N. Mex.
- New Laguna Reservoir at Laguna, N. Mex.
- Pagate Reservoir near Laguna, N. Mex.

The U.S. Bureau of Reclamation, El Paso, Texas furnished the following records:

- Storage in Elephant Butte Reservoir
- Storage in Caballo Reservoir
- Rio Grande below Caballo Dam, N. Mex.
- Bonito ditch below Caballo Dam, N. Mex.

The Rio Grande Compact Commission gratefully acknowledges the cooperation received from these agencies.

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STREAM FLOW

63

Rio Grande near Del Norte, Colo.

Location.--Water-stage recorder, lat 37°41'20", long 106°27'30", in NW¹ sec. 29, T. 40 N., R. 5 E., on right bank, 20 ft downstream from county highway bridge, 5 miles upstream from Pinos Creek, and 6 miles west of Del Norte. Datum of gage is 7,980.25 ft above mean sea level, datum of 1929. Prior to May 16, 1908, staff gage at site 4 miles downstream. Records are equivalent.

Drainage area.--1,320 sq mi, approximately.

Average discharge.--69 years (1890-1958) 931 cfs (674,000 acre-ft per year).

Extremes.--1889-1958: Maximum discharge, 18,000 cfs Oct. 5, 1911 (gage height, 6.80 ft), from rating curve extended above 6,000 cfs; minimum daily, 69 cfs Aug. 21, 1902.

Remarks.--Records excellent except for some winter months, which are fair. Flow regulated by four large reservoirs, total capacity 126,100 acre-ft, and by several smaller ones. Six transmountain diversions import water into basin above station.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	9,680	9,470	9,590	62,020	187,000	273,300	131,600	70,240	27,220	20,530	13,810	12,170	826,400
1953	11,160	9,830	15,390	32,850	78,190	146,900	41,310	21,780	11,980	11,820	10,410	9,890	401,500
1954	9,100	11,890	10,220	45,660	108,100	65,810	40,440	28,590	19,060	22,740	11,700	8,190	381,300
1955	8,320	8,520	10,620	22,510	84,600	125,600	34,900	30,970	14,160	10,460	8,930	8,950	368,500
1956	9,920	8,420	13,470	25,250	107,900	106,500	21,250	11,680	8,010	8,250	6,790	6,480	333,900
1957	6,610	7,820	11,340	37,790	82,920	271,400	212,200	107,300	42,350	26,320	22,240	15,070	843,400
1958	10,120	12,150	13,100	42,230	233,300	199,400	104,900	48,510	23,360	17,030	10,670	9,380	724,200

Conejos River below Platoro Reservoir, Colo.

Location.--Water-stage recorder and concrete control, lat 37°21'20", long 106°32'35", in NW¹ sec. 22, T. 36 N., R. 4 E., on left bank 1,500 ft downstream from valve house for Platoro Reservoir and half a mile northwest of Platoro. Datum of gage is 9,866.60 ft above mean sea level (levels by Bureau of Reclamation).

Drainage area.--40 sq mi, approximately.

Average discharge.--6 years (1953-58) 80.1 cfs (57,990 acre-ft per year).

Extremes.--1952-58: Maximum discharge, 1,160 cfs Nov. 1, 1957; maximum gage height, 4.29 ft June 15, 1958; no flow Oct. 16-20, 1955.

Remarks.--Records good except those for winter months, which are poor. No diversions above station. Flow completely regulated by Platoro Reservoir (capacity, 60,000 acre-ft).

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	-	-	-	-	-	16,000	37,520	26,410	1,770	714	418	357	-
1953	394	411	799	4,180	11,460	27,640	3,800	1,120	328	345	571	492	51,540
1954	389	417	523	6,170	17,200	11,800	2,800	2,450	1,610	1,090	536	523	45,490
1955	535	511	738	3,160	11,660	19,780	4,220	3,740	825	373	1,750	338	47,630
1956	307	288	863	2,580	20,510	21,810	1,990	572	199	118	119	123	49,480
1957	2,680	167	184	179	4,740	10,170	33,560	8,880	2,820	9,730	15,060	1,050	89,220
1958	1,050	944	1,050	1,060	1,040	28,130	21,040	5,190	2,510	1,160	893	920	64,990

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RIO GRANDE COMPACT COMMISSION REPORT

Conejos River near Mogote, Colo.

Location.--Water-stage recorder, lat 37°03'20", long 106°11'20", in SE $\frac{1}{4}$ sec. 34, T. 33 N., R. 7 E., on right bank 20 ft downstream from bridge on State Highway 174, three-quarters of a mile downstream from Fox Creek and $5\frac{1}{2}$ miles west of Mogote. Altitude of gage is 8,240 ft.

Drainage area.--282 sq mi.

Average discharge.--48 years (1904, 1912-58), 344 cfs (249,000 acre-ft per year).

Extremes.--1903-5, 1911-58: Maximum discharge, 9,000 cfs Oct. 5, 1911 (gage height, 8.50 ft), from rating curve extended above 3,000 cfs; minimum daily determined, 10 cfs July 18, 1904.

Remarks.--Records good except those for winter months, which are fair. Diversions above station for irrigation of about 500 acres. Since 1951 flow partly regulated by Platoro Reservoir.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	2,470	2,520	3,080	25,910	105,000	114,100	65,580	38,490	7,080	4,080	2,930	2,790	374,000
1953	2,820	2,750	5,210	22,640	40,550	62,170	11,210	4,180	1,990	2,470	3,170	2,700	161,900
1954	2,050	2,570	3,480	25,490	48,500	28,090	8,620	5,920	4,170	3,920	2,610	2,170	135,600
1955	2,820	2,500	3,430	8,330	35,760	49,480	11,120	9,650	3,730	2,490	*3,590	2,680	*135,600
1956	2,760	2,280	6,960	16,790	66,760	51,920	7,200	3,380	1,600	2,130	2,250	1,780	165,800
1957	3,880	2,620	3,790	15,190	46,180	117,800	92,340	27,000	10,680	11,750	18,400	4,090	353,700
1958	3,310	3,970	5,050	13,340	73,420	75,820	25,190	10,710	6,020	4,270	3,370	3,200	227,700

* Revised after annual meeting in February 1956.

San Antonio River at Ortiz, Colo.

Location.--Water-stage recorder, lat 37°00', long 106°02', in New Mexico in sec. 19, T. 32 N., R. 9 E., on left bank a quarter of a mile south of New Mexico-Colorado State line, half a mile south of Ortiz, and half a mile upstream from Los Pinos River. Altitude of gage is 8,000 ft.

Drainage area.--110 sq mi.

Average discharge.--18 years (1941-58), 27.3 cfs (19,760 acre-ft per year).

Extremes.--1920, 1925-58: Maximum discharge, 1,750 cfs Apr. 15, 1937 (gage height, 5.38 ft), from rating curve extended above 1,100 cfs; no flow at times.

Remarks.--Records good above 10 cfs and fair below. A few small diversions above station for irrigation.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	184	230	338	17,890	22,380	2,940	200	262	145	38	188	92	44,890
1953	164	224	710	3,510	2,140	126	23	18	0	94	272	154	7,440
1954	92	205	529	4,770	1,460	19	103	9.7	0	45	185	118	7,540
1955	68	111	615	1,780	4,510	282	0	626	23	0	62	123	8,200
1956	172	161	1,010	4,820	2,150	83	48	14	0	17	113	61	8,650
1957	6.1	222	593	4,810	18,050	6,420	737	1,090	156	216	223	123	32,650
1958	74	111	801	8,470	18,590	585	0	71	1.6	147	209	101	29,160

STREAM FLOW

65

Los Pinos River near Ortiz, Colo.

