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REPORT of the

RIO GRANDE COMPACT

COMMISSION

2007

6

TO THE GOVERNORS OF Colorado, New Mexico and Texas

| REPORT of the |
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| RIO GRANDE COMPACT |
| COMMISSION |
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ANNUAL REPORT TO THE GOVERNORS

RIO GRANDE COMPACT COMMISSION COLORADO TEXAS NEW MEXICO

March 27, 2008

The Honorable Rick Perry Governor of the State of Texas Austin, Texas

The Honorable Bill Richardson Governor of the State of New Mexico Santa Fe, New Mexico

The Honorable Bill Ritter Governor of the State of Colorado Denver, Colorado

Honorable Governors:

The 69th Annual Meeting of the Rio Grande Compact Commission was held in Santa Fe, New Mexico on March 27, 2008.

The Commission reviewed its prior reports and the current reports of the Secretary and the Engineer Advisers relative to streamflow at Compact gaging stations and storage in reservoirs in 2007. The Commission found that:

- (a) Deliveries of water at the Colorado-New Mexico state line by Colorado amounted to 298,900 acre-feet in 2007 and the scheduled delivery for the year was 304,500 acre-feet.
- (b) Deliveries of water into Elephant Butte Reservoir by New Mexico, as measured by the Elephant Butte Effective Supply, amounted to 546,300 acre-feet in 2007 and the scheduled delivery for the year was 513,500 acre-feet.
- (c) The actual release of usable water from Project Storage was 637,800 acre-feet.
- (d) Colorado relinquished 300 acre-feet of credit water to Texas on April 30, 2007.

The Commission agreed to the accounting of accrued credits for 2007, as follows:

- The Commissioners found that the accrued credit for deliveries by Colorado at the Colorado-New Mexico State Line was 7,200 acre-feet on January 1, 2008.
- (2) The Commissioners found that the accrued credit for deliveries by New Mexico at Elephant Butte Dam was 184,500 acre-feet on January 1, 2008.

The Honorable Rick Perry The Honorable Bill Richardson The Honorable Bill Ritter March 27, 2008 Page 2

(3)The Commissioners found that the accrued departure from normal release from Project Storage as of January 1, 2008 was a credit of 778,400 acre-feet.

The Commission reviewed the cost of operation and found that the expenses of the administration of the Rio Grande Compact were \$186,788 in the fiscal year ending June 30, 2007. The United States bore \$62,305 of this total; the balance of \$124,483 was borne equally by the three States party to the Compact.

Respectfully.

Patrick R. Gordon, Commissioner for Texas

R. D'Antonio Jr., Commissioner for New Mexico

Dick Wolfe, Commissioner for Colorado

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 For the State of New Mexico For the State of Texas

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

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

ARTICLE I

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

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

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

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

(e) The term "tributary" means any stream which naturally contributes to the flow of the Rio Grande.

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

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

(h) "Annual Credits" are the amounts by which 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.

(I) "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 the effective storage at the beginning of the calendar year following each actual spill.

ARTICLE II

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

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

(b) On the Conejos River near Mogote;

(c) On the Los Pinos River near Ortiz;

(d) On the San Antonio River at Ortiz;

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

(f) On the Rio Grande near Lobatos;

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

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

(i) On the Rio Grande near San Acacia;

(j) On the Rio Grande at San Marcial;

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

(I) 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.

RIO GRANDE COMPACT

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 thousand acre feet less than the sum of those quantities set forth in the two following tabulations of relationship, which correspond to the quantities at the upper index stations:

DISCHARGE OF CONEJOS RIVER

Quantities in thousands of acre feet

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

Intermediate quantities shall be computed by proportional parts.

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

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

DISCHARGE OF RIO GRANDE EXCLUSIVE OF CONEJOS RIVER Quantities in thousands of acre feet

| Rio Grande at Del Norte (3) | Rio Grande at Lobatos less Conejos at Mouths (4) |
|-----------------------------|---|
| 200 | 60 |
| 250 | 65 |
| 300 | 75 |
| 350 | 86 |
| 400 | 98 |
| 450 | 112 |
| 500 | 127 |
| 550 | 144 |
| 600 | 162 |
| | |

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) |
|-----------------------------|---|
| 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.

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:

RIO GRANDE COMPACT

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.

(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 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.

RIO GRANDE COMPACT

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

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

ARTICLE VII

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

ARTICLE VIII

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

ARTICLE IX

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

ARTICLE X

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

ARTICLE XI

New Mexico and Texas agree that upon the effective date of this Compact all controversies between said States relative to the quantity 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 New Mexico. The Rio Grande Compact Commissioner for 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.

RIO GRANDE COMPACT

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.

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

RESOLUTION

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.
- (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:

RESOLUTION

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

Quantities in thousands of acre-feet

Elephant Butte Effective Index

| Otowi Index Supply (5) | 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 |
| 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

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.

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.

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

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, /3, /4

(a) Water released 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.

(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 capacity of that reservoir to the level of the uncontrolled spillway less capacity reserved for flood purposes, i.e., 1,998,400 acre-feet in the months of October through March inclusive, and 1,973,400 acre- feet in the months of April through September, inclusive, as determined from the 1999 area- capacity table or successor area-capacity tables and flood control storage reservation of 50,000 acre-feet from April through September and 25,000 acre-feet from October through March.

(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 /5

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.

- /1 Amended at Eleventh Annual Meeting, February 23, 1950.
- /2 Adopted at Fourth Annual Meeting, February 24, 1943.
- /3 Amended September 9, 1998.
- /4 Amended March 22, 2001; made effective January 1, 2001.
- /5 Adopted June 2, 1959; made effective January 1, 1952.

RULES AND REGULATIONS

EVAPORATION LOSSES 16, 17, 18

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 disredarded.

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.

- /6 Amended at Tenth Annual Meeting, February 15, 1949.
- /7 Amended at Twelfth Annual Meeting, February 24, 1951.
- /8 Amended June 2, 1959.

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 /8

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 adviser 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.

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.

<u>/8</u> The substitution of this section for the section titled "Reports to Commissioners" was adopted at Ninth Annual Meeting, February 22, 1948.

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

RULES AND REGULATIONS

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.

MEETING OF COMMISSION /1, /10

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. Hinderlider Commissioner for Colorado (Signed) THOMAS M. McCLURE Thomas M. McClure Commissioner for New Mexico (Signed) JULIAN P. HARRISON Julian P. Harrison Commissioner for Texas

Adopted December 19, 1939.

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

/10 Amended at Thirteenth Annual Meeting, February 25, 1952.

REPORT OF THE ENGINEER ADVISERS TO THE RIO GRANDE COMPACT COMMISSIONERS

March 10, 2008

The Engineers Advisers met in Austin from February 25 through 29, 2008 to prepare the 2007 Rio Grande Compact (Compact) water accounting and to discuss continuing and new issues in preparation for the 2008 annual meeting of the Rio Grande Compact Commission (Commission). The Engineer Advisers requested and received the participation of the U.S. Geological Survey (USGS), the U.S. Bureau of Reclamation (Reclamation), the U.S. Army Corps of Engineers (Corps), the U.S. Bureau of Indian Affairs (BIA), the International Boundary and Water Commission (IBWC) and the U.S. Fish and Wildlife Service (Service) to discuss in detail their specific water-related activities in the basin. Bill Ruth, the Federal Chairman of the Commission, attended the water accounting and federal agency presentation portions of the meeting.

COMPACT ACCOUNTING

The Engineer Advisers to the Rio Grande Compact Commissioners have reviewed the streamflow and reservoir storage records and other pertinent data and have determined the scheduled and actual deliveries, and the release of Usable Water during calendar year 2007. As determined by the Engineer Advisers, scheduled and actual deliveries, release of Usable Water for the year 2007, and balances as of January 1, 2008 are as follows:

(a) Deliveries by Colorado at the Stateline:

Balance as of January 1, 2007 Scheduled delivery Actual delivery at Lobatos plus 10,000 acre-feet Reduction of credit on account of evaporation Accrued credits relinquishment to Project Storage on April 30, 2007 Accrued credit January 1, 2008 15,500 acre-feet 304.500 acre-feet 298,900 acre-feet 2,400 acre-feet

> 300 acre-feet 7,200 acre-feet

REPORT OF THE ENGINEER ADVISERS

| b) Deliveries by New Mexico at Elephant Butte Dam: | |
|--|-------------------|
| Balance as of January 1, 2007 | 180,100 acre-feet |
| Scheduled delivery | 513,500 acre-feet |
| Actual delivery | 546,300 acre-feet |
| Reduction of credit on account of evaporation | 28,400 acre-feet |
| Accrued credit January 1, 2008 | 184,500 acre-feet |
| c) Project Storage and Releases: | |
| Accrued departure (credit) as of January 1, 2007 | 628,400 acre-feet |
| Actual release of Usable Water | 637,800 acre-feet |
| Normal release for year | 790,000 acre-feet |
| Under release in excess of 150,000 | 2,200 acre-feet |
| Accrued departure (credit) as of January 1, 2008 | 778,400 acre-feet |
| | |

Snowmelt runoff levels in 2007 were average to slightly below average in most of the basin in Colorado and New Mexico. Summer monsoon activity was also average to slightly below average throughout most of the basin. Usable Water in Project Storage was below 400,000 acre-feet on January 1, 2007; rose above that level on January 31, 2007 and fell back below it on July 3, 2007 and remained below 400,000 acre-feet for the remainder of the year. As a result, the storage restrictions of Article VII of the Compact were not in effect during the snowmelt runoff. The San Juan-Chama Project diversions through Azotea Tunnel totaled about 105,000 acre-feet in 2007.

CONTINUING ISSUES

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This section of the report summarizes issues previously addressed by the Engineer Advisers or the Commission. It reflects information obtained by the Engineer Advisers subsequent to the 2007 Commission meeting, including information obtained in the reports of the federal agencies at the 2008 Engineer Advisers meeting.

Gaging Station Review

The Secretary and Engineer Advisers continued to investigate the water balance between Elephant Butte and Caballo Reservoir gages. Streamflow measurements at the gaging station below Elephant Butte Dam and a seepage run in the river reach from the Elephant Butte gage to the headwaters of Caballo Reservoir were conducted by the USGS in September, 2007 pursuant

to a Joint Funding Agreement between the USGS and the New Mexico Interstate Stream Commission (NMISC). The results indicated that this reach gained about 28 cubic feet per second (cfs) under the flow conditions at the time of measurement.

Analysis of the historical water balance indicates that in general this reach is a gaining reach. Of the 66 years of record, only ten of the years exhibited a loss. Of the years with a loss, all were less than 10,000 acre-feet except for 1970, 1993 and 2005. The analysis also indicates that since year 2000 (through 2006) this reach has aggregated an overall loss. Investigation of this issue will continue in 2008. NMISC and the USGS are planning two additional seepage studies in this reach in the upcoming year.

Federal Agency Efforts towards a New Middle Rio Grande Biological Opinion

In 2007, Reclamation, the Corps and the Service continued efforts with the Middle Rio Grande Endangered Species Collaborative Act Program (Collaborative Program) to develop a new biological opinion for middle Rio Grande water operations. They stated that their goal continues to be to develop and implement sustainable water operations that alleviate jeopardy to the Rio Grande silvery minnow (silvery minnow) and Southwestern willow flycatcher (flycatcher) and other threatened and endangered species. The federal agencies have developed a draft schedule for this effort that extends to March 2010 when a new biological opinion would be issued.

The technical approach of that effort will focus largely on experiments related to river system operations and on a population viability analysis (PVA) to investigate the long-term viability of the silvery minnow. The investigations are designed to build scientific support for future water operations changes. Investigations conducted in 2007 include:

- Conducting and assessing the effect of a deviation from normal operations at Cochiti Reservoir requested by the Engineer Advisers and approved by the Commission to re-regulate the delivery of water to Elephant Butte Reservoir to aid silvery minnow recruitment in 2007;
- Documenting silvery minnow viability in isolated pools and outfalls;
- Implementing and evaluating modified river recession and silvery minnow salvage procedures:

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- Compiling and commencing evaluation of the large amounts of information gathered on water operations and the status of the silvery minnow since 2003;
- Refining the Upper Rio Grande Water Operations Model (URGWOM) and a number of linked surface water/groundwater models;
- Conducting numerous silvery minnow research projects;
- Developing a population viability analysis for the silvery minnow; and
- Developing the first phase of the silvery minnow population and habitat viability assessment (PHVA).

The PVA uses a computer simulation that incorporates current knowledge of the demographics of the silvery minnow within the middle Rio Grande to project the probability of long-term success of various management actions, and the sensitivity of the silvery minnow to those management actions. The PHVA uses the PVA to guide, evaluate and prioritize species management and research activities.

A significant change in position since last year is that Reclamation and the Corps now indicate the process will not conclude with a biological opinion similar to the 2003 biological opinion. The 2003 biological opinion concluded an Endangered Species Act (ESA) Section 7 consultation that lumped together federal and non-federal actions. Reclamation and the Corps now want the new biological opinion to contain explicit commitments from the non-federal parties. The Federal agencies prefer a hybrid ESA Section 7-Section 10 approach to cover both federal and non-federal actions.

Compliance by Federal and State Agencies with State Water Law and Regulations

The Commission has previously adopted resolutions that requested the Corps, Reclamation and Service comply with state law by obtaining permits from the appropriate state agencies for any water related actions, including habitat restoration, that result in new or additional river depletions. Federal agency representatives have acknowledged the need to comply with applicable state laws regarding these projects.

The New Mexico Engineer Adviser reported the NMISC, Corps, and Reclamation negotiated an agreement for offset of depletions for a Corps habitat restoration project in the middle Rio Grande bosque near the Rio Grande Nature Center. In addition, the NMISC is

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continuing to negotiate with Reclamation and the Corps for a long-term agreement that will define how habitat restoration depletions are offset in the middle Rio Grande.

Lower Rio Grande Salinity Issues

In response to a request from the Commission at its 2006 meeting, the Engineer Advisers continue to work with other interested entities to explore the next-steps for evaluating the feasibility of salinity capture and treatment in the Rio Grande from San Acacia, New Mexico to Fort Quitman, Texas with emphasis on the Rio Grande Project region. The Commission hosted a workshop on Rio Grande salinity in El Paso, Texas on May 21 and 22, 2007, which brought together federal, state and local water managers, water users and water researchers from Texas, New Mexico, Colorado, Arizona, California and Chihuahua interested in Rio Grande salinity issues. The workshop was effective in improving the understanding of sources of Rio Grande salinity, particularly in the Rio Grande Project region; defining socioeconomic implications of increasing salinity; and exploring potential salinity management strategies to reduce impacts and extend existing water supplies in the fast-growing Rio Grande Project area.

The Commission subsequently invited water experts from the area to become members of a Rio Grande Project Salinity Management Coalition (Coalition). The Coalition is composed of individuals from Rio Grande Project irrigation districts; Texas, New Mexico and Colorado state water management agencies; El Paso Water Utilities; Las Cruces Water Utilities; and researchers from area universities. The Coalition will identify and prioritize salinity management efforts based on input from all members, and develop a work plan for funding and implementation of target projects where reduction in salinity could increase the quantity and improve the quality of available water supply.

An initial meeting of the Coalition was held in El Paso on January 11, 2008. The Coalition is considering making a request to the U. S. Army Corps of Engineers to institute a project to study, account for and ultimately intercept sources of salinity in the Rio Grande basin as part of the Corps' authorizations under Section 729 of the Water Resources Development Act of 2007 (WRDA). The New Mexico Engineer Adviser indicated that the NMISC has funds available to pursue this effort and certain Texas entities expressed support as well. The Coalition will meet again March 26, 2008 to continue these efforts.

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Staff of the USGS Texas Water Science Center made a presentation to the Engineer Advisers on February 26, 2008 on advanced geophysical methods for studying groundwatersurface water interaction, including delineation of aquifer boundaries, and assessment of salinity. The Engineer Advisers believe this technology may have application for evaluating salinity control in the lower Rio Grande.

Closed Basin Project

The total production of the Closed Basin Project in 2007 was 18,814 acre-feet with 15,038 acre-feet of that amount delivered to the Rio Grande. All of the water delivered to the Rio Grande in 2007 was of sufficient quality to qualify for credit under the Compact. Reclamation continues to address problems of biofouling in the production wells of the Closed Basin Project. Reclamation replaced five wells in 2007 that were most affected by iron bacteria, and rehabilitated numerous other wells. To date, 43 of the 150 original wells have been replaced. The new wells and change in operation of all project wells are helping to restore the production of the project. Wells will continue to be replaced as budgetary constraints allow. The Closed Basin Operating Committee continues to monitor groundwater levels and groundwater production and adjust project operations pursuant to the enabling legislation.

URGWOM Accounting Model

During 2007, Reclamation made several updates to the URGWOM accounting model, including incorporation of Nambe Falls Reservoir as a distinct model object; adding data objects needed for the monthly and annual report tables; and automating parts of the annual water accounting report preparation process.

The Engineer Advisers will review these updates and decide whether or not to approve their use in the 2008 water accounting.

Reclamation reported that it continued the process of implementing a generalized relational database management system, Hydrologic Database (HDB) during 2007. They plan to eventually import URGWOM output directly into HDB using an automated data loader and then use a software product called Crystal Reports to generate water accounting reports from HDB. The Corps reported on additional developments and updates to URGWOM, including

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improved simulation of groundwater/surface water interaction, and additional improvements to the water accounting module. The Corps also reported that a new multi-agency memorandum of understanding for continued development and upgrades of URGWOM has been signed and a five-year implementation plan is being prepared. The plan includes incorporation of stochastic procedures; development of a monthly model, similar to that of URGWOM, in Sandia National Laboratory's PowerSim model; and extending URGWOM to cover the reach of the lower Rio Grande from Elephant Butte to Fort Quitman, Texas.

The Engineer Advisers will continue to monitor this issue.

Low Flow Conveyance Channel Design, Construction, Operation and Maintenance

Reclamation reported that it published Notice of Cancellation of its final Environmental Impact Statement (EIS) on the environmental impacts of proposed modifications to the main channel of the Rio Grande and Low Flow Conveyance Channel (LFCC) system in the September 11, 2007 issue of the Federal Register. The draft EIS had been published in 2000. Reclamation's report to the Engineer Advisers indicates two reasons for canceling the EIS. First, Reclamation's Record of Decision for the Upper Rio Grande Water Operations Review and EIS to continue operating the LFCC as a passive drain with no diversion from the Rio Grande; and second, because the lowering of Elephant Butte Reservoir presents other opportunities for connecting the river and the LFCC. The New Mexico Engineer Adviser reported that modeling of the LFCC and adjacent river system operations indicate that up to 20,000 acre-feet per year of water could be saved if the LFCC were to be fully operated as originally authorized. The model results also indicate that depletions would increase if the LFCC were operated while maintaining downstream river flow targets.

