

# INTERNATIONAL WATER ALLOCATION ON THE RIO GRANDE AND TEXAS REGIONAL WATER PLANNING

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## I. INTRODUCTION AND BACKGROUND

The Rio Grande is a unique river. It not only flows through three states, Colorado, New Mexico, and Texas with contrasting cultures and economies, but after it reaches Texas, it flows for over 1,200 miles as the international boundary between the U.S. and Mexico until it flows into the Gulf of Mexico.

It is a river that has been divided by politics and the needs of the time into two segments, which I will refer to as the *Upper Reach* which is the segment from the headwaters of Rio Grande in the San Juan Range of the Rocky Mountains in southern Colorado through Central New Mexico to Fort Quitman, Texas, and the *Lower Reach* which 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 is all from tributary sources in the U.S., however, a great majority of the flows in the Lower Reach derive from Mexico. Flows in the Lower Reach historically were mixed waters composed of U.S. flows from the Upper Reach mixed with water from several Mexican tributaries and the Texas tributaries consisting of mainly the Pecos and Devil's River.

Reaching an agreement on the allocation of Rio Grande water on an international basis between the U.S. and Mexico took many years. Water in the Rio Grande in the Upper Reach was allocated between the U.S. and Mexico by the *Convention Between the United States and Mexico on the Equitable Distribution of the Waters of the Rio Grande*, signed in Washington on May 21, 1906, ratified and finally proclaimed by President Theodore Roosevelt on January 16, 1907 - herein referred to as the "1906 Convention."

International allocation of the water in the Lower Reach was not agreed upon until 40 years later 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*, signed at Washington on February 3, 1944, and later ratified by each country and proclaimed by the President of the U.S. on November 27, 1945 with an effective date of November 8, 1945, herein referred to as the "1944 Treaty" or "Treaty."<sup>1</sup>

The background leading into the 1906 Convention and 1944 Treaty assists in a better understanding of their significance.

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<sup>1</sup> Treaty on Water Utilization, February 3, 1944, United States and Mexico, 59 Stat. 1219.

## **II. EARLY BACKGROUND <sup>2</sup>**

### **A. Treaties of 1848 and 1853**

The first major agreement between the U.S. and Mexico was the Treaty of Guadalupe-Hidalgo, dated 1848, which established the boundary between the U.S. and Mexico. It made no reference to the regulation and allocation of the water resources of the Rio Grande. The 1848 Treaty established the first joint Commission of the two countries consisting of a Commissioner and a Surveyor appointed by each Government, but only to proceed to run and mark the boundary in its whole course from San Diego, California, to the mouth of the Rio Grande in Texas. The Commission completed this work in the early 1850s. The 1848 Treaty not only made no reference to regulation of waters, it specifically states that “. . . neither country shall, without the consent of the other, construct any work that may impede or interrupt in whole or in part the exercise of the navigation rights of each country.” The principal concern of the two countries at that time was the use of the rivers for navigation of waters. This is understandable when it is remembered that in 1848 there was little development along the rivers. Allocation and regulation of waters was then not important.

The same prohibition against construction of any works which may impede or interrupt navigation on the Rio Grande was confirmed in the Treaty of 1853.

It is significant to note that this prohibition which precluded either storage dams or diversion dams for regulation and utilization of water, and in turn precluded the secure development of major irrigation and domestic developments for use of water, continued until the 1906 Convention on the Upper reach, and 1944 Water Treaty on the Lower reach.

### **B. 1889 Convention**

The next important treaty between the U.S. and Mexico on the Rio Grande was the Convention of 1889. By this Convention, the U.S. and Mexico established the International Boundary Commission (“IBC”) to consist of the U.S. Section and the Mexico Section, each headed by a Commissioner appointed by each Government.

Its sole purpose as enunciated in that Convention was to resolve differences or questions that may arise on the frontier between the U.S. and Mexico where the Rio Grande and the

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<sup>2</sup> See, International Water Law Along the Mexican-American Border, Committee on Desert and Arid Zones Research, Southwestern and Rocky Mountain Division, A.A.C.S., the University of Texas at El Paso, April 29-30, 1968; article of J.F. Friedkin, U.S. Commissioner, International Boundary and Water Commission. “History and Functions of Joint Mexican-American Public Bodies Regulating and Allocating Water Resources Along the Rio Grande (Bravo)”.

Colorado River form the boundary, whether such differences arise from questions or alterations or changes in the bed of the river or from construction work along the bed of the river. This Convention made no mention or reference to regulation or allocations of water resource.

