

The background of the slide is a photograph of a city skyline, likely Phoenix, Arizona, with a large saguaro cactus in the foreground on the right. The image is overlaid with a dark blue gradient. The title 'Water Wise Development Coalition' is written in large, white, sans-serif font across the middle of the image.

Water Wise Development Coalition

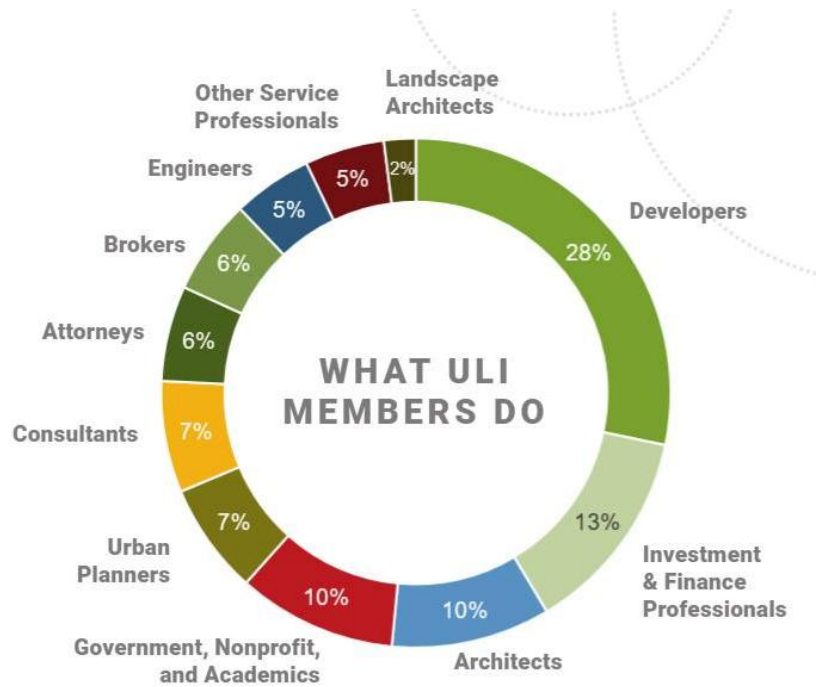
Marianne Eppig, Sr. Director of Resilience, ULI

November 19, 2025

Headquartered in Washington, D.C., ULI is an independent and nonpartisan organization singularly focused on impact.

From its establishment in 1936, ULI's fundamental purpose has been to **connect** industry leaders, **inspire** best practices for equitable and sustainable land use, and **lead** in anticipating and addressing challenges facing the urban landscape.

LOCAL IMPACT



70+ District and National Councils worldwide

ULI AMERICAS

58 District Councils

ULI EUROPE

13 National Councils

ULI ASIA PACIFIC

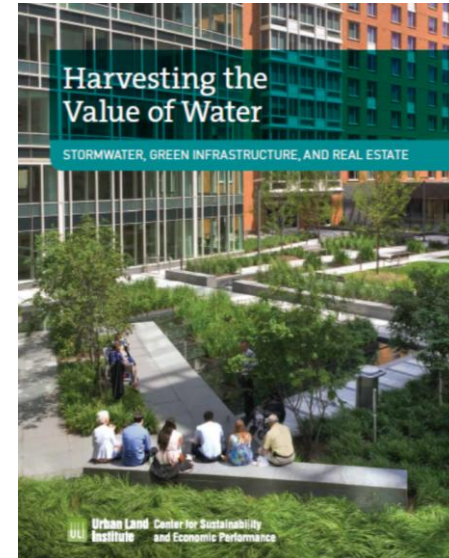
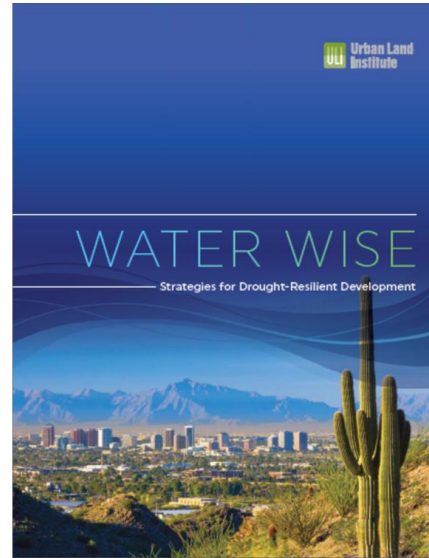
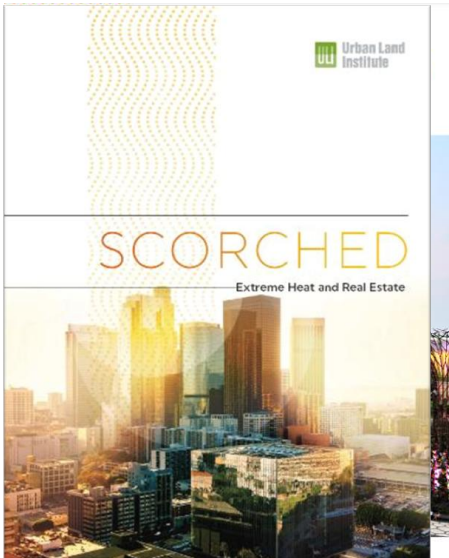
7 National Councils