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Elephant Butte Pilot Channel Project

In 2007, Reclamation maintained access roads and performed minor maintenance of the upper portion of the constructed pilot channel, focusing on removal of sediment and debris accumulated in the channel. Reclamation also performed a significant amount of maintenance and repair on the amphibious excavators used for maintenance of the channel. A NMISC contractor maintained the lower portion of the channel prior to the spring runoff. During the first half of 2007, the top of the active reservoir pool was located near the downstream end of the Narrows. By the middle of July 2007, the active reservoir pool had receded a mile or more to the south, and remained there for the duration of the year.

No work was conducted in the pilot channel during fall 2007 due the need for ESA consultation after field surveys indicated the presence of silvery minnow in the pilot channel. Reclamation reported that the consultation between Reclamation and the Service was completed in early February 2008 with issuance of a biological opinion for the project.

Reclamation and the NMISC have independently estimated that between 8,000 and 17,000 acre-feet of water is saved annually when the pilot channel is open. Additionally, the New Mexico Engineer Adviser reported that the open pilot channel and Reclamation's maintenance of levees in the San Marcial area have been instrumental in delivering water to Elephant Butte Reservoir in recent years. The improved delivery efficiency due to the pilot channel has contributed to minimizing the amount of time Article VII storage restrictions have been in effect, resulting in the storage of significant amounts of native water in post-1929 reservoirs. The New Mexico Engineer Adviser indicated New Mexico has spent more than \$9 million since 2000 to construct and maintain the channel.

New Mexico Lower Rio Grande Active Water Resource Management

The New Mexico Office of the State Engineer initiated its Active Water Resource Management (AWRM) initiative in New Mexico's Lower Rio Grande Basin (from Elephant Butte Dam to the Texas State Line) in late 2004. AWRM is the term used for the New Mexico State Engineer's initiative to build the capability to administer water resources in accordance with state law. Progress to date has included: 1) declaring the Lower Rio Grande Water Master District (District); 2) hiring two District Water Masters and two assistant water masters; 3)

issuing an order requiring meters on all wells in the District (except single-family domestic and small stock wells); and 4) drafting District-specific rules and regulations for implementation of priority administration in the District. The District-specific rules and regulations were released for general public comment and the Office of the State Engineer is addressing comments and continuing with public outreach and public meetings. The District-specific regulations will be adopted incrementally, with the initial focus on the jurisdiction and duties of the water masters such as ensuring compliance with metering requirements. Subsequently, the focus will be on priority administration and alternative administration as proposed by local water users; and establishing sensible limits on groundwater pumping to protect the aquifer and its ability to function as a drought reserve.

2003 New Mexico - Texas Relinquishment Agreement

In 2003, New Mexico offered and Texas accepted a phased relinquishment of a portion of New Mexico's accrued credits then held in Project Storage in Elephant Butte Reservoir. The relinquishment totaled 175,500 acre-feet. The relinquishment allowed the storage of a like amount of water in post-1929 reservoirs in New Mexico upstream of Elephant Butte Reservoir over as many years as necessary when the storage prohibition of Article VII of the Compact is in effect.

During 2007, no relinquished water was stored. Relinquishment storage occurred in 2003, 2004, and 2006, totaling 154,224 acre-feet, leaving a balance of 21,276 acre-feet to be stored in future years. At the end of 2007, 10,578 acre-feet of relinquished water remained in storage, all in El Vado Reservoir.

YEAR 2007 OPERATIONS

Platoro Reservoir Operations for 2007

Platoro Reservoir, located near the headwaters of the Conejos River in Southern Colorado, is a post-Compact reservoir subject to the storage prohibition of Article VII. For dam safety reasons, the main gate valve in the dam is normally closed during the winter. This allows the downstream butterfly valves on the end of the outlets to be left open and not operated during the winter. Spray from the outlet will freeze and totally encase the operating arms of these

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valves, risking damage if they are operated during the winter. The bypass valve passes water around the main slidegate for winter operation.

Because the release from Platoro Reservoir was reduced for these normal winter operations, native water was unavoidably stored in the post-Compact reservoir, despite the storage prohibition of Article VII of the Compact. This storage occurred in January of 2007. The maximum release possible through the bypass valves under the reservoir head conditions at that time was approximately eight cfs. The inflow to the reservoir exceeded this release resulting in a gain of approximately 300 acre-feet before Usable Water in Project Storage rose above the 400,000 acre-feet Compact Article VII trigger level on January 31, 2007. Colorado relinquished 300 acre-feet to Project Storage on April 30, 2007, making a like amount of water in Platoro Reservoir available to meet irrigation demand on the Conejos River.

Reclamation's Supplemental Water Program

Reclamation's supplemental water program is intended to provide additional water, primarily obtained through the voluntary leasing of San Juan-Chama (SJC) Project water, for endangered species needs and compliance with the 2003 biological opinion. In 2007, Reclamation released a total of 11,353 acre-feet of leased SJC Project water to assure compliance with the biological opinion. Supplemental water releases were made only during the summer between June 21 and October 9. No releases were necessary during the early part of the year due to adequate natural flows. Reclamation reported that it expects the annual volume of SJC Project water available for lease after 2010 will be about 8,000 acre-feet per year.

SJC Project water leased for the program is released for diversion and use by the Middle Rio Grande Conservancy District (MRGCD), which, in turn, allows an equivalent amount of native Rio Grande water (less conveyance losses) to remain undiverted.

Reclamation continued to operate portable diesel driven pumps at four locations in the San Acacia reach between late June and late October, 2007 to pump an estimated (by Reclamation) 6,439 acre-feet of water from the LFCC to the Rio Grande under a permit issued by the New Mexico Office of the State Engineer.

Reclamation reported that it was in compliance with the 2003 biological opinion during 2007.

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2007 Rio Grande Project Operations and Storage

Reclamation reported a final allocation of 760,391 acre-feet, or 81.6% of a full supply, for all three Rio Grande Project water users: Elephant Butte Irrigation District (EBID), El Paso County Water Improvement District No. 1 (EP No. 1), and Mexico. That amount included carryover allotments for EBID and EP No. 1. Reclamation reported that EBID requested and diverted 302,664 acre-feet and EP No. 1 requested and diverted 278,251 acre-feet. These values reflect the operations proposed by EBID (in which EBID ensures deliveries of Texas' and Mexico's annual Rio Grande Project surface-water allocations) and implemented by Reclamation. Mexico requested and diverted 51,245 acre-feet. City of El Paso diversions for 2007 were 58,792 acre-feet.

Storage at Elephant Butte Reservoir peaked at about 610,000 acre-feet on March 27, 2007 and storage at Caballo Reservoir peaked at about 77,000 acre-feet on May 23, 2007. Endof-year storage at Elephant Butte Reservoir was about 410,000 acre-feet, and about 24,000 acre-feet at Caballo Reservoir.

REPORTS OF THE FEDERAL AGENCIES

Representatives of Reclamation, the Corps, the Service, and the BIA presented reports to the Engineer Advisers from February 25 through 27, 2008.

Reclamation's 2007 Rio Grande Project Operating Criteria

On May 15, 2007, after completing an Environmental Assessment that resulted in a Finding of No Significant Impact, Reclamation imposed new operating criteria for the Rio Grande Project. Reclamation's procedures incorporated the essence of EBID's March 2006 operations proposal, in which EBID ensures deliveries of Texas' and Mexico's annual Rio Grande Project surface-water allocations. Additionally, Reclamation's criteria also allowed for REPORT OF THE ENGINEER ADVISERS carryover of the diversion allocation and established carryover limits. The Engineer Advisers

met with Reclamation twice in 2007 to discuss details of the new operating criteria.

Rio Grande Project Operations Agreement

Reclamation reported that the two Rio Grande Project Irrigation Districts (EBID and EP No. 1) have reached and signed an agreement on how Rio Grande Project operations will be conducted in the future. This agreement replaces Reclamation's 2007 operating criteria.

The agreement is also intended to settle the districts' existing lawsuits in New Mexico and Texas Federal District Courts. Reclamation reported that the agreement was reached in January 2008 after extensive negotiations between Reclamation and the two districts. The Texas Rio Grande Compact Commissioner mediated the negotiations under an appointment by the Texas Federal District Court. Reclamation indicated it will consider all water available for release as Usable Water in Project Storage. Reclamation indicated it will work with the districts over the next six months to develop a detailed operating manual for the Rio Grande Project. The Engineer Advisers plan to work with Reclamation as necessary in 2008 to assess Compact implications, if any, of the agreement.

Reclamation's Rio Grande Project Operations Plan for 2008

Reclamation discussed its Rio Grande Project water allocations for 2008. At the time of the Engineer Advisers meeting, Reclamation indicated that the current allocation is 44.1 percent of a full allocation. Reclamation's most probable forecast for 2008 indicates a full allocation.

Reclamation's most probable estimate predicts that Elephant Butte Reservoir could reach a low storage level (after runoff) of about 734,000 acre-feet in October 2008. Reclamation expected to begin releases from Caballo Reservoir for the 2008 irrigation season on February 25 for EP No. 1's orders, on March 7 for EBID's orders, and on March 12 for Mexico's orders.

As discussed previously, Reclamation's project operations for 2008 will be in accordance with the newly signed operating agreement. Reclamation is still in the process of drafting its accounting procedures. The Engineer Advisers are awaiting the draft documentation of

Reclamation's proposed operations and will evaluate it to ensure all Rio Grande Compact states are kept whole.

Middle Rio Grande River Maintenance Plan

Reclamation reported that it is developing a long-term river maintenance plan that will serve as a technical guide for future river maintenance activities, while meeting the original project authorization purposes and environmental compliance needs. Reclamation reported that a draft of the plan is scheduled for completion in mid-2008 and will be submitted to the Engineer Advisers for review.

Potential 2008 Flood Fighting Operations

Given the above average snowpack conditions throughout most of the upper Rio Grande watershed, the Engineer Advisers discussed flood-fighting readiness with both Reclamation and the Corps. Both agencies indicated that they continue to monitor snowpack conditions and are preparing for potential spring flooding. Both agencies and the Engineer Advisers stressed the ongoing need for coordination including with New Mexico's Department of Homeland Security and Emergency Management and with the MRGCD.

The need for advance procurement of emergency supplies (e.g., sandbags) and stockpiling of riprap at strategic locations is being assessed. Periodic monitoring by aerial flights and levee patrols will occur during high flow periods and bank erosion will be monitored at critical locations. The Corps advised the Engineer Advisers of its authority under Public Law 84-99, which allows it, upon request by the Governor, to assist state and local governments before, during and after flood events. The Corps is able to assist with flood fighting activities when the capabilities of local authorities are exceeded.

Upper Rio Grande Basin Water Operations Review and EIS

The final EIS for this joint Corps, Reclamation and NMISC project was published in April 2007. This project was a multi-year effort that evaluated alternatives for more efficient operations of federal water storage and flood control facilities under existing authorities to meet the increasing demands on the upper Rio Grande.

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REPORT OF THE ENGINEER ADVISERS

During 2007, the three lead agencies published their individual Records of Decision (ROD). Reclamation's ROD included the following elements:

- Extension of the time allowed for delivery of annual SJC Project water allocations from Heron Reservoir from March 30 to September 30;
- Continued operation of the LFCC as a drain with no diversions from the Rio Grande; and
- Refinement and implementation of improved communications and coordination of water operations at other federal facilities.

The Corps' ROD contained no changes to current operations at facilities under its discretion. However, the Corps has expressed interest in supporting future operational changes at Abiquiu and Cochiti Reservoirs, contingent on specific requests being made and the results of additional analysis and documentation.

The NMISC ROD contained the following elements:

- Work with the Corps, Reclamation and other agencies or entities to implement native water storage in Abiquiu Reservoir for Compact management purposes and environmental and other benefits in the middle Rio Grande;
- Support the Corps in its efforts to maintain the 1,800 cfs flood control release from Abiquiu Reservoir;
- Work with the Corps, Reclamation and other agencies and entities to plan, design, and implement projects in the middle Rio Grande to safely increase the combined flood releases from Cochiti and Jemez Reservoirs from 7,000 cfs to 10,000 cfs as measured at Albuquerque;
- Continued utilization of the LFCC as the primary drain for the San Acacia reach of the middle Rio Grande until a new approach is developed and implemented for the reach that will improve ecosystem function and conveyance efficiency, provide water for irrigation, and reduce depletions within the reach; and
- Continue to work with federal and state agencies to improve coordination and cooperation on water operations actions throughout the upper Rio Grande basin.

Cochiti Reservoir Baseline Study

The Corps reported on an ongoing baseline study designed to evaluate all aspects of operations at Cochiti Reservoir. The Corps reported that no additional work was completed on the study in 2007 due to lack of authority for the Corps to enter into a cooperative agreement with the Pueblo de Cochiti. WRDA 2007 provided that authorization and the Corps now anticipates that it will complete the baseline study in 2010.

2007 Six Middle Rio Grande Pueblos Prior and Paramount Operations

The BIA Designated Engineer and Reclamation provided details on 2007 Prior and Paramount storage and release activities. Reclamation reported that it stored 20,000 acre-feet in El Vado Reservoir for delivery of irrigation water to the Prior and Paramount lands of the six Middle Rio Grande Pueblos in 2007 in the event that natural flows were insufficient. These are lands recognized as being senior to other lands of the MRGCD. Of that amount, 3,503 acre-feet was stored while the storage restrictions of Article VII of the Compact were in effect between January 1 and January 31 and the balance, 16,497 acre-feet, was stored when the storage restrictions were not in effect.

The Prior and Paramount water stored when Article VII of the Compact was not in effect remained in storage and was reallocated as normal Rio Grande storage available for release to satisfy future MRGCD irrigation demand. The remaining Prior and Paramount storage that had been captured while Article VII of the Compact was in effect (3,383 acre-feet after taking losses into consideration) was released in November and December for delivery to Elephant Butte Reservoir before the end of the calendar year.

The Texas Engineer Adviser remains concerned about the storage of native Rio Grande water in El Vado Reservoir by Reclamation when the storage restrictions of Article VII of the Compact are in effect.

REPORT OF THE ENGINEER ADVISERS

Middle Rio Grande Project Channel Maintenance

Reclamation provided a presentation regarding the status of its middle Rio Grande river channel maintenance program. Since 2003, Reclamation has implemented long-term fixes at nine priority sites, implemented interim fixes at several other priority sites, and also performed recurring work at four sites due to sediment accumulation. Reclamation plans to complete work at three additional sites in 2008; but notes that the high snowmelt runoff might result in new sites.

Tiffany Sediment Plug

In 2005, a sediment plug formed in the river in the Tiffany, New Mexico area during the snowmelt runoff. The blockage was alleviated by excavating a pilot channel through the sediment plug later that summer. A long-term solution to sedimentation problems is currently being sought for the Tiffany reach. In 2007, a contractor for Reclamation completed work on a model designed to be a predictive tool for sediment plug formation. The model work was funded jointly by Reclamation and the NMISC, and the model will be used to support planning for the 2008 spring snowmelt runoff. All permits are currently in place for excavating pilot channels through sediment plugs in the Tiffany reach as they occur. Additionally, Reclamation has made some preliminary evaluations of a river widening project for the Tiffany area and has initiated a value engineering process.

San Acacia Levee Project

The San Acacia Levee project would rehabilitate 45 miles of levee between San Acacia and the San Marcial Railroad Bridge by removing the existing spoil bank levee and replacing it with an engineered levee. The project also would either raise or relocate the railroad bridge at San Marcial, which is a requirement of the 2003 biological opinion. Since the 2007 meeting of the Engineer Advisers, the Corps has determined that it does not currently have authority to relocate the bridge.

The Engineer Advisers are concerned the Corps may not be able to comply with the railroad bridge relocation requirement in the 2003 biological opinion. In 2007, the Engineer Advisers encouraged the Corps to confer with the Service on the need to move the bridge. At

the 2008 Engineer Adviser meeting, the Corps indicated it has received an extension from the Service until the fall of 2010 and has begun to develop alternative methods for replacing the bridge. The New Mexico Engineer Adviser indicated that the Corps has approached the NMISC concerning local sponsorship and cost-share for an alternative replacement project and that funding previously secured is no longer available. The NMISC has requested a list of all the Corps priority middle Rio Grande projects that for which it may need cost sharing to implement before making any specific additional commitments.

Vegetation Management at Elephant Butte and Caballo Reservoirs

Reclamation continued vegetation management efforts at Elephant Butte and Caballo Reservoirs in 2007 through a cooperative agreement funded by the NMISC. Reclamation reported that a total of 2,859 acres were treated in 2007 at both reservoirs under the program -2,729 acres by mowing and 130 acres by herbicidal application. A total of 3,850 acres (mostly saltcedar) have been treated by herbicides over the last four years with varying degrees of success.

Southwestern Willow Flycatcher

Reclamation continues to conduct flycatcher surveys and nest monitoring along the middle Rio Grande between the southern boundary of Isleta Pueblo and into the conservation pool of Elephant Butte Reservoir. Riparian vegetation within the uppermost levels of the conservation pool of Elephant Butte Reservoir holds the largest breeding population of flycatchers on the middle Rio Grande to date, and the largest population of flycatchers in New Mexico. Reclamation indicated that the number of flycatcher territories in the conservation pool at Elephant Butte Reservoir increased from 135 to 194 known territories between 2006 and 2007. The total number of flycatcher territories for the middle Rio Grande increased from 186 to 241 known territories between 2006 and 2007.

The Engineer Advisers continue to be concerned with the lack of ESA consultation related to the eventual filling of the Elephant Butte Reservoir pool and the effect of such filling on flycatchers in the pool area. In 2006, all known flycatcher territories in the reservoir delta were located within the top seven feet of the reservoir pool. However, in 2007 flycatchers were

REPORT OF THE ENGINEER ADVISERS

detected in areas 25 feet below the top of the reservoir pool. The Engineer Advisers previously met several times with Reclamation and the Service beginning in 2005 to assess the issue and discuss the need for consultation but with no resolution. Reclamation agreed to schedule a meeting with the Service and the Engineers Advisers for May 5, 2008 to further discuss this issue. The Service indicated that the issue was now ripe for discussion.

