Arizona Ag Water Issues

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Arizona Farm Bureau Federation | March 11, 2022

Arizona Farm Bureau

- Arizona's largest general agricultural advocacy organization
  - 14 county organizations
  - 2,300+ Farm and Ranch members
- Focus on education, public relations, and policy
- Grassroots policy development and advocacy strategy
  - County → State → National
  - Members drive it all!

Arizona Agriculture

- Wide variety of commercially grown crops and livestock
- Across every county in the state
- **$23.3 billion in economic impact to the state**

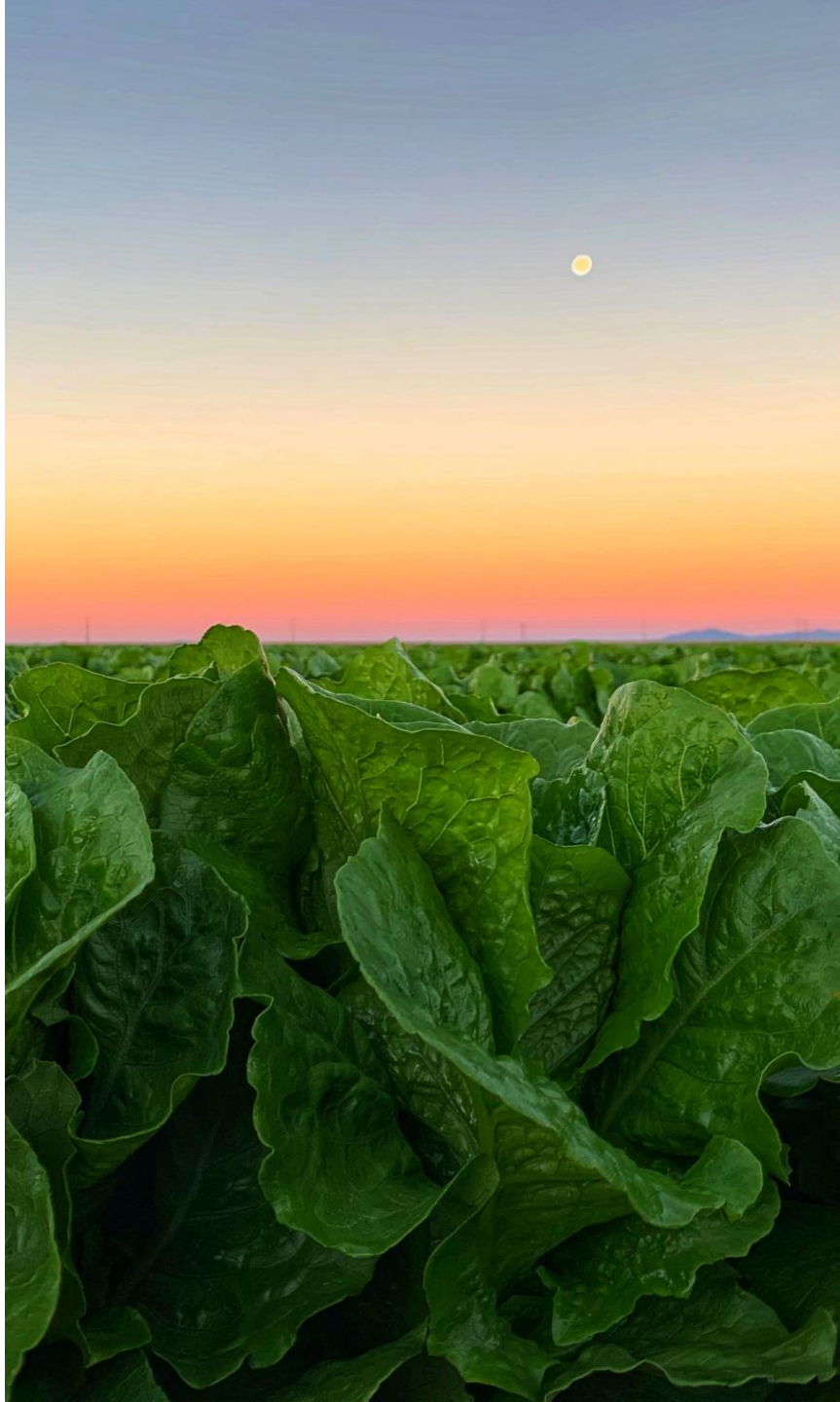
Ag Water Use Generally

5,515 farms with 1,094,936 acres irrigated

~70% of Arizona's Water Use

High-value crops tend to be "water-intensive:"

Leafy greens	Specialty crops	Alfalfa (and Dairy)	Cotton



Where does the water come from?

