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The United States – Mexico Dispute over the Waters of the Lower Rio Grande River

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Summary

The waters from the lower Rio Grande River are shared between the United States and Mexico pursuant to a 1944 Treaty. Beginning in 1992, Mexico claimed that "extraordinary drought" prevented it from fully meeting and repaying its water delivery obligations under the Treaty. Water supplies for users in South Texas (as well as Mexico) were significantly reduced as a result. Mexico owes the United States approximately 730,700 acre feet of water and is under threat of international litigation for allegedly expropriating water at the expense of South Texas water users, though it recently reached an agreement with the United States to eliminate its water debt by September 30, 2005. This report discusses the 1944 Treaty, the events that have led up to the current resolution, and Congress's response to this water crisis. It also discusses some of the proposals that various parties have suggested to help manage and prevent another water debt from occurring. This report will be updated as warranted.

The Binational Legal Framework

The Rio Grande River (also known as the Rio Bravo) divides the United States and Mexico for more than 1,200 miles along Texas's border and provides water for many purposes in both countries. Disputes over the internationally shared waters of the Rio Grande date back to the late nineteenth century. An early attempt to resolve some of these disputes came in 1906, with the formation of a Treaty regarding the section of the Rio Grande from the El Paso-Juarez Valley down to Fort Quitman, Texas.[1] The 1906 Treaty obligated the U.S. to make an annual delivery of 60,000 acre-feet[2] (AF) of water to Mexico according to a precise schedule of releases. By the 1940s, conflicts had once again surfaced over the distribution of the waters from the Rio Grande and other shared rivers, and negotiations resumed.

[1] Convention Between the United States and Mexico Providing for the Equitable Distribution of the Waters of the Rio Grande for Irrigation Purposes, May 21, 1906, U.S.–Mex., 34 Stat. 2953.

[2] An acre-foot is about 326,000 gallons of water, enough to cover an acre a foot deep.

The 1944 Treaty. In 1944, the United States and Mexico entered into another treaty for the management and distribution of two major international transboundary river systems: the Rio Grande River, from Fort Quitman to the Gulf of Mexico, and the Colorado River.[3] The 1944 Treaty provides Mexico with 1.5 million acre-feet (MAF) of water each year from the Colorado River and two-thirds of the flows that feed into the Rio Grande from the six major tributaries that enter from Mexico: the Conchos, San Diego, San Rodrigo, Escondido, and Salado Rivers and the Las Vacas Arroyo. The United States receives all of the flows from tributaries on the United States side and the remaining one-third from the six Mexican tributaries. Under Article IV of the Treaty, Mexico's water delivery from these six tributaries must average at least 350,000 AF per year, measured in five-year cycles. If Mexico can not meet its minimum flow obligations for a five-year cycle because of "extraordinary drought"—a term not defined in the Treaty—it must make up the deficiency during the next five-year cycle with water from the Mexican tributaries. The 1944 Treaty also provides each country one-half of all other flows (e.g., unmeasured storm water runoff entering from creeks) not identified in the Treaty, commonly known as "50/50 water."

The Treaty required the joint construction of at least two dams along the River. These dams now form Falcon (built in 1965 and covers 67,000 acres) and Amistad international reservoirs (built in 1954 and covers 78,300 acres). Water released from these reservoirs has the following priorities according to the Treaty: domestic, agricultural, electrical, industrial, navigational, and recreational. The distribution and regulation of Rio Grande water in the international reservoirs is managed by the International Boundary and Water Commission (IBWC) in accordance with the Treaty and applicable domestic law (i.e., generally state law in the United States and federal law in Mexico). The IBWC is an international body consisting of a United States and a Mexican section, which are overseen by the State Department and the Mexico Ministry of Foreign Relations, respectively. The IBWC is responsible for applying the 1944 Treaty and for resolving disputes that may arise from its execution.[4] The IBWC is authorized to develop rules and to issue decisions regarding the execution of the Treaty in the form of Minutes. Minutes become legally enforceable and can essentially amend the Treaty, unless one of the countries objects within thirty days.

