



# Minute 323 Overview



# The Colorado River Delta

- Once this area was large stretch of willows, cottonwoods, waterways, and mesquite.
- In 1922 Aldo Leopold visited the area and described it in "The Green Lagoons" found in the Sand County Almanac
- He described the area as having "hundreds of green lagoons" with "awesome jungles" and a "verdant wall of mesquite and willow"



# United States-Mexico Treaty on Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande - 1944

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- Administered by the International Boundary and Water Commission
- State Department (Treaty) & Interior Department (Facilities Operations) share responsibilities
- Apportions 1.5 million acre-ft annually
  - No express provision re: “carryover storage”
- Addresses surpluses & reductions
  - Surplus – in excess of amounts necessary to satisfy U.S. and Mexican uses
  - Shortage – reduction due to “extraordinary drought”
    - (Note: term is not defined & U.S. has never delivered less than the 1.5 MAF under this limitation)



# Implementation of 1944 Treaty

- Areas of Conflict/Implementation addressed via “Minutes” adopted by the Commissioners of the IBWC & both U.S. and Mexican Governments
- Minutes Provide additional detail re: implementation
- Examples:
  - Delivery of Water to Tijuana – Mins. 240, 314
  - Addressing Salinity Concerns – Min. 242
  - Establishing work groups on Colorado River Delta Issues – Minute 306 (“Conceptual Minute”)



# U.S./Mexico Relations (1997 – present)

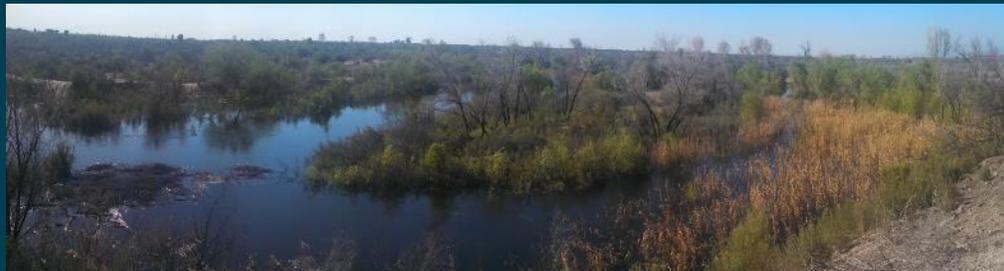
- **Litigation 1997, 2001, 2005**
  - **NGO Focus on the Colorado River Delta**
  - **US/MX tension on All-American Canal**
- **Post 2007 – Minute 316, 317 and 318**
  - **Dialogue**
  - **Humanitarian response**
  - **Cooperative Process**
- **2012 - Minute 319**
  - **Operational Agreements**
  - **Environmental Enhancement**
  - **Projects**
- **2017 – Minute 323: Extension of Cooperation**



# Mexico – U.S. Cooperative Process (2007-2018)

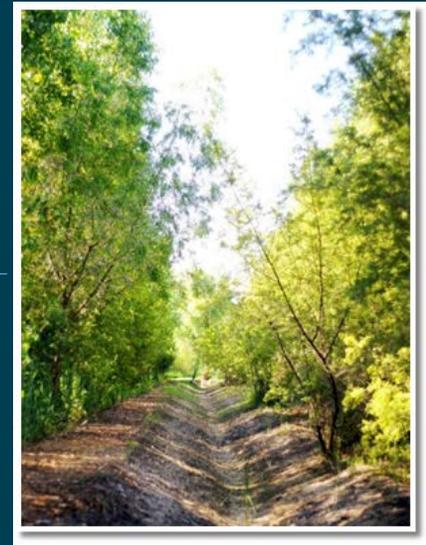
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- **Align Operational Rules in U.S. & Mexico**
- **Invest in Infrastructure Repair and Improvement**
- **Improve Riparian Habitat in Colorado River Delta**
- **Federal Governments, States, Water Agencies, NGOs**
- **Strengthen US-Mexico cooperation and creative thinking for a better transboundary basin management**



