EXHIBIT 1

CONSENT DECREE SUPPORTING THE RIO GRANDE COMPACT (WITH APPENDICES 1 AND 2)

No. 141, Original

In the

SUPREME COURT OF THE UNITED STATES

STATE OF TEXAS,

Plaintiff,

v.

STATE OF NEW MEXICO and
STATE OF COLORADO,

Defendants.

OFFICE OF THE SPECIAL MASTER

**CONSENT DECREE SUPPORTING
THE RIO GRANDE COMPACT**

DECREE

Based upon the Recommendation of the Special Master, with the agreement of the Compacting States of Texas, New Mexico, and Colorado, the Court decrees as follows:

The Texas-New Mexico Compact dispute among the Compacting States of Texas, New Mexico, and Colorado regarding Compact apportionment is resolved pursuant to the Decree terms described herein.

I. DEFINITIONS

When used in this Decree and the attachments and appendices hereto, the following definitions apply. The terms defined below shall be construed as consistent with the terms defined in the Rio Grande Compact.

> **"Accrued Index Departure"** means the sum of all Annual Index Departures as defined in more detail in Appendix 1. This may result in an Accrued Negative Departure or an Accrued Positive Departure.
>
> **"Annual Index Departure"** means the difference between the Index Delivery and the Index Obligation in any calendar year as described in Appendix 1. This may result in an Annual Negative Departure (under-delivery) or an Annual Positive Departure (over-delivery).
>
> **"Bureau of Reclamation"** or **"Reclamation"** means the Bureau of Reclamation within the United States Department of the Interior.
>
> **"Caballo Release"** means the official flow record as measured at the Rio Grande Below Caballo Dam stream gage (USGS 08362500) used in calculating the Index Obligation.
>
> **"Compact"** means the Rio Grande Compact, approved by Congress in the Act of May 31, 1939, ch. 155, 53 Stat. 785.
>
> **"Convention of 1906"** means the Convention Between the United States and Mexico Providing for the Equitable Distribution of the Waters of the Rio Grande for Irrigation Purposes, May 21, 1906, U.S.-Mex., 34 Stat. 2954.
>
> **"D2 Period"** means the period January 1, 1951, through December 31, 1978.

"Depletion of Index Supply" means the annual volumetric reduction of Project Supply in New Mexico and Texas, in acre-feet, resulting directly or indirectly from surface water use and groundwater use.

"**Effective El Paso Index"** or **"EEPI"** or **"Index"** means the index-based methodology for assessing compliance with this Decree described in Appendix 1.

"El Paso Gage" means the Rio Grande at El Paso, Texas stream gage (USGS 08364000).

"Excess Flow" means Rio Grande streamflow at the El Paso Gage, excluding the delivery to Mexico, that is excluded from the Index Delivery as defined in Appendix 1.

"Index Accounting" means the determination of the Annual Index Obligation, annual Index Delivery, and annual and Accrued Index Departures as described in Appendix 1.

"Index Delivery" means the sum of:

(i) the annual streamflow at the El Paso Gage, after subtracting delivery to Mexico and Excess Flow; and

(ii) the estimated Depletion of Index Supply caused by groundwater and surface water use in the Texas Mesilla, as determined by the methodology in Appendix 1.

"Index Departure" or **"Departure"** means the difference between the Index Delivery and the Index Obligation; when the Index Delivery is greater than the Index Obligation it is a "Positive Departure," when the Index Delivery is less than the Index Obligation it is a "Negative Departure."

"Index Obligation" means the volume of water calculated to be delivered to Texas as quantified using the EEPI, and subject to Index Departures and other provisions in this Decree.

"Mesilla Basin" means the part of the Rio Grande Basin that contains the Mesilla Valley. The Mesilla Basin is located in both New Mexico and Texas, as depicted in Appendix 2.

"Project Carryover Water" means the quantity of water allocated each water year by Reclamation for delivery to the irrigation districts in New Mexico and Texas that remains at the end of each calendar year.

"Index Supply" means the water supply for the Rio Grande Project as defined and administered by applicable State law. Index Supply generally consists of:

Usable Water, as defined in Article I(*l*) of the Compact, which excludes Rio Grande credit water and imported waters such as San Juan Chama Project water;

Usable Water released from Caballo Reservoir in accordance with irrigation demands, including deliveries to Mexico; and

Inflows and Project return flows that reach the bed of the Rio Grande or Project conveyances, but excluding flows from imported water.

"Rincon Basin" means the part of the Rio Grande Basin that contains the Rincon Valley in New Mexico, as depicted in Appendix 2.

"Rio Grande Project" or **"Project"** means the federal reclamation project, authorized in the Reclamation Act of June 17, 1902, 32 Stat. 390 and the Rio Grande Project Act of February 25, 1905, 33 Stat. 814, operated by the United States through the Bureau of Reclamation and irrigation districts located in New Mexico and Texas.

"Texas Mesilla" means the land in the State of Texas that overlies the Mesilla Basin, as depicted in Appendix 2.

"Transfers" means the transfer of Project allocation between the Rio Grande Project irrigation district in New Mexico and the Rio Grande Project irrigation district in Texas in accordance with this Decree.

II. INJUNCTION

A. General Provisions:

1. The Rio Grande Compact effects an equitable apportionment of the waters of the Rio Grande above Fort Quitman, Texas, among the States of Colorado, New Mexico, and Texas. The Compacting States must comply with the Compact.

2. Pursuant to Article IV of the Compact and the unanimous Resolution of the Rio Grande Compact Commission adopted February 14-16, 1948, New Mexico is obligated to deliver Rio Grande water as measured at Elephant Butte Reservoir in amounts that are based on flows measured at the stream gaging station located at Otowi Bridge near San Ildefonso.

3. Elephant Butte Reservoir is the major storage reservoir for the Rio Grande Project.

4. The division of Rio Grande water between New Mexico and Texas below Elephant Butte Reservoir is based upon the percentage of the total authorized irrigable acreage of the Rio Grande Project situated in each State at the time of the Compact, approximately 57% in New Mexico and 43% in Texas.

5. This Decree specifies procedures to ensure the proper apportionment of Rio Grande water between Texas and New Mexico below Elephant Butte Reservoir.

6. Compliance with this Decree represents compliance with the Compact with respect to the division of Rio Grande water below Elephant Butte Reservoir.

B. <u>Division of Water Below Elephant Butte Reservoir</u>:

1. The procedures for calculating the water to be delivered to Texas at the El Paso Gage are contained in the Effective El Paso Index documented in **Appendix 1**.