Location.--Water-stage recorder, lat 36°58', long 106°03', in New Mexico in N $\frac{1}{2}$ sec. 34, T. 32 N., R. 8 E., on left bank 1 mile south of New Mexico-Colorado State line, 2 miles southwest of Ortiz, and 2 $\frac{1}{2}$ miles upstream from mouth. Altitude of gage is 8,100 ft.

Drainage area.--167 sq mi.

Average discharge.--40 years (1915-20, 1925-58), 129 cfs (93,390 acre-ft per year).

Extremes.--1915-20, 1925-58: Maximum discharge, 3,160 cfs May 12, 1941 (gage height, 5.77 ft, site and datum then in use), from rating curve extended above 1,600 cfs; minimum observed, 4.0 cfs Dec. 17, 1945.

Remarks.--Records good except those for winter months, which are fair. Diversions above station for irrigation.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	615	633	861	21,350	82,450	46,550	8,820	2,520	1,160	889	982	922	167,800
1953	966	1,010	1,700	14,310	16,580	9,040	1,520	839	503	872	1,090	960	49,390
1954	984	1,440	1,630	17,760	15,410	3,850	1,450	1,190	756	754	750	766	46,740
1955	553	555	1,420	4,190	22,710	11,530	1,850	1,880	711	644	785	984	47,810
1956	564	571	2,710	13,510	25,710	7,940	1,170	826	448	624	659	468	55,200
1957	676	944	1,270	7,970	39,380	60,790	15,850	6,170	2,140	1,560	1,660	1,080	139,500
1958	922	1,170	1,810	8,390	55,240	16,080	1,770	1,340	1,160	934	853	976	90,640

Conejos River near La Sauses, Colo.

Location.--Water-stage recorders, lat 37°18', long 105°45', in secs. 2 and 11 (two channels), T. 35 N., R. 11 E., on left bank of main channel 100 ft downstream from bridge on State Highway 158 and on right bank of secondary channel 130 ft downstream from bridge, half a mile upstream from mouth, and 2 miles north of La Sauses. Datum of gage on main channel is 7,495.02 ft and on secondary (south) channel is 7,495.89 ft above mean sea level (levels by Bureau of Reclamation).

Drainage area.--887 sq mi.

Average discharge.--37 years (1922-58), 207 cfs (149,900 acre-ft per year).

Extremes.--1921-58: Maximum discharge, 3,890 cfs May 15, 1941; no flow at times in 1934, 1948, 1950-51, 1953-56, 1958.

Remarks.--Records fair above 10 cfs and poor below. Diversions for irrigation of about 75,000 acres above station.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	2,650	2,310	2,650	18,900	14,300	71,880	15,510	25,360	2,210	1,310	1,560	3,330	262,000
1953	4,330	4,150	3,640	4,670	5,420	3,700	105	18	48	220	1,240	2,390	29,930
1954	2,720	2,940	1,820	1,180	707	194	83	24	*41	*455	936	1,690	12,790
1955	2,220	1,980	2,140	1,130	3,060	1,030	102	98	72	92	1,400	1,680	15,000
1956	2,260	2,450	2,650	1,720	5,940	8,840	7.7	14	1.4	41	756	1,600	26,280
1957	2,610	2,070	1,530	1,920	31,850	75,170	69,630	16,430	3,380	5,020	17,300	5,080	232,000
1958	4,420	4,460	4,320	16,560	67,650	23,270	195	10	36	151	1,300	2,040	124,400

* Revised after annual meeting in February 1955.

RIO GRANDE COMPACT COMMISSION REPORT

Rio Grande near Lobatos, Colo.

Location.--Water-stage recorder, lat 37°05', long 105°45', in sec. 22, T. 33 N., R. 11 E., on right bank just downstream from highway bridge, 6 miles north of Colorado-New Mexico State line, 10 miles east of Lobatos, and 14 miles east of Antonito. Datum of gage is 7,426.79 ft above mean sea level, datum of 1929.

Drainage area.--7,700 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley).

Average discharge.--59 years (1900-1958), 658 cfs (476,400 acre-ft per year).

Extremes.--1899-1958: Maximum discharge observed, 13,200 cfs June 8, 1905 (gage height, 9.1 ft), from rating curve extended above 8,000 cfs; no flow at times in 1950-51, 1956.

Remarks.--Records excellent except those for some winter months, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	14,560	12,680	18,630	31,050	149,000	130,000	27,760	36,170	10,180	7,640	12,260	18,520	468,400
1953	20,650	18,820	13,760	12,530	10,850	12,640	3,240	1,860	1,790	3,880	7,460	14,600	122,100
1954	11,700	14,590	7,470	3,580	3,190	1,180	773	804	2,340	2,920	3,540	7,480	59,570
1955	10,730	10,950	9,970	3,530	6,020	3,890	717	1,250	1,130	1,680	4,630	8,620	63,120
1956	12,230	11,250	9,030	4,280	9,640	14,310	689	197	114	790	3,730	*3,870	*70,130
1957	4,660	5,670	4,060	3,920	41,390	119,000	122,800	51,780	21,160	10,000	36,990	23,490	444,900
1958	15,740	18,260	24,490	41,740	159,100	71,420	4,410	2,040	1,750	3,010	7,450	13,050	362,500

* Revised after annual meeting in February 1957.

Rio Chama below El Vado Dam, N. Mex.

Location.--Water-stage recorder, lat 36°34'50", long 106°43'30", in Tierra Amarilla Grant, 1.5 miles downstream from El Vado Dam, 2.7 miles upstream from Rio Nutrias, and 13 miles southwest of Tierra Amarilla, Rio Arriba County. Datum of gage is 6,696.12 ft above mean sea level, datum of 1929. Prior to October 1935, at site 1.5 miles upstream and October 1935 to September 1938, at site 1.1 miles upstream at different datum.

Drainage area.--877 sq mi.

Average discharge.--4 years (1914, 1921-23), 444 cfs prior to completion of dam; 23 years (1936-58), 399 cfs (288,900 acre-ft per year) subsequent to completion of El Vado Dam.

Extremes.--1914-16, 1920-24, 1936-58: Maximum discharge observed, 9,000 cfs May 22, 1920 (gage height, 12 ft); no flow Mar. 25, 26, 31, 1955.

Remarks.--Records are good except those for some winter months, which are poor. Diversions above station for irrigation of about 8,000 acres. Since 1935 flow regulated by El Vado Reservoir.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	6,570	4,180	13,360	47,640	87,970	117,500	88,580	49,370	3,810	1,950	1,540	56	422,500
1953	51	9,060	15,890	26,790	14,820	57,900	5,930	11,550	694	1,640	4,410	184	148,900
1954	93	4,920	10,000	16,870	55,150	22,100	22,760	2,060	13,720	1,920	2,040	1,060	152,700
1955	1,230	1,670	4,200	4,120	35,420	14,620	15,100	17,080	21,170	1,120	1,760	2,610	120,100
1956	2,520	2,880	12,640	34,600	31,950	16,890	10,540	9,310	8,430	492	1,510	1,560	133,300
1957	2,600	7,630	9,330	31,160	65,670	66,970	103,800	70,190	44,690	8,710	21,150	264	432,200
1958	32	163	10,600	51,080	94,970	60,040	17,000	31,890	20,510	2,770	75,560	40,500	405,100

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STREAM FLOW

67

Rio Grande at Otowi Bridge, near San Ildefonso, N. Mex.

Location.--Water-stage recorder, lat 35°52'25", long 106°08'35", in San Ildefonso Pueblo Grant, 400 ft downstream from bridge on State Highway 4, 1½ miles southwest of San Ildefonso Pueblo, 2½ miles downstream from Pojoaque River, and 7 miles west of Pojoaque. Datum of gage is 5,488.48 ft above mean sea level, datum of 1929. Prior to May 19, 1904, and July 25 to Oct. 1, 1904, staff gage at site 180 ft upstream at datum 2.02 ft lower.