Middle Rio Grande Endangered Species Act Collaborative Program

In 2007, the Collaborative Program was formally authorized by Congress as part of Public Law 110-161, the Consolidated Appropriations Act, 2008. Current priorities for the Collaborative Program include providing spawning and recruitment flows for the silvery minnow; propagation of captive silvery minnow for survival, augmentation, and reintroduction; habitat restoration; and funding sound scientific research to expand understanding of the species and its habitat.

Cochiti Reservoir Deviation

The Corps reported on a deviation from normal operations at Cochiti Reservoir during the period from about May 1 through June 8, 2007 to provide spawning and recruitment flows for the silvery minnow. The Commission approved this deviation during 2007 to provide a stable flow of 2,000 cfs or greater for 7-to-10 days with two caveats: one, that the re-regulation occur only if sufficient native flow is available in excess of the middle Rio Grande diversion demand, and two, that deliveries of water to Elephant Butte Reservoir not be reduced by the operation. The Corps reported that they stored approximately 10,000 acre-feet of water during the peak of the snowmelt runoff to ensure spawning and recruitment flow for the minnow. The New Mexico Engineer Adviser reported that the deviation resulted in an additional 52 acre-feet of depletions.

The Corps, Service, and Reclamation all reported that the deviation probably did not have a significant effect on silvery minnow recruitment because, as it turned out, the natural snowmelt runoff was sufficient. However, they all indicated that the deviation provided a valuable communication experience as well as certainty that a recruitment flow would occur.

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RIO GRANDE COMPACT COMMISSION REPORT

March 17, 2003 Middle Rio Grande Programmatic Biological Opinion

The Service reported that Reclamation and the Corps remain in compliance with the 2003 biological opinion. Under the 2003 biological opinion, 2007 was a Compact Article VII year, in which dry year flow targets were in effect. In total, approximately 30 miles of river dried during the summer of 2007 with several reaches drying and rewetting a number of times. Reclamation reported that 11,353 acre-feet of supplemental water was released and all of the releases were for management of river recession.

Biological opinion elements completed or in progress include:

- Over 500 acres of habitat have been restored towards the 1,600-acre requirement and over a hundred acres of habitat restoration work is planned for 2008;
- · Captive propagation requirements for the silvery minnow are being met;
- Major construction at the Los Lunas Silvery Minnow Refugia is complete;
- The second phase of construction will soon begin at the Silvery Minnow Sanctuary; and
- The Environmental Assessment for the San Acacia fish passage project is anticipated to be completed during the fall of 2008.

Rio Grande Silvery Minnow

Rio Grande silvery minnow salvage operations were conducted from July through October with a total salvage in 2007 of 13,953 minnows. Incidental take as a result of the water operations in the middle Rio Grande numbered 92, which was within the allowable limit.

The Service continues to propagate silvery minnow at the Dexter National Fish Hatchery and the City of Albuquerque Biopark to augment the population. Approximately 1,115,000 silvery minnow have been released to the middle Rio Grande since June 2002. Releases numbered approximately 133,000 in 2007. The Dexter facility held approximately 163,500 silvery minnow and the Biopark approximately 24,000 at the end of 2007.

Both Reclamation and the Service indicated the silvery minnow is doing well in the river and recruitment was good in 2007. The October catch of 1,166 silvery minnow is the second highest recorded since the 2003 biological opinion became effective and one of the higher October catches documented since monitoring began. Of particular significance was the higher 19 catches in the Albuquerque reach, the uppermost reach of the middle Rio Grande where silvery minnow are currently found.

Silvery Minnow Reintroduction

The Service reported they are in the final stages of the rule making process to reintroduce silvery minnow in the Big Bend National Park area of Texas. The Final Rule for re-introduction as an ESA Section 10(j) experimental, non-essential population is anticipated in the fall of 2008. If the Big Bend segments are designated per Section 10(j), they cannot be designated as critical habitat for the minnow. Reintroduction could occur in late 2008 or early 2009. The Service is holding 150,000 silvery minnow at the Dexter National Fish Hatchery for reintroduction once the Final Rule is issued and has a five-year plan for adding up to 200,000 silvery minnow each year.

Rio Grande Silvery Minnow Recovery Plan

In 2006, the Service completed the process necessary to submit the draft revised silvery minnow Recovery Plan for public review. The draft revised Recovery Plan provides criteria for downlisting and delisting as well as recovery actions. Peer review has been completed. The peer reviewers recommended the Service revisit the technical basis for some of the downlisting and delisting criteria. The Service met with the biology subcommittee of the Recovery Team on the recommendations and indicated they plan to use the PVHA process to conduct and complete the recommended review.

The Engineer Advisers suggested the Service convene a meeting of the entire Recovery Team to discuss ongoing activities.

International Boundary and Water Commission Activities

The International Boundary and Water Commission (IBWC) reported on its activities along the Rio Grande in New Mexico and Texas during 2007, including:

- Sediment removal activities at the Rio Grande confluence of Placitas Arroyo, Angostura Arroyo, and Reed Arroyo;
- Repair of concrete panels in the American Canal, damaged during heavy rains in
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August and September of 2006;

- Removal of 162,800 cubic yards of silt from 2.3 miles of the Chamizal Project channel; and
- Maintenance work in a 91 mile reach of the Rio Grande from El Paso to Fort Quitman, Texas to increase channel conveyance capacity.

IBWC reported that numerous levees could not be certified by the Federal Emergency Management Agency during recent inspections, mostly due to height issues, not structural issues. IBWC raised levees within the Rectification Project from the Chamizal to Riverside Dam. Approximately 18 miles of levees were improved by adding an average of about three feet to the top of the levees.

In 2006, boils were discovered downstream of American Dam. Fieldwork for the analysis was completed in January, 2007, and a final report is expected in spring 2008. The expected conclusion is no significant structural danger at American Dam. IBWC issued a contract in FY 2007 to replace the first three gates at American Dam. That project is expected to be complete by May, 2008.

IBWC received \$21.2 million for levee rehabilitation efforts in New Mexico and Texas in 2008. Geotechnical investigations will be conducted to verify the existing levees are structurally sound. Design and construction of levee raises will follow. Some of these projects may not be completed until FY2009.

In 2007, Mexico was allocated 58,769 acre-feet of water, 98% of a full allocation. Mexico elected to suspend deliveries in early September, 2007, and diversions by Mexico totaled 51,245 acre-feet for 2007. The current allocation for Mexico is 26,935 acre-feet for 2008, but increases in the actual allocation are expected with a possible full allocation of 60,000 acre-feet by early summer according to the most recent Reclamation forecast.

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REPORT OF THE ENGINEER ADVISERS

BUDGET

The Engineer Advisers reviewed the Cost of Operation for the year ending June 30, 2007 and the Budget for Fiscal Year ending June 30, 2009. The Engineer Advisers found that the expenses for gaging stations and administration of the Rio Grande Compact for the year ending June 30, 2007 were \$186,788. The United States bore \$62,305 of this total, with the balance of \$124,483 borne equally by the three states.

The proposed budget for the fiscal year ending June 30, 2009 indicates a total of \$208,287 will be spent for gaging and administration, with a proposed contribution by the United States of \$69,090. Both of these amounts include \$8,000 for installation of a new acoustical doppler meter at the gaging station on the Rio Grande below Caballo Reservoir. The Engineer Advisers are concerned about the increasing cost for stream gaging and Compact administration imposed by the USGS New Mexico Water Science Center, as well as the lower cost share of the USGS.

The Engineer Advisers recommend that alternatives to having the USGS provide the Compact administrative services required by the Commission be developed and evaluated for presentation to the Commission at its 2009 annual meeting. The Engineer Advisers further recommend that the NMISC evaluate the feasibility of developing internal stream gaging capability and implementing a stream gaging program for its Compact gages within New Mexico above Elephant Butte Reservoir.

Michael Sullivan Engineer Adviser for Colorado

Estevan R. Lopez

Engineer Adviser for New Mexico

Engineer Adviser for Texas

RECORDS OF DELIVERIES AND RELEASES

At the annual meeting of the Compact Commission on March 27, 2008, the records of deliveries and releases and computations of debits and credits for calendar year 2007 were reported. The records and computations as approved by the Commission are reproduced on the next three pages.

The delivery of water in the Rio Grande at the Colorado-New Mexico State line was obtained from the record of streamflow near Lobatos, Colorado; the scheduled delivery was computed as prescribed in Article III.

The delivery of water by New Mexico to Elephant Butte was computed from the record of streamflow below Elephant Butte Dam and the record of operation of Elephant Butte Reservoir, the scheduled delivery was computed as prescribed in the Resolution of the Commission adopted at the Ninth Annual Meeting held February 22-24, 1948, and published in this report.

The actual release from Project Storage during the year was measured at gaging stations below Caballo Dam. During 2007 the Commissioners found that the actual release of usable water was 637,800 acre-feet. This resulted in an accrued credit of 778,400 acre-feet as of January 1, 2008.

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| min visit v | 1441 | | 103 | 36 | 00 | | -25 | 0.1 | 44.0 | 44.0 | 50.4 | 553.9 | 44.4 | 0.4 | 44.8 | 44.8 |
| With Mark Egg 01 Tit 01 Tit Tit 01 Tit 01 | | F. C.F | 54 D | 40 | 0.0 | | -12 | 2.8 | 45.1 | 69.1 | 54.0 | 594.0 | 40.1 | 0.2 | 40.3 | 85.1 |
| AFR FF1 1342 611 1342 611 1340 550 1340 551 1340 551 116 11 | AM | 010 | 91.5 | 37.1 | 0.1 | | 7.1- | 35.5 | 128.4 | 216.5 | 91.5 | 604.6 | 10.6 | 56.3 | 65.9 | 151.0 |
| WY 1754 164 242 05 05 250 260 560 563 775 116 341 | APR | 87.1 | 134.2 | 43.1 | 0.4 | | -0.3 | 43.2 | 130.3 | 345.8 | 134.0 | 561.6 | -53.0 | 124.8 | 71.8 | 222.6 |
| JNN (69 1501 -1.0 -1.0 -1.2 17.7 0.6.0 36.7 1.2.0 7.1 2.0.0 1.0.0 37.0 1.0.1 1.2.2 1.0.1 36.7 1.0.1 1.2.2 1.0.1 36.7 1.0.1 1.2.2 1.0.1 2.0.1 36.7 1.0.1 1.2.2 1.0.1 1.2.2 1.0.1 1.2.2 1.0.1 1.2.2 1.0.1 1.2.2 1.0.1 1.0.2 36.7 36.1 <t< td=""><td>AAM</td><td>175.4</td><td>158.4</td><td>24.2</td><td>0.5</td><td></td><td>0.3</td><td>25.0</td><td>200.4</td><td>540.2</td><td>165.1</td><td>596.9</td><td>45.3</td><td>2.67</td><td>116.8</td><td>341.6</td></t<> | AAM | 175.4 | 158.4 | 24.2 | 0.5 | | 0.3 | 25.0 | 200.4 | 540.2 | 165.1 | 596.9 | 45.3 | 2.67 | 116.8 | 341.6 |
| JII E64 123 713 66 470 1732 610 1732 181 4030 AUC 559 1123 -165 03 27 113 123 7120 1732 181 4030 SET 453 1003 -165 03 -13 -16 323 401 1732 361 713 161 723 213 410 OCT 343 1003 -13 -13 216 713 363 373 361 427 713 410 713 363 421 713 410 713 410 713 410 713 410 427 713 410 713 410 713 412 423 413 412 414 412 414 414 414 414 414 414 414 414 414 414 414 414 414 414 414 414 414 414 414 </td <td>NIN</td> <td>5 69</td> <td>150.1</td> <td>-8.3</td> <td>1.0</td> <td></td> <td>4.9</td> <td>-122</td> <td>1.17</td> <td>626.9</td> <td>148.9</td> <td>567.1</td> <td>-29.8</td> <td>72.9</td> <td>43.1</td> <td>384.7</td> | NIN | 5 69 | 150.1 | -8.3 | 1.0 | | 4.9 | -122 | 1.17 | 626.9 | 148.9 | 567.1 | -29.8 | 72.9 | 43.1 | 384.7 |
| NIG 598 1123 ·165 0.3 ·17 ·180 410 700 1125 3824 481 123 413 GET 4/3 1027 4/8 102 2/15 10/4 3533 10/4 3533 10/3 2/2 4/13 OCT 3/4 1022 4/13 10/2 2/15 10/3 3/15 9/13 2/15 1/13 2/15 4/13 DEC 3/41 10/22 2/15 2/13 1/13 2/15 2/15 0/1 2/15 2/15 4/13 2/15 2/1 | AA | 59 | 128.8 | -21.3 | 30.6 | | 4.6 | -25.3 | 40.1 | 667.0 | 128.6 | 457.0 | -110.1 | 129.2 | 19.1 | 403.6 |
| SEPT 4:3 1(0;1) -6 0.1 -1:1 -1:0 3:3 74:3 10:4 3:0 6:10 2:20 4:33 0CT 3:4 10:2 3:19 4:17 -1:0 1:3 4:13 4:13 4:13 4:20 4:13 4:20 4:13 4:20 4:13 4:23 4:20 | ALIG | 55 | 112.3 | -16.5 | 0.3 | | -2.7 | -18.9 | 41.0 | 708.0 | 112.5 | 302.4 | -64.B | 67.9 | 23.3 | 427.1 |
| OCT 34.4 1123 0.2 1.3 1.1 32.6 175 1102 311.5 311.9 43.7 113.6 432.6 NOV 55.3 107.0 1.1 0.2 0.3 1.1.4 32.16 0.11.3 346.0 375.5 0.11 36.5 405.5 NOV 55.3 107.0 1.3 0.2 0.3 1.4 32.16 0.11.3 346.0 101.3 36.5 405.5 36.5 405.5 36.5 405.5 36.5 405.5 36.5 405.5 36.5 405.5 36.5 405.5 36.5 405.5 36.5 405.5 36.5 | SEPT | 45.3 | 103.7 | -5.6 | 5 0.3 | | -1.7 | -10.0 | 35.3 | 743.3 | 104.4 | 353.4 | 29.0 | 61.0 | 22.0 | 449.1 |
| NDV 32.3 '101.0 -1.9 0.1 2.0 0.0 3.0.0 3.0.0 3.0.5 0.1 2.0.6 4.0.5 DEC 54.1 0.0 -2.7 -4.0 50.1 65.0 -10.0 -0.1 2.6.5 0.1 26.0 40.3 56.0 10.0 -0.01 26.0 56.0 | OCT | 34 | 102.9 | -0.5 | 0.3 | | -1.2 | -1.6 | 32.6 | 775 9 | 102.2 | 321.5 | -31.6 | 45.7 | 13.6 | 462.9 |
| DEC 64.1 06.1 -1.4 0.1 3.7 4.0 90.1 85.9 100.0 40.7 56.7 0.1 66.8 56.6 56.3 YEAR 68.0 35.1 3.9 3.0 3.3 3.0 3.3 3.0 3.3 3.0 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 3.3 | NON | 22 | 101.0 | 1. | 9 0.2 | | 0.3 | P.1- | 33.8 | 809.6 | 101.3 | 348.0 | 26.5 | 0.1 | 26.6 | 489.5 |
| YEAR E23 () 31 () <th< td=""><td>DEC</td><td>3</td><td>9.66</td><td>-1.4</td><td>1 0.1</td><td></td><td>-2.7</td><td>d.A.</td><td>50.1</td><td>859.9</td><td>100.0</td><td>404.7</td><td>56.7</td><td>0.1</td><td>56 8</td><td>546.3</td></th<> | DEC | 3 | 9.66 | -1.4 | 1 0.1 | | -2.7 | d.A. | 50.1 | 859.9 | 100.0 | 404.7 | 56.7 | 0.1 | 56 8 | 546.3 |
| amansis. Cola, 3 and 11 adheal implementation of method ame-capacity lables for Abquia. Cochil, and amenia: Cola, 3 and 11 adheal implementation of method american and public for the American and the American and American an | YEAR | 826.0 | | 53.1 | 3.5 | | -23.6 | 23.9 | 028.8 | | 1 | | -104.8 | 851 1 | 546.3 | |
| Janne Campon Reservicit, effective January 1, 1966. Ceta, 3.1, 1960 Active and Michael Reservicity an | emerks: | Cols. 3 and 11 ref. | Tect implementatio | m of revised area | a-capacity tables fi | or Abiquits, Coch | N, and | | | | SUMMARY | OF DEBITS AN | D CREDITS | | | |
| Cols. 3, 11, end 12 do not include terremouncialm wells. Cols. 3, 11, end 12 do not include terremouncialm wells. Cols. 3, 11, end 12 do not include terremouncialm wells. Note: Scarague on Alarque, E Vado, AnChare and Nicholas Reservoirt under the Anni 12, 2003 appanniment for Note: Scarague on Alarque, E Vado, AnChare and Nicholas Reservoirt under the Anni 12, 2003 appanniment for Note: Scarague on Alarque, E Vado, AnChare and Nicholas Reservoirt under the Anni 12, 2003 appanniment for Nick Reservoirt appropriated 10 acre-feet in 2007. Storage of reincyulated credits of Englose Stoppins (data appregated 154, 254 acro-leat: balancer remaining at 31, 210 acre-feet. Nick Reservoirt approaching and Scalar appregated 154, 254 acro-leat: balancer remaining at 31, 210 acre-feet. Nick Reservoirt and Scalar appregated 154, 254 acro-leat: balancer remaining at 31, 210 acre-feet. Nick Reservoirt approaching and Scalar appregated 154, 254 acro-leat: balancer remaining at 31, 210 acre-feet. Nick Reservoirt appregated 154, 254 acro-leat: balancer remaining at 31, 210 acre-feet. Nick Reservoirt appregation and Scalar Nick Reservoirt appregation and Scalar Nick Reservoirt appreased on the Anni 1, 2007. Scanage of reincyulated credits of Englose Scalar of Credits of Englosentian Nick Reservoirt appreased on the Anni 1, 2007. Scanage of reincyulated credits Nick Reservoirt appreased on the Anni 2, 100 acre-feet. Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentian Nick Reservoirt appreased on the Anni 2, 2003 agreentin 2, 2003 agreentin 2, 2003 agreentian Nick Reservoirt appre | | Jernez Canyon | Reservoirs, effects | ive January 1, 19 | .88 | | | | | E | EM | | | DEBIT | CKEDI | SALANCE |
| Not: Strange in Alaqua, El Vado, McCure and Vachde Reamorier under the April 22, 2003 agreement for Intergratement of accurate and accurate and accurate and accurate and accurate and accurate and accurate accur | Cols. 3. 11. 6 | and 12 do not incl | hude transmountail | m water | | | | IMN | Balance of Begi | ming of Year | | | | | | 1 100 |
| Note: Strange in Active are meaning a strate are with a strate in 2001. Strange in Active are meaning a strate are with a strate in 2001. Strange in Active are meaning a strate are with a strate are are are are are are are are are ar | | | | | 5 | | and from | NM/2 | Scheduled Deliv | rery at Elephant B | urthe | | | 513.5 | | A LAN |
| Terroparament of accurate gape approver or a | Note: Storag | le in Abiquiu, El V | /ado, McClure and | I Nicholis Heading | Jami in 2007 She Apr. | 11 2.3, Zhuo agen Tune of referentity | and credit to | CWN | Actual Elophant | Butte Effective S | Adda | | | 1 | 546.3 | Cr 212.9 |
| Number of Condition of Condition of Condition of Condition and Spale 28.4 UT 1913 Num Num Num Num Cr (104.5 Num Num Num Cr (104.5 | ē f | inquisiminent of all | A 224 articles out | alance remaining | 1 is 21.276 acre-fe | The second se | | NMM | Reduction of De | bits of Eveporat | uo | 2 | | 1 | | |
| MHB MHC MUC MUC <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>NMS</td> <td>Reduction of Cn.</td> <td>odrts ofc Evepora</td> <td>tion and Spill</td> <td></td> <td></td> <td>28.4</td> <td></td> <td>CU 18415</td> | 3 | | | | | | | NMS | Reduction of Cn. | odrts ofc Evepora | tion and Spill | | | 28.4 | | CU 18415 |
| NMT NMT <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>NMB</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | NMB | | | | | | | | |
| and the second s | | | | | | | | NMI | Reignon at End | rd Veer | | | | 1 | | Cr 184.5 |
| | DODOVIED | | | | | | | | 2010 | | | 1100 | 0 | 10/0 | | |

