

# Colorado River 101



From Indigenous Peoples' Early Uses to 2006

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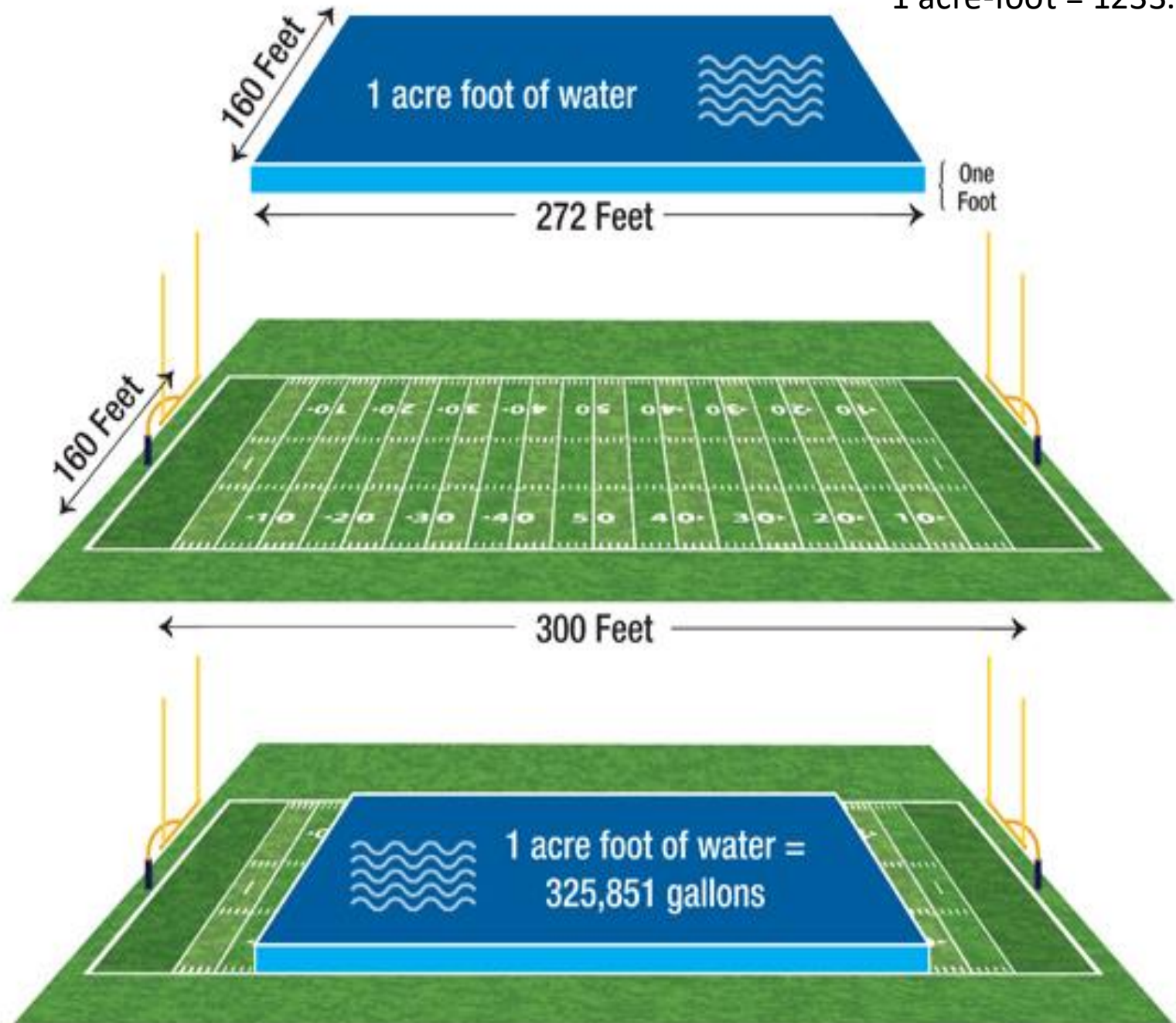
1983