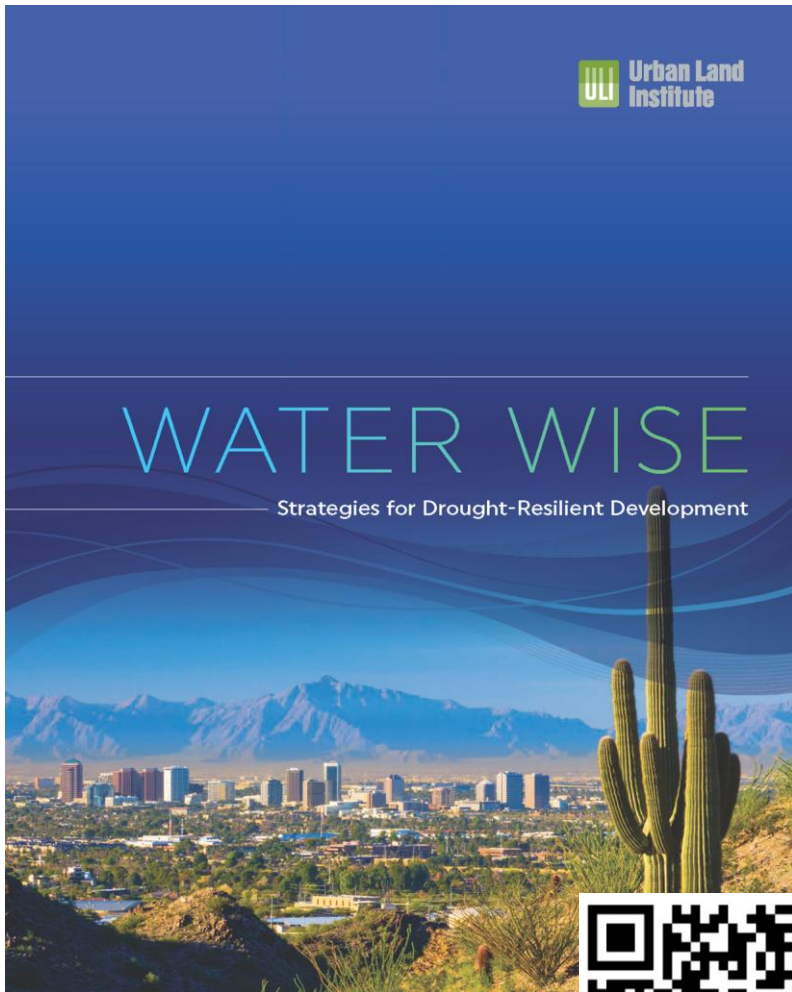


ULI's Urban Resilience Program

ULI's Urban Resilience program is focused on how buildings, cities, and communities can be more resilient to the impacts of climate change and other environmental vulnerabilities. We do this by:

- Advancing industry understanding of resilience
- Cultivating champions for resilience and catalyzing resilience partnerships
- Supporting communities in becoming more climate resilient