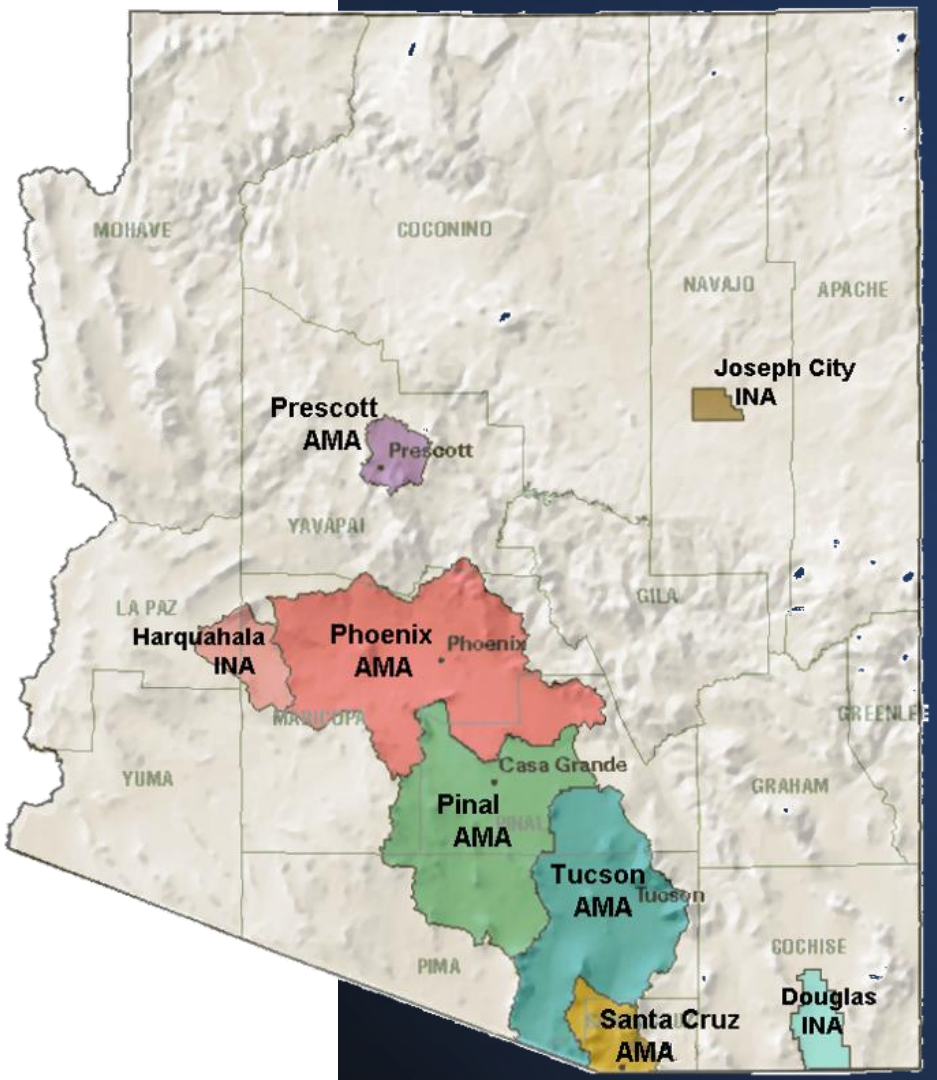
- Surface Water: the waters of all sources, flowing in streams, canyons, ravines, or other natural channels . . . Whether perennial or intermittent, floodwater, wastewater or surplus water, and of lakes, ponds, and springs on the surface (A.R.S § 45-101)
- Groundwater: water under the surface of the earth regardless of the geologic structure in which it is standing or moving (A.R.S § 45-101)

