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The 1944 Treaty
A South Texas Perspective

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TABLE OF CONTENTS

Table of Contents	i
INTRODUCTION	1
I. BACKGROUND	1
International Water Commission, 1924-1930.	1
Irrigation Development 1930-1943	2
II. 1944 TREATY	2
A. Mexico Allocation	2
B. United States Allocation	3
C. Mexico Guarantee	3
D. 1944 Treaty Enforcement: Implementation Flexibility	5
E. Implementation Agreement – “Minutes”	6
Minute 234.....	7
Minute 293.....	8
Minute 307.....	9
Minute 308.....	10
Minute 309.....	10
Mexican Water Deliveries Since 2002	11
III. IMPACT OF MEXICAN WATER DEFICITS	11
IV. NEED FOR RECIPROCITY UNDER TREATY	12
V. MEXICAN WATER DEFICIT ACCOUNTING ISSUES	12
A. US as Priority User of Tributary water	12
B. A Extraordinary Drought®	12
C. Measurement of Water at Fort Quitman.....	13
D. Mexico Conserved Waters is Dedicated to US Deliveries	14
CONCLUSION	15

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INTRODUCTION

The Rio Grande is a River that has been divided by politics and the circumstances of the times into two segments. The Upper Reach runs from the headwaters of Rio Grande in southern Colorado through Central New Mexico to Fort Quitman, Texas. The *Lower Reach* continues downstream from Fort Quitman - through miles of desert, mountains and semi-tropical areas - to the Gulf of Mexico.

The water in the Upper Reach all comes from tributary sources in the United States, while a great majority of the flows in the Lower Reach derive from sources in Mexico. Flows in the Lower Reach historically combined waters from what are now “U.S. flows” from the Upper Reach - principally Texas tributaries (Pecos and Devils River) – together with water from several Mexican tributaries. The Elephant Butte Dam and Reservoir built following the 1906 Convention now limits the amount of water above Fort Quitman, Texas (Upper Reach) entering the Lower Reach.

International allocation of the water in the Lower Reach was agreed upon in the *Treaty Between the United States of America and Mexico on the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande*, 59 Stat. 1219. The 1944 Treaty was signed at Washington, D.C. on February 3, 1944, and later ratified by each country and proclaimed by the President of the US on November 27, 1945 with an effective date of November 8, 1945 (referred to herein as the “1944 Treaty” or “Treaty”).

This paper provides a brief review of the historical background of the 1944 Treaty and an outline of the Treaty developments before discussing current points of contention. For purposes of this paper, these issues are identified from a “South Texas viewpoint” – without going into further detail.

I. BACKGROUND

International Water Commission, 1924-1930

In the early 1900’s, the US and Mexico both recognized that equitable division of waters of the Rio Grande below Fort Quitman, Texas, would be necessary. Some unilateral studies were made in each country, but without progress on how the water would be divided between the countries.

By the Act of the Congress in 1924, the President of the US was authorized to designate three special Commissioners to the International Boundary Commission (“IBC”) to cooperate with representatives of Mexico in a study regarding equitable use of the waters of the Rio Grande below Fort Quitman, Texas, with a view to their proper utilization for irrigation and other uses. With the concurrence of Mexico, the scope of IBC studies were extended to include the Colorado River and the Tijuana River by the Act of the Congress of March 3, 1927.

The IBC was the first joint commission established by the two countries to study the question of allocation and regulation of the waters in the Lower Reach of the Rio Grande. The IBC made various studies and held several sessions beginning in February, 1928. The American Section of the IBC made its report to the US Congress on March 22, 1930, indicating the negotiators were unable to reach agreement.

Irrigation Development 1930-1943

By the 1930's irrigation developments in both countries along the Colorado River and along the Rio Grande downstream from the El Paso-Juarez Valley (and Fort Quitman), pointed to a need for allocation and regulation of the Colorado River and Rio Grande waters. During the period from 1930 to 1943, ever increasing irrigation development on both sides of the Rio Grande added to the urgency of this need. In addition, serious floods in the Lower Reach in 1920's and the 1930's emphasized the need for flood control.

The natural unregulated flows in the Rio Grande below Fort Quitman occurred as either: 1) low flows often too low to serve irrigation needs of developed land at that time; or 2) high flood flows which caused heavy damages to the urban areas and irrigated lands and which for the most part was lost to the Gulf of Mexico. The need for storage dams for regulation was clear. However, the economic depression in the 1930's prevented more aggressive action.

Faced with growing problems exacerbated by droughts and floods, the IBC stepped up by conducting surveys, collecting hydrographic data, and completing other investigations and studies in the late 1930's and early 1940's. The data produced was intended to serve as a basis for concluding a Treaty for allocation and regulation of the waters of the Rio Grande below Fort Quitman. This goal was achieved in the Treaty of 1944.

II. 1944 TREATY

The 1944 Treaty is a comprehensive agreement relating to the allocation of the waters of the Rio Grande (from Fort Quitman to the Gulf of Mexico) and the Colorado and Tijuana Rivers further to the west. The Treaty authorized the joint construction and operation of international storage dams on the Rio Grande, which resulted in the construction of Falcon Dam in 1953 and Amistad Dam in 1969.

It should be noted that the "International Boundary Commission" (created by the *Convention of 1889*) was changed by the 1944 Treaty to the "International Boundary and Water Commission" (IBWC or "Commission") and gave it the authority to apply and enforce the Treaty provisions. The relevant IBWC sections representing each country are known as the "US Section of the IBWC" and "Mexican Section of the IBWC."

Treaty Article 4 allocated the water in the Rio Grande between the two countries:

A. Mexico Allocation

Article 4A allocates to Mexico:

- (a) *All of the waters reaching the main channel of the Rio Grande (Rio Bravo) from the San Juan and Alamo Rivers, including the return flow from the land irrigated from the latter two rivers.*

- (b) *One-half of the flow in the main channel of the Rio Grande (Rio Bravo) below the lowest major international storage dam, so far as said flow is not specifically allotted under this Treaty to either of the two countries.*
- (c) *Two-thirds of the flow reaching the main channel of the Rio Grande (Rio Bravo) from the Conchos, San Diego, San Rodrigo, Escondido and Salado Rivers and the Las Vacas Arroyo, subject to the provisions of subparagraph (c) of paragraph B of this Article.*
- (d) *One-half of all other flows not otherwise allotted by this Article occurring in the main channel of the Rio Grande (Rio Bravo), including the contributions from all the unmeasured tributaries, which are those not named in this Article, between Fort Quitman, and the lowest major international storage dam.*