2. The Effective El Paso Index:

   a. New Mexico shall manage and administer water in a manner that is consistent with this Decree, including satisfying the Effective El Paso Index requirements.

   b. The Index is the calculation of Rio Grande water that Texas is entitled to receive. New Mexico is entitled to use the balance of

the Rio Grande water released from Caballo Dam so long as its use complies with the other provisions of this Decree.

c. The Index was developed to ensure Texas and New Mexico receive the amounts of water each is entitled to under the Compact below Elephant Butte Reservoir based upon Project operations during the D2 Period.

d. The methodology for calculating and determining the Index Delivery and Index Obligation is documented in **Appendix 1**.

e. The Index Obligation is calculated annually and is based on a regression analysis of Caballo Releases and volumes of water reaching the El Paso Gage during the D2 Period, plus the historical D2 Period average agricultural and domestic, commercial, municipal, and industrial (DCMI) depletions to the Rio Grande caused by surface and ground water use in the Texas Mesilla, upstream of the El Paso Gage, subtracting out deliveries to Mexico. The Index Obligation is described in detail in **Appendix 1**.

f. The Index Delivery should equal the Index Obligation. However, river operations, hydrologic conditions, annual variations in the amount and location of water uses (including groundwater pumping) above the El Paso Gage, the distance between the release of Project water below Caballo Dam and the El Paso Gage and other factors may affect the Index Delivery. As a consequence,

this Decree provides for departures from the Index Obligation, and "triggers" for water management responses.

g. The Rio Grande Below Caballo Dam and El Paso gages are used for providing the official daily flow record for use in calculating the Index Delivery. The gages will continually meet the Rules and Regulations for administration of the Rio Grande Compact regarding gaging stations. Colorado shall not be responsible for the costs of the gages and measurements needed for Index Accounting.

3. Index Departures:

a. As set forth in this Decree, an Annual Negative Departure:

(i) will be used to reduce an Accrued Positive Departure at the beginning of the year by the amount of the Annual Negative Departure; or

(ii) will be added to the Accrued Negative Departures at the beginning of the year.

b. As set forth in this Decree, an Annual Positive Departure:

(i) will be used to reduce an Accrued Negative Departure at the beginning of the year by the amount of the Annual Positive Departure; or

(ii) will be added to the Accrued Positive Departures at the beginning of the year.

c. Transfers relating to Accrued Negative or Accrued Positive Departures from one irrigation district to the other will immediately reduce New Mexico's Accrued Negative Departures or Texas's Accrued Positive Departures by the same amount of the Transfer. Specifically, if such a Transfer occurs from the current-year allocation for the New Mexico irrigation district to the current-year allocation for the Texas irrigation district, then simultaneous with the Transfer, the Accrued Negative Departures will be reduced by an amount equal to the transfer. Likewise, if such a Transfer occurs from the current-year allocation for the Texas irrigation district to the current-year allocation for the New Mexico irrigation district, then simultaneous with the Transfer, the Accrued Positive Index Departure will be reduced by an amount equal to the Transfer.

C. <u>Index Departure Limits</u>:

1. New Mexico is in compliance with this Decree if New Mexico is within the Accrued Negative Departure limits. Exceedance of Accrued Negative Departure limits means New Mexico is in violation of this Decree.

2. Cap on Annual Positive Departure. The maximum Annual Positive Departure is 67,500 acre-feet; an Annual Positive Departure in excess of

67,500 acre-feet shall be treated as the equivalent of 67,500 acre-feet for the purposes of calculating Accrued Index Departures.

3. Caps on Annual Negative Departure.

   a. For the first full five (5) calendar years following entry of this Decree, in calculating the Accrued Index Departures, Annual Negative Departures in excess of 112,500 acre-feet shall be treated as the equivalent of 112,500 acre-feet.

   b. Beginning the sixth full calendar year after entry of this Decree, and thereafter, in calculating the Accrued Index Departures, Annual Negative Departures in excess of 90,000 acre-feet shall be treated as the equivalent of 90,000 acre-feet.

4. Negative Departures:

   a. Limits:

      (i) For the first full five (5) calendar years following entry of this Decree, New Mexico may accrue Negative Departures up to, but not in excess of 150,000 acre-feet.

      (ii) Beginning the sixth full calendar year after entry of this Decree, and thereafter, New Mexico may accrue Negative Departures up to, but not in excess of 120,000 acre-feet.

   b. Additional Index adjustments for exceedances of the Accrued Negative Departure limit:

      (i) In addition to the other provisions of this Decree, if New Mexico exceeds the Accrued Negative Departure limit of

150,000/120,000 acre-feet in three (3) consecutive years, New Mexico shall provide 12,000 acre-feet of water in excess of its Index Obligation for each year that it exceeds the Accrued Negative Departure limit. New Mexico shall have three (3) years to provide the full 36,000 acre-feet.

(ii) If New Mexico exceeds the Accrued Negative Departure limit of 150,000/120,000 acre-feet in four (4) or more consecutive years, New Mexico shall provide 15,000 acre-feet of water in excess of its Index Obligation for each additional year over the three (3) years addressed in the above paragraph that it exceeds the Accrued Negative Departures limit. The 15,000 acre-feet in excess of Index Obligation amounts shall be provided during the year immediately following the violation of the Accrued Negative Departure limit.

c. In any year in which the three-year rolling average of the end of year Project Carryover Water for the irrigation district in Texas is greater than 180,000 acre-feet, all Accrued Negative Departures shall be extinguished.

D. <u>Trigger for Water Management Actions</u>:

1. To avoid excessive Accrued Index Departures and to ensure that the equitable apportionment is achieved, certain volumes of accrued Negative Departures (Trigger) require the following water management actions.

2. Negative Departure Trigger. If Accrued Negative Departures are greater than 80,000 acre-feet at the end of any calendar year, the following provisions shall apply:

a. New Mexico shall take water management actions to reduce the Accrued Negative Departures to less than 16,000 acre-feet within six (6) calendar years following the exceedance of the Negative Departure Trigger. New Mexico shall have discretion to determine what water management actions are necessary and appropriate.

E. <u>Additional Index Provisions</u>:

1. Scope of the Index Obligation. In addition to the above specific terms and conditions related to the Index:

a. The EEPI shall not apply in those years in which annual Caballo Releases are less than 200,000 acre-feet. In those years, the Annual Index Departure shall be set at zero (0) acre-feet.

b. When annual Caballo Releases are 790,000 acre-feet or greater, the Index Obligation shall be calculated using a 790,000 acre-foot release for the year.

2. If there is an Accrued Index Departure at the end of the fifth year following entry of this Decree, or if the Trigger is reached pursuant to paragraph II.D.2 in the first five (5) years, then the Accrued Index Departures (either Positive or Negative) shall be reduced by the amount of the Index Departure up to, but not to exceed, 20,000 acre-feet or until the Index Accounting reflects zero (0) Index Departures.

3. Aridity adjustment. The Index will be adjusted annually for estimated change, since the D2 Period, in open water evaporation and riparian evapotranspiration between the Rio Grande Below Caballo Dam and the El Paso gages. *See* **Appendix 1**.

4. In any year in which an actual or hypothetical spill occurs, as determined by the Rio Grande Compact Commission, all Accrued Index Departures, both Positive and Negative Departures, shall be extinguished.