# Minute 323

- Entered into force on September 27, 2017; remains in effect through 2026
- Provides certainty for water operations in both countries by extending proactive, cooperative reservoir management strategies (e.g., surplus and shortage sharing, water storage in Lake Mead)
- Provides for investment by U.S. entities (Federal and non-Federal) in water infrastructure and environmental projects in Mexico



# Minute 323 Overview

## *Continued*

- Implements a Binational Water Scarcity Contingency Plan for additional actions to reduce the risk of reaching critical reservoir elevations at Lake Mead
- Environmental Flows to improve habitat in Colorado River Delta locations



Drought Conditions at Lake Mead



# Minute 323

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- Implementation is coordinated by:
  - International Boundary Water Commission (IBWC) (State Department – USA)
  - Comisión Internacional de Límites y Aguas (CILA)(Mexico)
  - US Bureau of Reclamation
- There are five work groups
  - Projects, Salinity, Flow Variability, Hydrology and....
  - We will focus on the Environmental Work Group for this presentation.



# Minute 323 other Groups involved

- ProNatura Noroeste
- Restauremos el Colorado
- Sonoran Institute
- Universidad Autónoma de Baja California
- USGS
- Audubon Society
- University of Arizona
- Nature Conservancy



# Environmental Work Group

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- The EWG is responsible for carrying out the environmental work of Minute 323 which includes:
  - Restoration of native habitat
  - Water deliveries to restored habitat
  - Monitoring of restoration sites (vegetation, wildlife)
  - Scientific analysis of restoration and monitoring



# Objectives of Scientific Research and Monitoring

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- Preserve and protect existing habitat
- Create and enhance additional habitat to support wildlife species diversity and promote additional recreational and economic opportunities for local communities in the Delta region.
- Effectively utilize water resources available under Minute 323 to support sustainable, functional ecosystems.
- Develop an integrated restoration approach to consider ecological, abiotic, and public interactions
- Incorporate ecological research and monitoring results into adaptive management decisions to ensure long-term restoration success.



- Reach 1 – There is flow in the channel no active restoration.
- Reach 2 – Dry in the channel and two active restoration sites.
- Reach 4 – Is where the groundwater is closest to the surface and the best conditions exist for restoration. This is where most of the active restoration sites are located.



# Minute 323 Restoration

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- Restoration under Minute 323 will focus on efficient use of water.
- Water will be delivered to existing and newly created restoration sites, directing water to where it can provide the greatest benefit.
- There is no flood pulse planned similar to what was done for Minute 319.



# Restoration as of 2018

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- Miguel Aleman restoration site :
  - Located in the Limitrophe (Reach 2)
  - Developed and managed by Pro Natura Noroeste
  - 248 acres (101 ha) restored including cottonwood-willow, mesquite, and upland habitat.
- Laguna Grande Complex
  - Located in Reach 4
  - Developed and managed by Sonoran Institute
  - 554 acres (224 ha) restored including cottonwood willow, mesquite, marsh, and open-water habitat.



# Restoration as of 2018

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- El Chausse restoration site:
  - Located in Reach 4
  - Developed and managed by Restauremos el Colorado
  - 155 acres (63 ha) including cottonwood-willow and mesquite.
- A total of 1,102 acres (446 ha) have been developed at various sites in the Colorado River Delta Region
- More habitat restoration will take place through 2023.



# Minute 323 Monitoring

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- Various types of system-wide and restoration site monitoring is taking place.
- On-the-ground vegetation monitoring
- Satellite imagery analysis of vegetation (NDVI)
- Bird point counts
- Marsh bird surveys
- Hydrologic conditions, water quality, and water delivery rates
- Recreation and community involvement



# Minute 323 Science Efforts

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- There will be attempts to analyze the monitoring data collected coming in 2020.
- Bird data from point counts will be analyzed using vegetation variables as environmental covariates.
- Other analysis will take place as more monitoring data is collected.



Questions  
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