B. United States Allocation

Article 4B allocates to the United States:

- (a) *All of the waters reaching the main channel of the Rio Grande (Rio Bravo) from the Pecos and Devils Rivers, Goodenough Spring, and Alamito, Terlingua, San Felipe and Pinto Creeks.*
- (b) *One-half of the flow in the main channel of the Rio Grande (Rio Bravo) below the lowest major international storage dam, so far as said flow is not specifically allotted under this Treaty to either of the two countries.*
- (c) *One-third of the flow reaching the main channel of the Rio Grande (Rio Bravo) from the Conchos, San Diego, San Rodrigo, Escondido and Salado Rivers and the Las Vacas Arroyo, provided that this third shall not be less, as an average amount in cycles of five consecutive years, than 350,000 acre-feet (431,721,000 cubic metres) annually. The United States shall not acquire any right by the use of the waters of the tributaries named in this subparagraph, in excess of the said 350,000 acre-feet (431,721,000 cubic meters) annually, except the right to use one-third of the flow reaching the Rio Grande (Rio Bravo) from said tributaries, although such one-third may be in excess of that amount.*
- (d) *One-half of all other flows not otherwise allotted by this Article occurring in the main channel of the Rio Grande (Rio Bravo), including the contributions from all the unmeasured tributaries, which are those not named in this Article, between Fort Quitman and the lowest major international storage dam.*

C. Mexico Guarantee

In recognition of the fact that historically the Mexican tributaries named in Article 4B(c) contributed a substantial amount of the normal and flood flows to the Rio Grande for downstream users in both countries, Mexico agreed to an annual minimum allocation to the US of 350,000 acre -feet average over five-year cycles.

In contrast, on the Colorado River, the allocation for Mexico is an annual quantified amount of US derived waters guaranteed to Mexico by Article 10(a) of the Treaty “of 1,500,000 acre-feet (1,850,234,000 cubic meters) to be delivered in accordance with the provisions of Article 15 of this Treaty.”

In the event of “extraordinary drought or serious accident” the Treaty also provides differing obligations for each country on the Colorado River as compared to the Rio Grande.

Concerning US difficulties in the delivery of water on the Colorado River, Article 10(b) provides that:

In the event of extraordinary drought or serious accident to the irrigation system in the United States, thereby making it difficult for the United States to deliver the guaranteed quantity of 1,500,000 acre-feet (1,850,234,000 cubic meters) a year, the water allotted to Mexico under subparagraph (a) of this Article will be reduced in the same proportion as consumptive uses in the United States are reduced.

These drought provisions on the Colorado River are similar to the 1906 Convention provisions where relative proration is provided.

On the other hand, concerning Mexico’s obligations, the two countries agreed to a unique and different remedy for the repayment of Rio Grande water in the event of extraordinary drought or serious accident to the Mexican reservoir systems on the named Mexican tributaries.

With respect to the Lower Reach, the 1944 Treaty provides:

Aln the event of extraordinary drought or serious accident to the hydraulic systems on the measured Mexican tributaries, making it difficult for Mexico to make available the run-off of 350,000 acre feet (431,721,000 cubic meters) annually, allotted in subparagraph (c) of paragraph B of this Article to the United States as the minimum contribution from the aforesaid Mexican tributaries, any deficiencies existing at the end of the aforesaid five-year cycle shall be made up in the following five-year cycle with water from the said measured tributaries. © (emphases added)

This important provision dealing with drought conditions in the Lower Reach was specifically emphasized by President Roosevelt in his message to the US Senate on the 1944 Treaty. The address included a message from Secretary of State Cordell Hull, concluding:

. . . it should be noted that the Treaty provides that, in case of drought or serious accident to the hydraulic works in the United States, deliveries of Colorado River water to Mexico will be curtailed in the same proportion as uses in the United States are reduced, and that, if for similar reasons Mexico cannot provide the

minimum 350,000 acre-feet from its measured tributaries of the Rio Grande, the deficiency is to be made up from these tributaries during the following 5-year cycle. See, Message from the President of the United States” transmitting the Treaty, February 15, 1944, U.S. Senate, 78th Congress, 2d Session, Executive A.

Thus, if a five-year cycle ends with a Mexican water deficit, these provisions provide the repayment schedule to be followed by Mexico. Repayment of this deficit is to occur during the following five-year cycle.

Article 5 of the Treaty provided for the construction of three possible dams and reservoirs, however, only two - Amistad Dam (upstream from Del Rio, Texas) and Falcon Dam (downstream of Laredo, Texas) - were found feasible and exist today.

In summary, the key allocation provisions of the 1944 Treaty are:

- S** The allocation of Rio Grande waters in the Lower Reach to each of the countries is specifically defined by an accounting of water reaching the Rio Grande from each of the contributing tributaries in the Rio Grande Basin in both the US and Mexico.
- S** Mexico, however, is required to provide an annual minimum amount of 350,000 acre feet averaged over a five-year period from the named Mexican tributaries.
- S** In the event of extraordinary drought or hydraulic accident making it difficult for Mexico to provide the 350,000 minimum annual average amount *from run-off in the named Mexican tributaries*, the deficit is to be made up during the following five-year cycle. (The term “run-off water” in this context is the amount of diffused natural surface waters from rainfall or spring flow which flow into streams and ultimately into storage reservoirs before any use of such flows).
- S** For accounting purposes -with respect to the average minimum annual amount of 350,000 acre -feet within a five-year cycle -annual deficits within that five-year cycle are considered paid should US conservation storage fill, at which time a new five-year cycle accounting begins. US conservation storage is considered filled when the US share of water in storage in both Amistad and Falcon reservoirs reaches full storage levels (said amounts are set out in Minutes) – then a new five-year cycle starts. This has occurred in the past when floodwaters fill the two reservoirs.

D. 1944 Treaty Enforcement: Implementation Flexibility

The US and Mexican Sections of the IBWC are given the responsibility of applying the water allocation provisions of the 1944 Treaty.

The Treaty recognized the need for the later determination of matters dealing with the implementation of the various provisions of the Treaty. For example, in Article 5, which authorizes the construction of three international dams and reservoirs, the Treaty expressly

provided that one or more of the stipulated dams may be omitted, and **A . . . others than those enumerated may be built, in either case as may be determined by the Commission, subject to the approval of the two Governments.** © Many of the details involved in the implementation of the Treaty were left for later determination by recommendation and approval by the two Governments through the IBWC. The approval **A by the two Governments** © shall be handled by or through the Department of State of the United States and the Ministry of Foreign Relations of Mexico.