F. <u>Index Accounting</u>:

1. The Compacting States shall cooperate in providing necessary data to support calculation of the Index Obligation and the Index Accounting as described in the attached **Appendix 1**.

   a. The data required for calculating the initial Index Accounting for the prior year shall be reported to the Engineer Advisors for the Compacting States following the Compact accounting schedules in the "Schedule for Review and Approval of Rio Grande Compact Accounting Records for the Previous Year."

   b. The initial Index Accounting for the prior year shall be annually prepared using the methodologies contained in **Appendix 1** and provided in the "Schedule for Review and Approval of Rio Grande Compact Accounting Records for the Previous Year."

   c. The Engineer Advisors shall review the initial Index Accounting, and include the final Index Accounting for the prior year in their annual report to the Rio Grande Compact Commission.

d. The Rio Grande Compact Commission shall review the Engineer Advisors' report and act as provided for in Article XII of the Compact.

III. CONSTRUCTION OF THE DECREE

A. Nothing in this Decree as a whole, nor any part hereof, modifies or otherwise requires modification of the Compact. This Decree clarifies but does not alter the Compact rights and obligations of the signatory States.

B. Nothing in this Decree 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.

C. The following appendices are attached:

"**Appendix 1**" is the Index Appendix; and

"**Appendix 2**" is a map showing the Mesilla Basin, the Rincon Basin, and the Texas Mesilla area.

To the extent any conflict exists between the language of this Decree and the appendices, or any ambiguity is created by the language of the appendices, the language in this Decree controls. The Compact and Decree govern the legal rights and obligations of the Compacting States. The technical appendices provide procedures and methodologies for ensuring proper implementation of this Decree.

D. This Decree creates no third-party beneficiaries, express or implied.

IV. MODIFICATION OF APPENDICES TO THE DECREE

Appendices may be modified only by unanimous agreement of the Compacting States or subsequent order of this Court.

V. RETENTION OF JURISDICTION

Any of the Compacting States may file a motion with the Court for amendment of the Decree or for further relief. The Court retains jurisdiction of this suit for the purpose of any order, direction, or modification of the Decree, or any supplementary decree, that may at any time be deemed proper in relation to this Decree or an action by the Compacting States for the enforcement of the Decree.

APPROVED AS TO FORM:

/s/ *Stuart L. Somach* Dated: August 29, 2025
STUART L. SOMACH
Counsel for the State of Texas

/s/ *Jeffrey J. Wechsler* Dated: August 29, 2025
JEFFREY J. WECHSLER
Counsel for the State of New Mexico

/s/ *Chad M. Wallace* Dated: August 29, 2025
CHAD M. WALLACE
Counsel for the State of Colorado

THE SPECIAL MASTER HEREBY RECOMMENDS THE ABOVE DECREE:

Dated: _____

Honorable D. Brooks Smith
Special Master
United States Circuit Judge
1798 Plank Road, Suite 203
Duncansville, PA 16635
Tel: 814-693-0570
chambers_of_judge_d_brooks_smith@ca3.uscourts.gov

APPENDIX 1

Appendix 1

Effective El Paso Index

Consent Decree Supporting the Rio Grande Compact

Section 1: Introduction

The Effective El Paso Index (EEPI) is an index-based methodology used to assess compliance with the Consent Decree Supporting the Rio Grande Compact (Consent Decree or Decree). The EEPI was developed for the purpose of quantifying and assessing the division of Rio Grande water below Elephant Butte Reservoir. This document provides a summary of the EEPI methodology and describes the procedures for calculating the elements included within the EEPI. Defined terms in the Consent Decree have the same meaning in this Appendix.

To the extent this Appendix presents any inconsistencies with the Consent Decree, the Consent Decree controls.

The EEPI includes provisions for calculating the annual calendar year volume of water obligated to Texas (***Index Obligation***), the annual volume of water delivered to Texas (***Index Delivery***), and the difference between the delivery and obligation, both on an annual and accrued basis (***Annual Index Departure*** and ***Accrued Index Departure***).

The EEPI methodology consists of the following:

- ***Index Obligation*** described in Section 2.
- ***Index Delivery*** described in Section 3.
- ***Annual Index Departure*** described in Section 4.
- ***Accrued Index Departure*** described in Section 5.
- ***Data for EEPI Calculations*** described in Section 6.
- ***Consent Decree Accounting Provisions*** described in Section 7.
- ***Review and Revision*** described in Section 8.

The Effective El Paso Index Supply (***Index Supply***) represents the Texas apportionment of the Rio Grande below Caballo Dam (see Section 2.1). It is comprised of the Rio Grande flows delivered at the ***El Paso Gage*** plus the depletions to the Rio Grande resulting from agricultural and domestic, commercial, municipal and industrial ***(DCMI)*** water uses in the ***Texas Mesilla***[1]

[1] ***Texas Mesilla*** means the land in the State of Texas that overlies the Mesilla Basin.

upstream of the ***El Paso Gage***[2], adjusted for ***Excess Flows***[3] and ***Delivery to Mexico at the Acequia Madre***[4] as follows:

Index Supply	=	+ ***Streamflow at the El Paso Gage***
		+ ***Texas Mesilla Agricultural Depletions***
		+ ***Texas Mesilla DCMI Depletions***
		- ***Delivery to Mexico at the Acequia Madre***
		- ***Excess Flow***

Section 2: Index Obligation

2.1 Definition of the Index Obligation

The ***Index Obligation*** is the annual target volume of water calculated for delivery to Texas, subject to adjustment for changes in open water evaporation and riparian evapotranspiration (***Aridity Adjustment***) and other provisions.

The ***Index Obligation*** is based on a two-year regression analysis relating annual ***Caballo Release***[5] in the current and previous years to the annual ***Index Supply*** during the 1951-1978 period (***D2 Period***).

2.2 Calculation of the Index Obligation

The following equation (*Equation 1*) will be used to compute the ***Index Obligation***, in units of acre-feet, following the end of each calendar year:

[2] ***El Paso Gage*** means the Rio Grande at El Paso, Texas stream gage (USGS 08364000).
[3] ***Excess Flow*** defined in Section 3.6.
[4] ***Acequia Madre*** is the canal through which deliveries of Rio Grande water are made to Mexico under the provisions of the Convention of 1906 between the United States and Mexico. The "Convention of 1906" means the Convention Between the United States and Mexico Providing for the Equitable Distribution of the Waters of the Rio Grande for Irrigation Purposes, May 21, 1906, U.S.-Mex, 34 Stat. 2954.
[5] ***Caballo Release*** means the official flow record as measured at the Rio Grande Below Caballo Dam stream gage (USGS 08362500).

Equation 1

Index Obligation [y] = ***0.485886 · Minimum ($Q_{Caballo}$ [y]; 790,000*** *acre-feet)*
+ 0.113382 · Minimum ($Q_{Caballo}$ [y-1]; 790,000 *acre-feet)*
- 90,149
+ 26,860 *(Average Texas Mesilla Agricultural Depletions, in acre-feet)*
+ 12,224 *(Average Texas Mesilla DCMI Depletions, in acre-feet)*

Where,

- 0.485886, 0.113382, and 90,149 are regression coefficients.
- ***$Q_{Caballo}$*** is the annual ***Caballo Release*** for a given calendar year in acre-feet.
- ***[y]*** indicates the year (e.g., ***$Q_{Caballo}$ [1970]*** is the annual ***Caballo Release*** for 1970).

