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RECLAMATION

Binational Cooperation in the Colorado River Basin: United States and Mexico

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Lower Colorado Basin Region
September 14, 2021

What one word do you associate with the U.S./Mexico relationship on the Colorado River?

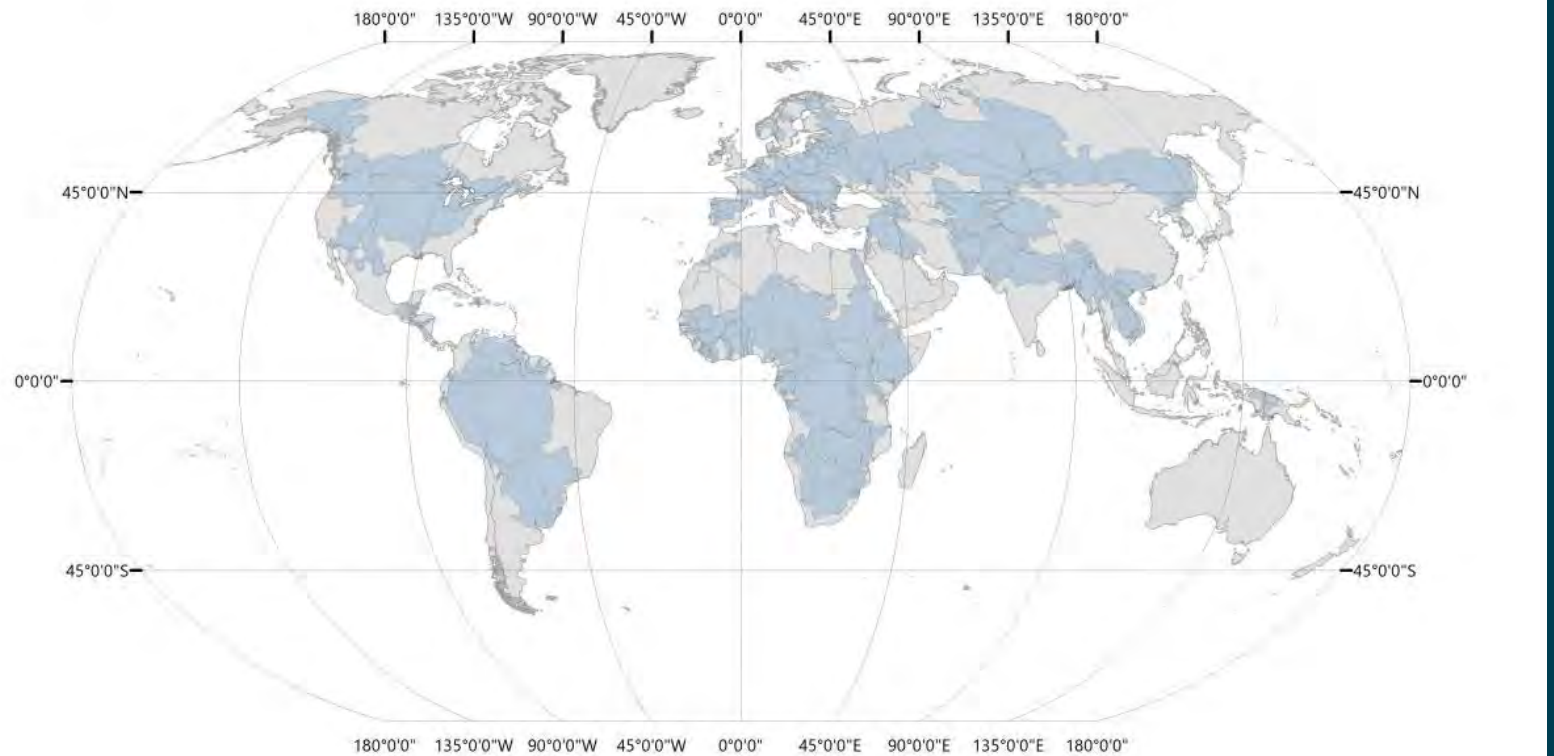


Presentation Outline

- International River Basins
- Background
 - Bureau of Reclamation
 - 1944 U.S. Mexico - Water Treaty
 - Cooperation on the Colorado River
 - Minute 323
- Ongoing Efforts
- Questions



International River Basins of the World



© 2018 Transboundary Freshwater Dispute Database
Oregon State University
Cartographer: Melissa McCracken
Robinson Projection