Drainage area.--14,300 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

Average discharge.--59 years (1896-1905, 1910-58) 1,618 cfs (1,171,000 acre-ft per year).

Extremes.--1895-1905, 1910-58: Maximum discharge, 24,400 cfs May 23, 1920 (gage height, 14.1 ft); minimum daily, 60 cfs July 4, 5, 1902.

Remarks.--Records good. Flow partly regulated by El Vado Reservoir since 1935. Diversions above station for irrigation of about 600,000 acres in Colorado and 75,000 acres in New Mexico.

Monthly and yearly runoff, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	46,660	34,610	64,300	166,500	378,800	335,500	148,200	109,100	29,300	24,710	30,260	40,310	1,408,000
1953	42,090	47,340	58,840	61,630	66,420	115,300	25,510	24,820	11,370	17,500	27,640	31,730	530,200
1954	30,650	38,260	36,760	55,330	95,390	37,270	36,650	16,770	26,630	19,120	19,200	23,350	435,400
1955	28,480	27,380	33,780	21,780	88,750	47,810	30,900	54,910	36,510	16,420	21,590	28,840	437,200
1956	33,580	30,760	41,990	59,440	57,400	37,130	18,240	16,550	15,190	10,300	16,720	22,170	359,500
1957	24,710	30,600	30,160	69,410	217,500	300,700	266,400	203,400	105,400	57,990	*99,070	58,300	*1,464,000
1958	45,440	55,030	70,910	242,300	537,400	235,000	31,770	52,580	39,710	23,900	97,130	76,940	1,508,000

* Revised after annual meeting in February 1958.

Santa Fe River near Santa Fe, N. Mex.

Location.--Water-stage recorder and concrete control, lat 35°41'10", long 105°50'35", in NE¼ sec. 23, T. 17 N., R. 10 E., 0.4 mile downstream from McClure Dam, and 5½ miles east of Santa Fe. Datum of gage is 7,718 ft above mean sea level, datum of 1929. Prior to Nov. 4, 1930, at site 1.5 miles downstream and Apr. 11, 1931, to September 1947 at site 0.3 mile upstream.

Drainage area.--18.2 sq mi.

Average discharge.--46 years (1913-58), 8.59 cfs (6,220 acre-ft per year).

Extremes.--1913-58: Maximum discharge (revised), 1,500 cfs Aug. 14, 1921; minimum daily, 0.1 cfs Feb. 7-10, 20, 21, 1927, Aug. 1-4, 1951.

Remarks.--Records good. Flow regulated by McClure Reservoir, completed in 1926, raised in 1935 and again in 1947.

Monthly and yearly runoff, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	89	83	88	102	434	1,220	386	434	308	108	85	94	3,430
1953	118	246	271	340	539	560	437	148	142	152	139	145	3,240
1954	139	100	65	42	44	445	501	450	269	84	56	58	2,250
1955	55	29	35	30	32	41	687	397	368	188	69	74	2,000
1956	76	80	82	78	76	464	308	120	62	36	30	38	1,450
1957	43	44	60	78	96	800	395	1,180	620	470	516	322	4,620
1958	158	170	456	2,960	4,020	1,670	462	550	230	241	325	442	11,680

RIO GRANDE COMPACT COMMISSION REPORT

Jemez River below Jemez Canyon Dam, N. Mex.

Location.--Water-stage recorder, lat 35°23'10", long 106°31'45", in NE $\frac{1}{4}$ sec. 5, T. 13 N., R. 4 E., on right bank three-quarters of a mile downstream from Jemez Canyon Dam, $1\frac{1}{2}$ miles upstream from mouth, and 6 miles north of Bernalillo. Datum of gage is 5,100.00 ft above mean sea level, datum of 1929. Prior to Apr. 24, 1951, at site three-quarters of a mile upstream at datum 20.11 ft higher.

Drainage area.--1,034 sq mi.

Average discharge.--16 years (1937, 1944-58), 50.5 cfs (36,560 acre-ft per year).

Extremes.--1937, 1944-58: Maximum discharge (revised), 16,300 cfs Aug. 29, 1943 (gage height, 5.62 ft); no flow at times.

Remarks.--Records poor. Flow regulated by Jemez Canyon Dam since October 1953. Diversions for irrigation of about 3,000 acres above station.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	1,320	1,230	1,910	12,950	10,830	1,500	583	1,440	52	4	290	900	33,010
1953	1,120	1,080	1,960	1,310	523	21	149	286	52	565	703	797	7,770
1954	1,260	1,020	2,560	4,580	3,030	0	3,320	1,490	1,640	1,870	621	797	22,150
1955	1,370	981	1,420	825	1,680	0	3,200	6,920	48	0	227	904	17,580
1956	1,220	865	3,270	3,840	984	0	22	1,950	0	0	240	561	12,950
1957	1,120	1,840	2,090	4,400	9,050	4,170	377	9,720	1,480	10,930	10,660	3,080	58,920
1958	2,340	2,580	4,610	7,430	375	58,810	8,400	512	1,310	1,200	1,390	1,390	90,350

Rio Grande below Elephant Butte Dam, N. Mex.

Location.--Water-stage recorder, lat 33°08'45", long 107°12'20", in SW $\frac{1}{4}$ sec. 25, T. 13 S., R. 4 W., (projected), in Pedro Armendariz Grant, on left bank 1.0 mile downstream from dam and $1\frac{1}{2}$ miles upstream from Cuchillo Negro River. Datum of gage is 4,242.09 ft above mean sea level, datum of 1929. Prior to Apr. 23, 1942, at several different sites and datums.

Drainage area.--28,900 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.

Average discharge.--42 years (1917-58), 1,065 cfs (771,000 acre-ft per year).

Extremes.--1917-58: Maximum daily discharge, 8,220 cfs May 22, 1942; no flow at times prior to 1929.

Remarks.--Records good. Flow regulated by Elephant Butte Reservoir. Diversions for irrigation of about 800,000 acres above station.

Monthly and yearly runoff, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	32,570	46,010	27,170	42,350	85,230	103,800	117,400	58,560	29,000	925	1,870	12,280	557,200
1953	64,180	83,630	83,880	58,420	24,440	64,320	65,140	72,550	22,100	302	375	417	539,800
1954	621	289	45,490	67,170	32,150	34,920	53,980	9,530	163	266	196	179	244,900
1955	433	188	27,080	24,000	4,810	47,810	42,220	39,390	25,210	519	227	456	212,300
1956	294	316	57,900	39,290	1,780	53,790	47,900	35,000	16,090	326	310	406	253,400
1957	373	322	22,250	29,750	512	81,280	104,300	99,640	44,940	434	381	522	384,700
1958	43,090	69,750	118,500	102,700	81,240	113,200	113,900	107,800	40,180	31,160	33,250	36,480	891,200

STREAM FLOW

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Rio Grande below Caballo Dam, N. Mex.

Location.--Water-stage recorder, lat 32°53'05", long 107°17'30", in NE1SW1 sec. 30, T. 16 S., R. 4 W., 600 ft upstream from Bojarquez Bridge, 4,200 ft downstream from Caballo Dam, 1 1/3 miles upstream from Percha diversion dam, and 3 miles northeast of Arrey. Datum of gage is 4,140.9 ft above mean sea level, datum of 1929. Oct. 13, 1938, to Dec. 31, 1945, at datum 5.0 ft higher.

Drainage area.--30,200 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

Average discharge.--21 years (1938-58), 954 cfs (690,700 acre-ft per year).

Extremes.--1938-58: Maximum daily discharge, 7,650 cfs May 20, 1942; minimum daily, 0.1 cfs Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955.

Remarks.--Records good. Considerable diversion above station for irrigation. Flow regulated by Caballo and Elephant Butte Reservoirs.