The annual calculation of the ***Index Obligation*** is subject to the following conditions:

- In extreme wet years, or when ***$Q_{Caballo}$*** is greater than 790,000 acre-feet per year, the ***Index Obligation*** will be determined using *Equation 1*, but the value for ***$Q_{Caballo}$*** will be set to 790,000 acre-feet.

Data for ***$Q_{Caballo}$*** will be obtained from the Rio Grande Below Caballo Dam stream gage, which is operated and maintained by the United States Bureau of Reclamation (Reclamation).

Furthermore, the ***Index Obligation*** will be adjusted to account for any estimated change, since the D2 Period, in open water evaporation and riparian evapotranspiration between the Rio Grande Below Caballo Dam stream gage and the ***El Paso Gage*** using the following equation (*Equation 2*):

Equation 2

A [y] = ***47,137 · (1.0 – (ET_o [y] / ET_o [D2])) · (67/155)***

Where,

- 47,137 is the average open water evaporation and riparian evapotranspiration during the ***D2 Period***, in acre-feet.
- ***A [y]*** is the calculated ***Aridity Adjustment*** to the ***Index Obligation*** for each calendar year in acre-feet.
- ***ET_o [y]*** is the five-year running average of annual calendar year reference evapotranspiration (***ET_o***) for the five-year period ending in year **[*y*]** in inches per year, computed using the original Blaney-Criddle method and climate data (see Section 6) from the Leyendecker II PSRC weather station, located at the New Mexico State University Leyendecker Plant Science Research Center. If climate data from Leyendecker II PSRC weather station is unavailable, the best available data should be used.

- ***ET_o [D2]*** is the average annual calendar year reference evapotranspiration (***ET_o***) over the ***D2 Period*** in inches per year, computed using the original Blaney-Criddle method, equal to 53.0 inches per year.
- **67/155** is the adjustment factor that represents the Texas portion of the ***Aridity Adjustment.***
- ***[y]*** indicates the year (e.g., ***ET_o [1970]*** refers to annual reference evapotranspiration in 1970).

The calculated annual open water evaporation and riparian evapotranspiration adjustment value (***A[y]***), whether negative or positive, will be added to the ***Index Obligation***. A one-inch difference in the ***ET_o[y]*** as compared to the ***ET_o[D2]*** represents an adjustment of about 384 acre-feet per year.

Section 3: Index Delivery

3.1 Definition and Calculation of the Index Delivery

The ***Index Delivery*** is the sum of:

- The annual streamflow at the ***El Paso Gage***, after subtracting ***Delivery to Mexico at the Acequia Madre*** and ***Excess Flow***; and
- The estimated depletion of ***Index Supply*** caused by groundwater and surface water use in the ***Texas Mesilla***.

The following equation (*Equation 3*) will be used to compute the ***Index Delivery***, in units of acre-feet, following the end of each calendar year:

Equation 3

$$\begin{aligned} \textbf{Index Delivery [y]} = {} & \textbf{Streamflow at the El Paso Gage [y]} \\ & + \textbf{Texas Mesilla Agricultural Depletions [y]} \\ & + \textbf{Texas Mesilla DCMI Depletions [y]} \\ & - \textbf{Delivery to Mexico at the Acequia Madre [y]} \\ & - \textbf{Excess Flow [y]} \end{aligned}$$

Where,

- ***Streamflow at the El Paso Gage*** as described in Section 3.2.
- ***Texas Mesilla Agricultural Depletions*** as described in Section 3.3.
- ***Texas Mesilla DCMI Depletions*** as described in Section 3.4.
- ***Delivery to Mexico at the Acequia Madre*** as described in Section 3.5.
- ***Excess Flow*** as described in Section 3.6.

3.2 Streamflow at the El Paso Gage

The annual calendar year streamflow at the ***El Paso Gage*** component of *Equation 3* will be based on the official daily flow record for the ***El Paso Gage***, in units of acre-feet.

The ***El Paso Gage*** is operated and maintained by the U.S. Section of the International Boundary and Water Commission (US-IBWC) and the official record of daily flow is maintained by US-IBWC.

3.3 Texas Mesilla Agricultural Depletions

The ***Texas Mesilla Agricultural Depletions*** component of the ***Index Delivery*** represents the annual calendar year volume of Rio Grande water depleted (consumed) by irrigation use of groundwater and surface water in the ***Texas Mesilla***, as shown in the inset of Appendix 2, or in Texas east of the boundary of the Texas Mesilla supplied by groundwater from hydrologically connected aquifers, in units of acre-feet.

The following equation (*Equation 4*) will be used to compute ***Texas Mesilla Agricultural Depletions:***

Equation 4

$$\textit{Texas Mesilla Agricultural Depletions [y]} = \textit{Acres [y]} \cdot \textit{CIR[y]}$$

Where,

- ***Acres*** is the total irrigated area in the ***Texas Mesilla*** in a given year, including acreage irrigated for crop production as well as non-crop irrigated acreage (e.g., lawns, parks, golf courses, etc.), in units of acres.
- ***CIR*** is the average consumptive use of irrigation water per acre for the ***Texas Mesilla***, equal to 2.8 acre-feet per acre per year (subject to periodic review under the Technical Review terms in Section 8).
- ***[y]*** indicates the year (e.g., ***Acres [1970]*** refers to the total irrigated acreage in the ***Texas Mesilla*** for 1970).

The annual irrigated acreage in the ***Texas Mesilla*** will be determined based on the sum of the acreage inside and outside of the Texas District boundary.

- Texas will provide the annual irrigated acreage in the ***Texas Mesilla*** for use in calculating the ***Index Delivery***, including documentation of the data and methods used to determine irrigated acreages.

3.4 Texas Mesilla DCMI Depletions

The ***Texas Mesilla DCMI Depletions*** component of the ***Index Delivery*** represents depletions to the Rio Grande above the ***El Paso Gage*** caused by groundwater pumping in the ***Texas Mesilla*** as shown in the inset of Appendix 2, or in Texas east of the boundary of the Texas Mesilla from hydrologically connected aquifers, for DCMI uses in a calendar year. There are no surface water diversions for DCMI use in the ***Texas Mesilla***. If surface water diversions are constructed in the future, then the ***Texas Mesilla DCMI Depletions*** calculation will be reviewed pursuant to Section 8.

Texas Mesilla DCMI Depletions include:

- Depletions caused by groundwater pumping from the City of El Paso's Canutillo Well Field (***TX Mesilla DCMI CWF***).
- Depletions caused by groundwater pumping from all other DCMI wells in the ***Texas Mesilla***, including municipalities, self-supplied domestics, mutual domestics, schools, commercial businesses, industrial facilities, and any other non-agricultural uses (***TX Mesilla DCMI Other***).