RIO GRANDE COMPACT - RELEASE AND SPILL FROM PROJECT STORAGE YEAR 2007

| | | | | | | | Ouan | Nees in thouse | nds of acce fect | I to nearest hur | ndred | | | | | | | |
|----------------|--|--------------------------------|----------------------|-----------------------------|---|--------------------------|----------------------------|-----------------------------|---|---|--|--|----------------------------------|---------------------------|-----------------|-----------------|------------------------|-------------|
| | | USABLE V | WATER IN S | TORAGE | | CREDIT | NATER IN S | TORAGE | | | | | RIO GR | ANDE BELC | W CABALL | O DAM | | |
| | | | | | | | | | | | | | | SPAL | FROM STOR | AGE | USABLE F | TELEASE |
| MONTH | ^a Total Project Storage Capacity Available at End of Month | Elephant Butte Reservoir | Caballo Reservoir | Total at End of Month | Untilled Capacity of Project Stomge at End of Month | Colorado Credit Water | New Mexico Credil Waler | Total at End of Month | Flood Water in Storage in Cabalio Reservoir al End of Month | Total Water In Project Storage at End of Month | Micesured Flow al Cabelio Gaging Station | Intervening Diversions to Canals | Totat Release and Spill | Caballo Flood Water | Credit Woler | Utarbie Woer | Net During Month | Accumulated |
| - | 2 | Ð | 4 | 2 | 8 | 7 | Ð | 6 | 10 | 1 | 12 | 13 | ž | 5 | 9 | 47 | 5 | 10 |
| | 2,225.0 | ^b 313.9 | 43.1 | ^b 357.0 | 1,868.0 | b15.5 | b160.1 | ^b 185.6 | | 552 6 | 1 | | 1 | | 1 | 1 | | |
| NAL | 2,225.0 | 313.0 | 45.2 | 359.1 | 1,865.9 | 15.5 | 180.1 | 195.6 | | 554 7 | 0.2 | 0.0 | 0.2 | | | | 0.0 | 60 |
| FEB | 2,225.0 | 358.3 | 46.5 | 404.8 | 1,820.2 | 15.5 | 180.1 | 195.6 | | 600.4 | 0.2 | 0.1 | 0.3 | | | | 0.3 | 9.6 |
| MAR | 2,225.0 | 409.0 | 19.0 | 428.0 | 1,797.0 | 15.5 | 180.1 | 195.6 | | 623 6 | 76.5 | 0.1 | 76.6 | | | | 78.6 | 77.1 |
| APR | 2,200.0 | 358.0 | 61.0 | 417.0 | 1,783 0 | 15.5 | 160.1 | 195.6 | | 612.6 | 74.1 | 0.1 | 74.2 | | | | 247 | 151.3 |
| MAY | 2,200.0 | 401.6 | 68.0 | 469.6 | 1,730.4 | 15.2 | 180.1 | 195.3 | | 664.9 | 56.2 | 0.2 | 56.4 | | | | 56.4 | 207 7 |
| NUL | 2,200.0 | 371.6 | 40.0 | 411.8 | 1,788.2 | 15.2 | 180.1 | 195.3 | | 607.1 | 103.7 | 0.1 | 103.8 | | | | 103.6 | 3115 5 |
| JUL | 2,200.0 | 261.7 | 58.3 | 321.0 | 1,879.0 | 15.2 | 180.1 | 195.3 | | 516.3 | 104.8 | 0.1 | 104.9 | | | | 104.9 | 416.4 |
| AUG | 2,200.0 | 197.1 | 33.0 | 1.002 | 1,969 9 | 15.2 | 180.1 | 105.3 | | 425.4 | 105.2 | 0.1 | 105.3 | | | | 105.3 | 521.7 |
| SEPT | 2,200.0 | 158.1 | 16.2 | 174.3 | 2,025 7 | 15.2 | 180.1 | 196.3 | | 369.6 | 78.9 | 0.1 | 77.0 | | | | 77.0 | 598.7 |
| OCT | 2,225.0 | 126.2 | 20.6 | 146.8 | 2,078.2 | 15.2 | 180.1 | 195.3 | | 342.1 | 38.6 | 0.3 | 36.9 | | | | 30.6 | 637.6 |
| NON | 2,225.0 | 152.7 | 22.2 | 174.9 | 2,050 1 | 15.2 | 180.1 | 195.3 | | 370.2 | 0.1 | 0.0 | 0.1 | | | | 0.1 | 1.760 |
| BEC | 2,225.0 | 209.4 | 23.8 | 2332 | 1,991.6 | 15.2 | 160.1 | 195.3 | | 429 5 | 0.1 | 0.0 | 0.1 | | | | 0.1 | 637.6 |
| YEAR | 1 | | | | - | | | 1 | 1 | - | 636.6 | 1.2 | 637.8 | 0.0 | 0.0 | 0.0 | 6.17.8 | |
| Damada. Colo | 7 Rand 11 and | and a stand and | | | | | | | | | | ACCRL | JED DEPARTI | JRE FROM NC | DRMAL RELEV | ASE | | |
| | 101 II Moto A 10 - | and the standard volume | | om Arondeoune | WE HOLD ENDING | K DUMB and Cat | MID Reservoirs, | aftective Jen. 1. | 2007. | | | ITEA | _ | | | DEBIT | CREDIT | BALANCE |
| Project Stor | age Capacity is | s 2,200,030 ac | re-feet (April Io | September) a | and 2,225.030 t | acre-feet (Octo | ther to March) L | ne recognized | 1 | P1 | corned Depart. | ure at Beginnin | g of Year | | | | | Cr 628.4 |
| Dy the Sept | ember 9, 1998 | Resolution of 1 | the Rio Grands | Compact Con | Tarrission with (| lood control sh | orage reserval | on at Elephan | - | P2 | ctual Release | during Year | | | | 637.8 | | Dr 9.4 |
| Power interest | | מרובאמפו וומוווי. | C UDOD B R MON | eprenioer and | 1 22,000 acre-N | Her man Uclob | er through Man | 5 | 1 | P3 | iormal Release | 1 for Year | | | | | 790.0 | Cr 780.6 |
| Based on B | alance at Begi | ming of Year (I | C1 and NM1). | | | | | | 1 | P4 | Inder Release in | Excess of 150.0 | | | | 2.2 | | Cr 778.4 |
| C CLOCH WERE | neid constant | per direction o | I Compact Con | Intraston in Ma | arch 2006. Eva, | porttion for cn | ocht water is ac | counted at an | 1 of | 8 | | | | | | | _ | |
| d Achustment | Durused in sec | Then antitled " | Tanati va finer | Montel Balace | and of the PD. | Lood Door of | the set of the local set | | -1 | 94 | | | | | | | | |
| Grande Como | act." | A DOWNERS INCOME | value notice | NUTITE FACTOR | אינה נאיי | พระ สบุร การนูน | ational for Motin | mistration of 12. | We Huo | P7 IA | corned Depart | ure al End of Y | ear | | - | | | Cr 776.4 |
| | | | | | | | | | - | | | TIME | OF HVPOTH | ETICAL SPILL | Did not occi | | | ſ |

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Adviser for Texas

Date: 2/29/08 Engineer

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APPROVED: Engineer Advisar k

COST OF OPERATION AND BUDGET

BUDGET FOR FISCAL YEAR ENDING JUNE 30, 2007

| | | Borne by | | Borne by | |
|---|------------|---------------|----------|------------|----------|
| Item | Total Cost | United States | Colorado | New Mexico | Texas |
| GAGING STATIONS | | | | | |
| In Colorado In New Mexico, above Caballo | \$65,588 | \$8,240 | \$57,348 | | |
| Reservoir In New Mexico, Caballo | \$60,470 | \$39,575 | | \$20,895 | |
| Reservoir and below | \$25,060 | \$6,380 | | \$2,280 | \$16,400 |
| Subtotal | \$151,118 | \$54,195 | \$57,348 | \$23,175 | \$16,400 |
| ADMINISTRATION | | | | | |
| U.S.G.S. Contract | \$32,440 | \$8,110 | \$8,110 | \$8,110 | \$8,110 |
| Other expenses | \$3,230 | | \$1,077 | \$1,077 | \$1,077 |
| Subtotal | \$35,670 | \$8,110 | \$9,187 | \$9,187 | \$9,187 |
| GRAND TOTAL | \$186,788 | \$62,305 | \$66,535 | \$32,362 | \$25,587 |
| EQUAL SHARES | | | \$41,494 | \$41,494 | \$41,494 |

BUDGET FOR FISCAL YEAR ENDING JUNE 30, 2009

| | | Borne by | | Borne by | |
|---|------------|---------------|----------|------------|----------|
| Item | Total Cost | United States | Colorado | New Mexico | Texas |
| GAGING STATIONS In Colorado | \$68,630 | \$9,085 | \$59,545 | | |
| In New Mexico, above Caballo Reservoir | \$65,692 | \$38,573 | | \$27,119 | |
| In New Mexico, Caballo | | | | | |
| Reservoir and below | \$34,979 | \$14,382 | | \$2,960 | \$17,637 |
| Subtotal | \$169,301 | \$62,040 | \$59,545 | \$30,079 | \$17,637 |
| ADMINISTRATION | | | | | |
| U.S.G.S. Contract | \$35,424 | \$7,050 | \$9,458 | \$9,458 | \$9,458 |
| Other expenses | \$3,562 | | \$1,187 | \$1,187 | \$1,187 |
| Subtotal | \$38,986 | \$7,050 | \$10,645 | \$10,645 | \$10,645 |
| GRAND TOTAL | \$208,287 | \$69,090 | \$70,190 | \$40,724 | \$28,282 |
| EQUAL SHARES | | 1.5 | \$46,399 | \$46,399 | \$46,399 |

Includes \$8,000 to install new accoustical doppler meter at Caballo gaging station during November, 2008 -December, 2009 per Rio Grande Compact Commission Recommendation dated March 22, 2007.

ACKNOWLEDGMENTS

This report was prepared by the U.S. Geological Survey, secretary to the Rio Grande Compact Commission. The watersupply data contained in this report have been provided by various Federal and State agencies.

The office of the State Engineer of Colorado provided records of transmountain diversions and of storage for the following:

| Jumper Creek Reservoir | Mill Creek Reservoir |
|------------------------|--|
| Big Meadows Reservoir | Fuchs Reservoir |
| Alberta Park Reservoir | Platoro Reservoir |
| Shaw Lake Enlargement | Trujillo Meadows Reservoir |
| | Jumper Creek Reservoir Big Meadows Reservoir Alberta Park Reservoir Shaw Lake Enlargement |

The office of the State Engineer of Colorado provided records of discharge for the following:

Rio Grande near Del Norte, Colo. Conejos River below Platoro Reservoir, Colo. Conejos River near Mogote, Colo San Antonio River at Ortiz, Colo

Los Pinos River near Ortiz, Colo. Conejos River near Lasauses, Colo. Rio Grande near Lobatos, Colo.

The U.S. Bureau of Reclamation, Albuquerque, N. Mex., provided the following records:

Azotea Tunnel at Outlet, near Chama, N. Mex. Willow Creek above Heron Res., near Los Ojos, N. Mex.

Storage in Heron Reservoir near Los Ojos, N. Mex Willow Creek below Heron Dam, N. Mex. Horse Lake Creek above Heron Res., near Los Ojos, N. Mex. Storage in El Vado Reservoir near Tierra Amarilla, N. Mex.

The U.S. Geological Survey, in cooperation with the U.S. Bureau of Reclamation, Albuquerque, N. Mex, provided the following records:

Storage in Nambe Falls Reservoir near Nambe, N. Mex. Rio Nambe below Nambe Falls Dam, near Nambe, N. Mex.

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

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 U.S. Geological Survey, in cooperation with the Corps of Engineers, Albuquerque, N. Mex., also provided the following records:

Rio Chama below Abiguiu Dam, N. Mex. Rio Grande below Cochiti Dam, N. Mex. Galisteo Creek below Galisteo Dam, N. Mex. Jemez River below Jemez Canyon Dam, N. Mex.

The Corps of Engineers, Albuquerque, N. Mex., provided the following records of storage:

Abiquiu Reservoir. Galisteo Reservoir. Jemez Canyon Reservoir. Cochiti Lake.

The Laguna Agency, Bureau of Indian Affairs, Laguna, N. Mex., supplied the records of storage in Seama Reservoir.

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

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

The 2007 report was compiled by Anne-Marie Matheme (U.S. Geological Survey), Secretary to Rio Grande Compact Commission.

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

STREAMFLOW

Rio Grande near Del Norte, Colo

Location. -- Water-stage recorder, lat 37°41'22", long 106°27'38", in NW 1/4 sec. 29, T. 40 N., R. 5 E., on right bank, 20 ft downstream from county highway bridge, 6 mi west of Del Norte, and 18 mi upstream from Pinos Creek. 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 mi downstream. Records are equivalent.

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

Average discharge. -- 118 years (1890-2007), 894 ft³/s (647,900 acre-ft per year).

Extremes. -- 1889-2007: Maximum discharge, 18,000 ft³/s Oct. 5, 1911 (gage height, 6.80 ft), from rating curve extended above 12,900 ft³/s; minimum daily, 69 ft³/s Aug. 21, 1902.

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

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|-------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 6,310 | 240 | 180 | 204 | 12,520 |
| February | 5,370 | 200 | 180 | 192 | 10,650 |
| March | 15,402 | 781 | 160 | 497 | 30,550 |
| April | 27,495 | 2,390 | 495 | 916 | 54,540 |
| May | 98,600 | 4,640 | 1,510 | 3,181 | 195,600 |
| June | 98,500 | 4,750 | 2,430 | 3,283 | 195,400 |
| July | 34,075 | 2,300 | 524 | 1,099 | 67,590 |
| August | 23,987 | 1,480 | 461 | 774 | 47,580 |
| September | 16,430 | 1,090 | 390 | 548 | 32,590 |
| October | 18,218 | 1,070 | 383 | 588 | 36,140 |
| November | 6,803 | 397 | 130 | 227 | 13,490 |
| December | 6,843 | 280 | 190 | 221 | 13,570 |
| Calendar year 2007 | 358,000 | 4,750 | 130 | 978 | 710,220 |
| | | | | | |

Conejos River below Platoro Reservoir, Colo.

Location. -- Water-stage recorder and concrete control, lat 37°21'18", long 106°32'37", in NW 1/4NW 1/4 sec. 22, T. 36 N., R. 4 E., on left bank 1,100 ft downstream from valve house for Platoro Reservoir, and 0.7 mi 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. -- 55 years (1890-2007), 92.0 ft³/s (66,660 acre-ft per year).

Extremes. -- 1952-2007: Maximum discharge, 1,160 ft³/s 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 fair. No diversions above station. Flow completely regulated by Platoro Reservoir (capacity, 59,570 acre-ft).

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 237 | 7.7 | 7.6 | 7.6 | 470 |
| February | 218 | 7.9 | 7.7 | 7.8 | 433 |
| March | 263 | 20 | 7.9 | 8.5 | 521 |
| April | 1,180 | 174 | 12 | 39 | 2,340 |
| May | 4,720 | 4()3 | 41 | 152 | 9,370 |
| June | 6,420 | 317 | 34 | 214 | 12,730 |
| July | 6,860 | 319 | 108 | 221 | 13,610 |
| August | 5,050 | 383 | 109 | 163 | 10,020 |
| September | 3,020 | 178 | 72 | 101 | 5,990 |
| October | 4,070 | 286 | 45 | 131 | 8,070 |
| November | 362 | 18 | 7.8 | 12 | 718 |
| December | 242 | 7.8 | 7.8 | 7.8 | 480 |
| Calendar year 2007 | 32,600 | 403 | 8.0 | 89 | 64,800 |

RIO GRANDE COMPACT COMMISSION REPORT

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 accuracy of streamflow records depends primarily on (1) the stability of the stage- discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description states the degree of accuracy attributed to the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true value; "good" within 10 percent; and "fair" within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record. The probable error in a monthly or annual mean discharge depends more on the distribution of the daily errors between the limits than it does on the limits themselves. For this reason, monthly and annual records are more accurate than most daily records.