Article 24 of the Treaty, assigning the Commission its powers and duties, provides for enforcement authority in paragraph (c) which provides that: **Aeach Commissioner shall invoke when necessary the jurisdiction of the courts or other appropriate agencies of his country to aid in the execution and enforcement of these powers and duties.** ©

It is clear that each IBWC Commissioner (US and Mexico) is given the legal authority by their respective governments to enforce the Treaty provisions through the courts and agencies in their respective countries.

The Commission is expressly given the power and duty in Article 24(d):

A(d) to settle all differences that may arise between the two Governments with respect to the interpretation or application of this Treaty, subject to the approval of the two Governments.”

In cases in which the Commissioners do not reach an agreement, Article 24(d) provides:

AThey shall so inform their respective governments reporting their respective opinions and the grounds therefor and the points upon which they differ, for discussion through diplomatic channels and for application where proper of the general or special agreements which the two Governments have concluded for the settlement of controversies. ©

Thus, the IBWC Commissioners are given the authority to resolve all disputes under the Treaty, and to enforce the Treaty provisions in their respective countries subject to the approval of the two Governments acting through the US State Department and the Ministry of Foreign Relations of Mexico.

E. Implementation Agreements – “Minutes”

The Treaty provides that the means by which the approval of the two countries are evidenced and recorded are by **AMinutes** © signed by each Commissioner and attested by the Secretaries with copies forwarded to each Government within three (3) days after being signed.

If the nature of the Minute is one which does not require the specific approval of both Governments then if either of the Governments fail to communicate to the Commission its approval or disapproval of the decision within thirty (30) days from the date of the Minute, then

the Minute in question and the decision which it contains shall be considered to be approved by that

Government. If either Government disagrees, and an agreement is otherwise reached by the two Governments regarding the matter, then this agreement shall be carried out by the Commissioners.

Important Rio Grande “Minutes”

Significant Minutes of particular importance to the Rio Grande in Texas below Fort Quitman will now be discussed.

Minute 234

This Minute is relevant to the Mexican guarantee of water in the Lower Reach. In 1969 following the closure of Amistad Reservoir, Minute 234 was approved. It pertains to compliance with the provisions of Article 4 relating to the waters of the Rio Grande allocated to the United States from the Conchos, San Diego, San Rodrigo, Escondido, and Salado Rivers, and the Las Vacas Arroyo.

In this Minute, the Commission agreed to commence the first five-year cycle when Falcon Dam was placed into operation in October 1953. The Rio Grande annual water volumes during each five-year cycle after 1953 through 1968 were agreed upon. In this Minute, it was agreed that there was a 476,461 acre feet deficiency during the five-year cycle of October 1, 1953 to September 30, 1958, when the drought of the 1950=s was experienced. However, this deficiency was made up during the October 1, 1958 through September 30, 1963 five-year cycle. The 1963-1968 cycle resulted in 32,270 acre feet more than the average of 350,000 acre feet per year requirement. Accordingly, the Commission agreed that the provisions of Article 4 in this respect was considered satisfied to September 30, 1968.

The Minute further addressed how repayment of a deficiency in five-year cycle water would occur in the future. In paragraph 2, it is provided:

“That in the event of a deficiency in a cycle of five consecutive years in the minimum amount of water allotted to the United States from the said tributaries, the deficiency shall be made up in the following five-year cycle, together with any quantity of water which is needed to avoid a deficiency in the aforesaid following cycle, by one or a combination of the following means:

- a. With water of that portion of the said tributary contributions to the Rio Grande allotted to the United States in excess of the minimum quantity guaranteed by the Water Treaty.*
- b. With water of that portion of the said tributary contributions to the Rio Grande allotted to Mexico, when Mexico gives advance*

notice to the United States and the United States is able to conserve such water; and

- c. *By transfer of Mexican waters in storage in the major international reservoirs, as determined by the Commission, provided that at the time of the transfer, United States storage capacity is available to conserve them.”*

The Minute aligns with the language in the Treaty in requiring that any deficiency shall be made up in the following five-year cycle. The Minute further assures compliance with the minimum 350,000 acre foot requirement in the following five-year cycle by requiring that the deficiency shall be made up in the manner agreed upon “. . . together with any quantity of water which is needed to avoid a deficiency in the aforesaid following cycle . . .” In other words, repayment waters cannot create a deficit within any year of the cycle.

Deficits can only occur during a year within a five-year cycle in the event of extraordinary drought or hydraulic accident when it is difficult for Mexico to make the annual 350,000 acre-feet guarantee available from *run-off in the watersheds of the named Mexican tributaries* or because of serious accident to the Mexican reservoir facilities.

Minute 234 requires that any repayment of a prior five-year cycle deficiency shall not adversely impact the minimum requirement in the following five-year cycle.

The three different methods of repayment are:

- (a) excess waters over the minimum 350,000 acre feet average annual amount;
- (b) water from the named tributaries out of Mexico's 2/3's share; and/or
- (c) by transfer of Mexican waters stored in the Rio Grande reservoirs.

Minute 293

The provisions of the Treaty regime worked well for over 50 years, including the drought years in 1950's, but became stressed in the 1990's.

Due to low flows in the Rio Grande upstream of Amistad Reservoir beginning in 1992 coupled with customary use in Mexico, an emergency situation occurred in 1995 when the Mexican storage levels in the reservoirs had reached a very low level.

This necessitated an emergency agreement between the two countries to assure that there would be no shortages in domestic uses in Mexico. Minute 293, entitled **A**Emergency Cooperative Measures to Supply Municipal Needs of Mexican Communities Located Along the Rio Grande Downstream of Amistad Dam,**@** signed October 4, 1995, and entered into force November 8, 1995. In the Minute, the United States agreed to loan waters to Mexico under certain circumstances.

Minute 293 was a recognition by all parties on both sides of the Rio Grande below Fort Quitman, that a period of short water supply was being encountered in the region. Indeed, by

the end of the five-year cycle ending October 2, 1997, there was a deficit of 1,023,849 acre-feet in Mexico deliveries from the tributaries specified in the Treaty.

By September 30, 2001, additional deficits were encountered so that at the close of the fourth year of the five-year accounting cycle, Mexico's obligation had grown to 1,303,818 acre-feet.

In an April, 2002 Report of the US Section IBWC entitled *Update of the Hydrologic, Climatologic, Storage, and Run-off Data for the United States and the Mexican portion of the Rio Grande Basin: October 19, 1992 – September 2001* noted the existing conditions in the named tributaries.