The sum of the following two equations (*Equation 5* and *Equation 6*) will be used to compute total ***Texas Mesilla DCMI Depletions***[6], as presented in *Equation 7*, in units of acre-feet:

Equation 5

$$TX\ Mesilla\ DCMI\ CWF\ [y] = (P_{CWF}\ [y] \cdot f_d)$$

Where,

- $P_{CWF}\ [y]$ is the total (gross) volume of water pumped from all wells in the Canutillo Well Field during a given calendar year, in acre-feet.
- f_d is a depletion factor that represents the fraction of total (gross) pumping that depletes the Rio Grande and Project conveyances, equal to 0.95.
- ***[y]*** indicates the year (e.g., $P_{CWF}\ [1970]$ refers to the volume of groundwater pumped in 1970).

[6] Canutillo return flows associated with El Paso's wastewater treatment plants are not included in this calculation, as the wastewater discharge returns to the Rio Grande below the ***El Paso Gage***.

Equation 6

$$\textbf{TX Mesilla DCMI Other [y]} = (P_{Other}[y] \cdot f_d) - (P_{Other}[y] \cdot f_r)$$

Where,

- $P_{Other}[y]$ is the total (gross) volume of water pumped from all DCMI wells in the ***Texas Mesilla***, excluding wells in the Canutillo Well Field, in a given calendar year, in acre-feet.
- f_d is a depletion factor that represents the fraction of total (gross) pumping that depletes the Rio Grande and Project conveyances, equal to 0.95.
- f_r is a return flow factor that represents the fraction of total (gross) pumping for by DCMI wells in the ***Texas Mesilla***, excluding wells in the Canutillo Well Field, which returns to the Rio Grande above the ***El Paso Gage*** in the ***Texas Mesilla***, equal to 0.33.
- ***[y]*** indicates the year (e.g., $P_{Other}[1970]$ refers to the volume of groundwater pumping in 1970).

Equation 7

$$\textbf{Texas Mesilla DCMI Depletions [y]} = \textbf{TX Mesilla DCMI CWF [y]} + \textbf{TX Mesilla DCMI Other [y]}$$

Data required to calculate the ***Texas Mesilla DCMI Depletions*** portion of the ***Index Delivery*** will be obtained as follows:

- Pumping from the Canutillo Well Field is metered and will be obtained by Texas from El Paso Water (the municipal water utility for the City of El Paso).
- Pumping from other DCMI wells in the ***Texas Mesilla*** (*i.e.*, DCMI wells outside of Canutillo Well Field) is either not metered or, if metered, records are generally not available. Pumping from these wells is currently estimated at 2,611 acre-feet per calendar year based on an average of 2007-2016 records and estimates. Texas will provide the estimated annual pumping each calendar year and document the methods used to develop the estimate.

3.5 Delivery to Mexico at the Acequia Madre

The ***Delivery to Mexico at the Acequia Madre*** component of the ***Index Delivery*** represents the annual calendar year volume of Rio Grande water delivered by the United States to Mexico pursuant to the Convention of 1906. Deliveries to Mexico are included within the flows measured at the ***El Paso Gage*** and are therefore subtracted from the ***Index Delivery*** calculation in *Equation 3*.

The ***Delivery to Mexico at the Acequia Madre*** will be based on the official daily flow record of deliveries to Mexico as determined by US-IBWC, in units of acre-feet.

3.6 Excess Flow

The ***Excess Flow*** component of the ***Index Delivery*** represents a portion of the annual volume of streamflow during the calendar year, in acre-feet, at the ***El Paso Gage***, which, like the ***Delivery to Mexico at the Acequia Madre***, is subtracted from the ***Index Delivery*** calculation in *Equation 3*. It represents water that cannot be put to beneficial use in Texas.

Excess Flow is determined based on three criteria:

- ***Operational Capacity Criteria*** as further described in Section 3.6.1
- ***Excess Release Criteria*** as further described in Section 3.6.2
- ***Extraordinary Circumstances Criteria*** as further described in Section 3.6.3

Any Rio Grande water that is put to beneficial use in Texas upstream of Ft. Quitman, Texas, is not considered ***Excess Flow.***

Compact spills, whether actual or hypothetical, are determined by the Rio Grande Compact Commission (RGCC) and are not controlled by the determination of ***Excess Flow***.

3.6.1 Operational Capacity Criteria

The ***Operational Capacity Criteria*** for ***Excess Flow*** quantifies streamflow at the ***El Paso Gage***, excluding ***Delivery to Mexico at the Acequia Madre***, that cannot be diverted and used in Texas due to the operational capacity of the American Canal and the Texas District distribution system in the El Paso Valley, which is currently approximately 1,000 cubic feet per second (cfs).

The annual volume, in acre-feet, of ***Excess Flow*** based on this criterion is computed using *Equation 8* and *Equation 9*.

Equation 8

$$\textbf{Excess Flow [y]} = SUM\left[Q_{Excess}[d] \cdot (60 \cdot 60 \cdot 24 / 43560) \right]$$

Where,

- ***Excess Flow [y]*** is the annual volume of excess flow in acre-feet for a given calendar year ***[y]***.
- Q_{Excess} ***[d]*** is the ***Excess Flow*** in cubic feet per second (cfs) on a given day ***[d]***, as determined by *Equation 9*.

Equation 9

IF:	$Q_{RGEP}[d] - Q_{MX}[d] =$	***> 1,000 cfs***
THEN:	$Q_{Excess}[d] =$	$(Q_{RGEP}[d] - Q_{MX}[d]) - 1{,}000$
OTHERWISE:	$Q_{Excess}[d] =$	***0.0***

Where,

- $Q_{RGEP}[d]$ is the daily average flow rate of streamflow at the ***El Paso Gage*** in cubic feet per second on a given day ***[d].***
- $Q_{MX}[d]$ is the daily average flow rate of ***Delivery to Mexico at the Acequia Madre*** in cubic feet per second on a given day ***[d].***

3.6.2 Excess Release Criteria

The ***Excess Release Criteria*** for ***Excess Flow*** quantifies streamflow at the ***El Paso Gage***, excluding ***Delivery to Mexico at the Acequia Madre***, resulting from an excess release from Caballo Dam, and which is not put to beneficial use in Texas. These criteria may apply to flows less than the ***Operational Capacity Criteria*** of 1,000 cfs. Excess releases from Caballo Dam consist of water released for flood control purposes, as necessary to accommodate operations and maintenance activities, or for purposes other than to meet water orders by the irrigation district in New Mexico, the irrigation district in Texas, and Mexico.

In the event of an excess release from Caballo Dam, available data and information will be used to determine the timing, duration, and volume of ***Excess Flow*** resulting from any excess release[7]. Available data and information may include but are not limited to: discussion with staff from Reclamation, the New Mexico District, the Texas District, and US-IBWC; incident reports; emergency declarations; Project water orders; and metered or estimated flows in the US-IBWC, the Texas District, or Hudspeth County Conservation & Reclamation District distribution systems. Available data and information may differ between occurrences of excess releases.

