Mexico Water Delivery Deficits on The Rio Grande Under The 1944 Treaty

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In the late 1800's, irrigation development in Colorado caused greater use of Rio Grande water in the Upper Reaches of the Rio Grande which impacted available water supplies downstream in Mexico, New Mexico and Texas. This prompted governmental efforts to provide for the needs of Mexico, Colorado, New Mexico and Texas at the time, and resulted in the 1906 Convention, the construction of Elephant Butte Dam, and an allocation of 60,000 acre feet per annum to Mexico. Floods and development in the Lower Reach of the Rio Grande in Texas and Mexico in the early 1900's and the need for allocation of the Colorado River between the two Countries in the western part of the United States and in Mexico resulted in the 1944 Treaty, which divided the waters in the Colorado River in the west and the Rio Grande in Texas.

The Rio Grande is a unique River. It not only flows through 3 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 reaches the Gulf of Mexico.

It's a River that has been divided by politics and the needs of the time into two segments. I will refer to the *Upper Reach* as 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, Texas, through miles of desert, mountains and semi-tropical areas in the Lower Rio Grande Valley to the Gulf of Mexico.

The water in the Upper Reach is all from tributary sources in the United States. Flows in the Lower Reach were historically mixed waters composed of U.S. flows from the Upper Reach mixed with water from several Mexican tributaries and the Texas tributaries, mainly the Pecos and Devil=s River. Now, after the 1906 Convention and Rio Grande Compact in the 1930's between Colorado, New Mexico, and Texas, the majority of the flows in the Lower Reach derive from Mexico.

The 1944 Treaty has many unique features, particularly how it divides available water during an extraordinary drought. On the Colorado River in the western States the 1944 Treaty, and the 1906 Convention provides a specific annual allocation of 1,500,000 acre feet and 60,000 acre feet to Mexico. In drought periods water is allocated on a *pro-rata basis* between the two Countries. In contrast, on the Rio Grande the 1944 Treaty provides a different approach. It requires Mexico to deliver an average minimum of 350,000 acre feet per annum during five year cycles to the Rio Grande for the United States. *During a year in a cycle when insufficient run-off waters in the watershed in Mexico prevents this guaranteed flow, the deficiency is to be made up during the other years of the five year cycle. If there are insufficient run-off during the entire*

five year cycle, then the deficit is to be made up during the following five year cycle. Obviously, this requirement was founded on existing natural facts where on the Colorado River the flows emanate from the United States in contrast to the Rio Grande below Fort Quitman, Texas, where the majority of water comes from certain named tributaries in Mexico.

The International Boundary and Water Commission (IBWC) which includes the U. S. Section and Mexico Section, is charged and entrusted with implementation and *enforcement* of the 1944 Treaty.

The 1944 Treaty was successful on the Rio Grande for about 50 years, including a state-wide drought in the 1950's. The Treaty was not successful during the drought on the Lower Rio Grande in cycles 1992-1997 and 1997-2002 when a violation of the 1944 Treaty occurred due to Mexico's failure to provide flows of the named tributaries in accordance with the provisions of the Treaty. A water debt of about 1.5 million acre feet was created which was not covered in the following cycle ending in 2002. This deficit brought forth many challenges for resolution. It was finally paid over a period of years in exchange for an agreement that Mexico would implement water policies to prevent water delivery deficits in the future.

The current 5-year cycle began on October 25, 2010, and ends on October 25, 2015. Currently, as of this writing in the third year of the 5-year cycle, Mexico is behind in its deliveries about 480,000 acre feet.

The lack of Mexico's water deliveries to the Lower Rio Grande in Texas significantly impacts the region's irrigated agriculture of over 500,000 acres with a population of about 1.5 million who depend upon the Rio Grande for water supply. In 2010, the combined population of the Lower Rio Grande Valley was 1.23 million composed of population in Cameron and Hidalgo Counties which, by the year 2060 will be over 2.9 million. Webb County (Laredo, Texas) had over 250,000 population in 2010 with a projected population of over 725,000 in 2060 and Maverick County (Eagle Pass area) now over 58,000 to near 100,000 in 2060. A total growth to **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).

This population growth and agricultural needs is causing more pressure for Mexico's compliance with the 1944 Treaty. A recent report by Texas A & M AgriLife Extension Service reveals that the deficit in deliveries by Mexico and the lack of irrigation water during one year or one full season of production, results in $229.2 million in crop revenue loss, which will contribute 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 (*Economic Impact Estimate of Irrigation Water Shortages on the Lower Rio Grande Valley Agriculture*, Luis Ribera and Dean McCorkle, Texas A & M AgriLife Extension Service, 2013)

Mexico has failed in each of the three years in this cycle to meet the minimum treaty obligation of 350,000 acre-feet per year on average. In year one, Mexico delivered 82% of the required minimum, in year two 29% of the required minimum. This year approximately 17% of the required minimum, or about 62,000 acre feet has been delivered. Comparatively, if Mexico was treated the same way on the Colorado River, our delivery for year 3 of the cycle on the Colorado River should be closer to *255,000 acre-feet*, not the *1,500,000 acre feet* Mexico is guaranteed.

Contrast this with the United States' efforts on numerous occasions, through the IBWC to assist and benefit Mexico. These actions are based upon a good neighbor policy. Recently, the United States stored Mexican water in Lake Mead after the 2010 earthquake. In order to provide this storage, the IBWC enacted various Minutes Orders (which are agreements between the U. S. State Department and Foreign Ministry of Mexico, without congressional approval, designed to implement the Treaty). This includes the recent Minute Order 319, which required extensive action by the member states of the Colorado River Compact and the Federal Bureau of Reclamation, and a request by Mexico for early water delivery in 2012 under the 1906 Convention for crop insurance purposes. The IBWC quickly granted this request, without a minute order, requiring Texas water users in the El Paso, Texas, area to scramble to implement alternative water use strategies. This action cost U. S.'s water users a large amount of water due to water loss. Over a dozen IBWC Minutes have been signed, including Minute 310 in 2003, to allow for emergency delivery of Colorado River water for use in Tijuana. Obviously, there appears a need for reciprocity on treatment of United States needs on the Rio Grande.

The principal challenges now are to provide new policies and programs in Mexico so that the crisis of enforcement of a violation of the 1944 Treaty will not occur in the future. Experience gained by the IBWC in both Countries in the implementation of the previous international agreements and lessons learned should be beneficial. The present challenges test the integrity of the Treaty. They should be resolved in order to restore enforcement and the integrity of the Treaty so that the Rio Grande can be managed in the future to better serve those in both Countries who rely on its waters.

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