### **C. First Water Supply Treaty - 1906 Treaty**

The first indication of water supply problems is recorded in an IBC official report in 1878 which contains the evidence of the difficulties over availability of waters in the El Paso Valley. The problem became increasingly serious for farmers on the U.S. and Mexican side of the El Paso-Juarez Valley in the 1880's. In 1894, the Mexican Consulate in El Paso complained to the Mexican Minister in Washington, D.C., that the Juarez region was becoming depopulated due to increases in uses of water upstream in the U.S. and the shortages in the Juarez Valley area. In 1896, the Secretary of State instructed the U.S. Commissioner and IBC, to examine and report on equitable distribution of waters in cooperation with the Mexican Commissioner. The Commissioners met on August 17, 1896, and they agreed to study and consider three phases of the problem: (1) the amount of diversion by the U.S., (2) whether the flows of the river were appreciably decreased by the upstream diversion, and (3) determination of the best and most feasible means of regulating the rivers to the advantage of the citizens of both countries. The findings were that upstream diversion had reduced the flow of the river in the El Paso-Juarez areas and that a dam was needed for regulation. There was then proposed the construction of a dam at a site just above El Paso and Juarez in the pass just above Smelter. The site was later changed to the current site of Elephant Butte Dam near Engle, New Mexico.

Out of these studies by the IBC and the ensuing negotiations, the two Governments, agreed to the 1906 Convention which divided the waters of the Rio Grande above Fort Quitman, Texas, located at the lower end of the El Paso-Juarez Valley. The details of the 1906 Convention will be more fully discussed below.

### **D. International Water Commission, 1924-1930**

In the early 1900s, both countries recognized that equitable division of waters of the Rio Grande would be necessary and some unilateral studies were made in each country, but without progress. By the 1930s increased irrigation developments in both countries along the Colorado River and along the Rio Grande downstream from the El Paso-Juarez Valley (and Fort Quitman, Texas), pointed to an early need for allocation and regulation of Rio Grande waters. By the Act of the Congress in 1924, the President of the U.S. was authorized to designate three special Commissioners 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. The scope of their studies was extended to include the Colorado

River and Tijuana River, with the concurrence of Mexico, by the Act of the Congress of March 3, 1927.

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

The U.S. Section of the IBC, with its powers, duties and functions, was transferred to the American Section of the IBC, U.S., and Mexico. Also in 1932, the Mexican Section of the IBC assumed the works of its Section of the IBC.

#### **E. Study and Investigation Looking to Allocation and Regulation of Waters of the Rio Grande below Fort Quitman**

In the period 1930 to 1943, there were continued irrigation development on both sides of the Rio Grande with corresponding increased urgency of allocation and regulation of the waters of the Rio Grande below Fort Quitman, Texas. There were also serious floods on the Rio Grande in 1920's and the 1930's which emphasized the need for regulation. 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 wasted to the Gulf of Mexico. The need for storage dams for regulation was abundantly apparent.

With the increased problem of droughts and floods, surveys, collection of hydrographic data, investigations and studies were stepped up by the IBC in the late 1930s and early 1940s with a view that these data would serve as a basis for concluding a Treaty for allocation and regulation of the waters of the Rio Grande below Fort Quitman, Texas. This was achieved in the Treaty of 1944 discussed below.

### **III. 1906 CONVENTION**

The 1906 Convention is a relatively short agreement of about 3 pages containing 5 substantive Articles. In Article I, the two countries agreed that after the completion of what later became Elephant Butte Dam “. . . *the United States shall deliver to Mexico a total of 60,000 acre-feet of water annually, in the bed of the Rio Grande . . . above the City of Juarez, Mexico*”.

The key provisions of Article II are: (1) that the delivery of this water “. . . *shall be assured by the United States . . .*” and delivered through the year in a monthly schedule of deliveries specifically set out in the Convention “. . . *in the same proportions as water is delivered . . .*” to lands in the United States in the vicinity of El Paso, Texas; and (2) that in case “*of extraordinary drought or serious accident to the . . . (reservoir facilities) . . . the amount delivered . . . (to Mexico) . . . shall be diminished in the same proportions as the water delivered to lands under said irrigation system in the United States.*”

In Article III, the U.S. agreed to assume all costs of storing and delivery of the water to Mexico and “. . . *assumes no obligation beyond the delivering of the water in the bed of the river above the head of the Mexican Canal.*”

Article IV contains provisions clarifying that the U.S. agreement to deliver water was not to be deemed to be any “. . . *recognition by the United States of any claim on the part of Mexico to the said waters . . .*” and that Mexico waived “. . . *any and all claims to the Rio Grande for any purpose whatever between the . . . (Mexican delivery point) . . . and Fort Quitman, Texas...*”