The ***Excess Release Criteria*** for ***Excess Flow*** will be determined by the RGCC upon recommendation of the Engineer Advisers of Colorado, New Mexico and Texas.

[7] In the case that these criteria result in an adjustment to the ***Index Delivery*** in any given calendar year, the ***Caballo Release*** from that year must be adjusted accordingly.

3.6.3 Extraordinary Circumstances Criteria

The ***Extraordinary Circumstances Criteria*** for ***Excess Flow*** will be determined by the RGCC upon recommendation of the Engineer Advisers of Colorado, New Mexico and Texas. Extraordinary circumstances may occur, for example, if Rio Grande water quality above the American Dam were hazardous. Available data, information, and methods will be used to determine the occurrence of extraordinary circumstances and to quantify the timing, duration, and quantity of ***Excess Flow*** resulting from such circumstances. Available data and information may differ between occurrences of extraordinary circumstances.

Section 4: Annual Index Departure

4.1 Definition and Calculation of the Annual Index Departure

The ***Annual Index Departure*** is calculated annually, on a calendar year basis, by subtracting the ***Index Obligation*** from the ***Index Delivery***. The calculation may result in an:

- ***Annual Negative Departure*** (under-delivery), when ***Index Delivery*** < ***Index Obligation***
- ***Annual Positive Departure*** (over-delivery), when ***Index Delivery*** > ***Index Obligation***

The ***Annual Index Departure*** is subject to the provisions described in Sections 4.2 through 4.4.

4.2 Cap on Annual Positive Departures

An ***Annual Positive Departure*** in excess of 67,500 acre-feet shall be treated as the equivalent of 67,500 acre-feet for the purposes of calculating the ***Accrued Index Departure***[8].

4.3 Cap on Annual Negative Departures

An ***Annual Negative Departure*** in excess of 112,500 acre-feet during the first full five calendar years following entry of the Consent Decree shall be treated as the equivalent of 112,500 acre-feet for the purposes of calculating the ***Accrued Index Departure***.

[8] Defined in Section 5

An ***Annual Negative Departure*** in excess of 90,000 acre-feet beginning the sixth full calendar year after entry of the Consent Decree shall be treated as the equivalent of 90,000 acre-feet for the purposes of calculating ***Accrued Index Departure***.

4.4 Suspension of Annual Index Departures

In any year in which the ***Caballo Release*** is less than 200,000 acre-feet, the ***Annual Index Departure*** will be set to zero acre-feet for the purposes of calculating the ***Accrued Index Departure***.

In any year in which the Rio Grande Compact Commission determines that there is an actual or hypothetical spill under the Compact the ***Annual Index Departure*** will be set to zero acre-feet and all ***Accrued Index Departures*** will be extinguished as described below in Section 5.2.

Section 5: Accrued Index Departure

5.1 Definition and Calculation of the Accrued Index Departure

The ***Accrued Index Departure*** is calculated annually, on a calendar year basis, as a running sum the ***Annual Index Departures***. The calculation may result in an:

- ***Accrued Negative Departure*** (representing an accrued net under-delivery by New Mexico through time).
- ***Accrued Positive Index Departure*** (representing an accrued net over-delivery by New Mexico through time).

An ***Annual Negative Departure*** will be:

- Used to reduce an ***Accrued Positive Departure*** at the beginning of the calendar year by the amount of the ***Annual Negative Departure***; or
- Added to the ***Accrued Negative Departure*** at the beginning of the calendar year by the amount of the ***Annual Negative Departure***.

An ***Annual Positive Departure*** will be:

- Used to reduce an ***Accrued Negative Departure*** at the beginning of the calendar year by the amount of the ***Annual Positive Departure***; or

- Added to the ***Accrued Positive Departure*** at the beginning of the calendar year by the amount of the ***Annual Positive Departure***.

The calculation of the ***Accrued Index Departure*** is subject to the provisions described in Sections 4 and 5.

5.2 Extinguishment of Accrued Index Departures

In any year in which the RGCC determines that there is an actual or hypothetical spill under the Compact, the ***Accrued Index Departure*** at the beginning of that year, whether positive (accrued over-delivery) or negative (accrued under-delivery), will be extinguished. Additionally, as described in Section 4.4, the ***Annual Index Departure*** will also be set to zero for that year. Therefore, the ***Accrued Index Departure*** at the end of the year in which the spill occurs will be equal to zero acre-feet.

5.3 Cancellation of Accrued Negative Departures for Texas District Carryover

The Texas District's ***Project Carryover Water*** for a given year is the part of the Texas District's total allocation that remains unused at the end of the calendar year.

In any calendar year in which the average of the Texas District's ***Project Carryover Water*** for the current year and the two prior years (three-year lagged movingg average), is greater than 180,000 acre-feet, and the ***Accrued Index Departure*** at the end of the current year is negative, the ***Accrued Negative Departure*** at the end of the current year will be extinguished. Therefore, the ***Accrued Index Departure*** for the following year will be equal to zero plus the ***Annual Index Departure*** that will be calculated during that following year.

In determining the three-year rolling average of the Texas District's ***Project Carryover Water***, the current year's ***Allocation Transfer*** amount (see Section 5.6) will be subtracted in the calculation of the three-year rolling average ***Project Carryover Water*** balance if the average of the Texas District's ***Project Carryover Water*** for the two prior years exceeds 180,000 acre-feet. This provision is intended to prevent the current year's ***Allocation Transfer*** from causing an exceedance of the 180,000 acre-feet threshold.

5.4 Accrued Negative Departure Limits

5.4.1 Accrued Negative Departure Limits

During the first full five calendar years following entry of the Consent Decree, New Mexico may have ***Accrued Negative Departures*** up to, but not in excess of 150,000 acre-feet.

Beginning the sixth full calendar year following entry of the Consent Decree, New Mexico may have ***Accrued Negative Departures*** up to, but not in excess of 120,000 acre-feet.

These limitations are known as the ***Accrued Negative Departure Limits***.

5.4.2 Index Adjustments for Exceedances of the Accrued Negative Departure Limit

If New Mexico exceeds the ***Accrued Negative Departure Limit*** of 150,000/120,000 acre-feet in three consecutive years, New Mexico will provide 12,000 acre-feet of water in excess of its ***Index Obligation*** for each year that it exceeds the ***Accrued Negative Departure Limit***. New Mexico will have three years to provide the full 36,000 acre-feet, excluding years in which the ***Caballo Release*** is less than 200,000 acre-feet.

If New Mexico exceeds the ***Accrued Negative Departure Limit*** of 150,000/120,000 acre-feet in four or more consecutive years, New Mexico will provide 15,000 acre-feet of water in excess of its ***Index Obligation*** for each additional year over the four years that it exceeds the ***Accrued Negative Departure Limit***. The 15,000 acre-feet in excess of New Mexico's ***Index Obligation*** will be provided during the year immediately following the violation of the ***Accrued Negative Departure Limit***, excluding years in which the ***Caballo Release*** is less than 200,000 acre-feet.