Groundwater

- Groundwater: originally governed by the law of “reasonable use”
  - Property owner has right to use the water under your land as long as the use is reasonable (not wasting it)
  - Because of the lack of available surface water, much of Central Arizona developed on groundwater
  - Led to overdraft: using more groundwater than was being recharged

Groundwater Management Act of 1980

- Goal: prevent overdraft of groundwater by creating restrictions on use
  - “Active Management Areas” (AMAs) – must have an established right to use groundwater
  - “Irrigation Non-Expansion Areas” (INAs) – no new irrigated acres after creation

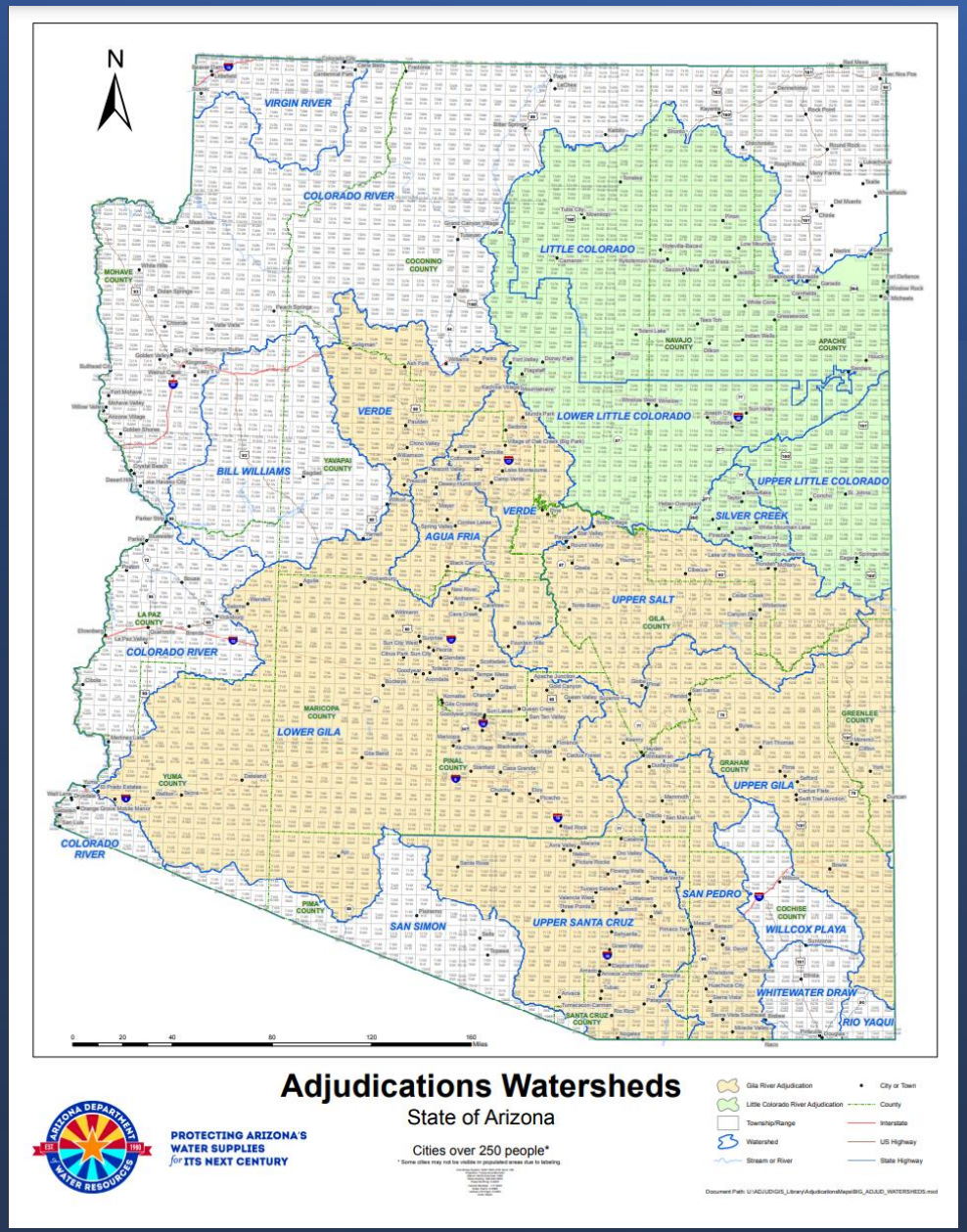


Groundwater Management Act of 1980

- Mandated conservation for agricultural and municipal users
  - Restricts agricultural production to acres with historical agricultural use and caps the total amount of groundwater that may be used on those acres