Mexico further waived any and all existing and future claims for damages of owners of land in Mexico caused by the diversion and use of Rio Grande water by U.S. users. Mexico had made claims for \$35,000,000 during the controversy leading up to this Agreement.<sup>3</sup>

In Article V it is made clear that the U.S. is not acknowledging any legal basis for any claim by Mexico to Rio Grande waters, or establishing any precedent supporting such a claim, and that “. . . *this Treaty extends only to the portion of the Rio Grande which forms the international boundary . . . to Fort Quitman, Texas. . .*” In other words, that part downstream from El Paso to Fort Quitman, Texas, is covered by the 1906 Convention. Mexico waived claim to any water in this segment in Texas above Fort Quitman.

In summary, the key agreements in the 1906 Convention with respect to Rio Grande water allocation:

- Mexico is assured the delivery of 60,000 acre feet of Rio Grande water per annum except in the event of extraordinary drought or facility accident in which case, the U.S. and Mexico will prorate available water.

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<sup>3</sup> 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.

- Mexico waived claims to water in the Rio Grande for any purpose from its delivery point downstream to Fort Quitman, Texas.
- The 1906 Convention left the apportionment of the waters in the Lower Reach unresolved, and this continued for almost 40 years and until the 1944 Treaty.

#### **IV. 1944 TREATY**

The 1944 Treaty is a much longer and comprehensive agreement relating to the allocation of the waters of the Rio Grande from Fort Quitman, Texas to the Gulf of Mexico as well as the Colorado and Tijuana Rivers in the West. The Treaty also authorized the joint construction and operation of international storage dams on the Rio Grande and changed the name of the International Boundary Commission (created by the *Convention of 1889*) to the International Boundary and Water Commission (hereafter referred to “IBWC”) and among other responsibilities, gave it the authority to apply and enforce the Treaty provisions.

In the provisions pertaining to the Rio Grande, 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**

As the United States gave assurances to Mexico to receive 60,000 acre feet annually in the 1906 Convention in the Upper Reach, Mexico agreed in Article 4B(c) of the 1944 Treaty to provide an annual minimum of 350,000 acre feet, averaged over five year cycles, from the named Mexican tributaries in the Lower Reach. This was obviously in recognition of the fact that historically these Mexican tributaries contributed a substantial amount of the normal and flood flows to the Rio Grande for downstream users in both countries. A similar guarantee by the U.S. of 1,500,000 acre feet annually was provided for Mexico of U.S. derived waters in the Colorado River.<sup>4</sup>

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<sup>4</sup> Article 10(a) of the Treaty provides that from the water, from any and all sources in the Colorado River, that Mexico be allotted "A guaranteed annual quantity of 1,500,00 acre-feet (1,850,234,00 cubic meters) to be delivered in accordance with the provisions of Article 15 of this Treaty."



In contrast to the drought provisions of the 1906 Convention and the Treaty provisions dealing with the Colorado River, where relative proration is provided, the 1944 Treaty adopted a different approach by providing that in the event of extraordinary drought or serious accident to the Mexican reservoir systems on the named Mexican tributaries, the two countries agreed to a unique and different remedy for the repayment of water. As noted above, the 1906 Convention provided that if the United States could not deliver the guaranteed 60,000 acre feet annually to Mexico at Juarez in the Upper Reach, the countries prorated available water supply. With respect to the Lower Reach, it was agreed as follows in the Treaty:

*“In 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)

As noted above, the 1944 Treaty in Article 10 pertaining to the Colorado River provides for a remedy of proration in drought conditions with respect to the Colorado as did the 1906 Convention with respect to the Rio Grande.<sup>5</sup> However, with respect to the Lower Reach of the Rio Grande the specific repayment schedule was adopted. This important provision dealing with drought conditions in the Lower Reach was specifically noted by President Roosevelt in his message to the U.S. Senate on the 1944 Treaty which 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.”*<sup>6</sup>

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<sup>5</sup> 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.”

<sup>6</sup> “Message from the President of the United States” transmitting the Treaty, February 15, 1944, U.S. Senate, 78<sup>th</sup> Congress, 2d Session, Executive A.

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.

With respect to water accounting within a five-year cycle, Article 4 provides:

*“When the conservation capacities assigned to the United States in at least two of the major international reservoirs including the highest major reservoir, are filled with waters belonging to the United States, a cycle of five years shall be considered paid, whereupon a new five-year cycle shall commence.”*

Article 5 of the Treaty relating to the Rio Grande also provides for the construction of three possible dams and reservoirs, however, subsequently only two - Amistad Dam, upstream from Del Rio, Texas, and Falcon Dam, downstream of Laredo, Texas, and reservoirs were found feasible and exist today.