2021



1 acre-foot = 1233.5 m<sup>3</sup>

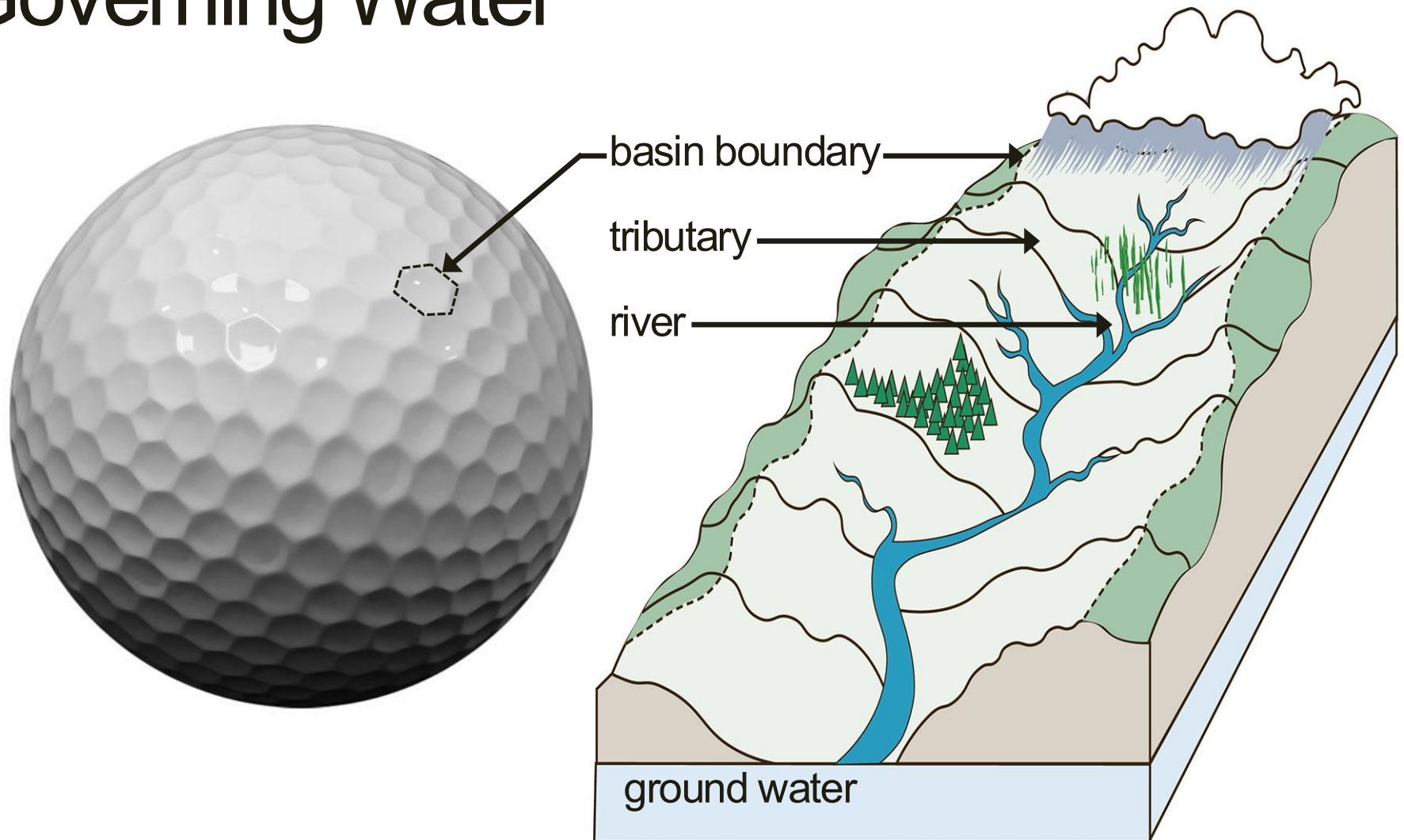


# The Indigenous Peoples of the Colorado River Basin



## Basins/Catchment/Watershed

# Governing Water





# The United Basins of America

John Wesley Powell's Vision





# Prior Appropriation

JUNIOR USER 1970 water right →

First-in-time, First-in-right  
Beneficial Use Without Waste  
Forfeiture – use it, or lose it  
Why? Mining & Homesteading