The additional amounts required under these exceedance provisions are known as ***Index Adjustments***. ***Index Adjustments*** shall be accounted for separately from ***Accrued Negative Departures***. Provided New Mexico meets its ***Index Obligation***, New Mexico shall classify ***Annual Positive Departures*** as either ***Index Adjustments*** or reduction in ***Accrued Negative Departures***.

5.4.3 Impact of the Texas District's Project Carryover Water on Index Departure Limits

If the ***Accrued Negative Departure*** exceeds the ***Accrued Negative Departure Limit*** of 150,000/120,000 acre-feet, the impact, if any, of the Texas District's ***Project Carryover Water*** on the ***Accrued Negative Departure*** will be considered.

Consideration of that impact will include the evaluation of the difference between the ***Index Obligation*** and the ***Index Delivery*** that would have occurred if the current balance in the Texas District's ***Project Carryover Water*** account had been released the previous year.

When determining whether New Mexico is in violation of the ***Accrued Negative Departure Limit***, or whether the additional ***Index Adjustments*** for exceedances of the ***Accrued Negative Departure Limit*** (see Section 5.4.2) apply, the impact of the Texas District's ***Project Carryover Water*** will be added to the current ***Accrued Negative Departure***, thus reducing the apparent ***Accrued Negative Departure*** for that year. This apparent ***Accrued Negative Departure*** will then be used to determine only whether New Mexico is in violation of the ***Accrued Negative Departure Limit*** for that year and whether ***Index Adjustments*** should apply. The current value of the ***Accrued Negative Departure*** will remain unchanged.

5.5 End of 5th Year Adjustment to Accrued Index Departures

If there is an *Accrued Index Departure* at the end of the fifth year following the entry of the Consent Decree, or if a Negative *Trigger* is reached pursuant to Paragraph II.D.2 of the Consent Decree in the first five years, the *Accrued Index Departure* (positive or negative), will be reduced by the amount of the *Accrued Index Departure* up to, but not to exceed, 20,000 acre-feet or until the accounting for the *Accrued Index Departure* reflects zero acre-feet.

5.6 Allocation Transfers

5.6.1 Definition of Allocation Transfers

Allocation Transfers are used to move current-year allocation from one District (either Texas or New Mexico) to the current-year allocation of another District (either Texas or New Mexico). ***Allocation Transfers*** from one District to the other will immediately reduce New Mexico's ***Accrued Negative Departure*** or Texas's ***Accrued Positive Departure*** by the same amount as the ***Allocation Transfer***.

More specifically:

- If an ***Allocation Transfer*** occurs from the current-year allocation for the New Mexico District to the current-year allocation for the Texas District, then, simultaneously with the transfer, the ***Accrued Negative Departure*** will be reduced by an amount equal to the transfer.
- If an ***Allocation Transfer*** occurs from the current-year allocation for the Texas District to the current-year allocation for the New Mexico District,

then, simultaneously with the transfer, the ***Accrued Positive Departure*** will be reduced by an amount equal to the transfer.

5.6.2 Accrued Positive Departure Trigger

If there is an ***Accrued Positive Departure*** that exceeds 50,000 acre-feet for one year (also known as the ***Accrued Positive Departure Trigger***), the Texas District will provide ***Allocation Transfers*** to the New Mexico District, equal in total to the amount of the ***Accrued Positive Departure*** that is greater than 16,000 acre-feet, and will do so over the subsequent three calendar years.

5.6.3 Accrued Negative Departure Trigger

If there is an ***Accrued Negative Departure*** that exceeds 80,000 acre-feet at the end of any calendar year (also known as the ***Accrued Negative Departure Trigger***), New Mexico will take water management actions to reduce the ***Accrued Negative Departures*** to less than 16,000 acre-feet within six calendar years following the exceedance of the ***Accrued Negative Departure Trigger***. These management actions are solely within New Mexico's discretion and may include ***Allocation Transfers***.

Section 6: Data for EEPI Calculations

The data required for the annual EEPI calculations shall be reported to the Engineer Advisers for the Compacting States following the Compact accounting schedules in the "Schedule for Review and Approval of Rio Grande Compact Accounting Records for the Previous Year". More specifically, the following data will be required annually, on a calendar year, for EEPI calculations:

- Daily official stream flow data from the Rio Grande at El Paso, Texas, (USGS 08364000).
  - Data source: US-IBWC
- Daily official flow data from the Rio Grande Below Caballo Dam, New Mexico stream gage, (USGS 08365000).
  - Data source: Reclamation.
- Official daily flow records of Delivery to Mexico at the Acequia Madre.
  - Data source: US-IBWC.
- Pumping records for the Canutillo Well Field, Texas.
  - Data source: Texas.
- Pumping estimates for any other DCMI use in Texas Mesilla
  - Data source: Texas

- Irrigated acreage estimates within the Texas Mesilla.
  - Data source: Texas.
- Temperature data from the Leyendecker II PSRC weather station.
  - Data source: New Mexico.
- Annual ***Project Carryover Water*** for New Mexico District and Texas District
  - Data source: Reclamation.

Section 7: Consent Decree Accounting Provisions

The following list includes the accounting-related provisions in the Consent Decree:

- ***Index Obligation***, pg. 6, Paragraph II(B)(ii)(e)
- ***Index Delivery***, pg. 7, Paragraph II(B)(ii)(f)
- Streamflow gages, pg. 7, Paragraph II(B)(ii)(g)
- ***Annual Negative Departure***, pg. 7, Paragraph II(B)(iii)(a)
- ***Annual Positive Departure***, pg. 8, Paragraph II(B)(iii)(b)
- ***Accrued Index Departures*****,** pg. 7, Paragraph II(B)(iii)(a) and pg. 8, Paragraph II(B)(iii)(b)
- ***Allocation Transfers****,* pg. 8, Paragraph II(B)(iii)(c)
- Cap on ***Annual Positive Departures***, pg. 9, Paragraph II(C)(2)
- Cap on ***Annual Negative Departures*** (first 5 years), pg. 9, Paragraph II(C)(3)(a)(ii)
- Cap on ***Annual Negative Departures*** (starting year 6), pg. 10, Paragraph II(C)(3)(a)(iv)
- Exceedances of ***Accrued Negative Departure Limits*** (3 consecutive years), pg. 10, Paragraph II(C)(3)(b)(i)
- Exceedances of ***Accrued Negative Departure Limits*** (4 or more consecutive years), pg. 10, Paragraph II(C)(3)(b)(ii)
- ***Index Adjustments***, pg. 10, Paragraph II(C)(3)(b)(i) and Paragraph II(C)(3)(b)(ii)
- ***Project Carryover Water***, pg. 11, Paragraph II(C)(3)(c)
- ***Caballo Release*** less than 200,000 acre-feet, pg. 12, Paragraph II(E)(1)(a)
- ***Caballo Release*** greater than 790,000 acre-feet, pg. 12, Paragraph II(E)(1)(b)
- End of 5th Year Adjustment to ***Accrued Index Departure***, pg. 12, Paragraph II(E)(2)
- ***Aridity Adjustment***, pg. 12, Paragraph II(E)(3)
- Actual or hypothetical spill under the Compact, pg. 12, Paragraph II(E)(4)
- Index Accounting, pg. 13, Paragraph II(F)(2)

Section 8: Review and Revision

The following procedure will be used to review and revise, if needed, the data sources and methods used to determine inputs to the calculation of the ***EEPI***:

- ***Request for Review***
  If any Compacting State identifies a significant error, bias, discrepancy, or other issue with the data sources and/or method used to determine any input to the ***EEPI***, that Compact State may request that the RGCC initiate a review of the data sources and/or method in question. In making a request for review, the Compacting State making the request must provide documentation and technical evidence substantiating the suspected error, bias, discrepancy, or other issues.