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

- 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 U.S. and Mexico.
- 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.
- 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.
- 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 U.S. conservation storage fill at which time a new five-year cycle accounting begins.

#### **D. 1944 Treaty Enforcement**

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

In Article 2 it is provided:

*“The application of the present Treaty, the regulation and exercise of the rights and obligations which the two Governments assume thereunder, and the settlement of all disputes to which its observance and execution may give rise are hereby entrusted to the International Boundary and Water Commission, which shall function in conformity with the powers and limitations set forth in this Treaty.”*

It also provided that:

*“Wherever there are provisions in this Treaty for joint action or joint agreement by the Governments, or for the furnishing of reports, studies or plans to the two Governments, or similar provisions, it shall be understood that the particular matter in question shall be handled by or through the Department of State of the United States and the Ministry of Foreign Relations of Mexico.”*

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 “ . . . 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 to the recommendation and approval by the two Governments through the IBWC for later determination and as noted above, that the approval “ 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 8 of the Treaty established general rules pertaining to the operation of the reservoirs, but provided that they could be modified or amended “ . . . by agreement of the Commission, with the approval of the two Governments . . . .”

Article 24 of the Treaty, assigning the Commission its powers and duties, provides in paragraph (c):

*“(c) In general to exercise and discharge the specific powers and duties entrusted to the Commission by this and other treaties and agreements in force between the two countries, and to carry into execution and prevent the violation of the provisions of those treaties and agreements. The authorities of each country shall aid and support the exercise and discharge of these powers and duties, and **each***

***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.***” (Emphasis added)

It is clear from the above provisions that each IBWC Commissioner (U.S. and Mexico) is given the legal authority by their respective governments to enforce the Treaty provisions and other treaties and agreements in force between the two countries through the courts and agencies in their respective countries.

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

*“(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:

*“They 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.”*

Therefore, the IBWC Commissioners are given the authority to resolve all disputes under the Treaty and to enforce the Treaty provisions in their respective countries as well as to put in place the Treaty implementation steps subject to the approval of the two Governments acting through the U.S. State Department and the Ministry of Foreign Relations of Mexico..

#### **E. Implementation Agreements - Minutes**

The Treaty provides that the means by which the decision and approval of the two countries are evidenced shall be recorded in the form of “Minutes” 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.

Article 25 further provides that if either Government disagrees with the decision embedded within a Minute, then “if” an agreement is reached regarding the matter between the

two Governments, the agreement shall be communicated to the Commissioners, who shall take actions as necessary to carry out such agreement.

#### *Minute No. 234*

Of significant importance to the Mexican guarantee of water in the Lower Reach is Minute No. 234. In 1969 following the closure of Amistad Reservoir, Minute No. 234 was approved pertaining 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 5-year cycle when Falcon Dam was placed into operation in October 1953. The Rio Grande annual water volumes during each 5-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 5-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 5-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 tracts the language in the Treaty in requiring that any deficiency “shall” be made up in the following 5-year cycle. The Minute further assures compliance with the minimum 350,000 acre foot requirement in the following 5-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 5-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 No. 234 enforces the provision in the Treaty requiring that a minimum of 350,000 acre feet average annually shall be delivered to the Rio Grande by Mexico. It requires that any repayment of a prior 5-year cycle deficiency shall not adversely impact the minimum requirement in the following 5-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.

Since the Treaty did not require that the Minute be approved by both Governments, pursuant to Article 24 of the Treaty, each of the two Governments was given notice and both Governments agreed to the Minute.

## **F. Principles of Mexican Water Deficit Accounting Imposed by the Treaty**

As noted, annual deficits caused by extraordinary drought or serious hydraulic accident are recognized by the Treaty and shall be made up in the following 5-year cycle. If an annual deficit is not caused by extraordinary drought or hydraulic accident, it is not a qualified deficit and must be made up by Mexico within the 5-year cycle in which it occurs instead of being deferred for repayment in the following 5-year cycle.

The term “extraordinary drought,” although not expressly defined in the Treaty, as other terms were in Article 1, is implicitly defined in the second subparagraph of Article 4 B(d) as an event which makes it difficult for Mexico “. . . to make available the run-off of 350,000 acre feet

(431,721,000 cubic meters) annually.” In other words, it is a drought condition when there is less than 1,050,000 acre feet (350,000 acre feet U.S. share and 700,000 acre-feet Mexican share) of run-off waters in the watersheds of the named Mexican tributaries.