← SENIOR USER  
1910 water right

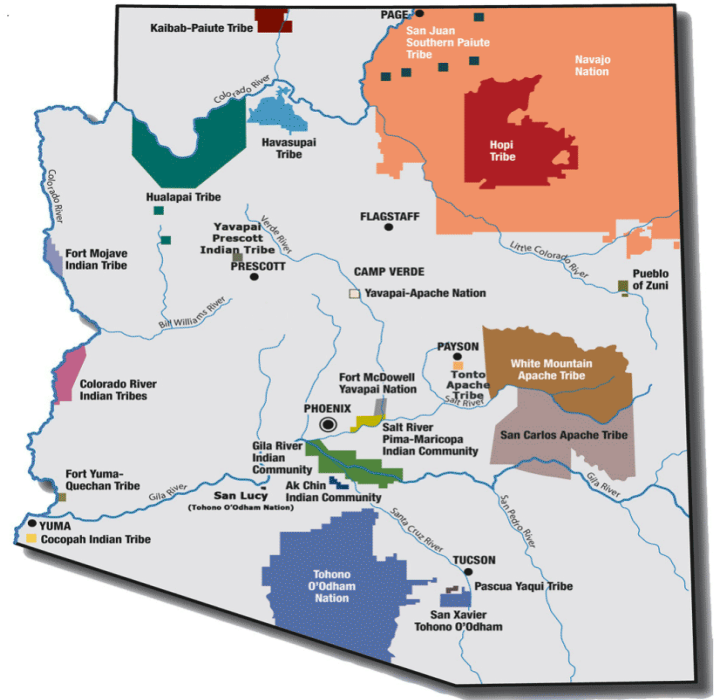
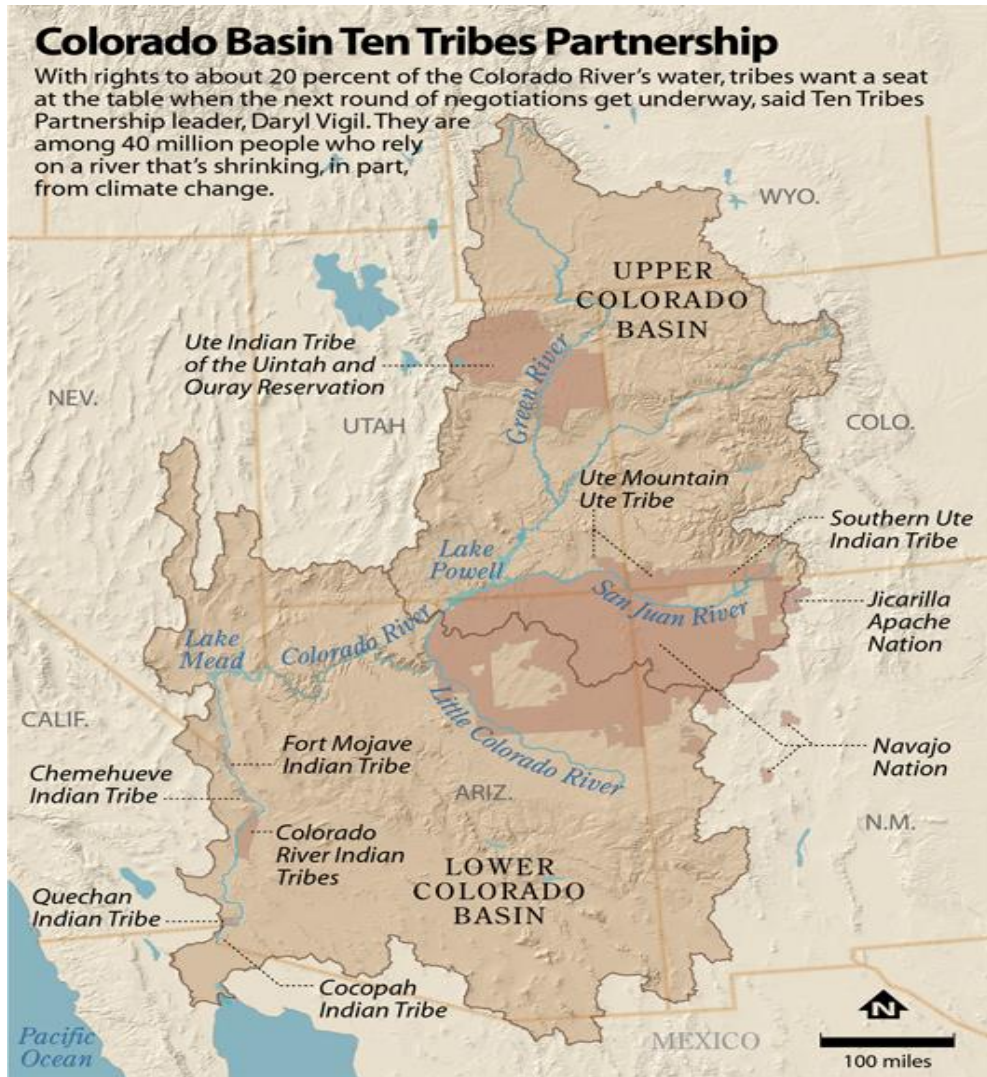