Minute 234. The 1944 Treaty allows Mexico to accumulate a water debt in the event of an extraordinary drought. Minute 234, established in 1969, provides a procedure whereby Mexico may pay its water debt using three different sources of water: (1) excess water from its tributaries; (2) a portion of its allotment from its tributaries; and (3) a transfer of its stored water in the international reservoirs.[5] Minute 234, however, requires that the deficit payments from these three sources be made concurrently with other

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[3] Treaty with Mexico Relating to the Utilization of the Waters of Certain Rivers, Feb. 3, 1944, U.S.–Mex., 59 Stat. 1219.

[4] The IBWC was originally created in 1889 and called the International Boundary Commission. The 1944 Treaty renamed the Commission and expanded its role to deal with broader transboundary water issues and areas inland in both countries where international dams had been built. The IBWC has the responsibility of executing a number of boundary and water treaties between the United States and Mexico, in addition to the 1944 Treaty.

[5] IBWC Minute 234, Dec. 2, 1969.

required deliveries in the following five-year cycle. The United States and Mexico differ in their interpretation and implementation of Minute 234 (see below).

The Drought Years

Over the last few decades, water shortages along both sides of the border have been exacerbated by growing populations, extensive industrialization, inadequate infrastructure, and prolonged periods of drought. During the 1990s, south Texas water users saw a considerable reduction in available water supplies from the River due particularly to Mexico's inability to fully meet its water delivery obligations under the 1944 Treaty. Beginning in 1992, Mexico claimed that "extraordinary drought" prevented it from making its annual treaty payments of at least 350,000 AF of water. By 1995, northern Mexico was reportedly so water-depleted that it declared five northern states a disaster area and requested a "water loan" from the Rio Grande water reserves of the United States. After much negotiation, the IBWC issued Minute 293, which provided a U.S. loan of 81,000 AF of water to help serve municipal water shortages in Mexican communities downstream of Amistad dam.[6] By 1997—the end of the 1992-1997 five-year water cycle—it was estimated that Mexico owed 1 MAF of water to the United States.[7]

As Mexico's water debt continued to increase, tensions between the United States (Texas, in particular) and Mexico also escalated. After some significant deliveries were made during the 1999-2000 water year, the IBWC issued Minute 307 in March 2001, which required Mexico to repay 600,000 AF by July 31, 2001, with an extension through September 2001.[8] This 600,000 AF was to come from Mexico's "50/50 water," the U.S.'s one-third share of Mexico's six measured tributaries, and an additional release from a reservoir on Mexico's Rio Saldo. Mexico reportedly repaid only 348,000 AF by the September deadline imposed by Minute 307.[9] Mexican officials attributed its noncompliance to local and internal political conflict, particularly with the State of Chihuahua,[10] and the drought. Lawsuits filed by Mexican farmers in August 2001 over the use of Mexico's "50/50 water" further complicated the matter by postponing potential Mexican deliveries.[11] These legal issues were finally resolved by February of 2002; Mexico, however, had only delivered 427,608 AF of the required 600,000 AF for the 2000-2001 water year.[12] After less than expected water was received by the United States

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[6] IBWC Minute 293, Oct. 4, 1995.

[7] Travis Phillips, *Behind the U.S.– Mexico Water Treaty Dispute*, Interim News, Texas House of Representatives, No. 77-7 at 2 (Apr. 30, 2002).

[8] IBWC, Minute 307, Mar. 16, 2001.

[9] Phillips, *supra* note 7, at 5.

[10] The Governor of Chihuahua, for example, developed a pipeline to divert water from a Rio Grande tributary to northern factories and blamed NAFTA for the water scarcity. *See* Steven G. Ingram, *In a Twenty–First Century "Minute,"* 44 NAT. RESOURCES J. 163, 178-80 (Winter 2004).

[11] Bob Richter, *Mexican Ruling on Water Debt a "Nightmare" for Valley*, SAN ANTONIO EXPRESS-NEWS, Aug. 14, 2001, at A8.