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

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 U.S. does not acquire a continuing right to these excess flows but has the right to use them once they reach the Rio Grande.

The Treaty allocated to the U.S. one-third (1/3) of the run-off in the watersheds of the named Mexican tributaries, and two-thirds (2/3) of the run-off to downstream Mexican users.

Treaty water accounting in this respect takes place on an annual basis,<sup>7</sup> and only annual deficits created by extraordinary drought or hydraulic accident are qualified and entitled to the remedy of repayment during the following 5-year cycle established by the Treaty for repayment of deficits.

Since 1944 there has been considerable reservoir development and improved reservoir management techniques in Mexico on the named Mexican tributaries associated with the Treaty guaranteed water. These developments have enhanced Mexico’s ability to capture and conserve the run-off water from the watershed of the tributaries.

Mexico has the sovereign right to pursue better reservoir management and development. Such development has the positive effect on its ability to perform its Treaty obligations to provide this run-off water so as to comply with its obligations set forth in Article 4 B.(c) and (d). Article 4 of the Treaty assures the U.S. that it will receive a minimum of 350,000 acre feet annually constituting its one-third of the **run-off** of the named Mexican tributaries unimpeded by reservoir systems. It is subject to Mexico’s normal use of the run-off water before it is stored, however, stored water which cannot be used in Mexico, without use of storage in the reservoir system, is intended to flow to the Rio Grande for U.S. and other Mexico users on the Rio Grande downstream. In any event, an average annual minimum of 350,000 acre-feet must reach the Rio

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<sup>7</sup> 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, 1993* which is one of the annual reports released and agreed to by both countries each year.

Grande to assure downstream U.S. users and to provide Mexican users on the Rio Grande an average minimum of 700,000 acre feet (Mexico's two-thirds share).

## V. U.S. ALLOCATION - 1906 CONVENTION AND 1944 TREATY INTERACTION

As noted, pursuant to the 1906 Convention, among other things, Mexico is entitled to 60,000 acre feet of water annually from Elephant Butte Reservoir, and in exchange for this water, Mexico waived any interest or claim to waters downstream from its delivery point to Fort Quitman, Texas.

The 1944 Treaty between the U.S. and Mexico, among other things noted above, divided the flows in the Rio Grande **from** Fort Quitman downstream to the Gulf between the U.S. and Mexico.

Mexico waived its claims to waters in the Rio Grande **above** Fort Quitman in the 1906 Convention, and 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 U.S. 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, and also insisted “. . . on ½ of the run-off entering the stream between El Paso and Fort Quitman.” The U.S. refused to consider this request with the contention that the earlier 1906 Convention had settled the question and 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.<sup>8</sup>

Water in the Rio Grande between El Paso and Fort Quitman, including return flows from each country, is 100% owned by the U.S. Accounting of water ownership consistent with these long-standing agreements between the U.S. and Mexico is entrusted to the IBWC because, as noted above, Article 24 of the 1944 Treaty granted the IBWC the power and duty to enforce the

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<sup>8</sup> See, Hundley, *supra* footnote 3 at pg. 131.



1944 Treaty and other treaties and agreements, including the 1906 Convention, between the two countries.

After decades of disputes between the U.S. and Mexico over the rights to water in the Rio Grande, the rights were determined and allocated in the first half of the 20<sup>th</sup> Century by the 1906 Convention and 1944 Treaty. In the last half of the 20<sup>th</sup> Century dams and reservoirs contemplated by these agreements have been constructed, and experience gained by the IBWC in the implementation of the agreements. It can be expected that challenges will occur in the 21<sup>st</sup> Century testing the integrity of these agreements, and the Rio Grande's ability to serve those in both countries who rely on its waters.

## **VI. TEXAS REGIONAL WATER PLANNING**

After a statewide drought in 1996, the 75<sup>th</sup> Texas Legislature, in 1997, enacted Senate Bill 1 ("SB 1"), often referred to as the Brown-Lewis Water Act after its Senate and House sponsors. This legislation provided a major overhaul of many longstanding state water laws and policies and was in part a response to the statewide drought of 1996 and increasing public awareness of the state's rapidly increasing water demands. SB 1 addressed a wide range of issues and concerns including state, regional, and local planning for water conservation, water supply and drought management; administration of state water rights programs; interbasin transfer policy; groundwater management; water marketing; state financial assistance for water-related projects; and state programs for water data collection and dissemination.