Water Wise Report

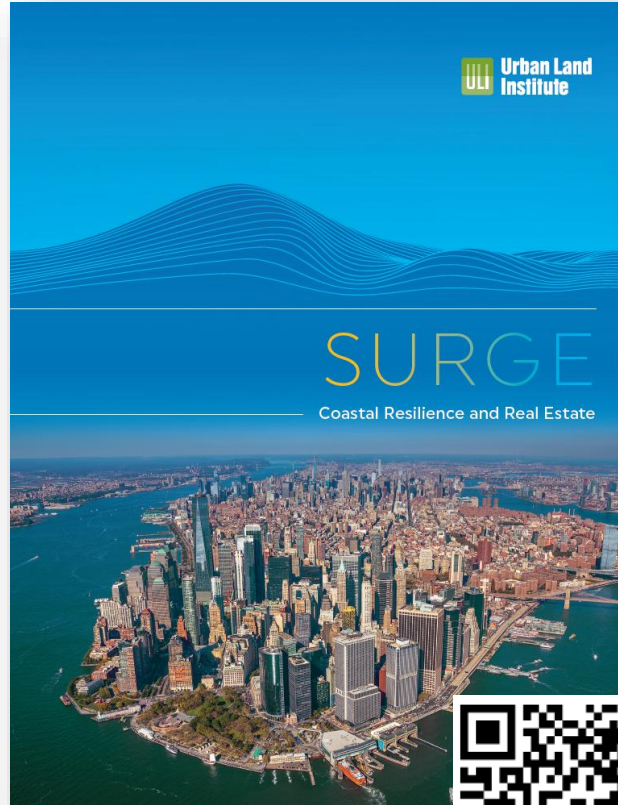
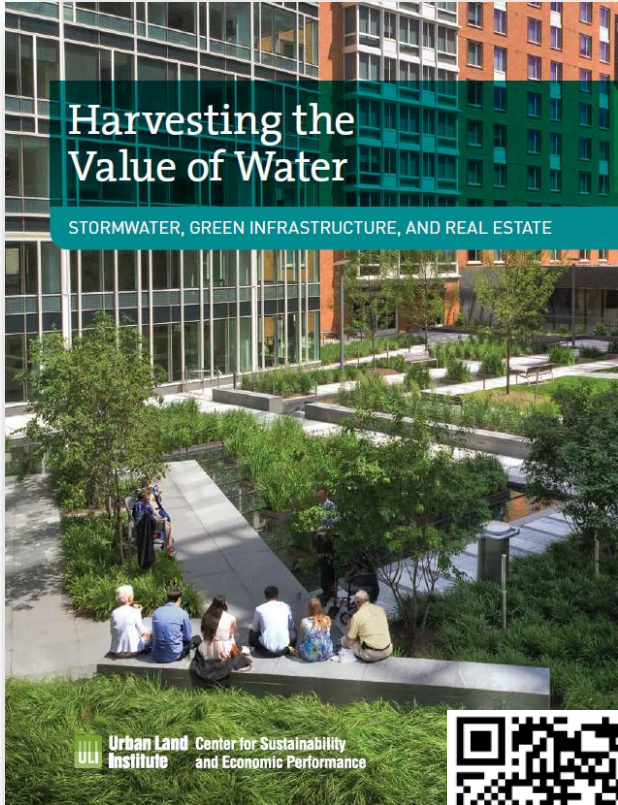
From ULI's Urban Resilience Program

Water Wise: Strategies for Drought-Resilient Development introduces the challenges associated with drought and limited freshwater availability and provides best practices for real estate and land use professionals to address them.

- Water-wise policy recommendations included!
- Many case studies!



ULI Reports & Resources on Flooding



More ULI resources
on flood
preparedness:



Water Wise Development Coalition

Intro for newbies!

- **Who:** ULI, in partnership with the Alliance for Water Efficiency, the Sonoran Institute, and the WaterNow Alliance, is convening land use and real estate professionals with policymakers and decision-makers.
- **What:** Advancing water-smart real estate development and supportive policies.
- **When & Where:** Quarterly virtual meetings.
- **How:** Participants will have a say in meeting topics, speakers, and efforts.



Agenda

- ULI welcome and introductions (5 minutes)
- Speakers (15 minutes each):
 - **Anne Castle**, senior fellow at the Getches-Wilkinson Center for Natural Resources, Energy, and the Environment at the University of Colorado Law School
 - **John Berggren**, Regional Policy Manager, Healthy Rivers, Western Resource Advocates
 - **Ken Ransford**, Secretary to the Colorado Basin Roundtable, and Ken Ransford, P.C.
 - **Sarah Porter**, Director, Kyl Center for Water Policy at Arizona State University's Morrison Institute for Public Policy
- Group discussion and resource sharing (20 minutes)
- ULI wrap up (5 minutes)





The Colorado River

Update on Post-2026 Negotiations

Water Wise Development Coalition

November 19, 2025

Anne Castle

Getches-Wilkinson Center, University of Colorado Law School



COLORADO RIVER BASIN

THE BASIC MATH

COLORADO RIVER COMPACT

1922

- River divided equally, sort of, 7.5 MAF to each
- Lower Basin gets 7.5 MAF + 1.0 MAF more
- Upper Basin gets 7.5 MAF, with a big catch
- If deliveries required to Mexico in future, split equally between Upper and Lower Basin



Compact Language

There is hereby apportioned to the Upper Basin and the Lower Basin, respectively, the exclusive use of 7,500,000 acre-feet of water per annum

The Lower Basin is given the right to increase its use by one million acre-feet per annum

The Upper Basin will not cause the flow of the river at Lee Ferry to be depleted below 75,000,000 acre feet over any period of ten consecutive years