  - Created the “Assured Water Supply” Program, requiring developers to show that there is 100 years’ worth of water “physically, continuously, and legally available”
- Each AMA has a management goal
  - Safe yield – no more taken out than is replenished
  - Managed depletion – enough taken out to support existing industry

Surface Water & General Stream Adjudication

- Surface Water is a public good, subject to prior appropriation and beneficial use.
  - Prior Appropriation: first in time, first in right
  - Forfeiture: use it or lose it
  - Users must register their use with the Department of Water Resources
- Judicial proceedings to determine the nature, extent and relative priority of water rights in Arizona.
- Began in the mid 1980s, still ongoing
- Two major streams are the subject of litigation:
  - Little Colorado
  - Gila River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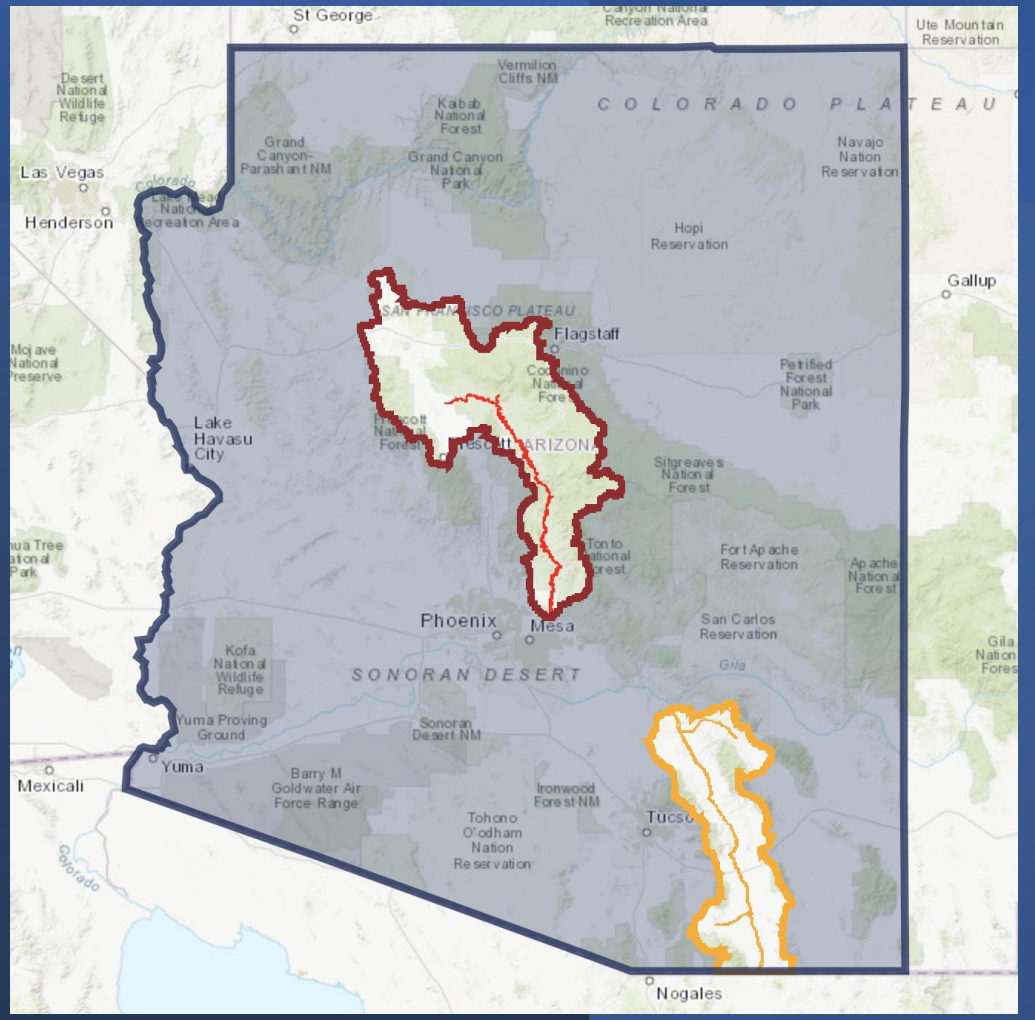