SB1 radically altered the manner in which future state water plans are to be prepared. Historically, the state water plan has been prepared by the Texas Water Development Board (TWDB), with input from other state and local agencies and the public. With SB 1, the Legislature established a "bottom up" approach whereby future state water plans are to be based on regional water plans prepared and adopted by appointed regional water planning group (RWPGs). The RWPGs serve without compensation and are responsible for overseeing the preparation of the regional water plans.

The regional water plans are based on an assessment of future water demands and currently available water supply and are to include specific recommendations for meeting identified water needs through 2030. The plans may also include recommendations regarding strategies for meeting long-term (2030-2050) needs, as well as recommendations regarding legislative designation of ecologically unique rivers and streams, reservoir sites, and policy issues. By law, the regional water plans were completed by January 5, 2001, at which time the

TWDB compiled a new state water plan, which was approved this year. The regional water plans and the state water plan are to be updated every five years.

In February 1998 the TWDB to accelerate the planning process adopted administrative rules, which included the delineation of 16 regional water planning areas in the state and the definition of the procedures and requirements for the development of the regional water plans. The TWDB also appointed the initial members of 16 RWPGs. Subsequently, the RWPGs adopted by-laws, selected a political subdivision to act as its administrative agent, and developed a scope of work and budget for preparation of the regional water plans. Funding for the preparation of the regional water plans was provided in the form of grants from the TWDB.

Initially designated by TWDB as “Region M”, the Rio Grande Regional Water Planning Area (herein referred to as the “Rio Grande Region”) consists of the eight counties adjacent to or in proximity to the middle and lower Rio Grande from essentially Amistad Reservoir to the Gulf. It is composed of Cameron, Hidalgo, Starr, Webb, Maverick, Jim Hogg, Zapata and Willacy counties in Texas, where more than 95% of the irrigation and urban development in the Lower Reach has historically occurred. In the 3 lower Texas counties, there was over 750,000 acres under irrigation, and population of near 1,000,000 not considering the population across the border in Mexico of an amount in excess of 1,000,000.

The Rio Grande Regional Water Planning Group, who adopted the Regional Plan, consisted of 17 voting members representing 10 of the 11 interest groups categories specified in SB 1. One category, river authorities, is not represented on the Rio Grande RWPG, as there is no river authority in existence within the boundaries of the Rio Grande Region. In addition to its voting membership, the Rio Grande RWPG includes non-voting members representing state agencies and the Mexican federal government. Region E was established, which is the other significant planning group in the Upper Rio Grande in Texas.

The Regional Water Plan for the Rio Grande Regional Water Planning Group approved by the state included in its projections of water supply, an assumption that Mexico would comply with the 1944 Treaty. In its Plan, specific fact findings and recommendations were adopted. The details of these findings are set out on Attachment A to this article.

In summary, the findings indicate the efforts for the past several years in coordination of water affairs between Texas and Mexico in the Lower Reach, and the extreme and vital importance that Mexico’s compliance to the 1944 Treaty is to the welfare of the South Texas region included in the Lower Reach of Rio Grande in Texas.

**ATTACHMENT A**  
**to**  
**International Water Allocation on the Rio Grande**  
**and Texas Regional Water Planning**

The recent Rio Grande Regional Water Plan, approved by the State of Texas and included in the State Water Plan (January 2002) provided in parts as follows:

**6.3.2 Mexico's Compliance with the 1944 Treaty**

**6.3.2.1 Background**

It is important to note that the minimum inflow requirements stipulated in paragraph B(c) of the Treaty for the United States from the six Mexican tributaries has not been satisfied by Mexico since October 1992 (see section 3.8.3 of this report). The total deficit as of October 1999 was approximately 1,400,000 acre-feet, and Mexico's ability to repay this deficit within the terms of the 1944 Treaty now is questionable. The uncertainty related to the availability, or unavailability, of this water from Mexico obviously has a direct bearing on water supply planning for the RGWPR.

**6.3.2.2 Current Mexican Water Deficits under the 1944 Treaty**

As discussed above, the 1944 Treaty between the United States and Mexico contains a provision whereby Mexico is to provide the United States with a minimum of 350,000 acre-feet per year, averaged in five-year cycles, of inflows to the Rio Grande from six named tributaries, all located below Fort Quitman, Texas. The inflows from these tributaries contribute directly to the Amistad-Falcon water supply that is extensively relied upon by water users in the Rio Grande Region. Hence, when these tributary inflows are reduced, the available water supply for the region also is reduced. Detailed discussions on firm yield of the Amistad-Falcon Reservoir System and the potential impacts on firm yield of changes in historical inflows are presented in Section 3.4.3.