Product of the Transboundary Freshwater Dispute Database (TFDD), College of Earth, Ocean, and Atmospheric Sciences, Oregon State University. Additional information about the TFDD can be found at: <http://transboundarywaters.science.oregonstate.edu>. Date Accessed: September 10, 2021



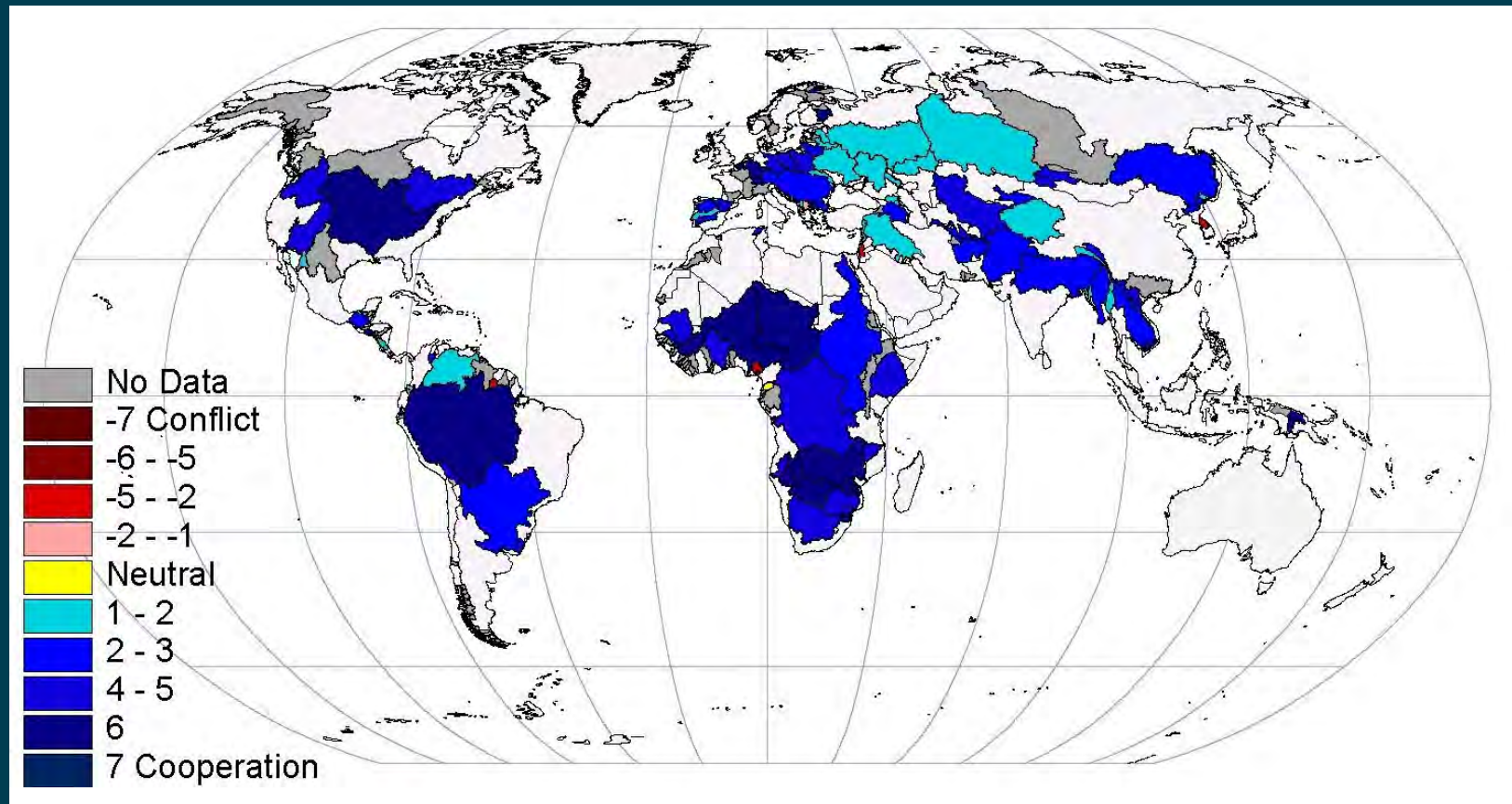
International River Basins of North America