Conejos River near Mogote, Colo

Location. -- Water-stage recorder, lat 37°03'14", long 106°11'13", in SE 1/4SE 1/4 sec. 34, T. 33 N., R. 7 E., on right bank 25 ft upstream from bridge on State Highway 174, 0.4 mi downstream from Fox Creek, and 5.3 mi west of Mogote.

Datum of gage is 8.271.54 ft above mean sea level.

Drainage area. -- 282 sq mi.

Average discharge. -- 97 years (1904, 1912-2007), 322 ft3/s (233,300 acre-ft per year).

Extremes. -- 1903-05, 1911-2007: Maximum discharge, 9,000 ft3/s Oct. 5, 1911 (gage height, 8.50 ft), from rating curve extended above 3,100 ft³/s; minimum daily determined, 10 ft³/s 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 discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Меал | acre-feet |
| January | 1,590 | 60 | 44 | 51 | 3,150 |
| February | 1,360 | 53 | 44 | 49 | 2,690 |
| March | 5,060 | 283 | 44 | 163 | 10,000 |
| April | 8,530 | 664 | 166 | 284 | 16,900 |
| May | 26,600 | 1,360 | 448 | 859 | 52,800 |
| June | 25,100 | 1,270 | 513 | 835 | 49,700 |
| July | 11,000 | 502 | 210 | 354 | 21,800 |
| August | 8,370 | 506 | 169 | 270 | 16,600 |
| September | 5,320 | 285 | 129 | 177 | 1,060 |
| October | 6,500 | 381 | 129 | 210 | 12,900 |
| November | 1,730 | 102 | 30 | 58 | 3,430 |
| December | 1,660 | 64 | 46 | 54 | 3,290 |
| Calendar year 2007 | 103,000 | 1,360 | 30.0 | 280 | 194,000 |

San Antonio River at Ortiz, Colo

Location. -- Water-stage recorder, lat 36°59'35", long 106°02'17", in New Mexico in NE1/4SE1/4, sec. 24, T. 32 N., R. 8

E., on left bank 800 ft south of New Mexico-Colorado State line, 0.4 mi southeast of Ortiz, and 0.4 mi upstream from Los Pinos River. Altitude of gage is 7,970 ft.

Drainage area. -- 110 sq mi.

Average discharge. -- 67 years (1941-2007), 25 ft³/s (17,900 acre-ft per year).

Extremes. -- 1920, 1925-2007; Maximum discharge, 1,750 ft³/s Apr. 15, 1937 (gage height, 5.38 ft), from rating curve extended above 1,100 ft³/s; no flow at times.

Remarks. -- Records good except those for winter months, which are fair. A few small diversions above station for irrigation.

| Monthly and | yearly discharge | in cubic | feet per second |
|-------------|------------------|----------|-----------------|
|-------------|------------------|----------|-----------------|

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 85 | 3.0 | 2.4 | 2.8 | 169 |
| February | 109 | 5.0 | 2.6 | 3.9 | 215 |
| March | 1,270 | 88 | 3.8 | 41 | 2510 |
| April | 2,450 | 137 | 37 | 82 | 4860 |
| May | 1,970 | 162 | 15 | 64 | 3910 |
| June | 169 | 14 | 0.21 | 5.6 | 335 |
| July | 53 | 11 | 0.00 | 1.7 | 105 |
| August | 33 | 3.4 | 0.00 | 1.1 | 66 |
| September | 53 | 9.5 | 0.00 | 1.8 | 106 |
| October | 82 | 4.4 | 1.3 | 2.7 | 163 |
| November | 63 | 2.6 | 0.90 | 2.1 | 125 |
| December | 146 | 6.9 | 2.0 | 4.7 | 289 |
| Calendar year 2007 | 6.480 | 162 | 0.00 | 18 | 12,900 |

STREAMELOW

Los Pinos River near Ortiz, Colo

Location. -- Water-stage recorder, lat 36°58'56", long 106°04'23", in New Mexico on line between secs. 26 and 27, T. 32 N., R. 8 E., on left bank 0.9 mi south of New Mexico-Colorado State line, 2.1 mi southwest of Ortiz, and 2.9 mi

upstream from mouth. Altitude of gage is 8,040 ft.

Drainage area. -- 167 sq mi.

Average discharge. -- 89 years (1915-20, 1925-2007), 117 ft³/s (84,900 acre-ft per year).

Extremes. -- 1915-20, 1925-2007: Maximum discharge, 3,160 ft³/s May 12, 1941 (gage height, 5.77 ft, site and datum then in use), from rating curve extended above 1,600 ft³/s; minimum observed, 4.0 ft³/s Dec. 17, 1945. Remarks. -- Records good except those for winter months, which are fair. Diversions above station for irrigation.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 638 | 24 | 16 | 21 | 1,270 |
| February | 626 | 29 | 18 | 22 | 1,240 |
| March | 3,010 | 195 | 26 | 97 | 5,970 |
| April | 7,930 | 634 | 111 | 264 | 15,700 |
| May | 15,300 | 797 | 323 | 495 | 30,400 |
| lune | 5,480 | 350 | 54 | 183 | 10,900 |
| uly | 1,090 | 51 | 25 | 35 | 2,160 |
| August | 639 | 32 | 12 | 21 | 1,270 |
| September | 549 | 33 | 11 | 18 | 1,090 |
| October | 611 | 28 | 17 | 20 | 1,210 |
| November | 450 | 17 | 11 | 15 | 893 |
| December | 646 | 25 | 18 | 21 | 1,280 |
| Calendar year 2007 | 37,000 | 797 | 11 | 101 | 73,400 |

Conejos River near Lasauses, Colo

Location. -- Water-stage recorder, lat 37°18'01", long 105°44'47", in secs. 2 and 11(two channels), T. 35 N., R. 11 E., on left bank of main channel 125 ft downstream from bridge on State Highway 158 and on left bank of secondary channel 230 ft upstream from bridge, 1.0 mi upstream from mouth, and 2.1 mi north of Lasauses. Datum of gage on main channel is 7,495.02 ft and on secondary (south) channel is 7,496.89 ft above main sea level (levels by Bureau of Reclamation).

Drainage area. -- 887 sq mi.

Average discharge. -- 86 years (1922-2007), 175 ft³/s (127,000 acre-ft per year).

Extremes. -- 1921-2007: Maximum discharge, 3,890 ft³/s May 15, 1941; no flow at times in some years. Remarks. -- Records good except those for winter months, which are fair. Diversions above station for irrigation of about 75,000 acres above station.

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 2,280 | 79 | 65 | 74 | 4,530 |
| February | 2,640 | 122 | 76 | 94 | 5,240 |
| March | 9,160 | 552 | 87 | 295 | 18,200 |
| April | 5,620 | 298 | 70 | 187 | 11,100 |
| May | 8,240 | 550 | 105 | 266 | 16,300 |
| June | 2,550 | 162 | 24 | 85 | 5,050 |
| July | 1,570 | 132 | 27 | 51 | 3,120 |
| August | 1,220 | 127 | 10 | 39 | 2,410 |
| September | 771 | 71 | 2.5 | 26 | 1,530 |
| October | 718 | 70 | 4.3 | 23 | 1,420 |
| November | 1,420 | 64 | 19 | 47 | 2,820 |
| December | 2,900 | 168 | 74 | 94 | 5,760 |
| Calendar year 2007 | 39,100 | 552 | 2.5 | 107 | 77.500 |

Rio Grande near Lobatos, Colo

Location. -- Water-stage recorder, lat 37°04'42", long 105°45'22", in sec. 22, T. 33 N., R. 11 E., on right bank at highway bridge, 6 mi north of Colorado-New Mexico State line, 10 mi east of Lobatos, and 14 mi east of Antonito. Datum of gage is 7,427.63 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. -- 31 years (1900-30), 846 ft³/s (612,900 acre-ft per year); 77 years (1931-2007) 437 ft³/s (317,000 acre-ft per year).
- Extremes. -- 1899-2007: Maximum discharge observed, 13,200 ft³/s June 8, 1905 (gage height, 9.1 ft); from rating curve extended above 8,000 ft³/s; no flow at times in 1950-51-51, 1956.
- <u>Remarks</u>. -- Records good except those for 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 discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 10,120 | 380 | 280 | 326 | 20,070 |
| February | 10,470 | 430 | 310 | 374 | 20,800 |
| March | 27,990 | 1,510 | 370 | 903 | 55,500 |
| April | 13,806 | 888 | 244 | 462 | 27,500 |
| May | 17,520 | 905 | 308 | 565 | 34,800 |
| June | 12,300 | 759 | 212 | 409 | 24,300 |
| July | 7,270 | 406 | 153 | 234 | 14,400 |
| August | 9,520 | 619 | 212 | 307 | 18,900 |
| September | 7,220 | 370 | 176 | 241 | 14,300 |
| October | 7,610 | 388 | 123 | 246 | 15,100 |
| November | 10,600 | 420 | 124 | 352 | 21,000 |
| December | 11,200 | 509 | 240 | 362 | 22,300 |
| Calendar year 2007 | 146,000 | 1,510 | 123 | 398 | 289,000 |

Willow Creek above Heron Reservoir, near Los Ojos, N. Mex.

Location. -- Water-stage recorder, lat 36°44'33", long 106°37'34", in Tierra Amarilla Grant, on right bank 200 ft

downstream from bridge, 0.2 mi downstream from Iron Spring Creek, 3.3 mi west of Los Ojos, and at mi 9.7. Datum of gage is 7,196.29 ft above mean sea level. Prior to Apr. 1, 1971, at site 900 ft downsteam.

Drainage area. -- 112 sq mi.

Average discharge. -- 7 years (1963-69), 11.5 ft³/s (8,330 acre-ft per year) prior to completion of Azotea tunnel; 38 years (1970-2007) 134 ft³/s (97,100 acre-ft per year) subsequent to completion of Azotea tunnel.

Extremes. -- 1962-2007: Maximum discharge, 1,610 ft³/s Mar. 12, 1985 (gage height, 6.65 ft); no flow at times. <u>Remarks.</u> -- Records good except those for winter months, which are fair. Subsequent to Nov. 16, 1970, flow affected by transmountain diversions through Azotea tunnel. Flow in Rutheron Drain included prior to Apr. 1, 1971.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| February | 128 | 25 | 0.00 | 4.6 | 254 |
| March | 9,110 | 647 | 1.5 | 294 | 18,100 |
| April | 9,400 | 587 | 208 | 313 | 18,600 |
| May | 16,600 | 841 | 284 | 535 | 32,900 |
| June | 13,400 | 687 | 142 | 447 | 26,600 |
| July | 2,510 | 282 | 21 | 81 | 4,980 |
| August | 3,770 | 553 | 4.5 | 122 | 7,480 |
| September | 1,020 | 145 | 5.0 | 34 | 2,020 |
| October | 38 | 23 | 0.00 | 1.2 | 75 |
| November | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| December | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Calendar year 2007 | 56,000 | 841 | 0.00 | 153 | 111,000 |

STREAMFLOW

Horse Lake Creek above Heron Reservoir, near Los Ojos, N. Mex.

Location. -- Water-stage recorder, lat 36°42'24", long 106°44'42", in Tierra Amarilla Grant, on right bank 3.7 mi northwest of Heron Dam, 7.8 mi downstream from Horse Lake, and 9.9 mi west of Los Ojos. Datum of gage is 7,188.85 ft above National Geodetic Vertical Datum of 1929. Prior to July 1, 1971, at site 1,100 ft upstream.

Drainage area. -- 45 sq mi, approximately.

Average discharge. -- 12 years (1963-73,1986), 1.17 ft3/s (848 acre-ft per year).

Extremes. -- 1963-2007: Maximum discharge, 3,960 ft³/s July 30, 1968 (gage height, 4.9 ft); no flow most of time. Remarks. -- Records good. Diversions above station for irrigation of meadows and for off-channel stock tanks.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | | | | *** | |
| February | | | | | |
| March | *** | | | *** | |
| April | | | | | |
| May | 22 | 15 | 0.00 | 0.72 | 44 |
| June | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| July | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| August | 1.1 | 0.57 | 0.00 | 0.04 | 2.2 |
| September | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| October | | *** | | | |
| November | | | | | |
| December | | *** | | | |
| Calendar year 2007 | | | | | *** |

Willow Creek below Heron Dam, N. Mex.

Location. -- Totalizing flowmeters, lat 36°39'56", long 106°42'12", in Tierra Amarilla Grant, in outlet conduits at Heron Dam, 0.2 mi upstream from Rio Chama, 5.1 mi northeast of El Vado Dam, and 8.7 mi southwest of Los Ojos. Drainage area. -- 193 so mi.

Average discharge. -- 36 years (1971-2007), 127 ft3/s (91,960 acre-ft per year).

Extremes. -- 1971-2007: Maximum daily discharge, 2,780 ft3/s Dec. 18, 19, 1982; no flow at times each year. Remarks. -- Records excellent. Flow completely regulated by Heron Dam.

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|------------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 7,750 | 250 | 250 | 250 | 5,614,880 |
| February | 7,000 | 250 | 250 | 250 | 5,071,500 |
| March | 7,750 | 250 | 250 | 250 | 5,614,880 |
| April | 4,600 | 250 | 0.0 | 153 | 3,335,600 |
| May | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| June | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| July | 1,890 | 450 | 0.0 | 60 | 1,368,580 |
| August | 2,490 | 450 | 0.0 | 80 | 1,806,900 |
| September | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| October | 324 | 205 | 0.0 | 10 | 234,740 |
| November | 6,250 | 209 | 205 | 208 | 4,528,120 |
| December | 7,810 | 360 | 205 | 252 | 5,659,790 |
| Calendar year 2007 | 45,870 | 450 | 0.0 | 126 | 33,235,710 |

Rio Chama below El Vado Dam, N. Mex

Location. -- Water-stage recorder with satellite telemetry, lat 36°34'48", long 106°43'24", in Tierra Amarilla Grant, on left bank 1.5 mi downstream from El Vado Dam, 2.8 mi upstream from Rio Nutrias, and 13 mi southwest of Tierra Amarilla. Datum of gage is 6,696.12 ft above National Geodetic Vertical Datum of 1929. Prior to October 1935, at site 1.5 mi upstream and October 1935 to September 1938, at site 1.1 mi upstream at different datums.

Drainage area. -- 877 sq mi, of which about 100 sq mi is probably noncontributing.

Average discharge. -- 4 years (1914, 1921-23), 444 ft3/s (321,700 acre-ft per year), prior to completion of El Vado Dam; 35 years (1936-70), 372 ft3/s (269,500 acre-feet per year), prior to release of transmountain water; 37 years (1971-2007)

460 ft3/s (333,300 acre-feet per year).

Extremes. -- 1914-16, 1920-24, 1936-2007; Maximum discharge observed, 9,000 ft3/s May 22, 1920 (gage height, 12 ft); no flow Mar. 25, 26, 31, 1955.

<u>Remarks</u>. -- Records good. Diversions above station for irrigation of about 10,600 acres. Since 1935 flow regulated by El Vado Reservoir and since October 1970 flow partly regulated by Heron Reservoir. Subsequent to May 1971 flow affected by releases of transmountain water from Heron Reservoir.

Monthly and yearly discharge, in cubic feet per second

| - | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|-------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 6,400 | 215 | 202 | 206 | 12,700 |
| February | 4,420 | 205 | 101 | 158 | 8,770 |
| March | 3,000 | 102 | 86 | 97 | 5,950 |
| April | 4,600 | 380 | 84 | 153 | 9,130 |
| May | 32,300 | 1,630 | 87 | 1,040 | 64,000 |
| June | 13,600 | 594 | 197 | 453 | 27,000 |
| July | 14,600 | 694 | 109 | 471 | 28,900 |
| August | 13,400 | 708 | 99 | 433 | 26,600 |
| September | 10,800 | 681 | 60 | 362 | 21,500 |
| October | 2,950 | 220 | 68 | 95 | 5,860 |
| November | 2,330 | 80 | 75 | 78 | 4,630 |
| December | 5,970 | 324 | 76 | 192 | 11,800 |
| Calendar year 2007 | 114,000 | 1,630 | 60 | 311 | 227,000 |

Rio Chama below Abiquiu Dam, N. Mex.

Location. -- Water-stage recorder with satellite telemetry, lat 36°14'12", long 106°24'59", in SE1/4SE1/4 sec. 8, T. 23 N.,

R. 5 E., on right bank 0.8 mi downstream from Abiquiu Dam and 5.9 mi northwest of Abiquiu. Altitude of gage is 6,040

ft above National Geodetic Vertical Datum of 1929 (from river-profile map and topographic map).

Drainage area. -- 2,147 sq mi, of which about 100 sq mi is probably noncontributing.

Average discharge. -- 9 years (1962-70), 376 ft³/s (272,400 acre-ft per year), prior to release of transmountain water; 37 years (1971-2007), 507 ft3/s (367,800 acre-feet per year).

Extremes. -- 1961-2007; Maximum discharge, 2,990 ft3/s July 1, 1965 (gage height, 6.69 ft); minimum, about 0.5 ft3/s Mar. 17, 1966, Jan. 28, 1972.

<u>Remarks</u>. -- Records good. Flow regulated by Heron, El Vado, and Abiquiu Reservoirs. Diversions above station for irrigation of about 17,600 acres. Subsequent to May 1971 flow affected by the release of transmountain water from Heron Reservoir.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | Maan | Runoff in |
|--------------------|-----------|---------|---------|--------|-----------|
| Month | root-days | daily | dally | Ivican | acie-ieet |
| lanuary | 1,600 | 59 | 36 | 52 | 3,180 |
| February | 1,380 | 63 | 35 | 49 | 2,740 |
| March | 3,180 | 212 | 61 | 103 | 6,320 |
| April | 7,060 | 324 | 210 | 235 | 14,000 |
| May | 42,900 | 1,870 | 212 | 1,380 | 85,000 |
| lune | 18,300 | 1,010 | 241 | 610 | 36,300 |
| uly | 18,000 | 897 | 160 | 582 | 35,800 |
| August | 13,500 | 795 | 143 | 434 | 26,700 |
| September | 8,620 | 556 | 81 | 287 | 17,100 |
| October | 2,690 | 300 | 48 | 87 | 5,330 |
| November | 1,700 | 62 | 51 | 57 | 3,380 |
| December | 6,300 | 405 | 57 | 203 | 12.500 |
| Calendar year 2007 | 125,000 | 1,870 | 35 | 340 | 248,000 |

Rio Nambe below Nambe Falls Dam, near Nambe, N. Mex.