The Report included important observations including:

- During the prior five-year cycle (ending October, 1997) and first four years of the following cycle (as of October, 2001), the inflows into the five largest reservoirs on the Mexican Tributaries were more than 11.7 million acre feet. This is more than 9,450,000 acre feet (9 years x 350,000 x 3) required to satisfy the Treaty requirement even considering reasonable transportation losses.
- Examination of rainfall data in the Treaty Tributaries indicate that the annual rainfall amounts and patterns that occurred between 1994 and 1997 were similar to those that occurred in 1982-1985, but the quantities in inflows from the Treaty Tributaries to the Rio Grande were considerably different in the two periods. More information is needed concerning water demands in Mexico and Mexico's reservoir operations during those two periods.

This indicated that run-off water in the watersheds of the Mexican Tributaries should have been sufficient to provide water for delivery to the Rio Grande to satisfy Mexico's compliance with the 350,000 acre foot requirement during the 1992-2001 period.

Minute 307

During the 1997-2001 repayment period, representatives of both countries met to resolve the crisis developed by the Mexico deficit. One of the results of these meetings, negotiated at the highest levels of their governments, was the agreement produced in Minute 307. Minute 307 was agreed to at a meeting of the two Governments at the Department of State in Washington on March 16, 2001. The IBWC Commissioners made note of discussions by US President George W. Bush and Mexican President Vicente Fox Quezada held in Guanajuato, Mexico on February 16, 2001, when a request was made of Mexico to provide to the US a volume of 600,000 acre feet of water through July 31, 2001. In Minute 307, it was agreed that Mexico would attempt to provide this amount of water. It was also agreed that the two countries would continue further discussions on the deficit reduction so as to arrive at a plan on additional measures that will be taken before the end of 2001. Significantly, it was agreed by the two governments to work jointly to identify measures of cooperation on drought management and sustainable management of the Rio Grande Basin so as to prevent a recurrence of this deficit.

After a limited amount of water was transferred by Mexico by contributing its 50% share of unmeasured tributary flows pursuant to Minute 307, several lawsuits were filed by water users in the State of Tamaulipas against the Mexican Section of the IBWC and its federal water agency to enjoin them from making these transfers. The contention was made by downstream Mexican users that such transfers violated the provision of the Treaty that Mexico's deficits are to be repaid from waters from the Rio Conchos and other tributaries named and measured in the Treaty, and not from unmeasured tributaries. In other words, users in Tamaulipas are the beneficiaries of 2/3's of the Mexican Tributaries flows required by the Treaty's 350,000 acre foot requirement, which were being lost to them. All of these lawsuits were dismissed by Mexican courts.

Mexico failed in its commitments to provide the 600,000 acre feet contemplated by Minute 307. Thereafter, Mexico did not produce a plan by December 31, 2001, to repay the 1,024,000 acre feet deficit by October 2002. The US Section of the IBWC presented technical proposals, but Mexico did not respond at that time.

Minute 308

It was not until June 28, 2002, that the two governments officially responded to the ongoing conditions dealing with the Mexico water deficit by agreeing to Minute 308.

Minute 308 resulted from a meeting of the IBWC making note of conversations on these matters between US President, George W. Bush, and Mexican President, Vicente Fox Quesada, in Monterrey, Nuevo Leon, on March 20, 2002, and their subsequent conversations in Washington, D.C., on June 6, 2002.

This Minute outlined various conditions of flows to that date, ending at the accounting period October 26, 2002. It forecast additional flows in the Basin. It also indicated financing by both governments for improvements in the irrigated areas in the Basin and further collaboration regarding the collection and sharing of data between the two governments. The Minute contained certain commitments regarding the accounting of water between the parties to reduce the ongoing Mexico deficit, and importantly indicated actions to be taken by both Governments in establishing Advisory Councils. Both countries agreed to establish a forum for the exchange of information, and to encourage the flow of information to the IBWC from governmental and non-governmental organizations in their respective countries. Currently, the IBWC is following through on binational technical and policy meetings between the US and Mexican Sections, representatives from the Mexico federal water entity, and Texas representatives from the Texas Commission on Environmental Quality, Texas Water development Board and representatives appointed by the Texas Governor. The last meeting was held in October, 2017, and it is reported another is planned for April or May, 2018.

A particularly important provision of Minute 308 was that the two Governments recognized that the additional funding for projects in the Basin would result in conserved waters in Mexico. Minute 308 states that whatever water is conserved in the projects on the Rio Conchos and the other named tributaries in the 1944 Treaty will be dedicated to **A . . . ensure their conveyance to the Rio Grande. ©**

Minute 309

Minute 309 principally addressed the conservation projects funded by the North American Development Bank (NADBank) and the estimated volumes of water saved by the projects in Mexico. The projects were intended to modernize and improve the technology of irrigation districts and units in the Rio Grande Basin in Mexico to make them sustainable and taking the necessary measures to ensure conveyance of saved waters to the Rio Grande.

To date, conservation projects in Mexico to ensure deliveries pursuant to the 1944 Treaty under Article 4B(c) and Minute 234, have not formally insured deliveries of water to the Rio Grande in any measurable and formalized manner.

Mexican Water Deliveries Since 2002

Deficits since 2002 have been satisfied in following cycles by:

- supplementing delivery of flows to the Rio Grande from the six named Mexican tributaries by Mexico's stored water from the tributaries in the Reservoirs pursuant to Minute 234
- one flood conservation level fill which resulted in a start of new five-year cycle
- flows from unnamed Mexican tributaries downstream of Falcon Dam by special agreements between the US, Mexico and Texas.

It is claimed that these special agreements are inconsistent with the Treaty and Minute 234.

The use of the flows from these downstream unnamed tributaries, which are not named tributaries in Article 4A(c) of the Treaty in the accounting of Mexico water deliveries, deprives the reach of the Rio Grande *below* the delivery points of the named tributaries (including the Big Bend area) of the benefit of such flows. This also adversely affects other water accounting details that are damaging to the majority of lower reach water rights holders below Falcon Reservoir. These complicated issues are the subject of current litigation in Texas and are beyond the scope of this.

The current five-year cycle began October 25, 2015 and ends October 25, 2019. Mexico delivered 219,101 acre feet (130,899 acre feet deficit) during first year, however, 536,478 acre feet were accounted for during second year ending 2017, using Minute 234 accounting provisions, for a total of 755,580 acre feet rounded to achieve compliance for the first two years of the current cycle. *See*, Edward Drucina, US Commissioner, Presentation October 25, 2017, on 1944 Treaty Compliance.