VIRGIN RIVER
COLORADO RIVER
LITTLE COLORADO
COCONINO COUNTY
MOHAVE COUNTY
NAVAJO COUNTY
APACHE COUNTY
VERDE
LOWER LITTLE COLORADO
BILL WILLIAMS
YAVAPAI COUNTY
UPPER LITTLE COLORADO
SILVER CREEK
AGUA FRIA
UPPER SALT
GILA COUNTY
LA PAZ COUNTY
COLORADO RIVER
MARICOPA COUNTY
LOWER GILA
GREENLEE COUNTY
PINAL COUNTY
GRAHAM COUNTY
UPPER GILA
YUMA COUNTY
COLORADO RIVER
SAN PEDRO
PIMA COUNTY
SAN SIMON
UPPER SANTA CRUZ
COCHISE COUNTY
WILLCOX PLAYA
WHITEWATER DRAW
SANTA CRUZ COUNTY
RIO YAQUI
0 20 40 80 120 160 Miles
Adjudications Watersheds
State of Arizona
Cities over 250 people*
* Some cities may not be visible in populated areas due to labeling.
ARIZONA DEPARTMENT OF WATER RESOURCES
PROTECTING ARIZONA'S WATER SUPPLIES for ITS NEXT CENTURY
Gila River Adjudication
Little Colorado River Adjudication
Township/Range
Watershed
Stream or River
City or Town
County
Interstate
US Highway
State Highway