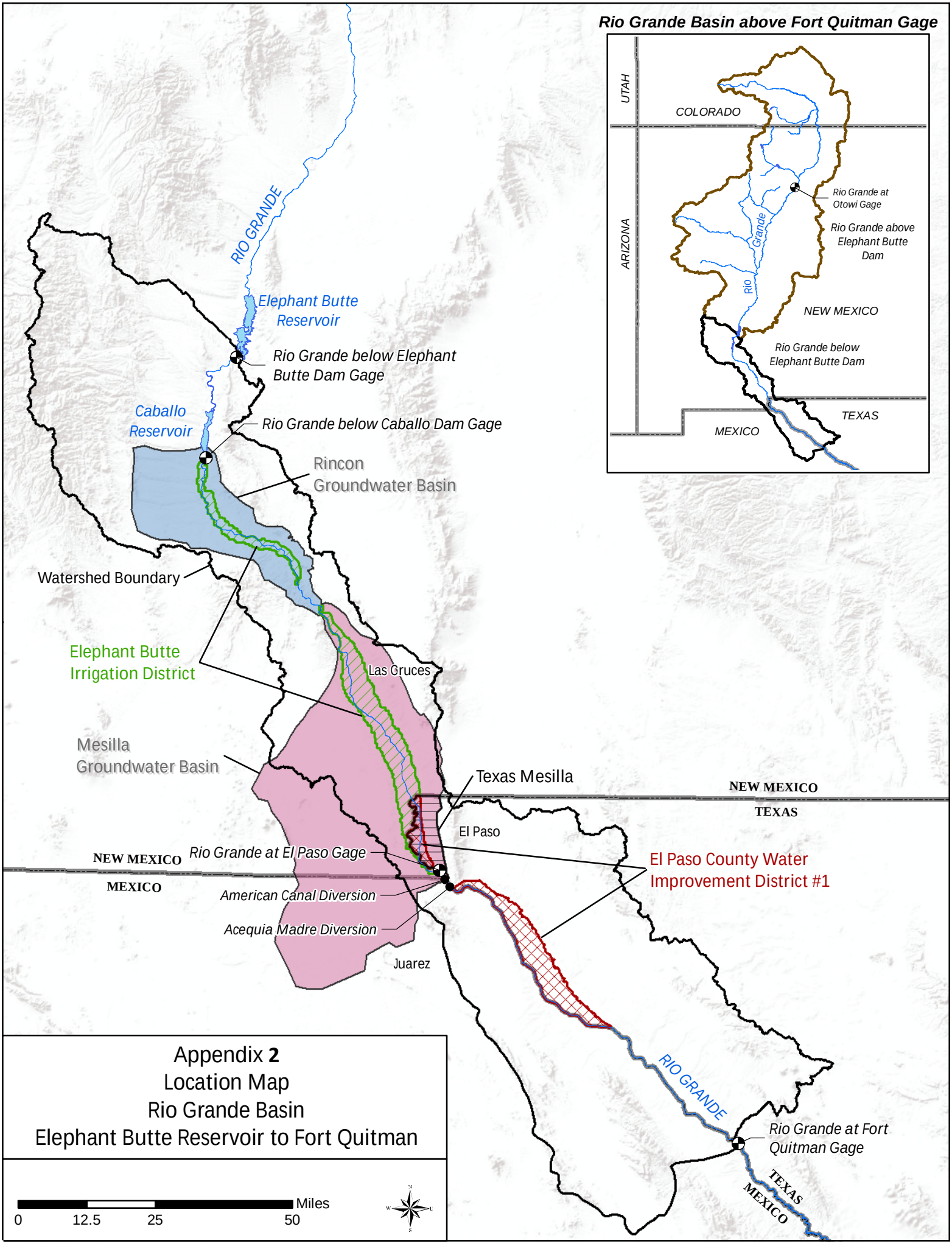
- ***Evaluation of Request for Review***
  The RGCC will evaluate the request for review and supporting documentation and evidence.

- ***Initiation of Review***
  If the RGCC determines that a review is warranted, the RGCC will convene a Technical Committee to conduct the review. The RGCC will instruct the Technical Committee as to the scope of the review.

- ***Technical Review***
  The Technical Committee will carry out the review as directed by the RGCC and will report their findings to the RGCC. If the Technical Committee recommends that the data sources and/or methods in question should be revised, the Technical Committee will recommend appropriate revisions. If warranted, the Technical Committee may recommend that previously approved ***Annual*** and ***Accrued Index Departures*** be corrected retroactively; if correction is recommended, the Technical Committee will identify a specified period over which the correction is recommended. If the Technical Committee fails to achieve consensus regarding recommended revisions or corrections, the opinion of committee members from each Party will be reported to the RGCC.

- ***Implementation of Revisions***
  The RGCC will determine whether to accept and implement any revisions or corrections recommended by the Technical Committee.

APPENDIX 2


Rio Grande Basin above Fort Quitman Gage
UTAH
COLORADO
ARIZONA
NEW MEXICO
TEXAS
MEXICO
Rio Grande at Otowi Gage
Rio Grande above Elephant Butte Dam
Rio Grande
Rio Grande below Elephant Butte Dam
RIO GRANDE
Elephant Butte Reservoir
Rio Grande below Elephant Butte Dam Gage
Caballo Reservoir
Rio Grande below Caballo Dam Gage
Rincon Groundwater Basin
Watershed Boundary
Elephant Butte Irrigation District
Las Cruces
Mesilla Groundwater Basin
Texas Mesilla
NEW MEXICO
TEXAS
El Paso
NEW MEXICO
MEXICO
Rio Grande at El Paso Gage
El Paso County Water Improvement District #1
American Canal Diversion
Acequia Madre Diversion
Juarez
RIO GRANDE
Rio Grande at Fort Quitman Gage
TEXAS
MEXICO
Appendix 2
Location Map
Rio Grande Basin
Elephant Butte Reservoir to Fort Quitman
Miles
0
12.5
25
50

Appendix 2. Inset of the Texas Portion of Mesilla Groundwater Basin (Texas Mesilla)