III. IMPACT OF MEXICAN WATER DEFICITS

Mexico's lack of water deliveries to the Lower Rio Grande in Texas significantly affects the region's irrigated agriculture of over 500,000 acres, as well as the population of about 1.5 million who depend on the Rio Grande for water supply.

The growth in population and agricultural needs is increasing the pressure for Mexico to comply with the 1944 Treaty. In 2010, the combined population of the Lower Rio Grande Valley, including Cameron and Hidalgo Counties, was 1.23 million; by the year 2060, the population will be over 2.9 million. Webb County (Laredo, Texas) had a population of over

250,000 in 2010, with a projected population of over 725,000 in 2060; Maverick County (Eagle Pass area) had a population of over 58,000, which is projected to reach approximately 100,000 in 2060. These increases total a projected 3.725 million by 2060. *Rio Grande Regional Water Planning Group* (Texas Water Development Board), *Rio Grande Regional Water Plan, Region M, 2010* (Pgs. 2-5).

A 2013 report by Texas A&M AgriLife Extension Service covering the Mexican water deficits during the late 1990s revealed that the deficit in deliveries by Mexico and the lack of irrigation water had an estimated cost of \$229.2 million in crop revenue loss. These lost revenues contributed to an estimated \$394.9 million in economic loss for the region and a loss of 4,840 jobs that depend on the production and sale of crops in the Lower Rio Grande region. See, Todd Staples and Carlos Rubinstein, Tex. Dep't of Agric., *Addressing Mexico's Water Deficit to the United States*, 1 (2013), available at: www.texasagriculture.gov/Portals/0/forms/COMM/Water%20Debt.pdf

IV. NEED FOR RECIPROCITY UNDER TREATY

The relationship between Mexico and the US on the Colorado River under the 1944 Treaty and the 1906 Convention is in contrast to that relationship in dealing with waters in the Lower Rio Grande.

In 2012, Mexico requested a water delivery earlier than was required by the 1906 Convention. The IBWC quickly granted the request without a Minute. This impacted water users in the El Paso, Texas, area requiring them to scramble to implement alternative water use strategies. This action cost US water users a large amount of water due to water loss. As noted above, a similar action was agreed to by the US in Minute 293 on the Lower Rio Grande when Mexican storage levels in the Reservoirs in 1995 reached a low level, resulting in a US loan of water.

These efforts - based upon a "good - neighbor policy"- have also occurred on the Colorado River in the west, which is also covered by the Treaty. For example, in Minutes 318 and 319, the US agreed to adjust delivery schedules for 2010 through 2013 and store water in Lake Mead due to infrastructure damage to Mexican irrigation facilities from the 2010 earthquake in Mexico. Also, Minute 322 provided an emergency delivery of water to the City of Tijuana in Mexico. Recently, Minute 323, (September 21, 2017), dealing with extension of Minute 319, adopted a water scarcity contingency plan in the Colorado River Basin. All of these US actions have been taken on the Colorado River where the US is the upstream provider of tributary flows to Mexico.

Reciprocity by Mexico (as the upstream provider of water) for US interests in the Lower Reach of the Rio Grande is needed. Mexico needs to recognize the US as a user of water under the Treaty. To meet Treaty obligations, it needs to set aside water in its allocation processes and reservoir operation plans to deliver a minimum of 350,000 acre -feet per year on average to the US.

V. MEXICAN WATER DEFICIT ACCOUNTING ISSUES

A. US as Priority User of Tributary Water

Mexico needs to recognize the United States as a priority user of water in accordance with the Treaty. As noted immediately above, this recognition should result in water being set aside by Mexico in their annual allocation processes and reservoir operation plans to deliver a minimum of 350,000 acre-feet per year on average to the United States. *See, Id*, Todd Staples and Carlos Rubinstein, at page 3.

B. “Extraordinary Drought”

The term “extraordinary drought,” although not expressly defined in the Treaty, as other terms were in Article 1, it is implicitly defined in the second subparagraph of Article 4 B(d) as an event which makes it difficult for Mexico **A. . . to make available *the run-off of 350,000 acre feet (431,721,000 cubic meters) annually.*** @ (emphases added). In other words, it is an extraordinary drought condition when there is less than 1,050,000 acre feet (350,000 acre -feet US share and 700,000 acre-feet Mexican share) of run-off waters in the watersheds of the named Mexican tributaries to allow Mexico to deliver to the Rio Grande the required amount of 1,050,000 acre feet to the Rio Grande.

If there is sufficient run-off water in the watershed of the Mexican tributaries, then an extraordinary drought event does not exist.

If extraordinary drought exists within a year in a five-year cycle, then the shortage involved is to be made up in other years within the five-year cycle. If this is impossible – because of an extraordinary drought in those years – then it is to be made up in the following five-year cycle without creating a deficit shortage in the subsequent five-year cycle. Mexico has ten years in which to satisfy the minimum of the 350,000 annual guarantee. This amount is measured at the Rio Grande, without regard to conveyance losses in Mexico. Thus, Mexico must assume conveyance losses in Mexico and deliver the required amount of water to the Rio Grande where each of the named tributaries in Article 4A(c) flow into the Rio Grande.

The Treaty contemplates that the guaranteed 350,000 acre-feet annual amounts is a *minimum* and that normally more than this amount would flow into the Rio Grande. In order to clarify the 350,000 acre-feet guarantee, the Treaty states in Article 4 B(c) that the US does not acquire a continuing right to these excess flows but has the right to use its portion once they reach the Rio Grande.

The Treaty allocated to the US one-third (1/3) of the run-off in the watersheds of the named Mexican tributaries, and two-thirds (2/3) of this run-off to downstream Mexican users, *i.e.* 350,000 acre-feet to the US and 700,000 acre-feet to Mexico.

Treaty water accounting in this respect takes place on an annual basis. Only annual deficits created by extraordinary drought or hydraulic accident are qualified and entitled to the remedy of repayment during the following five-year cycle established by the Treaty for repayment of deficits. *See, e.g.*, United States of America Department of State, Water Bulletin Number 63 entitled *Flow of the Rio Grande and Related Data from Elephant Butte Dam, New Mexico to the Gulf of Mexico, 199,*, which is one of the annual reports released and agreed to by both countries each year.

Since the Treaty was enacted, there has been considerable reservoir development and improved reservoir management techniques in Mexico on the named Mexican tributaries

associated with the Treaty -guaranteed water. Mexico has the sovereign right to pursue better reservoir management and development. However, such development should be made consistent with its responsibility under the Treaty.