St George
Ute Mountain Reservation
Desert National Wildlife Refuge
Vermilion Cliffs NM
COLORADO PLATEAU
Kaibab National Forest
Navajo Nation Reservation
Las Vegas
Grand Canyon-Parashant NM
Grand Canyon National Park
Henderson
Hopi Reservation
Gallup
Flagstaff
Mojave National Preserve
Petrified Forest National Park
Lake Havasu City
Sitgreaves National Forest
Fort Apache Reservation
Phoenix
Mesa
San Carlos Reservation
Kofa National Wildlife Refuge
SONORAN DESERT
Yuma Proving Ground
Sonoran Desert NM
Yuma
Mexicali
Barry M Goldwater Air Force Range
Ironwood Forest NM
Tohono O'odham Nation Reservation
Nogales

THIS IS FINE.

Arizona's State Surface Waters Protection Rule

- Passed in Arizona Legislature in 2021
- Adopts a state-level surface water quality program to "fill in the gaps" left by the WOTUS regulatory whiplash
- Creates a definitive list of waters that are jurisdictional – if it isn't on the list, you don't need a permit
- For jurisdictional waters, federal rules apply (but will be enforced by the State agency)

The 2022 Legislative Session

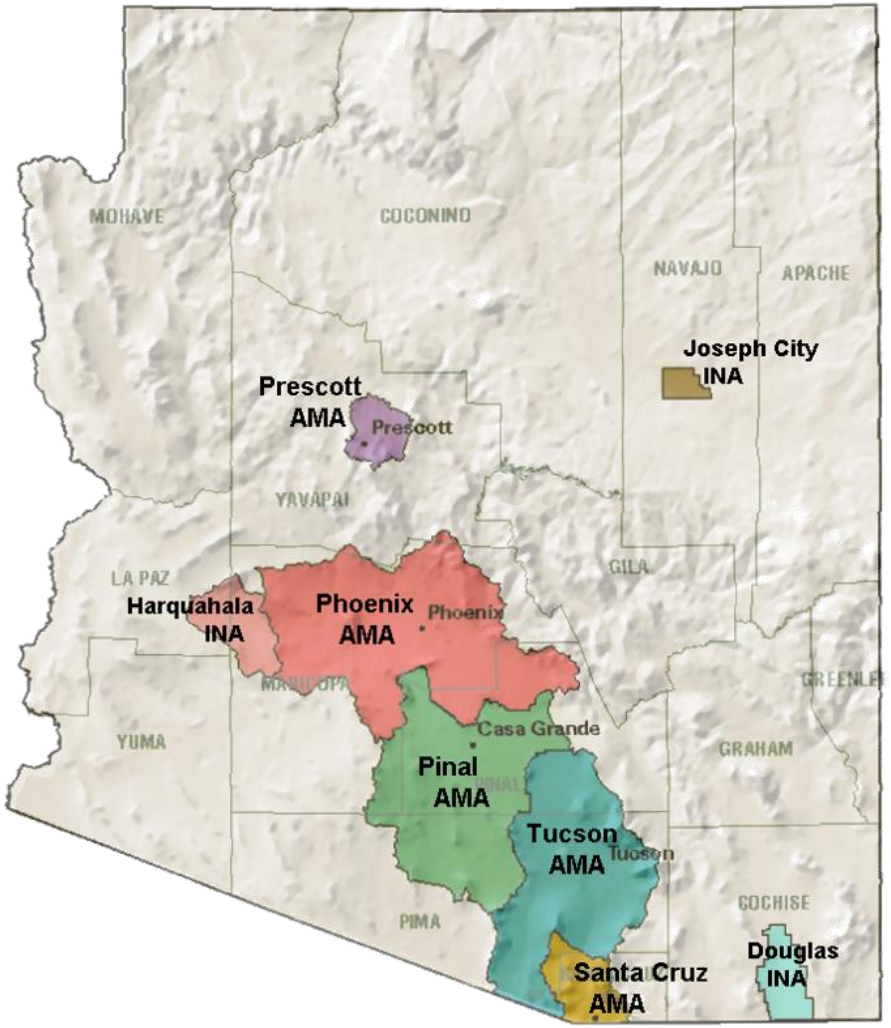
What's happening with water?

The big questions…

- How are we going to manage the water we have?
- How do we bring new water into the state?

Managing Existing Water

- More than 85 percent of the state doesn't fall under the Groundwater Management Act. Little restriction on groundwater pumping in those areas continues to create worry about the water future
- Current proposals:
  - Temporary INA
  - Rural Management Area (RMA)



Arizona Water Authority

- New state agency tasked with funding water augmentation and conservation projects that originate in or out of the state, including:
  - Purchasing water or rights to water
  - Acquiring or constructing water-related facilities or infrastructure
- Two funds:
  - Water Supply Development
    - Outside of CAP's service area
    - Smaller-scale projects
    - Loans and grants
  - Long-Term Water Augmentation Fund
    - Anywhere in state
    - Large-scale projects
    - Loans with the goal of cost recovery