[12] Carlos Marin, *Bi-National Border Water Supply Issues from the Perspective of the IBWC*, 11 (continued...)

during the 2001-2002 water year, the IBWC enacted Minute 308, which required Mexico to make an immediate 90,000 AF transfer of water from the international reservoirs to the United States.[13] Still, by the end of the 1997-2002 five-year water cycle, Mexico's water debt had grown another 477,828 AF, and ultimately to a total deficit of approximately 1.5 MAF.[14]

Recent Developments

The repayment of Mexico's water debt and the application of Minute 234 have been the subjects of longstanding negotiations between the United States and Mexico. Central to the issues being discussed is a claim by Mexico that in the event of extraordinary drought, only the deficit incurred during the 1992-1997 five-year water cycle needed to be repaid in the following five-year water cycle (by 2002) and any deficit incurred during the 1997-2002 five-year cycle could be deferred until the end of the next five-year cycle (2007).[15] The United States, on the other hand, argues that Minute 234 requires that the water debt incurred during the 1997-2002 five-year cycle be made up concurrently with the previous 1992-1997 water debt. The matter was left unresolved at the end of 2002. Nonetheless, negotiations continued and Mexico started to deliver more water, including a 910,491 AF delivery during the 2003-2004 water delivery year.[16] As of February 2005, Mexico owed the United States roughly 730,700 AF of water.[17]

The increases notwithstanding, in August 2004, farmers and irrigation districts in south Texas gave notice that they intended to submit to arbitration a claim for damages under Chapter 11 of the North American Free Trade Agreement (NAFTA).[18] Among other things, the potential plaintiffs claim that beginning in 1992, Mexico manipulated the flows of the six Mexican tributaries to the Rio Grande so as to divert their natural flows, one-third of which is allotted to the United States under the 1944 Treaty. The potential claimants, as well as state officials, have pointed to a number of studies that show increased agricultural production in Chihuahua and satellite imagery of Mexico's water reserves during the period of claimed extraordinary drought (Mexico also has images of U.S. reserves) as evidence of Mexico's ability to make required water deliveries.[19]

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[12] (...continued)
U.S.-MEX. L.J. 35, 37 (Spring 2003).

[13] IBWC Minute 308, June 28, 2002.

[14] Texas Commission on Environmental Quality, Legal Status of the 1944 Utilization of Waters Treaty Between the United States of America and Mexico (Oct. 30, 2002).

[15] Phillips, *supra* note 7, at 2; Marin, *supra* note 12, at 36.

[16] U.S. State Department, IBWC Briefing Paper (May 2004); Email to author from Sally Spener, IBWC Public Affairs Specialist (March 8, 2005).

[17] Email to author from Sally Spener, IBWC Public Affairs Specialist (Feb. 17, 2005).

[18] Notice of Intent to Submit a Claim to Arbitration under Section B, Ch. 11 of the North American Free Trade Agreement, at 7 (Aug. 27, 2004) *available* at [http://www.naftalaw.org/].

[19] *Id*; Ingram, *supra* note 10, at 176; Susan Combs, *The Mexico Water Debt*, Texas Bar Journal, Vol. 67, No. 3, pp. 198-201, 201 (Mar. 2004).

On March 10, 2005, the United States and Mexico reached an understanding to eliminate Mexico's Rio Grande water debt. Under the agreement, Mexico is to provide sufficient water from its portions of the international reservoirs to cover the outstanding deficit as of October 1, 2005 (approx. 716,670 AF), no later than September 30, 2005.[20] Included within these transfers and calculations, is a credit to Mexico of up to 149,980 AF for excess water diverted from Anzalduas Reservoir (a reservoir not included in the 1944 Treaty) or other alternative sources and a credit of 156,998 AF for water that would have apparently been lost to conveyance and evaporation during the normal water accounting process.[21] The repaid water is to be in addition to the minimum annual average deliveries of 350,000 AF required under the Treaty. The IBWC also intends to aid Mexico in developing water delivery plans for each cycle year and to work cooperatively on drought management strategies for the Rio Grande basin. It is unclear how this agreement may affect the potential NAFTA claim or other matters possibly still in dispute, such as the application of Minute 234.

Impacts on the Border

While a number of factors have contributed to water shortages along the border, many observers say that Mexico's inability to fulfill its water obligations under the Treaty had severe consequences for South Texas. Limited water deliveries reportedly forced some farmers in the Rio Grande Valley to forego watering or to plant low-return dryland row crops in order to preserve irrigation water for high-return crops that require more water.[22] According to some sources, irrigated acreage in the Rio Grande Valley decreased by about 29%, or 103,210 acres, since 1992.[23] Some studies indicate that an AF of irrigation water is worth an average of $652 to the area's economy and estimate that Mexico's failure to repay its water debt caused over $1 billion in economic losses to south Texas.[24] The flowing fresh water of the Rio Grande is also a critical resource to the River's ecosystem, including more than 450 native species, some of which are endangered.