Monthly and yearly runoff, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	40	59	34,030	62,660	58,850	100,700	115,900	123,600	47,770	56	38	42	543,700
1953	57	71	99,260	58,020	47,380	78,370	93,880	105,600	45,920	52	26	32	528,700
1954	32	26	31,890	58,440	39,180	46,870	48,420	20,530	7,750	15	9.3	23	244,200
1955	20	13	29,630	29,270	5,260	37,020	28,170	49,000	40,740	21	7.1	6.1	219,200
1956	42	32	52,790	44,760	1,900	46,940	45,790	35,640	18,180	31	16	19	246,100
1957	19	19	24,870	31,290	75	70,660	91,320	113,600	85,060	123	40	37	397,100
1958	39	59	96,600	88,110	93,440	128,800	153,400	119,200	57,030	128	138	183	737,100

Bonito ditch below Caballo Dam, N. Mex.

Records available.--January 1938 to December 1958. Published as supplementary data with Rio Grande below Caballo Dam in U.S.G.S. Water-Supply Papers beginning with October 1947.

Remarks.--Ditch diverts directly from Caballo Reservoir for irrigation of lands on right bank of river. The total release from Project Storage, as used in computations of Compact Commission, is the combined flow of this ditch and Rio Grande below Caballo Dam.

Monthly and yearly runoff, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	0	0	150	140	382	261	514	637	204	0	0	0	2,290
1953	0	0	307	110	142	550	592	416	328	0	0	0	2,440
1954	0	0	264	40	75	303	401	123	118	0	0	0	1,320
1955	0	0	107	173	90	244	215	143	204	0	0	0	1,180
1956	0	0	208	157	0	226	213	332	162	0	0	0	1,300
1957	0	0	224	58	0	186	242	178	19	0	0	0	907
1958	0	0	200	45	95	134	264	122	44	16	0	0	920

RIO GRANDE COMPACT COMMISSION REPORT

STORAGE IN RESERVOIRS

Reservoirs in Rio Grande Basin in Colorado
(Constructed or enlarged since 1937)

Squaw Lake.--Staff gage in sec. 13, T. 39 N., R. 4 W., on tributary to Squaw Creek. Completed in 1938; capacity, 162 acre-ft by 1953 survey. Water is used for irrigation below gaging station on Rio Grande near Del Norte.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	50	68	95	140	140	140	140	0	0	0	16	33
1953	64	100	140	140	140	140	68	0	0	0	23	47
1954	51	56	61	70	70	83	83	0	0	0	8	25
1955	68	112	162	162	162	162	104	0	0	0	17	59
1956	95	129	160	160	160	160	95	27	0	0	25	59
1957	95	130	162	162	162	162	162	162	162	162	162	162
1958	162	162	162	162	162	162	162	104	0	0	17	34

Rito Hondo Reservoir.--Staff gage in sec. 22, T. 42 N., R. 3 W., on Rito Hondo (Deep Creek) tributary to Clear Creek. Completed in 1957; capacity, 561 acre-ft. Storage began in May 1958. Water is used for fish culture.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1958	0	0	0	0	93	561	561	561	561	561	561	561

Troutvale No. 2 Reservoir.--Staff gage in E $\frac{1}{2}$ sec. 10, T. 41 N., R. 3 W., on South Clear Creek. Completed in 1940; capacity, 435 acre-ft. Condition of spillway limited storage to 168 acre-ft after May 1942. Repairs to spillway in 1947 increased capacity to 257 acre-ft. Water is used for fish culture with only occasional sale for irrigation.

Contents at end of each month January 1952 to December 1958 inclusive was 257 acre-ft.

Trout Lake.--Staff gage in sec. 12, T. 39 N., R. 3 W., on tributary to Trout Creek. Completed about 1932; capacity, 198 acre-ft; enlarged in 1948 to a capacity of 320 acre-ft. Only the storage in excess of 198 acre-ft is subject to terms of Rio Grande Compact.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	60	75	90	190	320	320	196	156	107	68	78	88
1953	98	113	130	180	320	269	186	56	47	47	65	80
1954	90	110	125	160	160	134	125	37	0	0	35	60
1955	75	90	115	160	160	160	129	47	0	0	30	60
1956	70	85	110	160	160	149	42	42	0	0	25	55
1957	65	80	105	155	210	320	148	148	148	0	0	11
1958	23	36	57	81	171	320	257	22	0	0	11	23

STORAGE IN RESERVOIRS

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Reservoirs in Rio Grande Basin in Colorado
(Constructed or enlarged since 1937)

Jumper Creek Reservoir.--In sec. 5, T. 39 N., R. 2 W., on Jumper Creek, tributary to Trout Creek. Completed in 1951; capacity, 38 acre-ft. Capacity table based on elevation above bottom of outlet.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	10	20	30	38	38	38	38	38	38	38	38	38
1953	38	38	38	38	38	38	38	38	38	38	38	38
1954	38	38	38	38	38	38	38	38	38	38	38	38
1955	20	29	38	38	38	38	38	27	0	0	5	11
1956	38	38	38	38	38	38	38	38	38	38	38	38
1957	20	26	32	38	38	38	38	38	0	0	8	16
1958	38	38	38	38	38	38	38	38	38	38	38	38

Alberta Park Reservoir.--In sec. 34, T. 38 N., R. 2 E., on Pass Creek. Completed in 1953; capacity, 598 acre-ft. Capacity table based on elevation above bottom of outlet.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1953	-	-	-	-	-	-	-	-	-	-	-	-
1954	74	93	112	112	184	296	296	296	191	191	203	228
1955	262	300	343	343	343	343	343	193	193	193	228	265
1956	291	317	343	343	253	376	244	69	0	0	36	73
1957	98	125	165	210	424	598	598	598	598	598	598	598
1958	598	598	598	598	598	598	489	234	0	0	31	57

Shaw Lake.--In sec. 5, T. 38 N., R. 2 E., on tributary to Lake Creek. Capacity, 638 acre-ft by 1916 decree; enlarged in 1955 to 681 acre-ft. Only the storage in excess of 638 acre-ft is subject to terms of Rio Grande Compact.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1955	70	135	215	352	352	352	305	199	190	190	190	205
1956	220	240	267	267	291	499	289	108	104	38	70	110
1957	155	210	290	390	530	681	681	593	593	593	600	610
1958	633	657	681	681	681	640	340	120	120	120	138	153

Poage Lake.--In sec. 26, T. 38 N., R. 3 E., on tributary to Race Creek. Constructed in 1918; capacity, 258 acre-ft; enlarged in 1954 to 370 acre-ft. Capacity based on elevation above outlet. Only the storage in excess of 258 acre-ft is subject to terms of Rio Grande Compact.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1955	65	95	135	180	180	167	52	32	17	17	37	64
1956	84	110	148	191	191	151	67	28	20	20	40	69
1957	90	115	160	210	280	370	370	370	313	313	313	313
1958	321	330	341	355	370	370	297	122	109	109	121	132

RIO GRANDE COMPACT COMMISSION REPORT

Reservoirs in Rio Grande Basin in Colorado
(Constructed or enlarged since 1937)

Beaver Park Reservoir.--In sec. 28, T. 39 N., R. 3 E., on Beaver Creek. Constructed in 1912. Enlarged in 1957 from capacity of 4,194 acre-ft to 4,758 acre-ft. Only the storage in excess of 4,194 acre-ft is subject to terms of Rio Grande Compact.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1957	1,670	1,840	2,155	2,422	2,422	4,600	4,434	4,246	3,546	2,082	330	1,093
1958	1,740	2,155	2,460	3,222	4,758	4,710	1,346	0	0	0	702	1,146

Mill Creek Reservoir.--In sec. 16, T. 39 N., R. 3 E., on Mill Creek. Completed in 1953; capacity, 43 acre-ft. Capacity based on elevation above bottom of outlet.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1953	-	-	-	-	-	-	-	-	-	-	-	0
1954	0	0	0	0	6	13	16	18	20	22	24	24
1955	26	28	30	30	30	30	30	30	30	30	30	30
1956	33	38	43	43	38	33	28	23	18	13	6	0
1957	2	6	11	18	29	43	43	43	43	43	43	43
1958	43	43	43	43	43	43	21	6	0	0	0	0