The IBWC is responsible for measuring the Mexican tributary inflows and performing the necessary water accounting in accordance with the provisions of the 1944 Treaty. Since October 1992, data reported by the IBWC indicate that Mexico has failed to deliver the required minimum inflows to the United States, and therefore, Mexico now has accrued deficits for the five-year accounting cycle that ended on 2 October 1997, as well as for the current five-year accounting cycle that will end on 2 October 2002. The total inflow deficit owed by Mexico for

the previous five-year cycle is 1,024,000 acre-feet, and from 2 October 1997 through September 2000 of the current five-year accounting cycle, the accrued deficit is 384,100 acre-feet.

### **6.3.2.3. Findings and Conclusions**

Because of the substantial amount of the current Mexican water deficits and because agricultural interests in the Lower Rio Grande Valley have been severely impacted during the current drought as available water supplies from Amistad and Falcon Reservoirs have diminished, there has been increased concern by all Rio Grande water users regarding the reasons for the deficits and Mexico's ability to repay the deficits in accordance with the terms of the 1944 Treaty. To begin to address these issues, special studies were undertaken as part of this regional water planning effort for the Rio Grande Region, and preliminary results pertaining to the Mexican water deficits were presented in a separate report. For the purpose of summarizing current results from these ongoing Mexican deficit studies, a Summary of Findings is included below (for additional details refer to the Mexican deficit report.<sup>1</sup>

Numerous meetings have been convened for the purpose of discussing all aspects of the Mexican water deficit situation and for the exchange of data for better management of waters of the Rio Grande Basin. Representation at these meetings has included the Rio Grande RWPG, local water rights stakeholders, the United States and Mexican Sections of the IBWC, TNRCC, TWDB, and the National Water Commission of Mexico (CNA). Mexican representatives to these meetings have presented extensive data and information for evaluation. Data provided by Mexico relating to historical rainfall during this period shows average rainfall in the Mexican tributary basins for the for the period 1993 through 1999 of over 90 percent of normal, while data provided by Mexico related to historical tributary reservoir inflows during this period shows inflows of 60 to 70 percent of normal. The inflows stored in Mexico's tributary reservoirs over this same period totaled almost 5,000,000 acre-feet as derived from positive monthly incremental changes in storage in individual reservoirs. During this same period over 3,000,000 acre-feet of water actually reached the Rio Grande for a total of approximately 8,000,000 acre-feet of stored water and water which actually reached the Rio Grande. This is an annual average of 380,000 acre-feet, U.S. share of water, which exceeds the average minimum of 350,000 acre-feet U.S. share required under the 1944 Treaty. Mexico, however, has stored inflows in tributary

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<sup>1</sup> R. J. Brandes Company; "Preliminary Analysis of Mexico's Rio Grande Water Deficit Under the 1944 Treaty"; Second Draft Report to the Rio Grande Regional Water Planning Group and the Lower Rio Grande Valley Development Council; Austin, Texas; April 3, 2000.

reservoirs to provide water supplies for use within Mexico. Mexico's stated operating policy for its tributary reservoirs is to optimize its storage capacity.

Paragraph B(c) of Article 4 of the 1944 Treaty between the United States and Mexico allots one-third of the flow reaching the Rio Grande from six named Mexican tributaries to the U.S., with the provision that this amount of flow shall not be less than 350,000 acre-feet annually as an average amount in cycles of five consecutive years. This provision requires Mexico to deliver to the United States in the Rio Grande a minimum of 1,750,000 acre-feet of water from named Mexican tributaries in five-year cycles. The Treaty does not contain conditional language that water needs in Mexico are a consideration with reference to this guarantee.

The 1944 Treaty further provides that Mexico make up any deficiencies in the amount of water delivered to the U.S. from the named tributaries during a given five-year cycle in the subsequent - five-year cycle, when either "extraordinary drought or serious accident to the hydraulic systems on the measured Mexican tributaries" has occurred, "making it difficult for Mexico to make available the runoff of 350,000 acre-feet (431,721,000 cubic meters) annually" during the previous five-year cycle. When the flows in the Mexican tributaries from runoff from the tributary watersheds during a five-year cycle are insufficient to provide the minimum average annual requirement, then Mexico shall make up this deficit by delivery of flows to the Rio Grande for the U.S. during the following five-year cycle. The allotment of water to the U.S. from the Mexican tributaries is dependent upon the runoff from the tributary watersheds reaching the Rio Grande from the named tributaries.