Congressional Response

Congress has responded to the growing water crisis in the Rio Grande Valley in a number of ways. In 2000, Congress passed the Lower Rio Grande Valley Water Resources Conservation and Improvement Act (P.L. 106-576) to improve basic water

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[20] Press Release, IBWC, USIBWC Commissioner Announces Resolution of Mexico's Rio Grande Water Debt (Mar. 10, 2005) available at [http://www.ibwc.state.gov/PAO/CURPRESS/2005/WaterDelFinalWeb.pdf]. An exchange of "diplomatic notes" is to later formalize and detail the agreement.

[21] Email to author from Sally Spener, IBWC Public Affairs Specialist (March 17, 2005); Some feel the agreement, particularly the "credit" for conveyance and evaporation, still shortchange Texas. *See* Marc B. Geller, Mexico Pledges Payment, THE MCALLEN MONITOR, March 11, 2005, *available* at [http://www.themonitor.com/SiteProcessor.cfm?Template=/GlobalTemplates/Details.cfm&StoryID=6117&Section=Local].

[22] Phillips, *supra* note 7, at 4.

[23] Notice of Intent to Submit a Claim to Arbitration, *supra* note 18, at 7.

[24] Phillips, *supra* note 7, at 3; Combs, *supra* note 19, at 201.

management, conservation, and efficiency in the area.[25] Additional water management projects for the Valley were authorized in 2002 (P.L. 107-351). Additionally in 2002, Congress directed, in the conference report for agricultural appropriations, the United States Department of Agriculture (USDA) to report on the economic loss to agricultural producers resulting from the water debt and on USDA's authority and plans to assist Valley farmers (H.R. Conf. Rep. 107-275). Congress also passed appropriations language in 2002 (P.L. 107-206, §102) and 2003 (P.L. 108-7, Div. N, §209) that provided block grants of $10 million to the state of Texas to provide assistance to agricultural producers who suffered economic losses during the 2001 and 2002 crop years, respectively, as a result of Mexico's failure to deliver water. In the 109th Congress, H.R. 386 and S. 519, would again authorize additional water management, conservation, and efficiency projects in this region. H.R. 1319, among other things, would direct the IBWC to develop a long-range strategic plan for water supply use and distribution in the U.S.–Mexico border. The federally funded North American Development Bank also helps finance water supply projects along this border region.

Reevaluating the Binational Framework

Many on both sides of the border view the 1944 Treaty as outdated and are concerned with what they perceive are inherent limitations in its application. Some stakeholders argue that the Treaty should be modified to reflect current realities in the border region, such as increases in urbanization and industrialization, prolonged periods of drought, and environmental issues.[26] There also appears to be wide agreement that the term "extraordinary drought" needs to be clearly defined. It has been suggested that the clarification of this term should be incorporated into a prospective, long-term drought management strategy that considers, among other things, the environment, groundwater, reprioritizing water allocations, and contingency repayment plans.[27] Many have also stated that the structure and role of the IBWC—a role traditionally rooted in the protection of national sovereign interests—should be reevaluated to reflect the growing need for cooperation and assign a stronger commitment to forming policy on the River's sustainable development.[28] Some of these concerns seem to have been addressed by the most recent agreement reached by the two countries and could be the subject of future Minutes. Still, some claim that this agreement may not have done enough and that Minutes often go unobserved.[29]

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[25] Types of projects may include the construction of pipelines, the development of more advanced water control facilities, and the lining of canals. Some research indicates that modernizing the Valley's antiquated irrigation system could increase efficiency by reducing the estimated 25 percent of water lost to evaporation and poor infrastructure. *See* Phillips, *supra* note 7, at 6.

[26] Ingram, *supra* note 10, at 180-85.

[27] Stephen P. Mumme, Managing Acute Water Scarcity on the U.S.– Border: Institutional Issues Raised by the 1990's Drought, 39 NAT. RESOURCES J. 149, 161 (Winter 1999). Minutes 307 and 308, notably, did call on both nations to develop a framework to address future drought related emergencies.

[28] Ingram, *supra* note 10, at 173, 181-191; Mumme, *supra* note 27, at 161-164.

[29] Combs, *supra* note 19, at 199 and 201; Geller, *supra* note 21.