# Native American Tribes in Colorado River Basin

- The *Winters* Doctrine & Priority
- *Arizona v. California* & Practicably Irrigable Acreage
- General Stream Adjudications, the McCarran Amendment, & Tribal Water Rights Settlements

## Colorado Basin Ten Tribes Partnership

With rights to about 20 percent of the Colorado River's water, tribes want a seat at the table when the next round of negotiations get underway, said Ten Tribes Partnership leader, Daryl Vigil. They are among 40 million people who rely on a river that's shrinking, in part, from climate change.



## *Arizona v. California* Decreed Rights:

- Chemehuevi
- Cocopah
- Fort Yuma (Quechan)
- Colorado River Indian Tribes
- Fort Mohave Indian Tribes



# General Interstate Water Law

- Equitable Apportionment
  - U.S. Supreme Court Original Jurisdiction
  - State law is “guiding principle”, but Court considers multiple factors
- Congressional Apportionment
  - Risks of Hydro-Hegemons
- Compact Apportionment
  - Goldilocks Governance
- Dormant Commerce Clause





# Sharing the Colorado River in the U.S.

The Structural Deficit  
Climate Change  
Population Growth

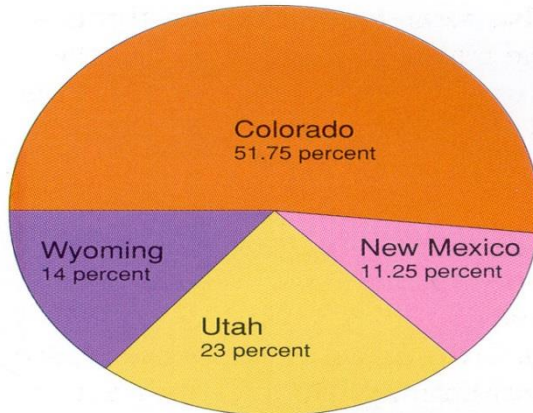
## The Law of the River

Colorado River Compact (1922)  
Boulder Canyon Project Act (1928)  
Upper Basin Compact (1944)  
Arizona v. California (1963)  
Colorado Basin Project Act (1968)  
Quantification Settlement Agreement (2003)

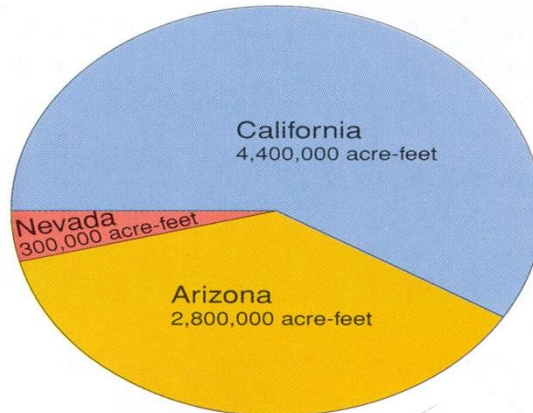




... ..