Fuchs Reservoir.--Staff gage in sec. 2, T. 37 N., R. 4 E., on East Pinos Creek. Completed in 1939; capacity, 237 acre-ft with 2 ft of flash boards in spillway. Pinos Creek enters Rio Grande below station near Del Norte.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	58	94	147	237	237	237	193	180	180	99	19	29
1953	70	136	209	209	209	187	126	0	0	0	17	35
1954	75	110	140	140	140	107	99	0	0	0	11	28
1955	45	64	83	83	83	83	61	0	0	0	11	28
1956	58	91	128	128	128	128	74	0	0	0	32	64
1957	79	94	119	157	211	237	237	237	237	237	237	237
1958	237	237	237	222	211	202	128	102	35	0	11	28

Platoro Reservoir.--Water-stage recorder in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, T. 36 N., R. 4 E., on Conejos River. Completed in 1951; capacity, 60,000 acre-ft at crest of spillway. Reservoir is used for irrigation and flood control. Storage affects Conejos Index Supply.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	1,040	1,400	2,040	3,770	2,630	36,830	20,000	0	0	0	0	0
1953	0	0	0	0	1,010	0	0	0	0	0	0	0
1954	0	0	0	0	91	0	0	0	0	0	0	0
1955	0	0	0	0	0	1,150	1,210	1,190	1,210	1,210	0	0
1956	0	0	0	0	1,460	3,480	3,500	3,530	3,480	3,480	3,480	3,480
1957	1,040	1,040	1,040	1,040	3,580	42,040	49,500	49,500	49,500	43,370	30,390	30,390
1958	30,390	30,390	30,390	30,390	53,110	54,000	38,080	34,030	34,030	34,030	34,030	34,030

STORAGE IN RESERVOIRS

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Reservoirs in Rio Grande Basin in Colorado
(Constructed or enlarged since 1937)

Trujillo Meadows Reservoir.--In sec. 5, T. 32 N., R. 5 E., on Los Pinos River. Completed in 1957; capacity, 913 acre-ft. Water is used for fish culture. Storage affects Conejos Index Supply.

Year	Month-end contents, in acre-feet											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1957	-	-	-	-	-	-	-	-	-	-	-	-
1958	913	913	913	913	913	913	913	913	913	913	913	913

Reservoirs in Rio Grande Basin in New Mexico
(Constructed or enlarged since 1929)

Carson Reservoir.--Water-stage recorder in NW $\frac{1}{4}$ sec. 12, T. 25 N., R. 10 E., on Aguaje de la Petaca. Completed in 1935; capacity, 5,684 acre-ft as determined by a survey in 1941. Little storage value has been realized because of porosity of basin.

Year	Month-end contents, in acre-feet											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	0	0	1,490	2,220	314	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0	0	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	124	390	2,430	220	0	0	0	0	0	0	0

El Vado Reservoir.--Water-stage recorder (staff gage only below elevation 6,878.0 ft), lat 36°34'45", long 106°43'55" on Rio Chama. Storage began in January 1935. Capacity, 194,500 acre-ft at elevation 6,902.0 ft (crest of spillway), as determined by partial-sediment survey in 1954. Staff gage readings furnished by Middle Rio Grande Conservancy District.

Year	Month-end contents, in acre-feet											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	0	0	5,820	40,280	138,800	121,800	55,030	9,170	8,400	8,550	9,020	12,940
1953	15,800	10,500	0	17,350	53,440	14,610	11,710	0	0	0	390	4,820
1954	7,900	6,100	4,400	53,310	49,580	34,340	13,800	15,190	0	0	0	0
1955	0	0	500	10,000	42,920	45,480	32,550	22,200	100	100	300	300
1956	300	500	886	9,480	34,000	28,510	17,740	9,020	313	533	545	545
1957	570	686	782	2,780	50,730	166,700	100,500	56,880	18,420	16,550	355	8,150
1958	13,040	23,890	38,250	81,560	192,200	170,600	158,300	128,100	112,300	112,100	42,080	2,400

RIO GRANDE COMPACT COMMISSION REPORT

Reservoirs in Rio Grande Basin in New Mexico
(Constructed or enlarged since 1929)

McClure (Granite Point) Reservoir.--Water-stage recorder in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 17 N., R. 10 E., on Santa Fe River. Original reservoir, capacity, 561 acre-ft, completed in 1926 and not subject to terms of Rio Grande Compact; in 1935, permanent flash boards were installed in spillway increasing capacity to 650 acre-ft; in 1947 both dam and spillway were raised increasing capacity to 3,090 acre-ft (gage height, 103.1 ft, at which radial gates open automatically).

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	539	520	645	1,560	2,740	2,610	2,420	2,110	1,890	1,840	1,800	1,750
1953	1,710	1,550	1,450	1,340	1,440	1,390	1,220	1,230	1,140	1,040	992	926
1954	843	789	898	1,240	1,810	1,520	1,080	756	553	542	536	512
1955	514	528	582	722	1,250	1,520	1,010	1,170	1,030	918	926	946
1956	942	942	963	1,030	1,150	694	391	294	239	232	234	235
1957	246	282	405	996	2,010	2,980	3,020	3,080	3,060	3,100	3,100	3,070
1958	3,070	3,080	3,100	2,880	3,030	3,040	2,780	2,460	2,510	2,540	2,380	2,100

Nichols Reservoir.--Water-stage recorder in E $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T. 17 N., R. 10 E., on Santa Fe River. Completed in 1942; capacity, 796 acre-ft. Water is for municipal use in Santa Fe.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	271	348	472	468	585	643	661	688	664	461	335	278
1953	229	249	266	285	444	542	515	310	223	329	449	570
1954	569	593	667	595	313	199	384	458	362	414	440	485
1955	515	526	544	539	440	217	375	398	338	270	313	371
1956	428	480	491	342	197	354	407	340	260	265	279	302
1957	331	358	410	447	329	614	520	707	614	698	701	692
1958	695	625	701	716	713	698	472	582	452	336	384	536

Jemez Canyon Reservoir.--Water-stage recorder in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 14 N., R. 4 E., on Jemez River $2\frac{1}{4}$ miles above mouth. Completed in 1953; capacity, 187,800 acre-ft at elevation of 5,252.3 ft. Capacity at elevation 5,232.0 ft (crest of spillway), 117,200 acre-ft, based on original survey. Reservoir is operated by Corps of Engineers for flood control and sediment storage.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1953	-	-	-	-	-	-	-	-	0	0	0	0
1954	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	111	0	0	872	0	0	0	0	0
1956	0	0	(a)	(b)	0	0	0	0	0	0	0	0
1957	0	0	0	351	1,120	0	0	1,390	0	0	0	0
1958	0	0	1,060	41,120	70,690	10,390	0	0	0	0	0	0

a Less than 213 acre-feet.

b Less than 16 acre-feet.

Note.--All values are based on original capacity table; about 1,400 acre-feet of sediment has been deposited in reservoir since 1954.

Reservoirs in Rio Grande Basin in New Mexico
(Constructed or enlarged since 1929)

Acoma Reservoir.--Staff gage in SE $\frac{1}{4}$ sec. 29, T. 10 N., R. 7 W., on San Fidel Arroyo; water for reservoir is diverted from Rio San Jose. Completed in 1938; capacity, 850 acre-ft. Water is used for irrigation on Acoma and Laguna Indian Reservations.