The U.S. and Mexican Section of the IBWC have agreed in Minute No. 234 as to the method by which a Mexican deficit in water will be repaid during a subsequent five-year cycle. In the event there is insufficient run-off from the Mexican tributaries during a five-year cycle, which prevents Mexico from providing the average annual amount of 350,000 acre-feet, Minute No. 234 provides that “. . .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 ways: (a) amounts of water reaching the Rio Grande from the Mexican tributaries in excess of the minimum 350,000 acre-feet guaranteed by the Treaty; (b) waters belonging to Mexico reaching the Rio

Grande (its two-thirds portion) provided the U.S. is able to conserve such water; and (c) transfer of Mexican owned water in storage in Amistad and Falcon Reservoirs provided the U.S. is able to conserve the water.

Based on records published annually by the IBWC regarding historical flows in the Rio Grande and its major tributaries, the deficit in the quantities of inflows allotted to the United States from the Mexican tributaries during the five-year accounting cycle ending October 2, 1997, was 1,024,000 acre-feet. From October 1997 through September 2000, the cumulative deficit in the current accounting cycle was 384,100 acre-feet, or since October 1992, the total amount of the inflow deficit that has been incurred by Mexico on the six tributaries identified in the 1944 Treaty was 1,408,100 acre-feet as of October 2000.

Mexico has 12 major reservoirs located in the tributary basins identified in the 1944 Treaty with a combined conservation storage capacity of over 4.4 million acre-feet. Water stored in these reservoirs is diverted and released for municipal, industrial and irrigation uses in Mexico. One of the reservoirs, Luis Leon on the Rio Conchos, also has over 400,000 acre-feet of flood control storage capacity available above its conservation pool.

Based upon data provided by Mexico during the five-year accounting cycle ending October 1997, a total of approximately 3,600,000 acre-feet of water, as derived from positive monthly incremental changes in storage in the individual reservoirs, was stored in Mexican reservoirs located in the 1944 Treaty tributary basins, after diversions and releases by Mexico to meet its water demands at the time of storage. Through October 1999 of the current five-year accounting cycle, the total amount of excess water stored in the Mexican tributary reservoirs since October 1992 was near 5,000,000 acre-feet, after diversion and releases for use in Mexico. This 5,000,000 acre-feet stored for later use in Mexico, or over 1,600,000 acre-feet, U.S. share, is more than the total Rio Grande inflow deficit incurred by Mexico during this same period under the 1944 Treaty of 1,400,000 acre-feet. The quantities of inflows stored in the Mexican tributary reservoirs, including amounts of water in the flood pool of Luis L. Leon Reservoir, is water that would otherwise have been passed downstream in the named tributaries to the Rio Grande in order to meet the minimum allotment to the United States of an average of 350,000 acre-feet per year in accordance with the provisions of the 1944 Treaty

Additional in-depth studies have been authorized and funded through the TWDB in an attempt to refine the estimates of inflows to the Rio Grande from the Mexican tributaries pursuant to the 1944 Treaty. Progress is limited, however, due to the

lack of site-specific information regarding Mexico's tributary reservoirs and the specific demands for water by Mexico from each of the reservoirs. Mexico continues to provide this needed data so that it can be assembled to allow, when combined with data available to Texas, a preliminary reservoir operations model to be developed for Mexico's tributary reservoirs so that simulations of their available supplies can be made under different demand conditions and operating scenarios. Such results could contribute to the development of a long-range operating plan for the reservoirs that would both optimize the use of Mexico's available water supplies for its internal needs and assure compliance with its 1944 Treaty obligations. In the short term, such results would be useful in formulating a repayment schedule for Mexico's current deficits.

#### ***6.3.2.4 Recommendation***

Recognizing that Mexico's full compliance with the 1944 Treaty provisions and Minute No.234 is essential to providing the water supply needs of the Region, the Rio Grande Regional Water Planning Group hereby strongly recommends that the government of the United States take all necessary and appropriate actions to ensure full compliance by Mexico with the terms of the 1944 Treaty and Minute No. 234 governing the development and use of the waters of the Rio Grande. This includes full and expeditious repayment of current water deficits in accordance with Minute No. 234, since Mexico has failed to come up with an acceptable repayment plan to date. It is also recommended that the dialog continue between the United States and Mexico with regard to the development of an operating plan for Mexican tributary reservoirs that will ensure full compliance with the treaty while also optimizing the amount of water supply available to Mexico for beneficial use. It is further recommended that the United States Section of the International Boundary and Water Commission continue to seek and provide opportunities for direct stakeholder participation in bi-national discussions regarding the management of the waters of the Rio Grande. In particular, the State of Texas may be represented directly by the Secretary of State's Office, the Texas Natural Resource Conservation Commission, and the Texas Water Development Board. Further, the Governor should designate one of these agencies to have the lead role in representing the State on this issue.