Location. -- Water-stage recorder with satellite telemetry, lat 35°50'46", long 105°54'17", in NE1/4SW1/4 sec. 29, T. 19 N., R. 10 E., in Nambe Indian Reservation, in outlet conduits at Nambe Falls Dam, 300 ft upstream from Nambe Falls, 2.6 mi upstream from confluence of Rio Nambe and Rio En Medio, 4.4 mi southeast of Nambe Pueblo, and 5.4 mi southeast

of Nambe. Datum of gage is 6,840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Drainage area. -- 34.1 sq mi.

Average discharge. -- -- 29 years (1979-2007), 14 ft3/s (9,750 acre-feet per year).

Extremes. -- 1979-2007; Maximum discharge, 312 ft³/s June 9, 1979 (gage height, 1.96 ft), at site 1,100 ft downstream; no flow December 31, 1994.

Remarks. -- Records good. Flow completely regulated by Nambe Falls Reservoir.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 18 | 0.68 | 0.53 | 0.59 | 36 |
| February | 16 | 0.61 | 0.54 | 0.58 | 32 |
| March | 263 | 17 | 0.57 | 8.5 | 521 |
| April | 352 | 18 | 8.7 | 12 | 697 |
| May | 1,010 | 42 | 21 | 33 | 2,000 |
| June | 842 | 43 | 15 | 28 | 1,670 |
| July | 491 | 30 | 6.1 | 16 | 973 |
| August | 500 | 26 | 7.7 | 16 | 992 |
| September | 295 | 16 | 3.6 | 10 | 586 |
| October | 134 | 7.4 | 3.9 | 4.3 | 265 |
| November | 25 | 4.5 | 0.62 | 0.82 | 49 |
| December | 18 | 0.72 | 0.46 | 0.58 | 35 |
| Calendar year 2007 | 3,960 | 43 | 0.46 | 11 | 7,860 |

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

Location. -- Water-stage recorder with satellite telemetry, lat 35°52'29", long 106°08'30", in SW1/4SW1/4 sec. 18, T. 19 N., R. 8 E., in San Ildefonso Pueblo Grant, 400 downstream from bridge on State Highway 502, 1.8 mi southwest of San Ildefonso Pueblo, 2.5 mi downstream from Pojoaque River, and 6.8 mi west of Pojoaque. Datum of gage is 5,488.48 ft above National Geodetic Vertical 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. -- 108 years (1896-1905, 1910-2007), 1,510 ft³/s (1,090,000 acre-feet per year).

Extremes. -- 1895-1905, 1910-2007; Maximum discharge, 24,400 ft³/s May 23, 1920 (gage height, 14.1 ft); minimum daily, 60 ft³/s July 4, 5, 1902.

<u>Remarks</u>. -- Records good. Flow partly regulated by Heron, El Vado, and Abiquiu Reservoirs. Diversions above station for irrigation of about 620,000 acres in Colorado and 75,000 acres in New Mexico. Subsequent to May 1971 flow affected by releases of transmountain water from Heron Reservoir.

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|-------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 21,700 | 800 | 634 | 699 | 43,000 |
| February | 21,300 | 864 | 648 | 762 | 42,300 |
| March | 47,400 | 2,350 | 762 | 1,530 | 93,900 |
| April | 43,900 | 1,960 | 1,130 | 1,460 | 87,000 |
| May | 88,400 | 3,740 | 1,440 | 2,850 | 175,000 |
| June | 45,300 | 2,170 | 997 | 1,510 | 89,900 |
| July | 33,000 | 1,470 | 728 | 1,060 | 65,400 |
| August | 30,190 | 1,250 | 732 | 974 | 59,900 |
| September | 22,900 | 1,170 | 556 | 762 | 45,300 |
| October | 17,300 | 821 | 419 | 559 | 34,400 |
| November | 17,800 | 684 | 397 | 594 | 35,300 |
| December | 27,300 | 1,360 | 692 | 881 | 54,200 |
| Calendar year 2007 | 416,000 | 3,740 | 397 | 1,140 | 826,000 |

Santa Fe River near Santa Fe, N. Mex.

Location. -- Water-stage recorder with satellite telemetry and concrete control, lat 35°41'12", long 105°50'35", in

NE1/4SE1/4 sec. 23, T. 17 N., R. 10 E., 0.4 mi downstream from McClure Dam, and 5.3 mi east of Santa Fe. Altitude of gage is 7,720 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 4, 1930, at site 1.5 mi downstream, and Apr. 11, 1931 to Sept. 30, 1947, at site 0.3 mi upstream, each at different datum.

1.5 mi downstream, and Apr. 11, 1951 to Sept. 50, 1947, at site 0.5 th upsueam, each

Drainage area. -- 18.2 sq mi.

Average discharge. -- 95 years (1913-2007), 8.0 ft³/s (5,800 acre-feet per year).

Extremes. -- 1913-2007; Maximum discharge, 1,500 ft³/s Aug. 14, 1921 (gage height, 5.17 ft); from rating curve extended above 150 ft³/s; minimum, no flow Aug. 2-10, 2000.

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

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| lanuary | 81 | 2.9 | 2.3 | 2.6 | 161 |
| February | 167 | 10 | 2.5 | 6.0 | 331 |
| Aarch | 244 | 23 | 3.7 | 7.9 | 483 |
| pril | 420 | 23 | 7.1 | 14 | 832 |
| Aay | 687 | 48 | 8.7 | 22 | 1,360 |
| une | 380 | 20 | 10 | 13 | 754 |
| uly | 290 | 10 | 9.1 | 9.4 | 575 |
| August | 278 | 9.2 | 8.7 | 9.0 | 552 |
| leptember | 163 | 8.7 | 3.1 | 5.4 | 324 |
| October | 96 | 3.1 | 3.1 | 3.1 | 191 |
| lovember | 89 | 3.1 | 2.9 | 3.0 | 177 |
| December | 87 | 3.2 | 2.5 | 2.8 | 173 |
| Calendar year 2007 | 2,980 | 48 | 2.0 | 8.2 | 5,910 |

Rio Grande below Cochiti Dam, N. Mex.

Location. -- Water-stage recorder with satellite telemetry, lat 35°37'05", long 106°19'24", in SW1/4NE1/4 sec. 17, T. 16 N., R. 6 E., in Pueblo de Cochiti Grant, 320 ft upstream from bridge on State Highway 22, 700 ft downstream from Cochiti Darn, and 1.4 mi northeast of Cochiti Pueblo. Datum of gage is 5,226.08 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 14, 1973, at site 2.4 mi downstream at altitude 5,210 ft, from topographic map. Nov. 14, 1973 to Jan. 8, 1976, at site 320 ft downstream at datum 1.79 ft lower.

Drainage area. -- 14,900 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

Average discharge. -- 37 years (1971-2007), 1,330 ft³/s (962,000 acre-feet per year).

Extremes. -- 1971-2007; Maximum discharge, 10,300 ft³/s July 26, 1971 (gage height, 7.90 ft) at site 2.4 mi downstream prior to closure of Cochiti Dam; from rating curve extended above 2,600 ft³/s; minimum discharge 0.51 ft³/s Aug. 3-5, 1977, Aug. 27-28, 1978.

Remarks. -- Records good. Since Nov. 12, 1973, flow completely regulated by Cochiti Dam. Cochiti Eastside Main Canal on left bank and Sili Main Canal on right bank bypass station.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|-------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 18,900 | 755 | 484 | 608 | 37,400 |
| February | 19,900 | 824 | 568 | 712 | 39,500 |
| March | 42,500 | 2,080 | 651 | 1,370 | 84,200 |
| April | 36,200 | 1,830 | 886 | 1,210 | 71,900 |
| May | 80,900 | 3,660 | 897 | 2,610 | 160,500 |
| June | 43,300 | 2,590 | 974 | 1,440 | 85,900 |
| July | 26,600 | 1,040 | 707 | 857 | 52,700 |
| August | 24,100 | 876 | 691 | 777 | 47,800 |
| September | 17,800 | 710 | 443 | 593 | 35,300 |
| October | 14,200 | 680 | 349 | 459 | 28,200 |
| November | 16,900 | 706 | 219 | 565 | 33,600 |
| December | 28,300 | 1,490 | 542 | 912 | 56,100 |
| Calendar year 2007 | 370,000 | 3,660 | 219 | 1,009 | 733,000 |

STREAMFLOW

Galisteo Creek below Galisteo Dam, N. Mex.

Location. -- Water-stage recorder with satellite telemetry, lat 35°27'53", long 106°12'49", in NE1/4NE1/4 sec. 8, T. 14 N., R. 7 E., in Mesita de Juana Lopez Grant, on right bank 0.4 mi downstream from Galisteo Dam, 5.3 mi northwest of Cerrillos, and at mile 11.4. Elevation of gage is 5,450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 21, 1981, at site 1,200 ft downstream at different datum. Drainage area. -- 597 sq mi.

Average discharge. -- -- 37 years (1971-2007), 5.0 ft³/s (3,900 acre-feet per year).

Extremes. -- 1970-2007; Maximum discharge, 3,460 ft³/s Aug. 24, 1997 (gage height, 5.57 ft); no flow many days each year.

<u>Remarks</u>. -- Records poor. Flow partly regulated by uncontrolled outlet in Galisteo Dam. Capacity of outlet, 5,000 ft³/s when reservoir is full. Diversions for irrigation of about 50 acres above reservoir.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| February | 1.4 | 1.2 | 0.00 | 0.05 | 2.7 |
| March | 2.2 | 1.5 | 0.00 | 0.07 | 4.4 |
| April | 2.6 | 1.3 | 0.00 | 0.09 | 5.2 |
| May | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| June | 337 | 326 | 0.00 | 11 | 669 |
| July | 22 | 14 | 0.00 | 0.69 | 43 |
| August | 64 | 47 | 0.00 | 2.1 | 127 |
| September | 76 | 48 | 0.00 | 2.5 | 151 |
| October | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| November | 0.00 | 0,00 | 0.00 | 0.00 | 0.00 |
| December | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Calendar year 2007 | 500 | 326 | 0.00 | 1.4 | 1,000 |

Jemez River below Jemez Canyon Dam, N. Mex.

Location. -- Water-stage recorder with satellite telemetry, lat 35°23'24", long 106°32'03", in NE1/4 sec. 5, T. 13 N., R. 4 E., 0.8 mi downstream from Jemez Canyon Dam, 2.0 mi upstream from mouth, and 6 mi north of Bernalillo. Datum of gage is 5,095.60 ft above National Geodetic Vertical Datum of 1929. Prior to April 24, 1951, at site three-quarters mi

upstream at datum 24.51 ft higher. April 24, 1951 to June 25, 1958, at site 37 ft upstream at datum 4.40 ft higher. Drainage area. -- 1,038 sq mi.

Average discharge. -- 65 years (1937, 1944-2007), 61ft3/s (44,400 acre-feet per year).

Extremes. -- 1937, 1944-2007; Maximum discharge, 16,300 ft³/s Aug. 29, 1943 (gage height, 5.62 ft); no flow at times. <u>Remarks</u>. -- Records good. Flow regulated by Jemez Canyon Dam since October 1953. Diversions for irrigation of about 3,000 acres above station.

| | Second- | Maximum | Minimum | 1 | Runoff in |
|--------------------|-----------|---------|---------|------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 557 | 30 | 15 | 18 | 1,100 |
| February | 1,070 | 45 | 30 | 38 | 2,120 |
| March | 5,740 | 620 | 40 | 185 | 11,400 |
| April | 4,670 | 250 | 97 | 156 | 9,260 |
| May | 7,410 | 550 | 62 | 239 | 14,700 |
| lune | 662 | 57 | 0.00 | 22 | 1,310 |
| uly | 100 | 40 | 0.00 | 3.2 | 198 |
| August | 104 | 51 | 0.00 | 3.3 | 205 |
| September | 557 | 100 | 0.00 | 19 | 1,100 |
| October | 345 | 50 | 0.00 | 11 | 685 |
| November | 587 | 54 | 6.6 | 20 | 1,160 |
| December | 2,710 | 275 | 7.3 | 87 | 5,370 |
| Calendar year 2007 | 24,500 | 620 | 0.00 | 67 | 49,000 |

Rio Grande below Elephant Butte Dam, N. Mex.

Location. -- Water-stage recorder with satellite telemetry, lat 33°08'54", long 107°12'22", in SW1/4 sec. 25, T. 13 S., R. 4 W. (projected), in Pedro Armendariz Grant, 1.0 mi downstream from dam and 1.5 mi upstream from Cuchillo Negro

River. Datum of gage is 4,241.09 ft above national Geodetic Vertical Datum of 1929. Prior to April 23, 1942, at several different sites and datums.

Drainage area. -- 29,450 sq mi approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.). Average discharge. -- 93 years (1915-2007), 998 ft³/s (723,000 acre-feet per year).

Extremes. -- 1915-2007; Maximum daily discharge, 8,220 ft³/s May 22, 1942; no flow at times prior to 1929 and March 2-4, 1979.

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

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|-------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 231 | 20 | 1 | 7 | 458 |
| February | 90 | 9 | 0.00 | 3 | 179 |
| March | 27,900 | 2,320 | 11 | 899 | 55,300 |
| April | 62,900 | 2,380 | 1,540 | 2,100 | 125,000 |
| May | 37,000 | 3,440 | 882 | 1,200 | 73,500 |
| June | 36,800 | 2,450 | 818 | 1,200 | 72,900 |
| July | 65,100 | 2,600 | 1,730 | 2,100 | 129,000 |
| August | 44,300 | 1,840 | 862 | 1,430 | 87,900 |
| September | 30,800 | 1,100 | 967 | 1,030 | 61,000 |
| October | 23,000 | 1,080 | 1 | 743 | 45,700 |
| November | 33 | 1 | 1 | 1 | 66 |
| December | 42 | 2 | 1 | 1 | 84 |
| Calendar year 2007 | 328,000 | 3,440 | 0.00 | 893 | 651,000 |

Rio Grande below Caballo Dam, N. Mex.

Location. -- Water-stage recorder, lat 32°53'05", long 107°17'31", in NE1/4SW1/4 sec. 30, T. 16 S., R. 4 W., 2,000 ft upstream from Interstate Highway 25, 4,200 ft downstream from Caballo Dam, 1.3 mi upstream from Percha diversion dam, and 3 mi northeast of Arrey. Datum of gage is 4,140.90 ft above National Geodetic Vertical Dam of 1929. October 13, 1938 to December 31, 1945, at datum 5.0 ft higher.

Drainage area. -- 30,700 sq mi, approximately (includes 2,940 sq mi in closed basin in San Luis Valley, Colo.).

Average discharge. -- 70 years (1938-2007), 925 ft³/s (670),000 acre-feet per year).

Extremes. -- 1938-2007; Maximum daily discharge, 7,650 ft³/s May 20, 1942; minimum daily, 0.1 ft³/s Oct. 31 to Nov. 14, 1954, Nov. 7 to Dec. 31, 1955, Feb. 15-29, 1972.

<u>Remarks</u>. -- Records good. Flow regulated by Elephant Butte Reservoir and Caballo Reservoirs. Diversions for irrigation of about 800,000 acres above station.

Monthly and yearly discharge, in cubic feet per second

| | Second- | Maximum | Minimum | | Runoff in |
|--------------------|-----------|---------|---------|--------|-----------|
| Month | foot-days | daily | daily | Mean | acre-feet |
| January | 93 | 3.0 | 3.0 | 3.0 | 184 |
| February | 84 | 3.0 | 3.0 | 3.0 | 167 |
| March | 38,6(8) | 2,220 | 3.0 | 1,240 | 76,500 |
| April | 37,400 | 1,970 | 981 | 1,250 | 74,100 |
| May | 28,400 | 1,430 | 694 | 915 | 56,300 |
| June | 52,300 | 2,060 | 1,560 | 1,74() | 104,000 |
| July | 52,800 | 2,060 | 1,320 | 1,710 | 105,000 |
| August | 53,000 | 2,200 | 1,150 | 1,710 | 105,000 |
| September | 38,800 | 1,720 | 907 | 1,290 | 76,9()() |
| October | 19,400 | 1,250 | 2.0 | 627 | 38,600 |
| November | 60 | 2.0 | 2.0 | 2.0 | 119 |
| December | 62 | 2.0 | 2.0 | 2.0 | 123 |
| Calendar year 2007 | 321,000 | 2,220 | 2.0 | 874 | 637,000 |

STREAMFLOW

Bonito Ditch below Caballo Dam, N. Mex.

Records available. -- January 1938 to current year. Published as supplementary data with Rio Grande below Caballo Dam in U.S.G.S. Water-Supply Papers and Water-Data Reports 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.

