US-MEXICO COOPERATION ON RIO GRANDE WATER SUPPLY: MINUTE NO. 325 AND MEXICO’S RIO GRANDE WATER DELIVERIES TO THE UNITED STATES

Sally Spener, U.S. Secretary
International Boundary and Water Commission
March 24, 2022
Covers Rio Grande from Ft. Quitman to the Gulf

Mexico delivers water to US from 6 tributaries

US receives 1/3 of flow arriving in the Rio Grande from the 6 tributaries

1/3 shall not be less, as an average amount in cycles of 5 years, than 350,000 acre-feet annually (1.75 maf in 5 yrs.)
Mexican tributaries allotted 1/3 to US, 2/3 to Mx:
- Conchos, Arroyo las Vacas, San Rodrigo, Escondido, Salado, San Diego

Mexican tributaries allotted 100% to Mx
- Alamo, San Juan

All major US tributaries allotted 100% to US

Historically 70% of water originates in Mexico but 50% allotted to US
Waters for both countries are stored at the 2 international reservoirs

- Falcon Dam near Falcon Hts, TX – Nva. Cd. Guerrero, Tamaulipas
- Amistad Dam near Del Rio, TX - Cd. Acuña, Coahuila

Official data on national ownership:
www.ibwc.gov/wad/storage.htm
If a 5-year cycle ends in deficit, Mexico repays in next cycle.

Cannot end 2 consecutive cycles in debt.

2010-2015 cycle’s debt of 263,250 af was paid in early 2016.

Rio Grande near Brownsville.
“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 6 tributaries
b. Deliver to US some of Mexico’s share of water from 6 tributaries
c. Transfer of Mx water at the international reservoirs
Mexican Actions Jan. – Sept. 2020

- Releases from V. Carranza Dam (Salado River)
- Releases from Madero and Luis Leon Dams (Conchos River)
- Increased share to US starting 5/28/20:
  - 100% of Conchos River flows
  - 2/3 of other tributaries
- 100% of all Mx tributary flow to US starting 9/1/20
- Small transfers at Falcon and Amistad
MINUTE 325

- Signed 10/21/20
- Binding US-Mexico agreement
- Transfer of Mexican water to US at Amistad and Falcon Reservoirs at end of cycle
- Assures cycle ends with no debt
Potential temporary use of U.S. water to meet Mexico’s drinking water needs; this provision is no longer applicable

Enhanced data exchange

Affirms 2 back-to-back cycles cannot end in debt
MINUTE 325

- Establishes technical and policy work groups to develop tools to improve predictability and reliability of Rio Grande deliveries
- Sets expectation of a new Minute by December 2023 to adopt work group recommendations

Data from IBWC gaging stations is being reviewed by Rio Grande Hydrology Work Group
2015-2020 CYCLE

◆ Annual Deliveries

► Year 1: 219,077 af (+263,250 af for previous cycle’s debt)
► Year 2: 567,238 af
► Year 3: 235,097 af
► Year 4: 218,097 af
► Year 5: 510,494 af

◆ Cycle Total: 1,750,003 af

Rio Grande water sampling at Presidio, TX
- Rio Grande Hydrology Work Group meets ~monthly
- Developing a model so we can test different management/delivery scenarios
- Rio Grande Policy Work Group meets 2-3 times per yr.
3 Priority US Scenarios

Naturalized Flow Concept: US to receive same percentage of naturalized flow as it did prior to water concession adjustments in Mexico.

Rio Grande at Johnson Ranch Gaging Station
Allow use of Min. 234 sources when a shortfall exists during a 5-year cycle, not just after a cycle concludes in deficit.

- 1/3 US share of the 6 tributaries
- A portion of Mexico’s 2/3 share
- Transfer of national ownership at the international reservoirs

Mexico could transfer water to the US at Amistad Dam
Model upstream Mexican reservoirs on the 6 tributaries to pass inflows when U.S. storage is below critical thresholds and a shortfall exists during a 5-year cycle

- Mexico has not yet presented its priority scenarios
- Scenarios will be analyzed considering impacts in both countries
2020 – 2025 CYCLE

Rio Grande River Basin
Estimated Volumes Allotted to the United States by Mexico from Six Named Mexican Tributaries and Other Accepted Sources under the 1944 Water Treaty
(October 25, 2020 thru March 12, 2022)

- 350,000 Acre-Feet Minimum Average Annual Commitment - Linear Target Delivery Rate
- U.S. Accumulated Five-Year Cycle Deliveries - 64,535 AF (80 MCM) as of March 12, 2022
- Minimum Annual Commitment with the Pattern of Historical Runoff (1953-2015)

Accumulated Volume (Acre-Feet)

Accumulated Volume (MCM)

Data Provisional after March 31, 2021

International Boundary & Water Commission - United States Section
2020 – 2025 CYCLE
RESERVOIR STATUS

Luis L. León
FCO I. Madero
San Gabriel
Falcon Dam
El Rejon
Chihuahua
Fco. I. Madero
La Boquilla
Pico del Aguila
San Gabriel
Pico del Aguila
San Miguel
La Fragua
V. Carranza
Falcon
Marte R. Gomez
El Cuchillo

SYMBOLOGY
RIO CONCHOS BASIN DAM
MIDDLE RIO GRANCE BASIN DAM
RIO SAN JUAN BASIN DAM
HYDROMETRIC STATIONS
RIO GRANDE HYDROMETRIC STATIONS

El Rejon
50.4%
3.3 MCM
2,696 AF

Chihuahua
50.6%
11.8 MCM
9,591 AF

Fco. I. Madero
60.8%
202.8 MCM
164,442 AF

La Boquilla
34.8%
991.6 MCM
803,872 AF

Pico del Aguila
78.4%
37.8 MCM
30,676 AF

San Miguel
78.3%
16.6 MCM
13,446 AF

La Fragua
28.7%
13.6 MCM
10,986 AF

V. Carranza
13.4%
116.7 MCM
94,649 AF

Falcon
17.1%
559.1 MCM
453,240 AF

Marte R. Gomez
81.4%
636.6 MCM
516,072 AF

El Cuchillo
51.9%
582.7 MCM
472,386 AF

3/18/22
Interest in projects to promote the long-term sustainability of the Rio Grande Basin

US and Mx are reviewing potential projects:

- Desalination of Morillo Drain water
  - Potential savings of 83,503 af/yr.
  - 2016 estimated cost $40M USD or $250 USD per acre-foot

- Brownsville-Matamoros Weir
  - Capture additional water that would otherwise flow to the Gulf
  - Capacity of 60,000 af
  - Mexico is interested if US considers alternate sites
WATER CONSERVATION AND NEW WATER SOURCES

Use of water from the San Juan River
- San Juan River reservoirs often have more storage than other Mexican reservoirs
- Could consider delivering water from the San Juan in a volume greater than that credited to the 5-year cycle

Falcon-Matamoros Aqueduct
- Mexican aqueduct to convey Matamoros supply from Falcon Dam
- Current use by Matamoros is 77,000 af but they release 255,000 af to get the water to the city
- Estimated cost of $295 million dollars
- Potential conservation of 178,000 af
Reuse of effluent from Mexican wastewater treatment plants

Raising the elevation of Boquilla, Luis L. Leon and Francisco I. Madero Dams on the Conchos River

- Reservoirs could store additional water for delivery to the US

Water conservation projects in Texas with funding appropriated to Reclamation under the Bipartisan Infrastructure Law

2008 Flood Releases at Madero Dam