Product of the Transboundary Freshwater Dispute Database (TFDD), College of Earth, Ocean, and Atmospheric Sciences, Oregon State University. Additional information about the TFDD can be found at: <http://transboundarywaters.science.oreg.onstate.edu>. Date Accessed: September 10, 2021



Historic Conflict and Cooperation Events 1948-1999 (average)

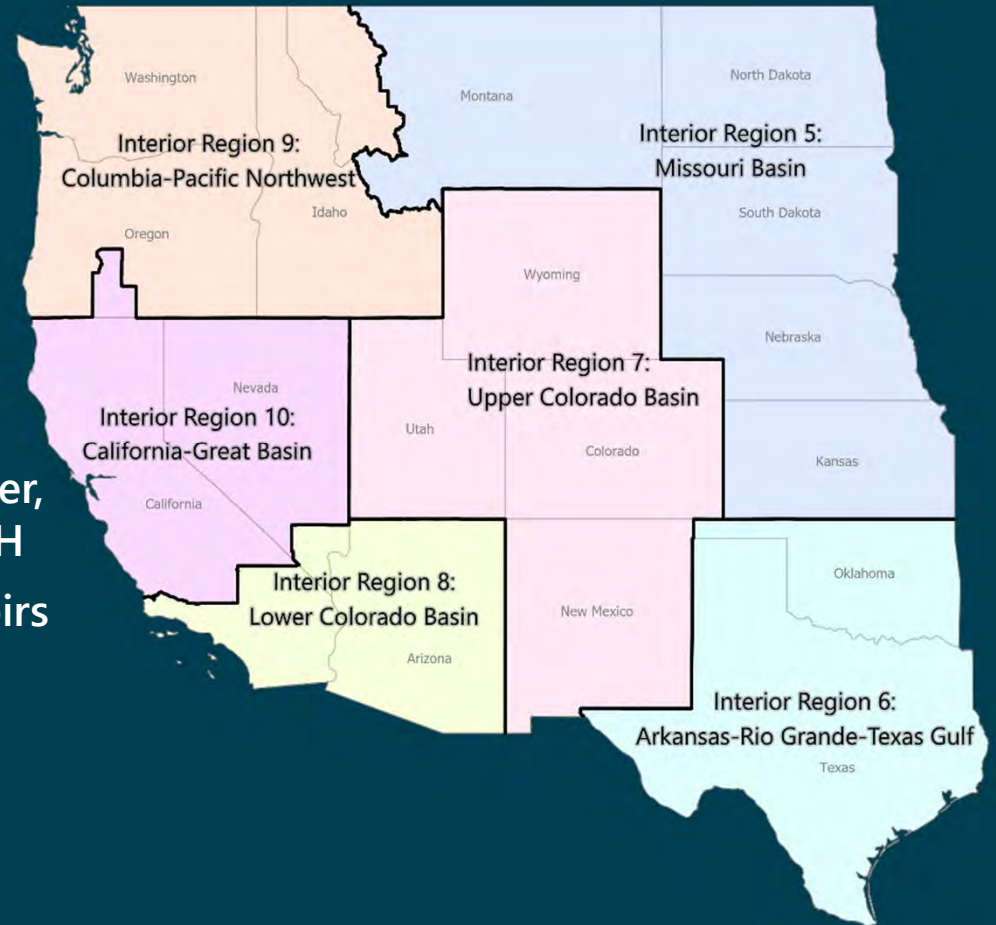


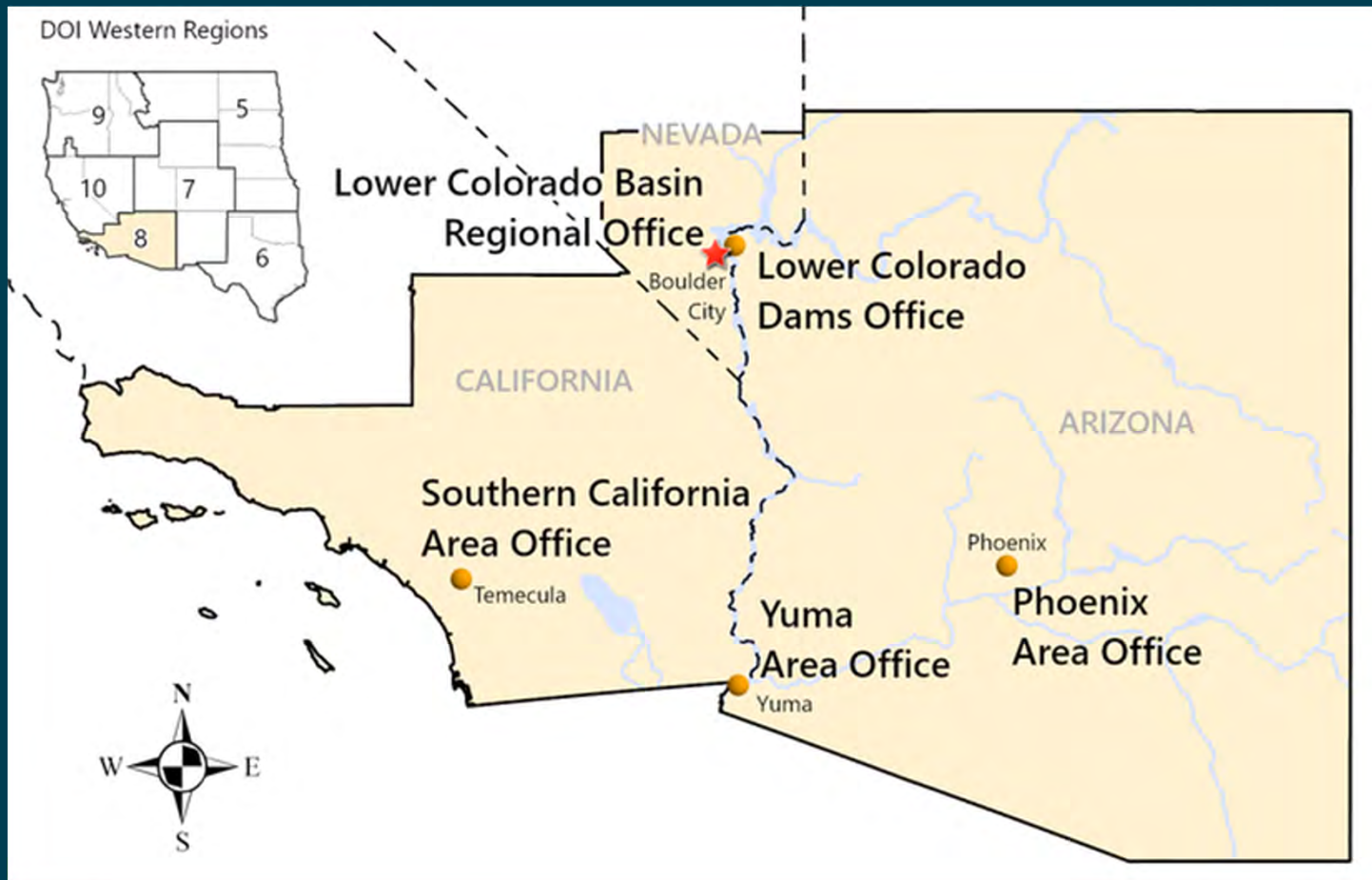
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Bureau of Reclamation

- U.S. Department of the Interior agency
- Established in 1902 in the 17 western United States
- Largest wholesaler of water in U.S.
- Provides water to irrigate 10 million acres of farmland, producing 60% of the nation's vegetables
- Second largest producer of hydroelectric power, with 53 powerplants producing 40 billion KWH
- Constructed more than 600 dams and reservoirs including Hoover Dam on the Colorado River
- Manages, with partners, 249 recreation sites that have 90 million visits annually