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|------------|--------------|-----|-------|----|
| 1 32 5 | Jereion | 110 | 0000 | 64 |
| ~~~ | USIOR | | aLIC- | |
| | | , | | |

| January | 0.0 |
|--------------------|---------|
| February | 43.3 |
| March | 77.0 |
| April | 112.5 |
| May | 167.9 |
| June | 125.8 |
| July | 98.0 |
| August | 103.8 |
| September | 128.2 |
| October | 318.6 |
| November | 0.0 |
| December | 0.0 |
| Calendar year 2007 | 1,175 1 |

STORAGE IN RESERVOIRS

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

Squaw Lake. - Staff gage in sec. 12, 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 gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| Gage height | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9,1 | 9.1 | 9.1 | 9.1 | 9.1 | - |
| Contents | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 1.0 |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

<u>Rito Hondo Reservoir</u>, - 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. Originally filled during May and June 1958 with transmountain water; storage is not in debit status. Water is used for fish culture.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|------|------|------|------|-------|------|------|------|----------|
| Gage height | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | - |
| Contents | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | 561 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

<u>Hermit Lakes Reservoir No.3.</u> – In sec. 25, T. 41 N., R. 4 W., on South Clear Creek. Completed prior to 1960; capacity, 192 acre-ft. Capacity table based on elevation above bottom of outlet. Water is used for fish culture. Includes 169 acrefeet of transmountain water by exchange in 1984 and 23 acre-ft of transmountain water by exchange in 1985.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Арг. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| Gage height | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | - |
| Contents | 192 | 192 | 192 | 192 | 192 | 192 | 192 | 192 | 192 | 192 | 192 | 192 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

<u>Troutvale No. 2 Reservoir</u>. – Staff gage in E1/2 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. Storage omitted from accounting by action of Commission on Feb. 15, 1962.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| Gage height | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | - |
| Contents | 213 | 213 | 213 | 213 | 213 | 213 | 213 | 213 | 213 | 213 | 213 | 213 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

STORAGE IN RESERVOIRS

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. Storage omitted from accounting by action of Commission on Feb. 15, 1962.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|------|------|------|------|-------|------|------|------|----------|
| Gage height | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | |
| Contents | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

<u>Big Meadows Reservoir</u>. – In NW1/4 sec. 17, T. 38 N., R. 2 E., on South Fork about 0.9 mi upstream from Hope Creek. Completed in 1967; capacity, 2,437 acre-ft. Capacity table based on elevation above outlet. Water is used for fish culture. Includes 140 acre-ft of transmountain water, by exchange, in 1967; 838 acre-ft, by exchange, in 1968; 347 acreft, by exchange, in 1969; and 1,112 acre-ft, by exchange, in 1983, for a total of 2,437 acre-ft.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| Gage height | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | 45.0 | |
| Contents | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | 2,437 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

<u>Alberta Park Reservoir.</u> – 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. Storage prior to June 30, 1983 included 244 acre-ft of transmountain water imported in 1963. By a 1983 resolution of the Rio Grande Compact Commission, the reservoir was drained for repairs in July 1983; recovery was completed in 1984. The reservoir also contains 100 acre-ft of transmountain water stored by exchange in 1983 and 254 acre-ft of transmountain water stored in 1984.

Month-end gage height, in feet, and contents, in acre-feet

| Calendar Year 4 | 2007 | |
|-----------------|------|--|
|-----------------|------|--|

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|------|------|------|------|-------|------|------|------|----------|
| Gage height | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 21.0 | 21.0 | 21.0 | 27.0 | 27.0 | - |
| Contents | 598 | 598 | 598 | 598 | 598 | 598 | 598 | 394 | 394 | 394 | 598 | 598 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -204 | 0 | 0 | +204 | 0 | 0 |

Shaw Lake Enlargement. – 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. Includes 42 acre-ft of transmountain water imported in 1965.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| Gage height | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Contents | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 14 |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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

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. Includes 43 acre-ft of transmountain water, by exchange, in 1976.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan: | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|------|------|------|------|-------|------|------|------|----------|
| Gage height | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | 14.5 | |
| Contents | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | () |

<u>Fuchs Reservoir</u>. – 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. Prior to calendar year 1999, contents reported as 238 acre-ft were actually 237 acre-ft. Pinos Creek enters Rio Grande below station near Del Norte.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|-------------|------|------|------|------|------|------|------|------|-------|------|------|------|----------|
| Gage height | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | 17.2 | - |
| Contents | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 237 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

<u>Platoro Reservoir.</u> – Water-stage recorder in NW1/4 sec. 22, T. 36 N., R. 4 E., on Conejos River. Completed in 1951; capacity, 59,570 acre-ft at crest of spillway. Reservoir is used for irrigation and flood control. Storage affects Conejos Index Supply. Contents include 3,000 acre-ft of transmountain water stored by exchange in April 1985 on behalf of the Colorado Division of Wildlife.

Month-end elevation, in feet, and contents, in acre-feet

| Date | Elevation | Contents | Change in contents |
|--------------------|-----------|----------|--------------------|
| December 31, 2006 | 9,961.42 | 9,360 | - |
| January 31, 2007 | 9,962.17 | 9,678 | +318 |
| February 28 | 9,962.49 | 9,820 | +142 |
| March 31 | 9,965.16 | 10,991 | +1,171 |
| April 30 | 9,967.80 | 12,191 | +1,200 |
| May 31 | 9,984.39 | 20,842 | +8,651 |
| June 30 | 10,000.40 | 31,252 | +10,410 |
| July 31 | 9,988.78 | 23,492 | -7,76() |
| August 31 | 9,981.12 | 18,966 | -4,526 |
| September 30 | 9,975.57 | 15,987 | -2,979 |
| October 31 | 9,967.38 | 11,996 | -3,991 |
| November 30 | 9,967.43 | 12,022 | +26 |
| December 31, 2007 | 9,968.78 | 12,648 | +626 |
| Calendar year 2007 | - | | +3,288 |

Trujillo Meadows Reservoir. - In sec. 5, T. 32 N., R. 5 E., on Los Pinos River. Completed in 1957; capacity, 869 acre-ft, effective Jan. 1, 1999. Water is used for fish culture. Storage is transmountain water, by exchange, in 1959.

Month-end gage height, in feet, and contents, in acre-feet

Calendar Year 2007

| | | | | | | | | | | | the second se | | |
|-------------|------|------|------|------|------|------|------|------|-------|------|---|------|----------|
| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
| Gage height | 29.5 | 29.5 | 29.5 | 29.5 | 30.6 | 29.7 | 29.6 | 29.5 | 29.5 | 29.5 | 29.5 | 29.5 | - |
| Contents | 770 | 770 | 770 | 770 | 843 | 783 | 777 | 77() | 770 | 77() | 770 | 77() | |
| Change | 0 | () | 0 | 0 | +73 | -6() | -6 | -7 | 0 | 0 | 0 | () | () |

STORAGE IN RESERVOIRS

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

<u>Heron Reservoir.</u> – Water-stage recorder with satellite telemetry, lat 36°39'56", long 106°42'13", on Willow Creek. Storage began in October 1970. Capacity, 401,300 acre-ft at elevation 7,186.1 ft (low point on crest of spillway); dead storage, 1,340 acre-ft at elevation 7,003.0 ft. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Used for storage of transmountain water.

Month-end elevation, in feet, and contents, in acre-feet

| Date | Elevation | Contents | Change in contents |
|--------------------|-----------|----------|--------------------|
| December 31, 2006 | 7,140.76 | 183,032 | - |
| January 31, 2007 | 7,137.54 | 171,252 | -11,780 |
| February 28 | 7,135.48 | 163,997 | -7,255 |
| March 31 | 7,136.80 | 168,621 | +4,624 |
| April 30 | 7,140.60 | 182,435 | +13,814 |
| May 31 | 7,148.98 | 215,390 | +32,955 |
| June 30 | 7,153.98 | 236,651 | +21,261 |
| July 31 | 7,154.26 | 237,877 | +1,226 |
| August 31 | 7,154.41 | 238,536 | +659 |
| September 30 | 7,151.55 | 226,169 | -12,367 |
| October 31 | 7,151.26 | 224,937 | -1,232 |
| November 30 | 7,151.13 | 224,386 | -551 |
| December 31, 2007 | 7,144.33 | 196,689 | -27,697 |
| Calendar year 2007 | | - | +13,657 |

El Vado Reservoir. – Water-stage recorder and surface follower, lat 36°35'39", long 106°44'00", on Rio Chama. Storage began in January 1935. Capacity, 186,250 acre-ft at gage height 6,902.0 ft (crest of spillway); dead storage, 480 acreft, below gage height 6,775.0 ft (invert of outlet works), as determined by survey in 1984. Datum of gage is 8.21 ft above National Geodetic Vertical Datum of 1929. Storage includes both Rio Grande and transmountain water.

Month-end gage height, in feet, and contents, in acre-feet

| | | | Change in | Transmountain |
|--------------------|-------------|----------|-----------|---------------|
| Date | Gage Height | Contents | contents | water |
| December 31, 2006 | 6,854.03 | 70,233 | - | 23,749 |
| January 31, 2007 | 6,856.13 | 73,744 | +3,511 | 23,763 |
| February 28 | 6,858.54 | 77,910 | +4,166 | 23,763 |
| March 31 | 6,876.30 | 114,062 | +36,152 | 23,748 |
| April 30 | 6,892.68 | 157,429 | +43,367 | 23,698 |
| May 31 | 6,900.08 | 180,103 | +22,674 | 23,656 |
| June 30 | 6,898.03 | 173,660 | -6,443 | 23,549 |
| July 31 | 6,890.36 | 150,687 | -22,973 | 21,934 |
| August 31 | 6,884.23 | 133,852 | -16,835 | 21,525 |
| September 30 | 6,880.94 | 125,375 | -8,477 | 21,945 |
| October 31 | 6,879.86 | 122,668 | -2,707 | 19,803 |
| November 30 | 6,878.75 | 119,931 | -2,737 | 18,937 |
| December 31, 2007 | 6,887.54 | 142,759 | +22,828 | 43,376 |
| Calendar year 2007 | - | 1 | +72 526 | |

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

Abiquiu Reservoir. -- Water-stage recorder, lat 36°14'24", long 106°25'44", on Rio Chama. Completed in February 1963; capacity, 1,192,800 acre-ft at elevation 6,350 feet (crest of spillway) by 1998 survey. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Reservoir is operated by Corps of Engineers for flood control and sediment storage. A resolution granting permission to store transmountain waters was approved by Rio Grande Compact Commission on May 3, 1974. Storage includes both Rio Grande and transmountain water.

Month-end elevation, in feet, and contents, in acre-feet

| | | | Change in | Transmountain |
|--------------------|-----------|----------|-----------|---------------|
| Date | Elevation | Contents | contents | water |
| December 31, 2006 | 6,213.13 | 157,378 | - | 155,464 |
| January 31, 2007 | 6,215.69 | 166,985 | +9,607 | 165,128 |
| February 28 | 6,217.52 | 174,056 | +7,071 | 172,355 |
| March 31 | 6,218.66 | 178,538 | +4,482 | 175,905 |
| April 30 | 6,219.28 | 180,995 | +2,457 | 178,697 |
| May 31 | 6,219.55 | 182,073 | +1,078 | 178,094 |
| June 30 | 6,218.12 | 176,408 | -5,665 | 174,408 |
| July 31 | 6,217.45 | 173,785 | -2,623 | 171,770 |
| August 31 | 6,217.73 | 174,877 | +1,092 | 172,843 |
| September 30 | 6,219.61 | 182,313 | +7,436 | 179,975 |
| October 31 | 6,219.40 | 181,475 | -838 | 179,379 |
| November 30 | 6,219.49 | 181,837 | +362 | 179,792 |
| December 31, 2007 | 6,219.71 | 182,715 | +878 | 180,430 |
| Calendar year 2007 | - | - | +25,337 | - |

<u>Nambe Falls Reservoir</u>. – Water-stage recorder, lat 35°50'46", long 105°54'17", in NE1/4SW1/4 sec. 29, T. 19 N., R. 10 E., in Nambe Indian Reservation, on Rio Nambe. Completed in 1976; capacity 1,920 acre-ft at elevation 6,826.6 feet (crest of spillway) by 2004 survey, dead storage 121 acre-ft at elevation 6,760.9 ft. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Storage is transmountain water by exchange (see resolution adopted March 27, 1975).

Month-end elevation, in feet, and contents, in acre-feet

| Date | Elevation | Contents | Change in contents |
|--------------------|-----------|----------|--------------------|
| December 31, 2006 | 6,816.46 | 1,394 | - |
| January 31, 2007 | 6,820.52 | 1,591 | +197 |
| February 28 | 6,824.79 | 1,817 | +226 |
| March 31 | 6,826.63 | 1,921 | +104 |
| April 30 | 6,826.69 | 1,925 | +4 |
| May 31 | 6,826.78 | 1,930 | +5 |
| June 30 | 6,826.64 | 1,922 | -8 |
| July 31 | 6,821.15 | 1,623 | -299 |
| August 31 | 6,812.23 | 1,207 | -416 |
| Sentember 30 | 6,805.28 | 938 | -269 |
| October 31 | 6,806.33 | 976 | +38 |
| November 30 | 6,811.26 | 1,167 | +191 |
| December 31, 2007 | 6,816.95 | 1,417 | +250 |
| Calendar year 2007 | - | - | +23 |

STORAGE IN RESERVOIRS

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

McClure (Granite Point) Reservoir, – Water-stage recorder, lat 35°41'18", long 105°50'06", in NE1/4SW1/4 sec. 24, T. 17 N., R. 10 E., on Santa Fe River. Original reservoir completed in 1926, capacity, 561 acre-ft; in 1935, permanent flash boards were installed in spillway increasing capacity to 650 acre-ft; in 1947 both dam and spillway were reconstructed increasing capacity to 2,615 acre-ft (gage height, 96.6 ft, crest of spillway). In 1953 spillway was equipped with radial gates that opened automatically, increasing capacity to over 3,000 acre-ft. In 1972, radial gates were removed decreasing capacity to 2,615 acre-ft. In 1989, modifications to the dam and spillway increased capacity to 2,813 acre-ft. In 1995, modification to the dam and spillway increased capacity to 3,257 acre-ft. No dead storage. Elevation of gage is 7,790 ft above National Geodetic Vertical Datum of 1929, from topographic map. Water is for municipal use in Santa Fe. Storage includes both Rio Grande water and transmountain water by exchange. Capacity includes 561 acre-ft for pre-Compact storage and additional capacity as may be available to accomodate up to a total of 1,061 acre-fet of pre-Compact storage in McClure and Nichols Reservoirs combined.

Month-end gage height, in feet, and contents, in acre-feet

| and the second se | | | | | |
|---|-------------|----------|-------------|-------------|---------------|
| | | | Change | Pre-Compact | Transmountain |
| Date | Gage height | Contents | in contents | water | water |
| December 31, 2006 | 7,880.53 | 2,880 | - | 99 | 2,781 |
| January 31, 2007 | 7,879.87 | 2,840 | -40 | 59 | 2,781 |
| February 28 | 7,876.27 | 2,740 | -100 | 0 | 2,740 |
| March 31 | 7,885.49 | 3,230 | +490 | 449 | 2,781 |
| April 30 | 7,884.55 | 3,160 | -70 | 379 | 2,781 |
| May 31 | 7,885.86 | 3,260 | +100 | 476 | 2,781 |
| June 30 | 7,884.62 | 3,170 | -90 | 389 | 2,781 |
| July 31 | 7,880.26 | 2,840 | -330 | 59 | 2,781 |
| August 31 | 7,875.96 | 2,520 | -320 | 0 | 2,520 |
| September 30 | 7,874.16 | 2,400 | -120 | 0 | 2,400 |
| October 31 | 7,872.65 | 2,290 | -110 | 0 | 2,290 |
| November 30 | 7,871.77 | 2,190 | -100 | 0 | 2,190 |
| December 31, 2007 | 7,870.79 | 2,170 | -20 | 0 | 2,170 |
| Calendar year 2007 | - | | -710 | | |
| | | | | | |

Nichols Reservoir, – Water-stage recorder, lat 35°41'24", long l05°52'46", in SE1/4NE1/4 sec. 21, T. 17 N., R. 10 E., on Santa Fe River. Completed in 1942; capacity, 685 acre-ft at gage height 167.0 feet (crest of spillway), dead storage, 14 acre-ft at gage height 121.1 feet. Datum of gage is 7,313.2 feet above National Geodetic Vertical Datum of 1929. Water is for municipal use in Santa Fe. Storage includes both Rio Grande water and transmountain water by exchange. Capacity may include pre-Compact storage such that total pre-Compact storage in McClure and Nichols Reservoirs combined does not exceed 1,061 acre-ft.

Month-end gage height, in feet, and contents, in acre-feet

| | | | Change | Pre-Compact | Transmountain |
|--------------------|-------------|----------|-------------|-------------|---------------|
| Date | Gage height | Contents | in contents | water | water |
| December 31, 2006 | 154.80 | 371 | - | 271 | 100 |
| January 31, 2007 | 147.23 | 236 | -135 | 136 | 100 |
| February 28 | 155.36 | 383 | +147 | 242 | 141 |
| March 31 | 162.92 | 569 | +186 | 469 | 100 |
| April 30 | 165.79 | 649 | +80 | 549 | 100 |
| May 31 | 167.07 | 688 | +39 | 585 | 100 |
| June 30 | 164.06 | 600 | -88 | 500 | 100 |
| July 31 | 160.70 | 510 | -90 | 410 | 100 |
| August 31 | 155.47 | 386 | -124 | 25 | 361 |
| September 30 | 151.54 | 309 | -77 | 0 | 309 |
| October 31 | 148.80 | 261 | -48 | 0 | 261 |
| November 30 | 146.85 | 230 | -31 | 0 | 230 |
| December 31, 2007 | 142.33 | 168 | -62 | 0 | 168 |
| Calendar year 2007 | - | | -203 | | |
| | | | | | |

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

Cochiti Lake, – Water-stage recorder with satellite telemetry, lat 35°37'01", long 106°18'58", in NW1/4SW1/4 sec. 16, T. 16 N., R. 6 E., in Pueblo de Cochiti Grant, on Rio Grande. Completed in 1975; capacity 491,259 acre-ft at elevation 5,450.0 ft (crest of service spillway); zero storage at elevation 5,255.0 from 1998 survey. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). A 50,000 acre-foot permanent pool was authorized by Public Law 88-293, 88th Congress, March 26, 1964. Reservoir is operated by Corps of Engineers for flood control, sediment storage, and recreation. Storage began Nov. 12, 1973.

Month-end elevation, in feet, and contents, in acre-feet

| | | | Change in | Transmountain |
|--------------------|-----------|----------|-----------|---------------|
| Date | Elevation | Contents | contents | water |
| December 31, 2006 | 5,339.54 | 48,609 | - | 45,675 |
| January 31, 2007 | 5,341.47 | 50,940 | +2,331 | 47,618 |
| February 28 | 5,341.92 | 51,513 | +573 | 48,625 |
| March 31 | 5,343.27 | 53,342 | +1,829 | 49,990 |
| April 30 | 5,342.58 | 52,387 | -955 | 49,615 |
| May 31 | 5,347.02 | 58,939 | +6,552 | 49,151 |
| June 30 | 5,341.78 | 51,333 | -7,606 | 48,423 |
| July 31 | 5,341.43 | 50,889 | -444 | 47,820 |
| August 31 | 5,341.05 | 50,415 | -474 | 47,060 |
| September 30 | 5,341.21 | 50,614 | +199 | 46,675 |
| October 31 | 5,340.38 | 49,598 | -1,016 | 47,139 |
| November 30 | 5,341.09 | 50,465 | +867 | 46,933 |
| December 31, 2007 | 5,341.15 | 50,539 | +74 | 46,937 |
| Calendar year 2007 | - | | +1,930 | - |

<u>Galisteo Reservoir.</u> – Water-stage recorder above elevation 5,500.3 ft, nonrecording below, lat 35°27'44", long 106°12'30", in NW1/4 sec. 9, T. 14 N., R. 7 E., on Galisteo Creek. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Storage records begin in October 1970. Capacity 88,990 acre-ft at elevation 5,608.0 ft (crest of spillway). No dead storage. Reservoir is operated by Corps of Engineers for flood control and sediment storage.