The upper basin states  
water division.



The lower basin states  
water division.

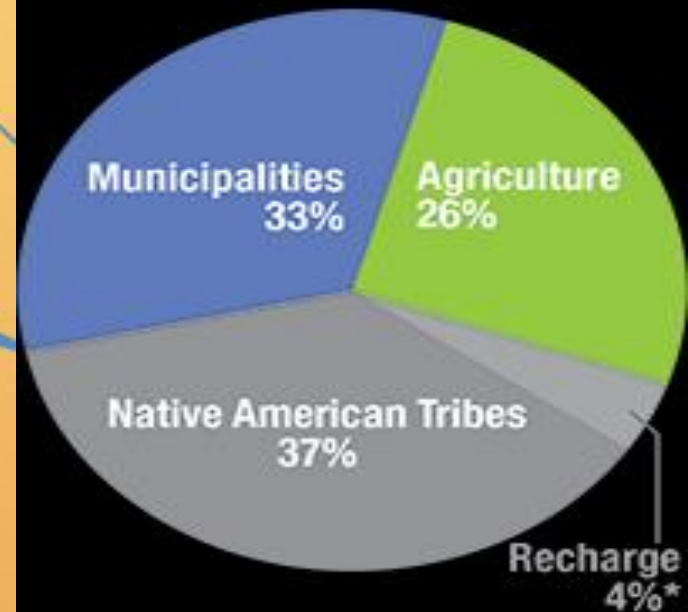






# CAP Water

Central Arizona Project Water is used for:



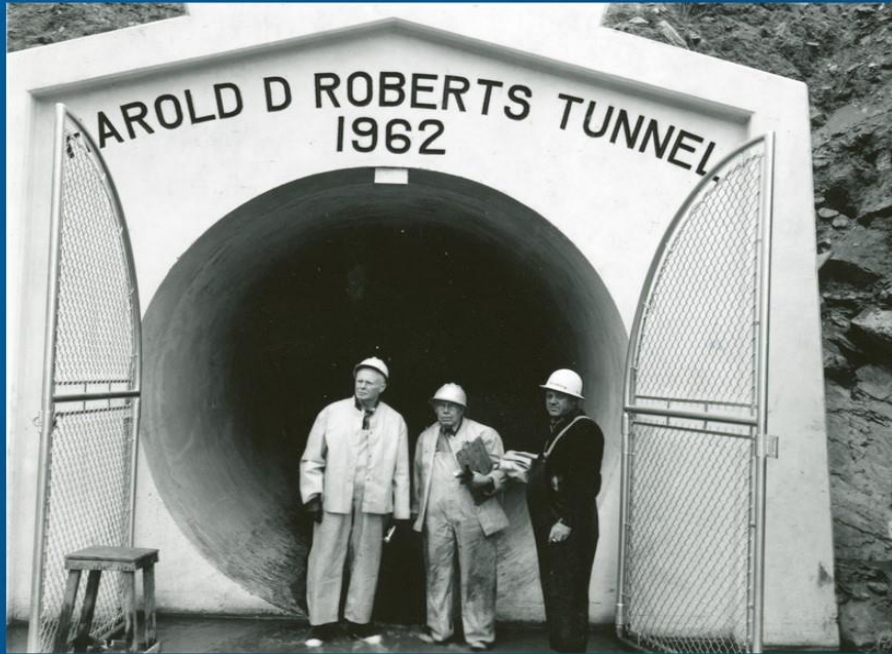
\*Recharge facilities store water underground via percolating into natural aquifer and stored for later use.