Year	Month-end contents, in acre-feet											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	500	700	800	800	-	-	-	-	0	0	0	400
1953	400	400	600	500	400	200	100	0	0	0	200	500
1954	200	500	700	700	700	500	300	100	100	100	100	200
1955	600	700	800	800	800	800	650	500	400	400	480	680
1956	650	650	650	650	550	350	150	650	50	150	450	650
1957	650	650	650	650	550	350	150	50	200	400	520	650
1958	650	650	650	515	450	280	200	20	50	250	430	650

New Laguna Reservoir.--Staff gage in SW¹/₄ sec. 1, T. 9 N., R. 6 W., on Rio San Jose. Completed in 1934; capacity, 683 acre-ft, based on survey of 1938. In 1952, reservoir was reported to be filled with sediment; capacity, negligible. In 1955, dam was destroyed by floods.

Paguete Reservoir.--Staff gage in NE 1/4 sec. 26, T. 10 N., R. 5 W., on Paguate Creek. Completed in 1938; capacity, 976 acre-ft. Accumulation of sediment since 1938 reduced capacity to about 100 acre-ft in 1952 and to a negligible amount in 1956. Collection of records officially discontinued Dec. 31, 1957 (see minutes of meeting of February 1958).

[illegible]

Reservoirs in Rio Grande Basin in New Mexico

Elephant Butte Reservoir.--Water-stage recorder in NW $\frac{1}{4}$ sec. 30, T. 13 S., R. 3 W., at dam on Rio Grande. Storage began Jan. 6, 1915; capacity 2,206,800 acre-ft at gage height, 4,407.0 ft (crest of spillway), by survey of 1957. Datum of gage is 43.3 ft above mean sea level, datum of 1929. Water is used for power development and irrigation in New Mexico and Texas. Records furnished by Bureau of Reclamation.

Month-end contents, in thousands of acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	36.5	17.3	18.9	59.3	259.0	421.2	390.7	385.7	360.9	357.2	355.3	376.9
1953	351.6	311.8	277.4	232.3	228.7	209.2	162.8	109.6	88.5	90.6	93.9	110.6
1954	137.2	166.8	138.5	87.0	90.6	59.6	13.8	32.9	55.6	76.1	80.8	97.6
1955	125.1	150.3	141.1	121.1	131.9	97.6	73.0	120.8	112.3	122.8	130.4	+155.0
1956	a169.9	a200.6	a166.6	a146.4	a160.2	a108.9	a63.3	a38.4	a24.2	a26.1	a28.7	a32.9
1957	47.3	68.4	64.3	50.2	160.6	267.4	381.0	509.3	556.1	635.8	731.5	776.1
1958	773.1	753.3	705.9	776.3	1,097.9	1,209.3	1,093.3	977.6	951.2	925.0	954.3	988.8

† 137,500 acre-feet on basis of new capacity table put into use Jan. 1, 1956.

a Recomputed after February 1957 on basis of 1957 sediment survey.

Caballo Reservoir.--Water-stage recorder in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T. 16 S., R. 4 W., at dam on Rio Grande. Storage began Feb. 8, 1938; capacity, 344,000 acre-ft (by 1958 survey), at gage height, 4,182.0 ft (above which spillway gates open automatically). Datum of gage is 43.3 ft above mean sea level, datum of 1929. 100,000 acre-ft of storage reserved for flood control. Records furnished by Bureau of Reclamation.

Month-end contents, in acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	45,960	86,620	78,200	59,150	79,670	81,560	80,760	23,970	9,860	13,750	17,410	30,330
1953	87,020	156,800	136,900	132,500	107,700	88,820	59,990	27,500	6,620	9,390	11,770	14,130
1954	16,480	17,660	28,400	33,440	34,460	19,140	22,340	16,460	10,580	15,380	16,480	17,470
1955	18,920	19,550	14,330	8,240	7,020	13,030	29,810	21,250	5,440	6,900	7,760	9,140
1956	10,400	11,580	10,660	4,910	5,200	8,100	8,010	5,680	4,540	4,940	5,730	6,770
1957	7,840	8,730	4,180	3,280	4,660	9,170	19,610	21,540	3,920	9,860	11,730	+13,550
1958	47,500	104,200	123,100	135,500	118,500	100,600	60,890	50,680	48,910	82,170	113,000	146,000

† 11,880 acre-feet on basis of new capacity table put into use Jan. 1, 1958.

Project Storage.--This is the combined storage in Elephant Butte and Caballo Reservoirs. Total Project Storage capacity is 2,450,800 acre-ft which excludes the 100,000 acre-ft reserved for flood control in Caballo Reservoir.

Month-end contents, in thousands of acre-feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1952	82.5	103.9	97.1	118.5	338.7	502.8	471.5	409.7	370.8	371.0	372.7	407.2
1953	438.6	468.6	414.3	364.8	336.4	298.0	222.8	137.1	95.1	100.0	105.7	124.7
1954	153.7	184.5	166.9	120.4	125.1	78.7	36.1	49.4	66.2	91.5	97.3	115.1
1955	144.0	169.9	155.4	129.3	138.9	110.6	102.8	142.0	117.7	129.7	138.2	+164.1
1956	180.3	212.2	177.3	151.3	165.4	117.0	71.3	44.1	28.7	31.0	34.4	39.7
1957	55.1	77.1	68.5	53.5	165.3	276.6	400.6	530.8	560.0	645.8	743.2	+789.7
1958	820.6	857.5	829.0	911.7	1,216.4	1,309.9	1,154.2	1,028.3	1,000.1	1,007.2	1,067.3	1,134.8

† 146.6 acre-feet on basis of new capacity table for Elephant Butte put into use Jan. 1, 1956.

‡ 788.0 acre-feet on basis of new capacity table for Caballo Reservoir put into use Jan. 1, 1958.

TRANSMOUNTAIN DIVERSIONS

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Fuchs ditch.--Water-stage recorder and 3-ft Parshall flume in sec. 33, T. 40 N., R. 4 W., at Weminuche Pass in Colorado. Diversion is from North Fork Los Pinos River in San Juan River Basin into Weminuche Creek in Rio Grande Basin. Second enlargement was completed in 1936. Diversion for irrigation is from Rio Grande above the Del Norte gaging station.

Imported quantities, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	0	0	0	0	0	85	314	131	6	0	0	0	536
1953	0	0	0	0	0	261	90	30	0	0	0	0	381
1954	0	0	0	0	353	415	197	52	96	76	0	0	1,189
1955	0	0	0	0	19	335	101	101	64	28	0	0	648
1956	0	0	0	0	201	445	201	66	0	0	0	0	913
1957	0	0	0	0	0	184	546	339	196	0	0	0	1,265
1958	0	0	0	0	0	321	118	67	16	0	0	0	522

Raber-Loehr ditch.--Water-stage recorder and 4-ft rectangular flume in sec. 33, T. 40 N., R. 4 W., at Weminuche Pass in Colorado. Diversion is from Rincon la Vaca Creek in San Juan River Basin into Weminuche Creek in Rio Grande Basin. Second enlargement was completed in 1936. Diversion for irrigation is from Rio Grande above the Del Norte gaging station.

Imported quantities, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	0	0	0	0	0	220	885	621	0	0	0	0	1,726
1953	0	0	0	0	0	598	363	243	134	0	0	0	1,338
1954	0	0	0	0	658	1,120	771	600	498	241	0	0	3,888
1955	0	0	0	0	60	1,170	682	784	554	170	0	0	3,420
1956	0	0	0	0	317	1,160	640	340	0	0	0	0	2,457
1957	0	0	0	0	0	102	1,020	922	632	0	0	0	2,676
1958	0	0	0	0	0	736	694	345	38	0	0	0	1,813

Squaw Pass ditch.--Water-stage recorder and 2-ft Parshall flume in sec. 21, T. 39 N., R. 3 W., at Squaw Pass in Colorado. Diversion is from Williams Creek in San Juan River Basin into Squaw Creek in Rio Grande Basin. Constructed in 1938. Diversion for irrigation is from Rio Grande below Del Norte gaging station.