Binational Cooperation: National and International Collaborators

U.S. and Mexican Federal Agencies



U.S. and Mexican State Agencies



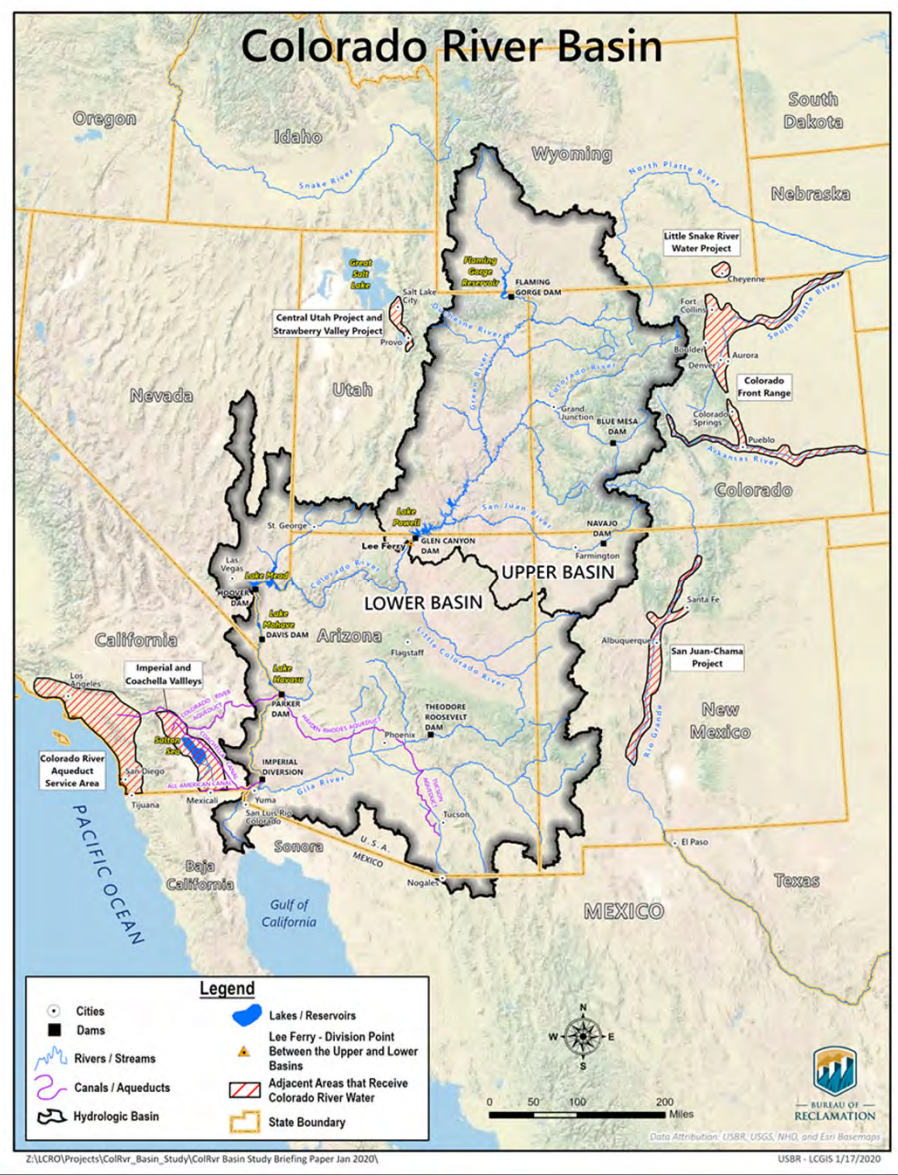
Universities and Non-Governmental Organizations



Water Districts



List will expand in the future to include additional collaborators as appropriate



1944 U.S. – Mexico Water Treaty

- Includes the Tijuana River, Colorado River, and Rio Grande
- Established the International Boundary and Water Commission, U.S. and Mexico (USIBWC and CILA)
 - Previously known as the International Boundary Commission (IBC)



Collaboration on the Colorado River Between the U.S. and Mexico

- 1944 U.S. – Mexico Water Treaty
 - 1.5 million acre-feet of Colorado River water for Mexico under normal operating conditions
- Minutes to the 1944 U.S. – Mexico Water Treaty
 - Implementing Agreements
 - Negotiation Process
 - Implementation Process
- Evolving Relationship between the U.S. and Mexico over time



Minute 323 Ceremony, Santa Fe, New Mexico, 2017

April 2010 – Mexicali Valley
Devastating Earthquake (7.2 magnitude)





A "Package Deal"
for a Minute

Operational
Rules

Water Conservation
and Infrastructure
Improvements

Environmental
Enhancement



Implementing Minute 323

- Aligns operations in both countries
- Invests in conservation projects in Mexico to conserve water for Mexico, the system, and environment
- Develops and enhances environmental restoration sites and monitors effects of environmental water deliveries
- Implements Binational Water Scarcity Contingency Plan



Environmental Enhancement



Response to Low Elevation Reservoir Conditions



Conservation Projects

Implementing Minute 323

- Minute Oversight Group
 - Policy level – includes Commissioners from USIBWC, CILA, and Reclamation and other policy level representatives from the Basin
- Work Groups
 - Include representatives from both U.S. and Mexico
 - Environmental, Salinity, Flow Variability, Hydrology, All-American Canal Turnout Project, Desalination, and Systems Operations