Month-end contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|----------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| Contents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | () | 0 | 0 | - |
| Change | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

STORAGE IN RESERVOIRS

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

Jemez Canvon Reservoir, ~ Water-stage recorder, lat 35°23'40", long 106°32'50", in SW1/4SW1/4 sec. 32, T. 14 N., R. 4 E., on Jemez River. Completed in 1953; capacity, 259,423 acre-ft at elevation 5,271.20 ft. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Maximum controlled capacity at elevation 5,232.0 ft (floor of spillway) is 97,425 acre-ft by 1998 survey. Reservoir is operated by Corps of Engineers for flood control and sediment storage. A sediment pool of about 2,000 acre-ft of transmountain water has been maintained since August 1979.

Month-end elevation, in feet, and contents, in acre-feet

| | | | Change in | Transmountain |
|--------------------|-----------|----------|-----------|---------------|
| Date | Elevation | Contents | contents | water |
| December 31, 2006 | 5,155.00 | 0 | - | 0 |
| January 31, 2007 | 5,155.00 | 0 | 0 | 0 |
| February 28 | 5,155.00 | 0 | 0 | 0 |
| March 31 | 5,155.00 | 0 | 0 | 0 |
| April 30 | 5,155.00 | 0 | 0 | 0 |
| May 31 | 5,155.00 | 0 | 0 | 0 |
| June 30 | 5,155.00 | 0 | 0 | 0 |
| July 31 | 5,155.00 | 0 | 0 | 0 |
| August 31 | 5,155.00 | 0 | 0 | 0 |
| September 30 | 5,155.00 | 0 | 0 | 0 |
| October 31 | 5,155.00 | 0 | 0 | 0 |
| November 30 | 5,155.00 | 0 | 0 | 0 |
| December 31, 2007 | 5,155.00 | 0 | 0 | 0 |
| Calendar year 2007 | - | | 0 | . · |

<u>Acomita Reservoir.</u> – Staff gage in SE1/4 sec. 29, T. 10 N., R. 7 W., on San Fidel Arroyo; water for reservoir is diverted from Rio San Jose. Completed in 1938; original capacity, 850 acre-ft; present capacity 650 acre-ft on basis of 1956 sediment survey. Water is used for irrigation on Acoma Indian Reservation. Storage omitted from accounting by action of Commission on March 23, 2000.

Month-end contents, in acre-feet

Calendar Year 2007

| Month | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Cal. Yr. |
|----------|------|------|------|------|-----|------|------|------|-------|------|------|------|----------|
| Contents | - | | - | - | - | - | - | - | | - | - | | - |
| Change | | - | - | - | - | - | - | 10 g | - | | - | - | |

Seama Reservoir. - In sec. 36, T. 10 N., R. 7 W., off channel from Rio San Jose. Completed in October 1980; capacity approximately 400 acre-ft. Water is used for irrigation on Laguna Indian Reservation.

No storage during 2007.

Reservoirs in Rio Grande Basin in New Mexico (project storage)

Elephant Butte Reservoir. – Water-stage recorder, lat 33°09'15", long 107°11'28", in NW1/4 sec. 30, T. 13 S., R. 3 W., on Rio Grande. Storage began Jan. 6, 1915; capacity, 2,023,400 acre-ft at gage height 4,407.0 ft (crest of spillway), by survey of 1999 with flood control storage reservation of 50,000 acre-ft from April through September and 25,000 acre-ft from October through March in accordance with Sept. 9, 1998 resolution of the Rio Grande Compact Commission. Datum of gage is 43.3 ft above National Geodetic Vertical Datum of 1929. Water is used for power development and irrigation in New Mexico and Texas. Records furnished by Bureau of Reclamation. Delivery of transmountain water for minimum recreation pool was initiated in December 1975. Beginning Jan. 1, 1977 gage readings are midnight readings.

Month-end gage height, in feet, and contents, in acre-feet

| | | | Change in | Transmountain |
|--------------------|-------------|----------|-----------|---------------|
| Date | Gage Height | Contents | contents | water |
| December 31, 2006 | 4,340.72 | 514,029 | - | 4,517 |
| January 31, 2007 | 4,344.02 | 558,442 | +44,413 | 4,497 |
| February 28 | 4,346.88 | 598,463 | +40,021 | 4,480 |
| March 31 | 4,347.62 | 609,050 | +10,587 | 4,454 |
| April 30 | 4,343.84 | 555,970 | -53,080 | 4,418 |
| May 31 | 4,347.08 | 601,315 | +45,345 | 4,385 |
| June 30 | 4,344.96 | 571,439 | -29,876 | 4,335 |
| July 31 | 4,336.60 | 461,319 | -110,120 | 4,290 |
| August 31 | 4,331.16 | 396,598 | -64,721 | 4,244 |
| September 30 | 4,327.64 | 357,604 | -38,994 | 4,216 |
| October 31 | 4,324.60 | 325,545 | -32,059 | 4,079 |
| November 30 | 4,327.12 | 352,061 | +26,516 | 4,059 |
| December 31, 2007 | 4,332.22 | 408,773 | +56,712 | 4,048 |
| Calendar year 2007 | - | - | -105,256 | |

<u>Caballo Reservoir.</u> – Water-stage recorder, lat 32°53'47", long 107°17'30", in SE1/4SW1/4 sec. 19, T. 16 S., R. 4 W., on Rio Grande. Storage began Feb. 8, 1938; capacity, 326,700 acre-ft (by 1999 resurvey), at gage height 4,182.0 ft (above which spillway gates open automatically). Datum of gage is 43.3 ft above National Geodetic Vertical Datum of 1929.

Month-end gage height, in feet, and contents, in acre-feet

| Date | Gage height | Contents | Change in contents |
|--------------------|-------------|----------|--------------------|
| December 31, 2006 | 4,144.30 | 43,140 | - |
| January 31, 2007 | 4,144.88 | 45,250 | +2,110 |
| February 28 | 4,145.22 | 46,530 | +1,280 |
| March 31 | 4,135.64 | 19,010 | -27,520 |
| April 30 | 4,148.68 | 60,960 | +41,950 |
| May 31 | 4,150.18 | 68,050 | +7,090 |
| June 30 | 4,143.40 | 39,990 | -28,060 |
| July 31 | 4,148.32 | 59,330 | +19,340 |
| August 31 | 4,141.22 | 33,040 | -26,290 |
| September 30 | 4,134.24 | 16,160 | -16,880 |
| October 31 | 4,136.38 | 20,620 | +4,460 |
| November 30 | 4,137.06 | 22,160 | +1,540 |
| December 31, 2007 | 4,137.74 | 23,770 | +1,610 |
| Calendar year 2007 | - | * | -19,370 |

STORAGE IN RESERVOIRS

Reservoirs in Rio Grande Basin in New Mexico (project storage)

Project storage. - The combined total storage in Elephant Butte and Caballo Reservoirs.

| Month-end | contents | 111 | acre-te | et. |
|-------------|-----------|-------|---------|-----|
| TACTOR CITY | concento, | - 444 | 1010-10 | |

| Date | Contents | Change in contents | |
|--------------------|----------|--------------------|--|
| December 31, 2006 | 557,169 | • | |
| January 31, 2007 | 603,692 | +46,523 | |
| February 28 | 644,993 | +41,301 | |
| March 31 | 628,060 | -16,933 | |
| April 30 | 616,930 | -11,130 | |
| May 31 | 669,365 | +52,435 | |
| June 30 | 611,429 | -57,936 | |
| July 31 | 520,649 | -90,780 | |
| August 31 | 429,638 | -91,011 | |
| September 30 | 373,764 | -55,874 | |
| October 31 | 346,165 | -27,599 | |
| November 30 | 374,221 | +28,056 | |
| December 31, 2007 | 432,543 | +58,322 | |
| Calendar year 2007 | | -124,626 | |

NOTE .-- Values of combined contents may not agree with sum of individual values because of rounding.

TRANSMOUNTAIN DIVERSIONS

<u>Pine River - Weminuche Pass ditch (Fuchs ditch)</u> 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.

Weminuche Pass ditch (Raber-Lohr 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.

<u>Williams Creek - Squaw Pass ditch</u>— 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.

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 below Del Norte gaging station.

Don La Font No. 1 & 2 ditches (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. Water is imported by Colorado Game and Fish Department, beginning in 1959, to offset losses from fish culture reservoirs.

<u>Treasure Pass diversion ditch</u>— 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 above the Del Norte gaging station, beginning in 1959. Prior to 1959 it was diverted below gaging station.

Azotea tunnel.-- Water-stage recorder and 10-ft Parshall flume, lat 36°51'12", long 106°40'18", at south portal of Azotea tunnel, San Juan-Chama Project. Diversion is from Rio Blanco, Little Navajo River, and Navajo River in Colorado and discharge is into Azotea in New Mexico. Construction completed in 1970.

Imported quantities, in acre-feet, 2007

| | Pine River- | | Williams | | | Treasure | | |
|---------------|-------------|-----------|------------|-------|-------------|-----------|---------|--|
| | Weminuche | Weminuche | Creek- | | | Pass | Azotea | |
| | Pass | Pass | Squaw Pass | Tabor | Don La Font | diversion | | |
| Month | ditch | ditch | ditch | ditch | ditches | ditch | tunnel | |
| anuary | 0 | 0 🛞 | 0 | 0 | 0 | 0 | 0 | |
| ebruary | 0 | 0 | 0 | 0 | 0 | 0 | 179 | |
| March | 0 | 0 | 0 | 0 | 0 | 0 | 12,976 | |
| pril | 0 | 0 | 0 | 0 | 0 | 0 | 17,745 | |
| Aay | 0 | 0 | 16 | 242 | 0 | 0 | 33,838 | |
| une | 449 | 1,046 | 298 | 498 | 109 | 200 | 26,679 | |
| ulv | 4 | 0 | 95 | 176 | 77 | 0 | 4,302 | |
| ugust | 0 | 0 | 57 | 194 | 77 | 0 | 7,375 | |
| eptember | 34 | 0 | 0 | 90 | 6 | 0 | 1,948 | |
| October | 42 | 0 | 0 | 34 | 0 | 0 | 33 | |
| lovember | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Calendar year | 529 | 1,046 | 466 | 1,234 | 269 | 200 | 105,075 | |

EVAPORATION AND PRECIPITATION

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 page. 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 the State University, Elephant Butte Dam, and El Vado Dam antedated the creation of the Commission; the stations at Abiquiu Dam, Cochiti Dam, and Jemez Canyon Dam were established by 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 National Oceanic and Atmospheric Administration, U.S. Army Corps of Engineers, and U.S. Bureau of Reclamation for furnishing the climatological records contained in this report.

Alamosa Airport -- Lat 37°27', long 105°52', in Alamosa County at airport near Alamosa, Colo. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 7,536 ft.

<u>Platoro Dam.-Lat 37°21'</u>, long 106°30', in Conejos County near Platoro, Colo. Standard class A pan, anemometer, maximum and minimum thermometers, fan type psychrometer, standard 8-inch and recording rain gages at elevation 9,826 ft.

Heron Dam --Lat 36°40', long 106°42', in Rio Arriba County about 4 mi. northeast of Heron Dam near Tierra Amarilla, N. Mex Standard class A pan, maximum and minimum thermometers, and standard 8-inch rain gage at elevation 7,310 ft.

El Vado Dam.--Lat 36°36', long 106°44', in Rio Arriba County at El Vado Dam near Tierra Amarilla, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 6,750 ft.

<u>Abiquiu Dam.-Lat 36°14'</u>, long 106°26', in Rio Arriba County at Abiquiu Dam near Abiquiu, N Mex. Standard class A pan, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 6,380 ft.

Nambe Falls Dam. --Lat 35°51', long 105°54', in Santa Fe County at Nambe Falls Dam, N. Mex. Standard class A pan, maximum and minimum thermometers, recording thermograph, standard 8-inch and recording rain gages at elevation 6,840 ft.

Cochiti Dam.-Lat 35°38', long 106°19', in Sandoval County at operations building, at Cochiti Dam, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 5,560 ft.

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

Elephant Butte Dam.-Lat 33°09', long 107°11', in Sierra County at Elephant Butte Dam, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, and standard 8-inch rain gage at elevation 4,576 ft.

Caballo Dam. --Lat 32°54', long 107°18', in Sierra County at Caballo Dam, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 4,190 ft.

New Mexico State University -- Lat 32°17', long 106°45', in Doña Ana County at University Park, N. Mex. Standard class A pan, anemometer, maximum and minimum thermometers, standard 8-inch and recording rain gages at elevation 3,881 ft.

EVAPORATION AND PRECIPITATION

Evaporation and precipitation, in inches 2007

| _ | Station | | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug | Sept. | Oct. | Nov. | Dec. | Annua |
|---|---------------------|---------|------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| | | | | | | | | | | | | | | | |
| | Alamosa | Evap. | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Airport | Precip. | 0.48 | 0.07 | 1.05 | 1.49 | 0.53 | 0.25 | 2.62 | 0.49 | 1.06 | 0.07 | 0.42 | 1.21 | 9.74 |
| | Platoro | Evap. | - | - | - | - | 2.59 | 7.49 | 4.17 | 5.56 | 3.82 | 3.26 | - | - | - |
| | Dam | Precip. | - | - | - | - | 0.90 | 0.75 | 4.36 | 4.09 | 2.57 | 1.64 | - | - | 12 |
| | Heron | Evan | - | | | 4 4 1 | 6 27 | 8 07 | 8 75 | 6.46 | 5.51 | 4 16 | | | - |
| | Dom | Dreein | 1.26 | 1 25 | 0.00 | 1.95 | 2 26 | 0.02 | 0.09 | 4 22 | 1 70 | 0.62 | 0.22 | 2 1 2 | 10.03 |
| | Dam | Precip. | 1.30 | 1.55 | 0.90 | 1.65 | 2.30 | 0.92 | 0.98 | 4.33 | 1.79 | 0.03 | 0.55 | 3.13 | 19.9. |
| | El Vado | Evap. | - | - | - | 5.19 | 6.11 | 9.59 | 8.27 | 6.49 | 5.34 | 4.23 | - | - | - |
| | Dam | Precip. | 1.02 | 0.99 | 0.76 | 1.90 | 2.05 | 1.10 | 1.88 | 4.22 | 2.23 | 0.77 | 0.23 | 2.45 | 19.6 |
| | Abiquiu | Evan | - | - | - | 7 21 | 7 97 | 11 47 | 10.90 | 9 76 | 7 10 | 6.39 | | - | |
| | Dam | Precip. | 0.40 | 0.17 | 0.63 | 1.53 | 2.04 | 0.52 | 2.70 | 0.65 | 1.59 | 0.43 | 0.04 | 1.53 | 12.2 |
| | Nombe | Even | | | | 6 71 | 7 9 7 | 17.46 | 9 70 | 8 70 | 0.16 | 7.50 | | | |
| | Nambe Comme Door | Evap. | 0.00 | - | - | 0.21 | 1.62 | 14.40 | 0.70 | 0.70 | 9.10 | 7.30 | 0.45 | 7.56 | 14.6 |
| | Canyon Dam | Frecip. | 0.06 | 0.94 | 0.09 | 1.20 | 1.05 | 1.55 | 2,40 | 0.00 | 1.05 | 0.42 | 0.45 | 2.50 | 14.0 |
| | Cochiti | Evap. | - | - | - | 6.56 | 8.49 | 12.38 | 11.51 | 13.56 | 8.92 | 7.85 | - | - | - |
| | Dam | Precip. | 1.49 | 0.75 | 1.00 | 0.62 | 0.62 | 0.51 | 1.11 | 0.35 | 1.59 | 0.24 | 0.08 | 1.42 | 9.7 |
| | lemez | Evan | - | - | - | 7.06 | 9.03 | 12.91 | 13.53 | 12.48 | 9.11 | 7.69 | | - | - |
| | Canyon Dam | Precip. | 0.68 | 0.57 | 1.17 | 1.13 | 1.16 | 0.52 | 0.36 | 1.66 | 0.81 | 0.23 | 0.14 | 2.39 | 10.8 |
| | Elephant | Evan | 5.05 | 5 11 | 8 48 | 12 12 | 12 41 | 16.40 | 14.60 | 12 77 | 10.28 | 10.00 | 5 56 | 4 18 | 118 1 |
| | Butte Dom | Dregin | 0.07 | 0.00 | 0.12 | 0.67 | 1 56 | 0.16 | 1 17 | 0.75 | 1.85 | 0.04 | 0.07 | 0.76 | 73 |
| | Bulle Dall | Fleetp. | 0.07 | 0.09 | 0.15 | 0.07 | 1.50 | 0.10 | 1.1/ | 0.75 | 1.05 | 0.04 | 0.07 | 0.70 | 1.5 |
| | Caballo | Evap. | - | 5.30 | 9.36 | 11.50 | 12.14 | 15.57 | 14.00 | 11.85 | 8.88 | 8.77 | 5.34 | 3.85 | - |
| | Dam | Precip. | 1.45 | 0.23 | 0.13 | 1.32 | 1.17 | 0.05 | 1.28 | 2.60 | 1.26 | 0.04 | 0.10 | 0.77 | 10.8 |
| | State | Evan | | 5.01 | 0 31 | 10.61 | 10.06 | 12.08 | 11.57 | 11.83 | 8 47 | 8 26 | 5.04 | _ | |
| | University | Precip | 1 39 | 0.08 | 0.07 | 1 41 | 1 94 | 0.21 | 1 91 | 1 10 | 1 15 | 0.08 | 0.26 | 0.70 | 10 7 |
| | Oniversity | riccip. | 1.20 | 0.00 | 0.07 | 1.71 | 1.24 | 0.41 | 1.21 | 1.10 | | 0.00 | 0.20 | 0.70 | 10.4 |





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