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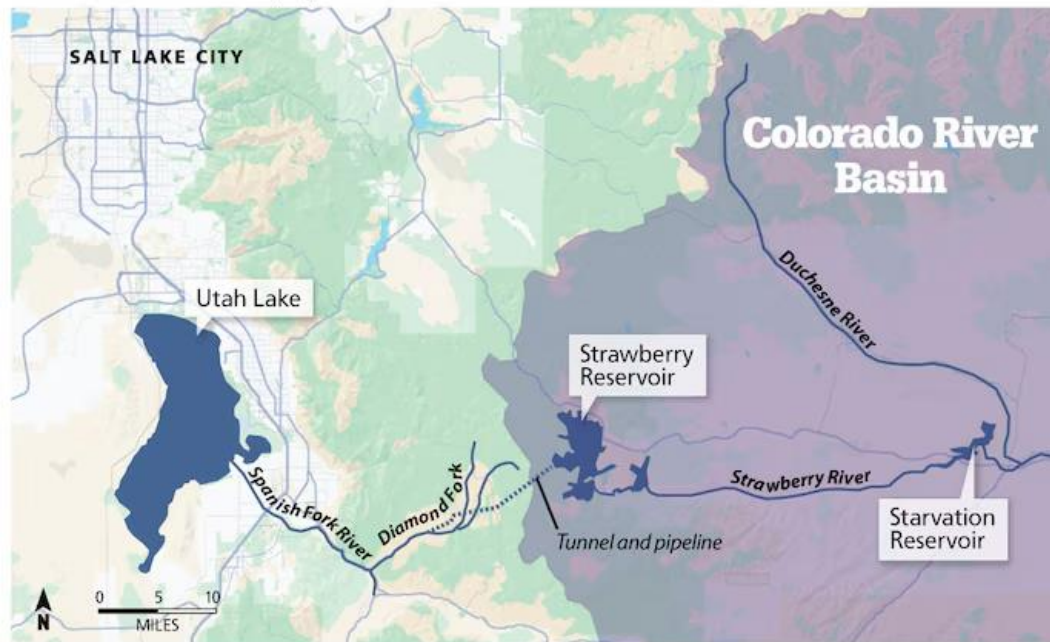
THE CENTRAL ARIZONA PROJECT AND  
CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT





## Central Utah Project

Part of the Central Utah project delivers water from the Colorado River Basin to the Wasatch Front.



Source: U.S. Department of the Interior, Google Maps

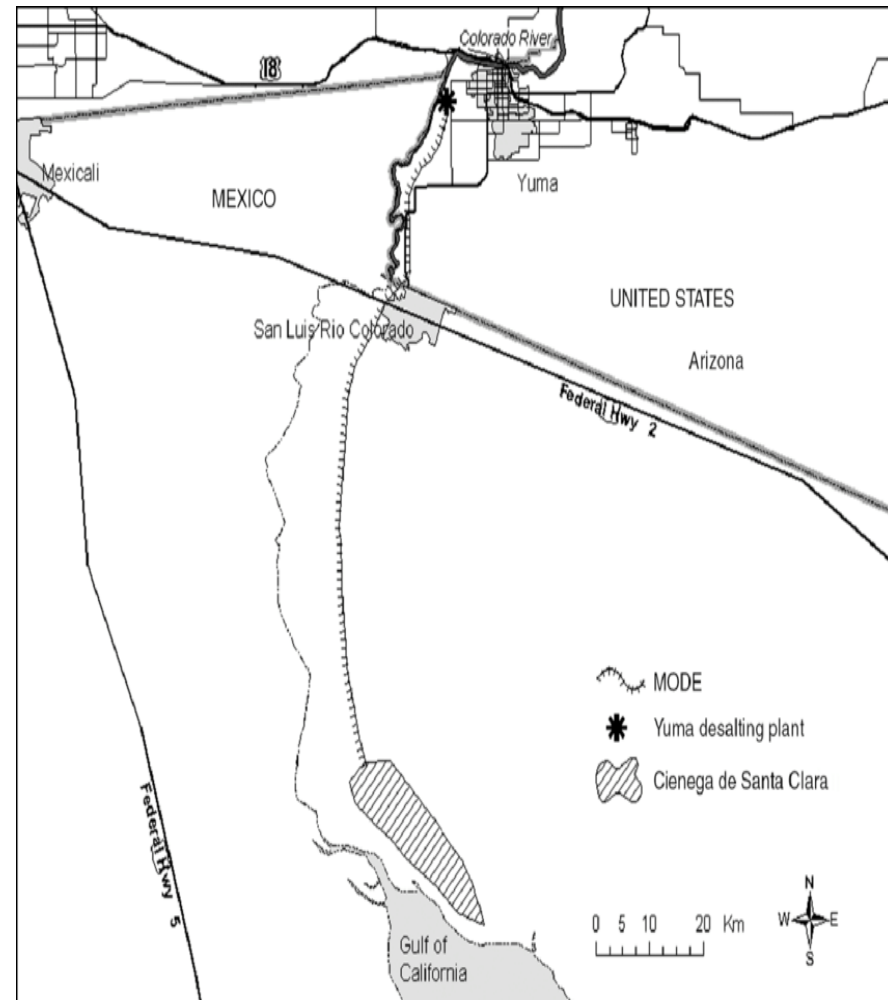
GRAPHIC BY CHRISTOPHER CHERRINGTON | The Salt Lake Tribune