Imported quantities, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	0	0	0	0	0	21	198	21	0	0	0	0	240
1953	0	0	0	0	0	161	31	0	0	0	0	0	192
1954	0	0	0	0	0	154	57	0	0	0	0	0	211
1955	0	0	0	0	0	37	34	0	0	0	0	0	71
1956	0	0	0	0	0	177	0	0	0	0	0	0	177
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	153	19	0	0	0	0	172

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Tabor ditch.--Water-stage recorder and 3-ft Parshall flume in sec. 35, T. 43 N., R. 3 W., at Spring Creek Pass in Colorado. Diversion is from Cebolla Creek in Gunnison River Basin into tributary of Clear Creek in Rio Grande Basin. Completed in 1910 or 1911. Diversion for irrigation is from Rio Grande above Del Norte gaging station.

Imported quantities, in acre-feet

Imported quantities, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	0	0	0	0	0	211	57	40	0	0	0	0	308
1953	0	0	0	0	0	168	14	0	0	0	0	0	182
1954	0	0	0	0	107	67	0	0	0	0	0	0	174
1955	0	0	0	0	0	31	0	0	0	0	0	0	31
1956	0	0	0	0	112	55	0	0	0	0	0	0	167
1957	0	0	0	0	0	434	354	0	0	0	0	0	788
1958	0	0	0	0	98	557	125	14	0	0	0	0	794

Piedra Pass ditch.--Water-stage recorder and 2-ft Parshall flume in sec. 4, T. 38 N., R. 1 W., at Piedra Pass in Colorado. Diversion is from tributaries of Piedra River in San Juan River Basin to South River in Rio Grande Basin. Original ditch completed in 1938, first enlargement completed in 1940. Imported water is diverted above the Del Norte gaging station for irrigation of land downstream from Del Norte gaging station.

Imported quantities, in acre-feet

Imported quantities, in acre-feet													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1952	0	0	0	0	0	0	0	0	0	0	0	0	0
1953	0	0	0	0	0	13	29	0	0	0	0	0	42
1954	0	0	0	0	0	0	0	0	0	0	0	0	0
1955	0	0	0	0	0	0	0	0	0	0	0	0	0
1956	0	0	0	0	0	50	34	0	0	0	0	0	84
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	155	89	0	0	0	0	0	244

Treasure Pass ditch.--Water-stage recorder and 2-ft Parshall flume in sec. 31, T. 38 N., R. 2 E., at Wolf Creek Pass in Colorado. Diversion is from Wolf Creek in San Juan River Basin to a tributary of South Fork Rio Grande. Completed in 1923 or 1924. Water is diverted for irrigation from Rio Grande below the Del Norte gaging station.

Imported quantities, in acre-feet

[illegible]

EVAPORATION AND PRECIPITATION

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The last paragraph of Article VI of the Compact states in part, --- "such credits and debits shall be reduced annually to compensate for evaporation losses in the proportion that such credits or debits bear to the total amount of water in such reservoirs during the year."

To provide the data needed for the computation of such evaporation losses, the Commission has encouraged the establishment and operation of evaporation stations near each major reservoir in the basin and at other selected locations.

Evaporation and other climatological data collected at the several stations in Colorado and New Mexico are tabulated on the next three pages. At some of the stations, it was not possible to obtain evaporation records throughout the winter period.

The measurements of evaporation were made in accordance with standard practice for the type of pan in use. Measurements of precipitation were made in standard 8-inch rain gages, which were supplemented at some of the stations by recording rain gages.

Records for the evaporation stations at Agricultural College, Elephant Butte Dam and El Vado Dam antedated the creation of the Commission; the station at Bosque del Apache was established for the U.S. Fish and Wildlife Service; the station at Jemez Canyon Dam was established for the Corps of Engineers. All others were established at the request of the Commission.

The Rio Grande Compact Commission gratefully acknowledges the cooperation of the U.S. Weather Bureau for furnishing the climatological records contained in this report.

EVAPORATION AND PRECIPITATION

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Santa Fe. --Lat 35°39', long 105°56', in Santa Fe, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 7,045 ft.

Evaporation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	-	-	-	-	9.34	12.52	10.58	-	8.99	7.37	-	-	-
1953	-	-	-	-	10.51	13.27	11.74	-	8.23	7.10	-	-	-
1954	-	-	-	8.70	8.40	11.78	8.69	10.55	10.33	-	-	-	-
1955	-	-	-	7.63	7.84	11.05	9.67	8.23	7.10	5.53	-	-	-
1956	-	-	-	-	-	-	-	6.99	6.98	5.50	-	-	-
1957	-	-	-	-	-	11.61	11.21	8.97	9.01	6.68	-	-	-
1958	-	-	-	-	-	10.03	10.16	7.62	8.06	3.82	-	-	-
						10.49	10.33	7.78	5.21	3.81	-	-	-

Precipitation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	0.55	0.49	0.82	1.07	1.12	0.36	2.57	2.26	0.79	0.07	0.80	0.53	11.43
1953	.32	.44	.80	.24	.84	.39	5.12	.94	1.08	.51	1.34	.78	12.80
1954	.35	.13	1.49	T	1.88	1.14	3.38	3.42	1.09	.68	.13	.37	14.06
1955	.81	.27	.20	.89	1.29	.23	1.87	2.57	1.35	.24	.02	1.11	10.85
1956	.83	.26	T	.01	1.22	.58	1.77	1.39	T	.24	.09	.29	6.68
1957	1.00	.91	1.61	1.22	1.59	.30	2.33	3.61	.20	3.20	1.33	.26	17.56
1958	.73	1.02	1.74	1.43	.18	.67	.57	3.73	2.38	1.26	.60	.32	14.63

Jemez Dam. --Lat 35°23', long 106°32', in Sandoval County at Jemez Dam, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 5,388 ft.

Evaporation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	10.43	12.10	15.71	14.28	12.14	10.32	7.93	5.26	-	-
					11.64	16.19	12.45	10.40	10.50	8.71	-	-	-
1956	-	-	-	10.88	14.28	17.09	15.44	13.67	13.33	8.90	-	-	-
1957	-	-	-	8.93	10.80	15.63	13.06	11.25	10.81	5.30	-	-	-
1958	-	-	-	8.48	12.32	14.18	14.71	12.53	8.24	6.08	-	-	-

Precipitation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	0.51	0.04	0.75	0.00	0.65	0.92	1.79	0.27	0.02	0.48	0.59	0.12	-
1955	.39	.09	.00	.23	1.01	.25	2.16	2.28	.80	.17	.09	.10	6.09
1956	.76	.42	.00	.00	.20	.05	.34	.51	.00	T	T	.12	6.74
1957	.22	.79	.78	.43	.86	T	1.72	.51	.00	.25	.00	.04	2.57
1958	.41	.32	1.65	.55	.09	.10	.15	2.28	.04	2.05	1.15	.22	10.54
								1.07	1.99	.69	.50	.82	8.34

Bosque del Apache. --Lat 33°46', long 106°54', in Socorro County, 7 miles south of San Antonio, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 4,520 ft.