Binational Panel at the Colorado Water Users Association Conference, 2019



Work Group Highlights and Ongoing Efforts

- Projects
- Desalination
- Environmental



Minute 319 Canal Project, 2019
Photo: Amy Witherall, Bureau of Reclamation



Chausee delivery point, May 12, 2021
Photo: Martha Gomez Sapiens, University of Arizona



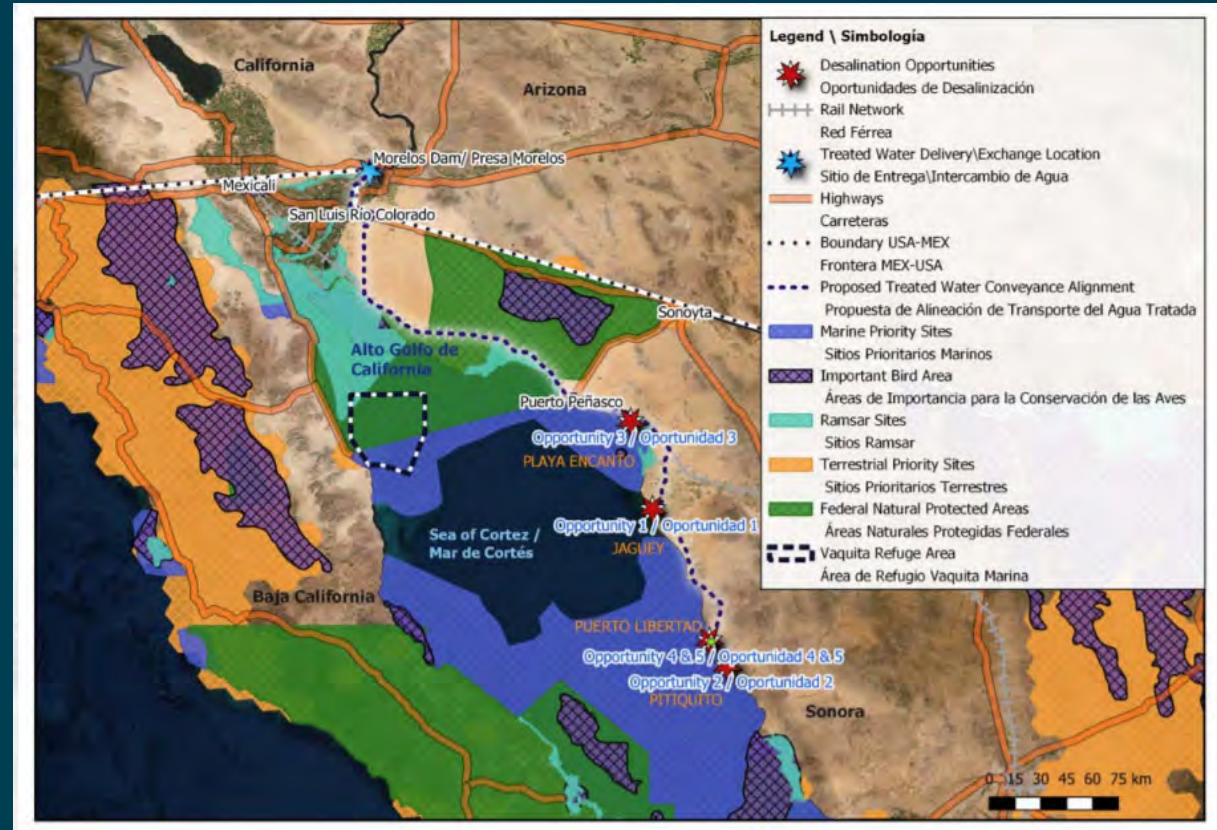
Projects Work Group



Minute 319 Projects, 2019
Photos: Amy Witherall, Bureau of Reclamation

Desalination Work Group

- Appraisal level study of desalination in the Sea of Cortez
- Found technically and economically feasible with more information needed on:
 - Rights of Way
 - Power Availability
 - Mechanism for Exchange
- Comparison with other New Water Sources Projects



Past WRRRC Presentation on Binational Desalination and link to Report:
<https://wrrc.arizona.edu/events/brown-bag/brown-bag-webinar-binational-seawater-desalination-study-sea-cortez-region>

Environmental Work Group

- Water Delivery, Monitoring and Environmental Enhancement Component
- Partnership between the U.S., Mexico, and a binational coalition of non-governmental organizations (NGOs)
- Binational Science Team