# U.S.-Mexico Hydro-Diplomacy

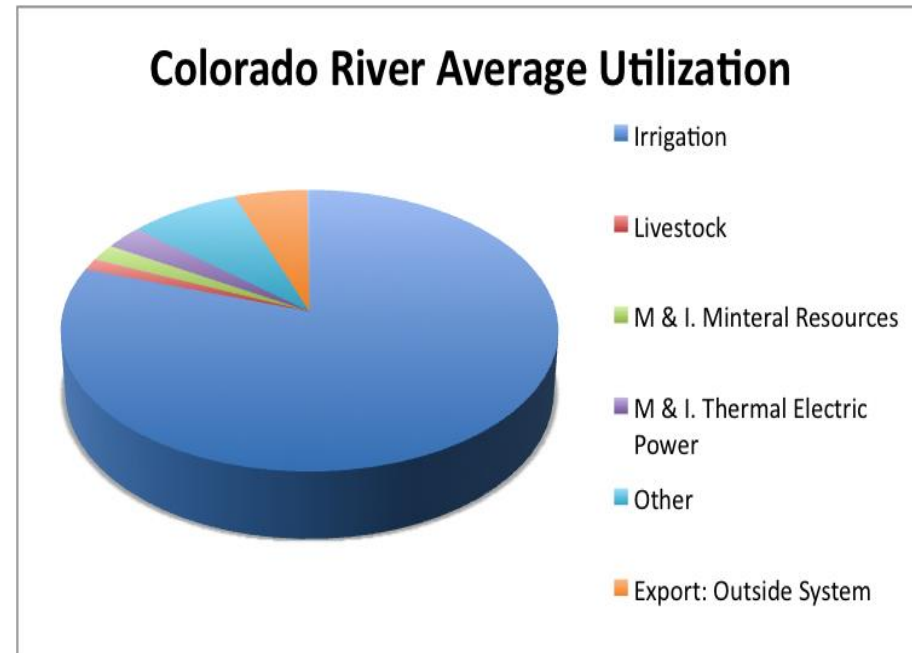
- The Harmon Doctrine
- The 1922 Compact's Role
- 1944 Rivers Treaty & IBWC
- The “National Obligation” & the 1968 CRBPA
- 1974 Salinity Control Act
- All-American Canal Lining
- The Rio Grande/Rio Bravo





# Using the Colorado River

- Colorado River Use by Sector
  - Over 75% used by irrigated agriculture (about half for alfalfa)
  - Applied to 15% of U.S. farmland
  - Provides 90% of winter vegetables
- Average Water Consumption in the Colorado River Basin (in approximate acre-feet per year)
  - Golf Courses: 138,000 af/y
  - Power Plants: 162,000 af/y
  - Alfalfa: 1.5 maf/y







## What Does Our History Teach Us?

- Excluding Tribes from basin governance excludes expertise & creates inequity and uncertainty
- Mexico is a critical partner
- Despite divisions & challenges, we find ways to collaborate
- Litigation has pitfalls and potential
- Conditions change & we must adapt as we have in the past
- Water policy does not lend itself well to crisis management & requires long-term planning and predictability.
- Our problem in a nutshell – 19<sup>th</sup> Century laws, 20<sup>th</sup> Century infrastructure, 21<sup>st</sup> Century population, economy, & climate.
- We are a (often dysfunctional) family, but we have found ways to thrive together.