Evaporation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	3.97	5.28	7.24	8.97	12.00	14.94	11.75	11.45	9.17	6.56	3.83	1.96	97.12
1953	3.96	3.71	7.53	10.93	12.41	13.39	11.57	11.15	9.32	6.85	3.70	2.46	96.98
1954	4.16	6.06	9.40	10.60	11.90	14.68	12.83	10.25	8.25	6.58	4.25	2.60	101.36
1955	2.07	3.57	8.65	11.22	13.48	13.97	11.56	10.31	9.04	6.03	4.74	2.42	97.06
1956	3.18	3.51	8.54	10.02	13.04	13.25	12.01	11.08	9.61	7.24	3.79	2.25	97.52
1957	3.22	4.10	6.44	9.47	11.04	13.56	12.42	10.29	6.31	4.29	2.41	3.18	86.73
1958	-	4.02	4.28	10.32	11.17	13.06	11.97	11.19	7.09	4.98	3.13	2.76	-

Precipitation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	0.03	0.06	0.19	0.19	0.29	0.89	1.13	0.58	0.73	0.00	0.41	0.40	4.90
1953	.00	.75	1.10	1.41	.03	1.45	1.69	2.66	.11	.08	.11	.05	9.44
1954	.13	T	.15	.12	.17	.15	.44	2.21	1.17	1.14	.00	.00	5.68
1955	.49	.00	.00	T	.05	.20	1.34	.55	.33	.88	.00	.05	3.89
1956	T	.06	.00	.00	.10	.37	.71	.99	.00	.00	.00	.00	-
1957	.39	.36	.58	.24	.72	.11	.11	.00	.00	.00	.00	.00	-

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Evaporation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	4.70	5.58	8.42	11.58	15.36	17.32	14.35	13.92	11.72	8.76	5.10	2.93	119.74
1953	4.89	4.91	8.53	13.15	16.41	19.09	14.60	14.17	13.72	9.03	6.03	3.26	127.79
1954	3.48	7.00	9.82	13.15	15.46	19.16	16.87	12.10	10.99	7.98	6.18	4.21	126.40
1955	2.75	5.06	9.12	14.80	15.29	17.95	13.61	11.74	12.95	9.30	6.88	4.52	123.97
1956	4.82	5.61	10.55	13.12	18.31	17.92	14.69	13.15	12.97	10.47	5.62	3.62	130.85
1957	5.01	5.74	9.06	14.05	14.83	17.72	15.67	10.49	10.62	6.48	4.03	3.23	116.93
1958	3.19	4.96	5.67	12.04	14.15	16.98	14.49	13.69	8.07	5.40	4.43	3.92	106.99

Precipitation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	0.10	0.03	0.14	0.23	0.60	1.34	1.56	0.74	0.82	0.00	0.25	0.51	6.32
1953	.00	.93	1.12	.63	.21	.37	.50	1.07	.03	.25	T	.11	5.22
1954	.06	T	.11	.09	1.17	.09	.19	1.80	.73	1.11	.00	.10	5.45
1955	.57	.00	.05	.00	.24	.17	2.19	2.02	T	1.31	.00	.00	6.55
1956	.15	1.15	.00	.00	.01	.82	2.22	1.76	.01	.08	.00	.02	6.22
1957	.07	.55	.29	1.19	.40	.18	2.05	5.24	.16	2.68	.79	.00	13.60
1958	.47	.34	1.46	.62	.35	.34	.58	1.10	2.86	1.65	.03	T	9.80

Evaporation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	4.86	5.00	7.56	10.29	14.14	15.54	13.09	12.76	11.06	7.93	4.62	2.67	109.52
1953	4.36	4.92	8.25	12.51	15.46	17.14	14.08	12.92	12.22	8.30	5.16	3.15	118.47
1954	3.57	6.52	9.24	12.54	14.99	18.01	15.30	11.45	9.69	7.33	5.31	4.90	118.85
1955	2.63	5.59	9.60	14.57	14.59	17.61	13.01	11.95	11.76	8.46	6.33	4.07	120.17
1956	3.95	5.68	10.25	12.37	17.15	17.90	14.37	12.91	12.26	9.38	5.33	4.04	125.59
1957	4.43	5.91	8.69	12.93	13.63	17.81	15.83	10.41	9.67	5.22	3.40	3.32	111.25
1958	3.44	5.30	5.94	11.36	12.06	15.57	14.87	12.38	7.59	4.52	3.80	3.66	100.49

Precipitation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	0.12	0.27	0.28	0.38	0.82	1.37	1.41	1.37	1.04	0.00	0.03	0.73	7.82
1953	.00	.71	1.36	.69	.16	.32	.97	1.57	.01	.51	.02	.02	6.34
1954	.07	T	.15	.12	1.34	.24	.21	4.31	2.31	1.44	.00	.23	10.42
1955	.68	.00	.14	T	.27	.05	2.29	1.22	.01	.43	T	.01	5.10
1956	.15	.60	.00	T	.06	.28	3.18	.78	.06	.12	.00	.05	5.28
1957	.29	.75	.49	.63	.25	.18	3.33	3.25	.16	1.33	.27	T	10.93
1958	.19	.79	1.49	.72	.66	.10	.76	1.59	4.02	2.74	.04	T	13.10

Evaporation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	3.58	4.54	7.88	9.55	13.03	12.97	12.57	10.44	9.42	5.98	3.53	2.38	95.63
1953	3.79	4.46	7.65	11.28	12.71	14.36	12.37	11.55	9.68	6.11	4.11	2.49	100.56
1954	2.93	5.09	8.23	10.70	12.16	14.30	12.85	9.97	8.53	5.82	4.15	3.19	97.92
1955	2.15	4.32	7.22	11.35	12.52	14.15	11.15	9.12	9.27	5.66	4.21	3.15	94.27
1956	3.04	4.22	8.38	10.48	14.22	15.11	12.70	10.87	9.87	7.16	3.76	2.55	102.36
1957	3.19	4.26	7.06	10.45	12.59	13.86	12.66	9.92	8.86	4.94	3.62	2.40	93.71
1958	2.37	3.54	4.96	9.95	11.01	13.31	13.13	10.61	6.25	4.49	2.90	2.83	85.35

Precipitation, in inches													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1952	T	0.72	0.71	0.56	0.16	1.07	1.11	1.22	0.37	0.00	0.19	0.12	6.23
1953	0.00	.68	.41	.03	T	.28	1.31	.33	T	.57	T	.20	3.81
1954	.07	.30	.10	.00	.82	.26	.72	1.34	.96	1.25	.00	T	5.82
1955	.66	.00	.39	.00	.15	.08	3.17	.59	.01	2.10	.11	T	7.26

The Minutes of the Sixth Annual (Sixteenth) Meeting of the Rio Grande Compact Commission state in part:

"---factual data used in the compilation of reports of the Commission which factual data had been revised and published by the U.S.G.S. ---- subsequent to use by the Compact Commission in computing debits and credits should be published in succeeding reports of the Commission together with proper explanatory notes."

The Rio Grande Compact provides that the Annual Report of the Commission for each calendar year shall be transmitted to the Governors of the signatory states before March first of the following year. Although every effort is made to furnish correct data to the Commission for use in their report, the limited time available to the collecting agency does not permit a thorough analysis of the data and they are necessarily subject to revision.

The Commission bases all computations of debits and credits on volumes in thousands of acre-feet, expressed to the nearest hundred. A check was made of all records published in these annual reports against those published by the U.S.G.S. and it was found that in most instances the changes were not of sufficient magnitude to affect the computations of debits and credits; other changes were of items not used by the Commission; but whenever a corrected value affected the computations of credits or debits, such revisions are listed hereafter. The effect of changes or revisions on the credits, debits or departures from normal release have been adjusted from time to time by appropriate correction entries.

The figures shown in the following list are the corrected values of runoff in acre-feet for the periods indicated and supplement the corrections published in the Twelfth Annual Report.

Conejos River near Mogote, Colo.

1955 November 3,590; annual 135,600

Conejos River near La Sauses, Colo.

1954 September 41; October 455

Rio Grande near Lobatos, Colo.

1956 December 3,870; annual 70,100

Rio Grande at Otowi Bridge, near San Ildefonso, N. Mex.

1949 June 370,700; annual 1,327,300

Elephant Butte Reservoir

<u>1956</u>	Jan.	169,900	May	160,200	Sept.	24,200
	Feb.	200,600	June	108,900	Oct.	26,100
	Mar.	166,600	July	63,300	Nov.	28,700
	Apr.	146,400	Aug.	38,400	Dec.	32,900