Map Source: *Minute 323 Environmental Work Group 2018 Implementation Report*, Microsoft Word - 2018 EWG implementation report FINAL.docx (ibwc.gov)





Restoration Sites



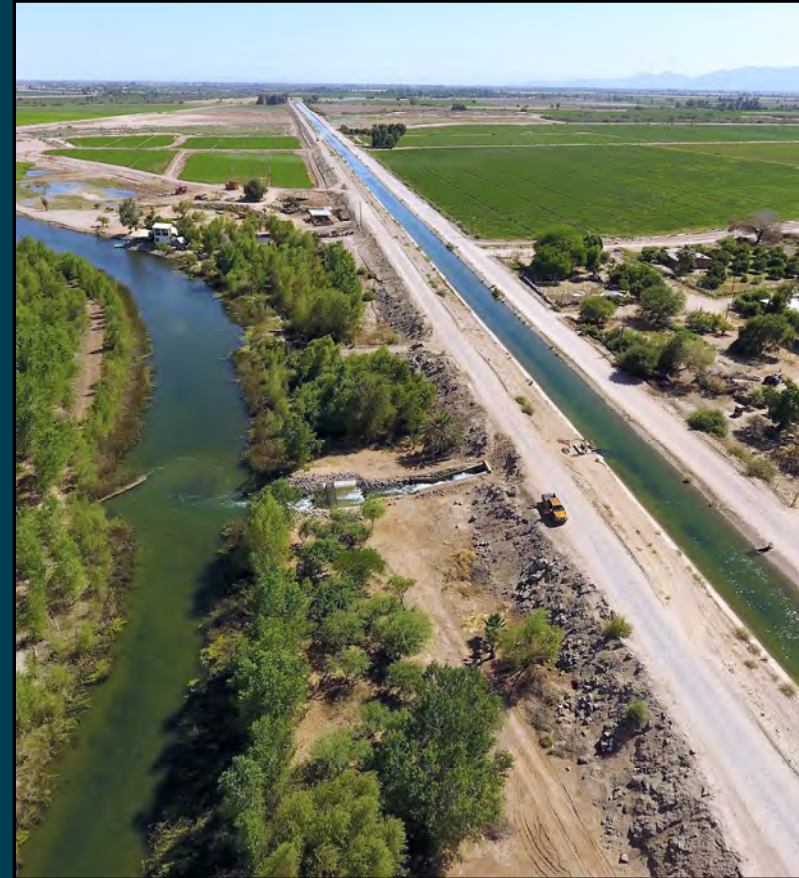
Federal Environmental Water Deliveries

- Scheduled water deliveries began May 1, 2021 and are scheduled through mid-October
- A total of 35,000 acre-feet (43 mcm)
- ½ of the U.S. share of water for the environment under Minute 323
 - Mexico and a binational coalition of NGOs have each also agreed to provide 70,000 acre-feet of water for the environment under Minute 323



Km 18 delivery point, May 11, 2021

Photo: Martha Gomez Sapiens, University of Arizona



Chause delivery point, May 12, 2021
Photo: Martha Gomez Sapiens, University of Arizona



Discharge Measurement Site (DMS)-10. September 7, 2021. Photo Credit: Eliana Rodríguez Burgueño, UABC



CILA (left), Cori (right). June 18, 2021. Photo Credit: Eliana Rodríguez Burgueño, UABC



DMS-11. May 21, 2021. Photo Credit: Eliana Rodríguez Burgueño, UABC



DMS-12. May 21, 2021. Photo Credit: Eliana Rodríguez Burgueño, UABC



Vado Carranza, July 24, 2021. Photo Credit: Arturo Lara Flores, Restaremos el Colorado



Vado Carranza, July 24, 2021. Photo Credit: Arturo Lara Flores, Restaremos el Colorado



DMS-L1. July 22, 2021. Photo Credit: Eliana Rodríguez Burgueño, UABC



Location of photo is approximated



Estuary. June 18, 2021. Photo Credit: Eliana Rodríguez Burgueño, UABC

Binational Cooperation - Key Takeaways

- Finding Flexibilities Within Existing Legal Framework
- Importance of Relationships
- Incremental Approach
- Turning Challenges into Opportunities



What one word do you associate with the U.S./Mexico relationship on the Colorado River?



Thank you! Questions?

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