System improvement should have enhanced its ability to perform its Treaty obligations to provide this *run-off water* so as to comply with its obligations set forth in the Treaty. The Treaty assures the US that it will receive a minimum of 350,000 acre -feet annually, constituting its **a** of the **run-off** of the named Mexican tributaries unimpeded by reservoir systems. Stored water, however, is subject to the minimum required by the Treaty to flow to the Rio Grande **-a** for the US and **b**'s for Mexico users on the Rio Grande downstream.

C. Measurement of Water at Fort Quitman

Among other things, pursuant to the 1906 Convention and applicable to the Upper Reach, Mexico is entitled to 60,000 acre- feet of water annually from Elephant Butte Reservoir. In exchange for this water, Mexico waived any interest or claim to waters downstream from its delivery point under the 1906 Convention to Fort Quitman (located just below El Paso, Texas). The delivery point under the 1906 Convention of the 60,000 acre-feet per annum is provided in Article I of the 1906 Convention: "...in the bed of the Rio Grande at the point where the head works of the Acequia Madre, known as the Old Mexican Canal, now exist above the city of Juarez, Mexico." Juarez is across the Rio Grande from El Paso. Elephant Butte Reservoir, of course, did not exist at that time, but the 1906 Convention provided that this delivery would commence after the completion of the proposed storage dam near Engle, New Mexico (later becoming Elephant Butte Dam and Reservoir).

The 1944 Treaty between the US and Mexico is the governing document for the management of the Rio Grande **below** Fort Quitman. As noted above, the Treaty divided the flows in the Rio Grande **from** Fort Quitman downstream to the Gulf between the US and Mexico.

Mexico waived its claims to waters in the Rio Grande **above** Fort Quitman in the 1906 Convention. Rio Grande waters constituting inflows from Fort Quitman downstream to the Gulf of Mexico are governed by the 1944 Treaty. By virtue of the interaction between the 1906 Convention and the 1944 Treaty, waters in the Rio Grande flowing at Fort Quitman are US waters. Historical precedent shows this interaction between the 1906 Convention and the 1944 Treaty. During the negotiations for the 1944 Treaty, Mexico expressed its desire to increase the 60,000 acre- feet delivery guarantee from Elephant Butte Reservoir provided for in the 1906 Convention by demanding more Upper Rio Grande water than the 60,000 acre feet. Mexico also insisted **A. . . on 2** of the run-off entering the stream between El Paso and Fort Quitman." The US refused to consider this request, contending that the earlier 1906 Convention had settled the question. Accordingly, Mexico's requested change in ownership of water in the Rio Grande downstream from Mexico's 1906 Convention delivery point and upstream of Fort Quitman was not included in the 1944 Treaty. [The background of the detailed facts and development of international water law principles applicable to streams shared by the two countries is beyond the scope of this paper. See Hundley, *Dividing the Waters, A Century of Controversy Between the United States and Mexico*, Univ. of California Press (1966). Pages 17-40, and 131.]

Water in the Rio Grande between El Paso and Fort Quitman, including return flows from each country, is 100% owned by the US Accounting of water ownership consistent with these

long-standing agreements between the US and Mexico is entrusted to the IBWC under the 1944 Treaty and other treaties and agreements, including the 1906 Convention, between the two countries.

Currently, water in the river at Fort Quitman is divided equally between the US and Mexico. The US Section, IBWC, should require that in water accounting between the U S and Mexico all flows at Fort Quitman be 100% U S waters. As discussed above, in the 1906 Convention, Mexico waived rights to any water below the Acequia Madre delivery point “to Fort Quitman” – plus the 1944 Treaty divides the water between the two countries “below Fort Quitman.” Therefore, the contention is that water in the Rio Grande “at Fort Quitman” is 100% owned by US. The 1/3 – 2/3 split of the water below Fort Quitman is measured at the point where each of the named Mexican tributaries flow into the Rio Grande downstream of Fort Quitman.

D. Mexico Conserved Waters is Dedicated to US Deliveries

Under the terms of Minutes 308 and 309 and the various funding mechanisms provided by the NADBank, all waters conserved by these funded projects in Mexico are dedicated to the obligations of Mexico in fulfilling its obligations under the Treaty to provide an annual minimum of 350,000 acre- feet, averaged over five year cycles, from the named Mexico tributaries. This is a recognized agreement between the two countries. It should be enforced. This statement is made based upon the terms of the Minutes mentioned above.

CONCLUSION

After decades of disputes between the US and Mexico over the rights to water in the Rio Grande, the rights were determined and allocated in the first half of the 20th Century by the 1906 Convention and 1944 Treaty. In the last half of the 20th Century dams and reservoirs contemplated by these agreements have been constructed in the US, but many others have been constructed in Mexico, after the treaty, pursuant to its sovereign authority. Experience has been gained by the IBWC in the implementation of the international agreements and use of science and technology common to both countries. It can be expected that challenges will occur in the 21st Century testing the integrity of these agreements in view of activities in both countries, while also testing the Rio Grande=s ability to serve those in both countries who rely on its waters.

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TREATY GEOGRAPHY

- U.S. and Mexico share waters of the Rio Grande
 - From Fort Quitman, Texas
 - To Gulf of Mexico
- Two International Reservoirs for water supply and flood control
 - Amistad
 - Falcon



Falcon Reservoir 2010



Amistad Reservoir 2010



1944 Treaty – Rio Grande Basin



Excellence through teamwork

MEXICAN TRIBUTARIES OF THE RIO GRANDE

Treaty allocates 1/3 of the flow that reaches the Rio Grande to the United States from six-named Mexican Tributaries

➤ Six-Named Tribs.

- Rio Conchos
- Arroyo de las Vacas
- Rio San Diego
- Rio San Rodrigo
- Rio Escondido
- Rio Salado

➤ Two additional Mexican Tributaries below Falcon reservoir (100% Mexican Water)