Arizona Water Authority - Strategy

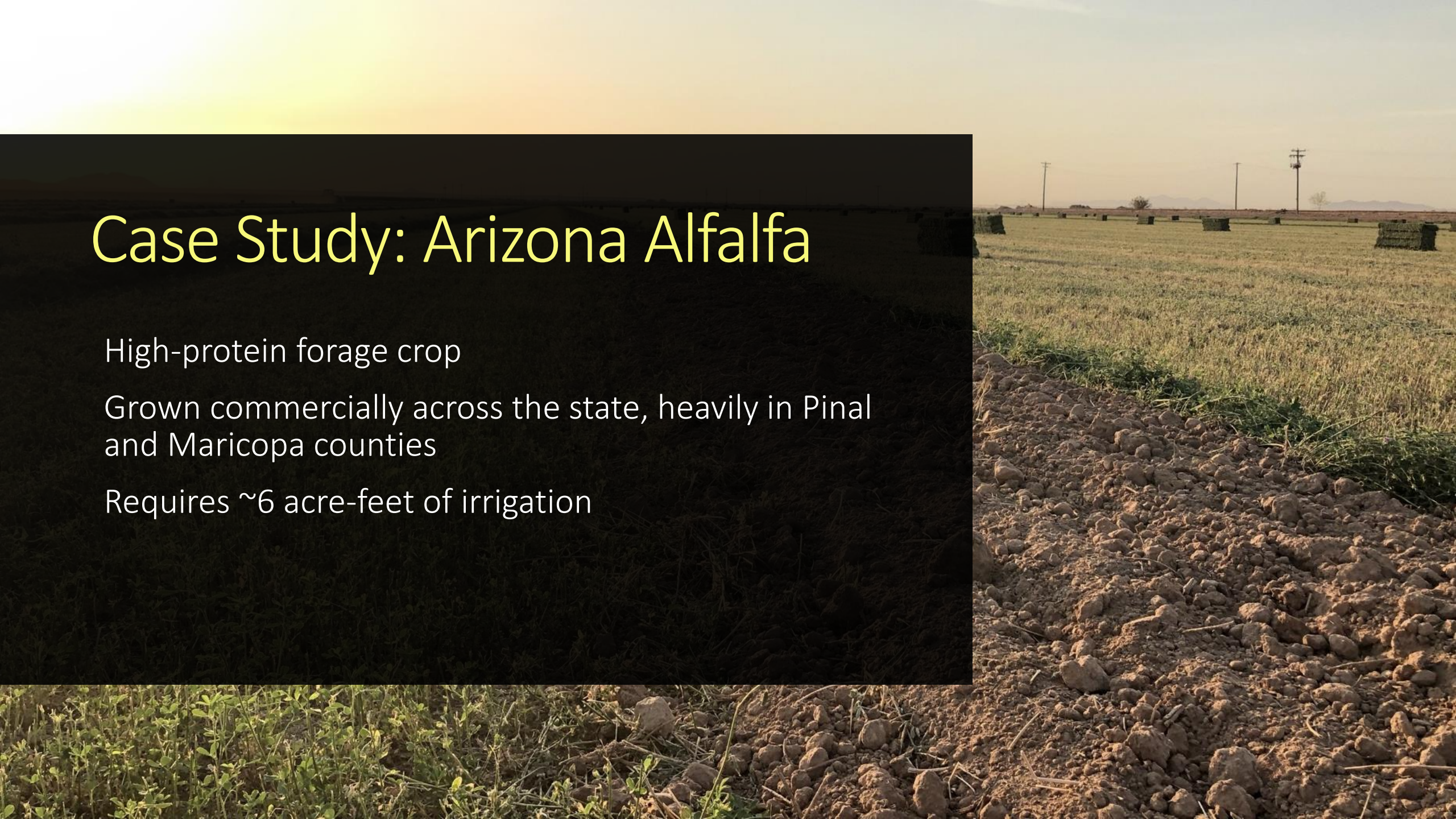
- Huge concept, not “fully baked”
- GOP resistance:
  - Creating and funding a new state agency
- DEM resistance:
  - Not wholistic approach to water management
- Lookout for a special session in April (?)

Case Study: Arizona Alfalfa

High-protein forage crop

Grown commercially across the state, heavily in Pinal and Maricopa counties

Requires ~6 acre-feet of irrigation



It uses water really, really well.

Alfalfa varieties are uniquely adapted to low-desert climates:

-Arizona alfalfa yields average 8.5 tons per acre

-Nationwide, alfalfa yields average 3.2 tons per acre

It uses water to provide ecological benefits

As a perennial legume, alfalfa fixates nitrogen from the atmosphere to stabilize and improve soil quality

Irrigated alfalfa creates wildlife habitat, especially for birds

Refuge and breeding ground for insects, including pollinators and beneficial predators

It uses water to facilitate a locally sourced food supply

97% of milk found on Arizona grocery stores came from Arizona dairies

Dairy manufacturing is the largest industry within food processing, (ex: accounts for 18% of manufacturing jobs in Pinal County)

Water *use* is not water *waste.*

Thank you!

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