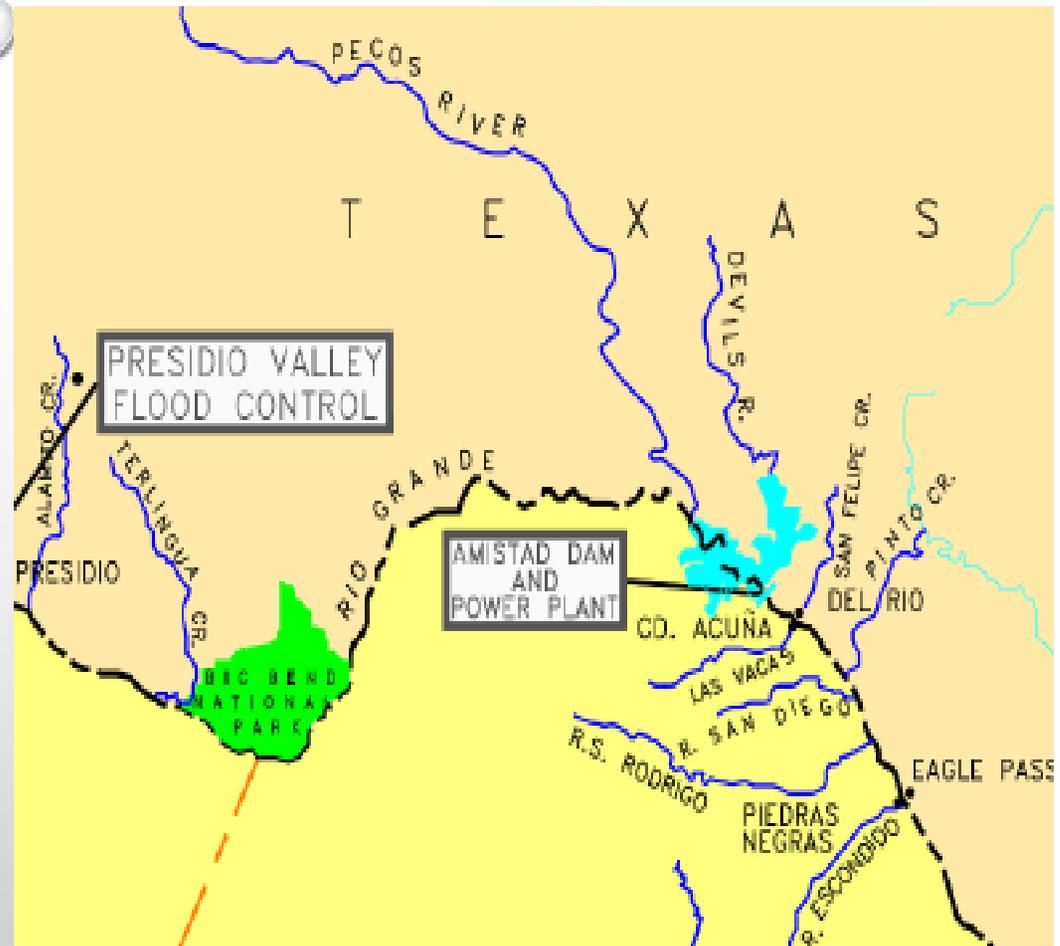
- Rio Alamo
- Rio San Juan



U.S. TRIBUTARIES OF THE RIO GRANDE

Treaty allocates 100% of the flows that reaches the Rio Grande from the following water sources to the United States:

- Pecos River
- Devils River
- Good-enough Spring
- Alamito Creek
- Terlingua Creek
- San Felipe Creek
- Pinto Creek



U.S. Tributary locations

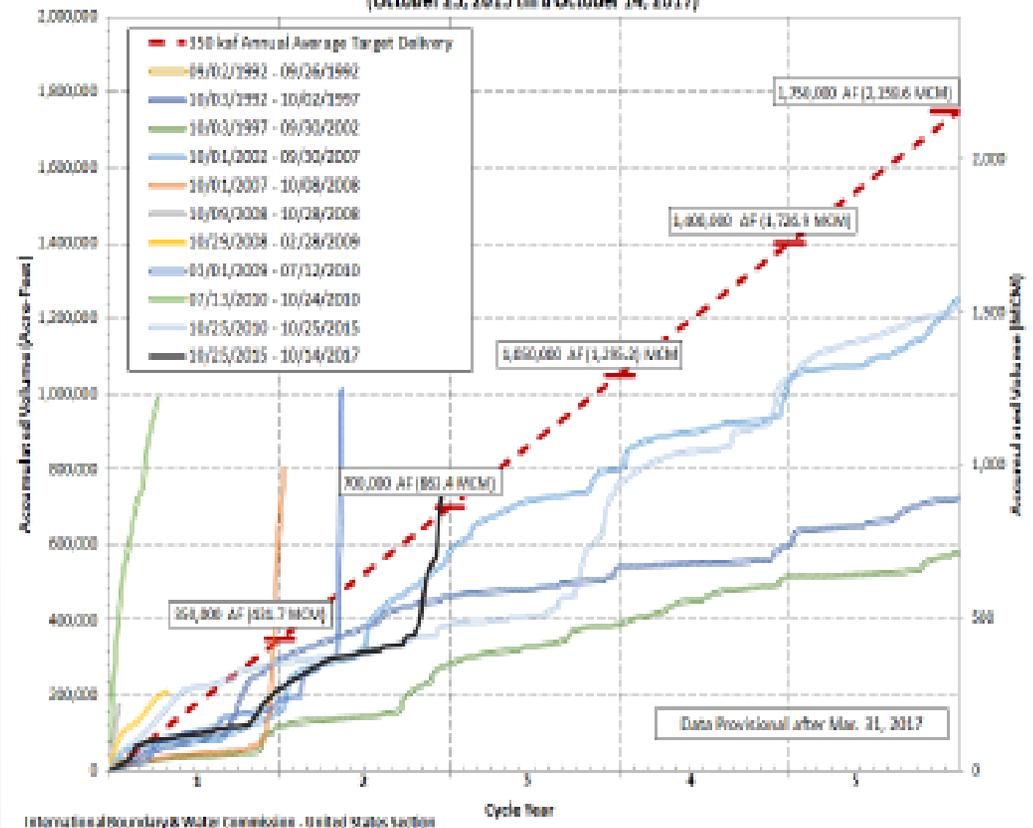


TREATY DELIVERY TERMS

➤ Article 4 of 1944 Water Treaty

- **One-third** of the flow reaching the Rio Grande from six (6) named tributaries is allotted to the United States.
- the 1/3 share to the US... "shall not be less, as an **average amount** in cycles of five consecutive years, than **350,000 acre-feet (431,721,000 cubic meters) annually**"
- **"Extraordinary drought"** clause - any delivery deficiencies existing at end of cycle, must be made up in following five-year cycle.
- If **U.S. conservation pool** fills in both Amistad and Falcon, **cycle terminates**, all debits paid.

Rio Grande River Basin
Estimated Volumes Allotted to the United States by Mexico from Six Named Mexican Tributaries under the 1944 Water Treaty
(October 25, 2015 thru October 14, 2017)



Past ten, five-year cycles

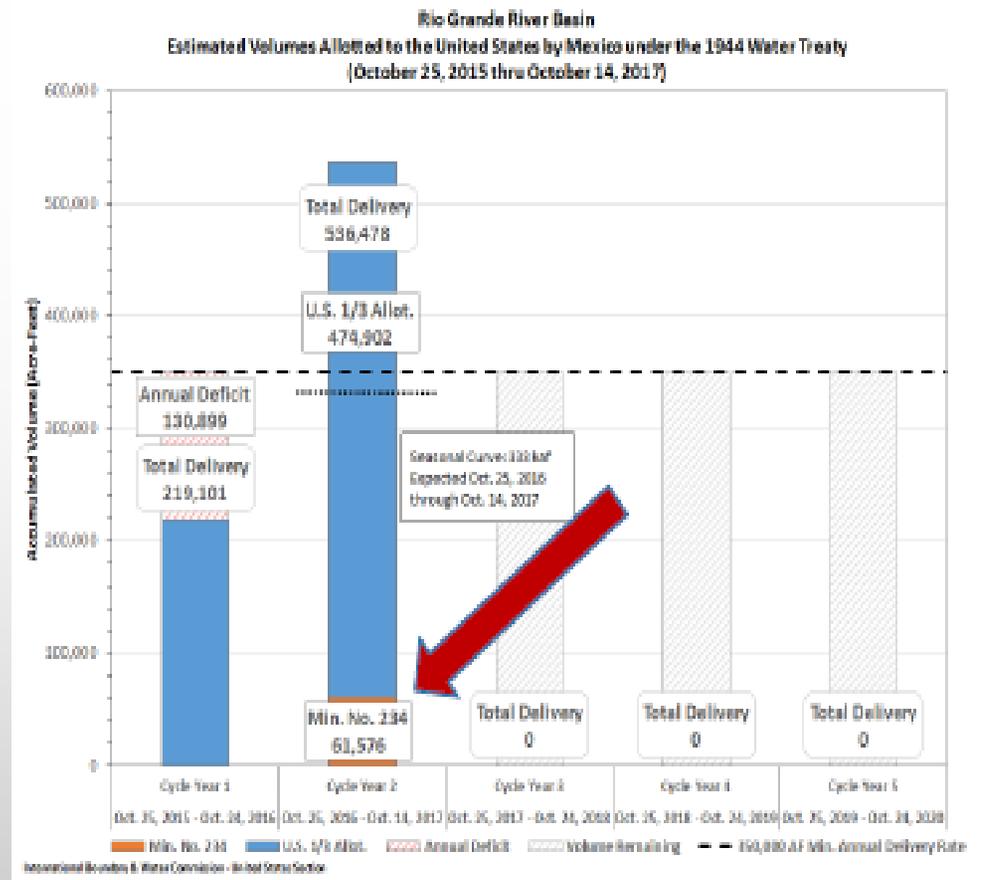
(About half end early and other half end in debt)

Excellence through teamwork



MINUTE NO. 234 – GREATER SHARE

- “In the event of a deficiency in a cycle of five consecutive years in the minimum amount of water allotted to the United States from the said tributaries, the deficiency shall be made up in the following five-year cycle, together with any quantity of water which is needed to avoid a deficiency in the aforesaid following cycle, by one or a combination of the following means:”
 - a. Deliver more water from the tributaries
 - b. Deliver to the US some of Mexico's share of tributary water
 - c. Transfer of Mx water at the international reservoirs
- Mexico used this provision to provide an additional 61,576 acre-feet from the Rio Conchos this delivery year.



Present five-year cycle status



REVIEW OF PRESENT CYCLE

➤ Cycle Year One

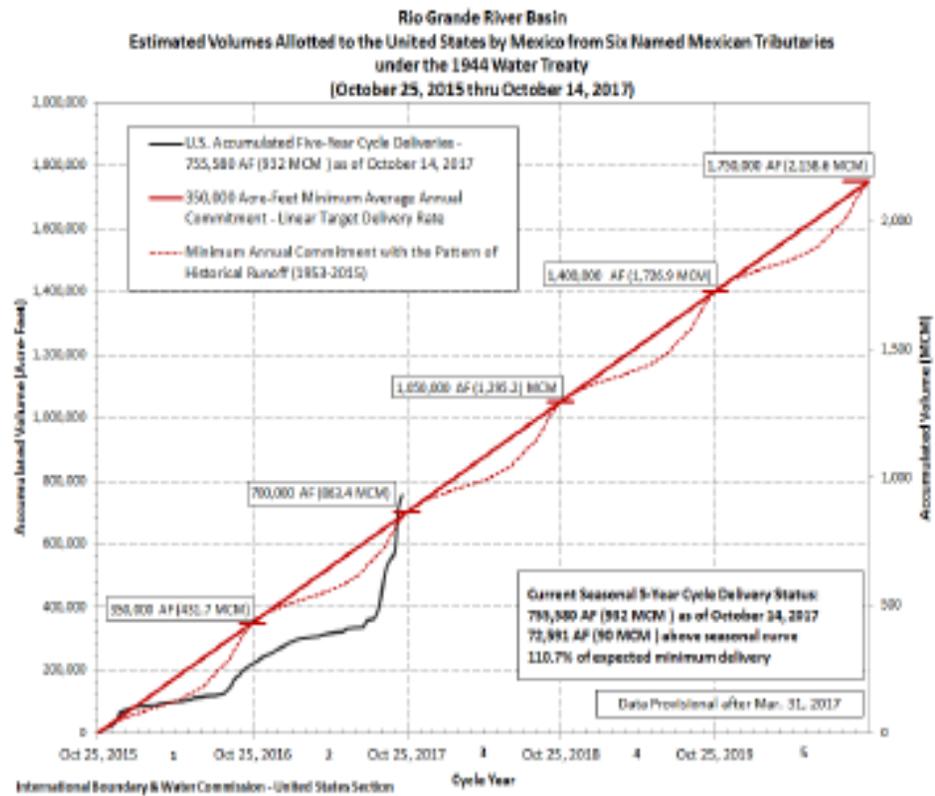
- Total Delivery of 219,101 acre-feet
- Annual Deficit 130,899 acre-feet

➤ Cycle Year Two

- Year two delivery to date of 536,478 acre-feet
 - In April, Mexico released water from La Fragua reservoir resulting in approximately 2,000 acre-feet to U.S.
 - Using Minute No. 234, Mexico increased U.S. allocation from 33% to 50% from August 20th thru September 30th.
 - Mexico continues to release water from Luis L. Leon with objective to bring reservoir to 80% of conservation.
 - Appreciable flood flows from Rio Salado.

➤ Total five-year cycle deliveries to date...

755,580 acre-feet



Present five-year cycle status