Legal Allocations

1922 Compact

7.5 MAF for Upper Basin

7.5 + 1.0 MAF for Lower Basin

1944 Mexico Treaty

1.5 MAF to Mexico

Compact

16.0 MAF

Treaty with Mexico

1.5

Total

17.5 MAF

Add in evaporation

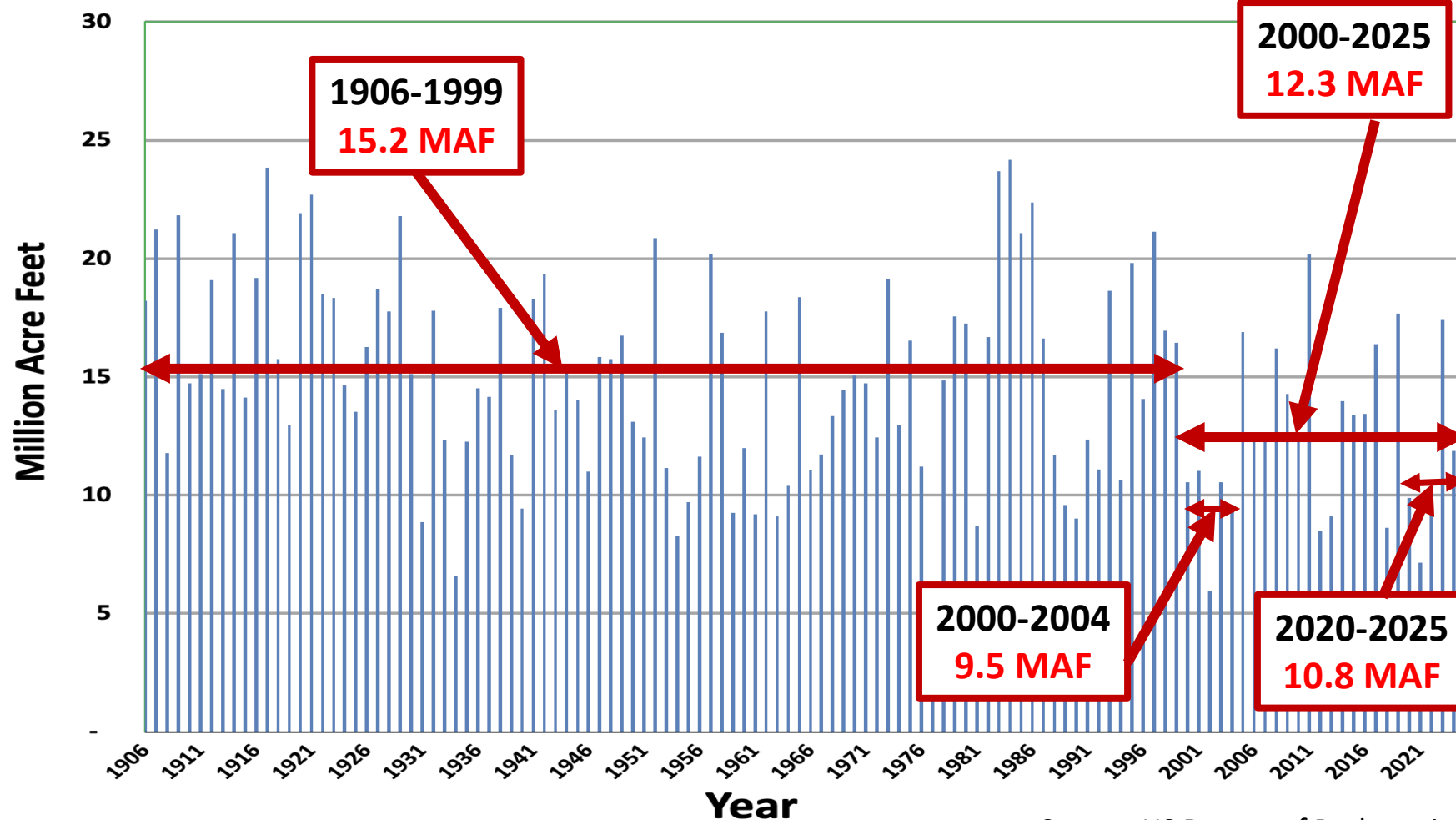
1.5

LEGAL PLUS PHYSICAL

19.0 MAF

AVAILABLE SUPPLY

Colorado River Natural Flow at Lee Ferry 1906 - 2025



Source: US Bureau of Reclamation

Inflows and Outflows

(in millions of acre feet)

Natural Flow (2020-2025) **11.6**

Outflows

UB use 4.0-4.5

LB mainstem use 6.0-7.5

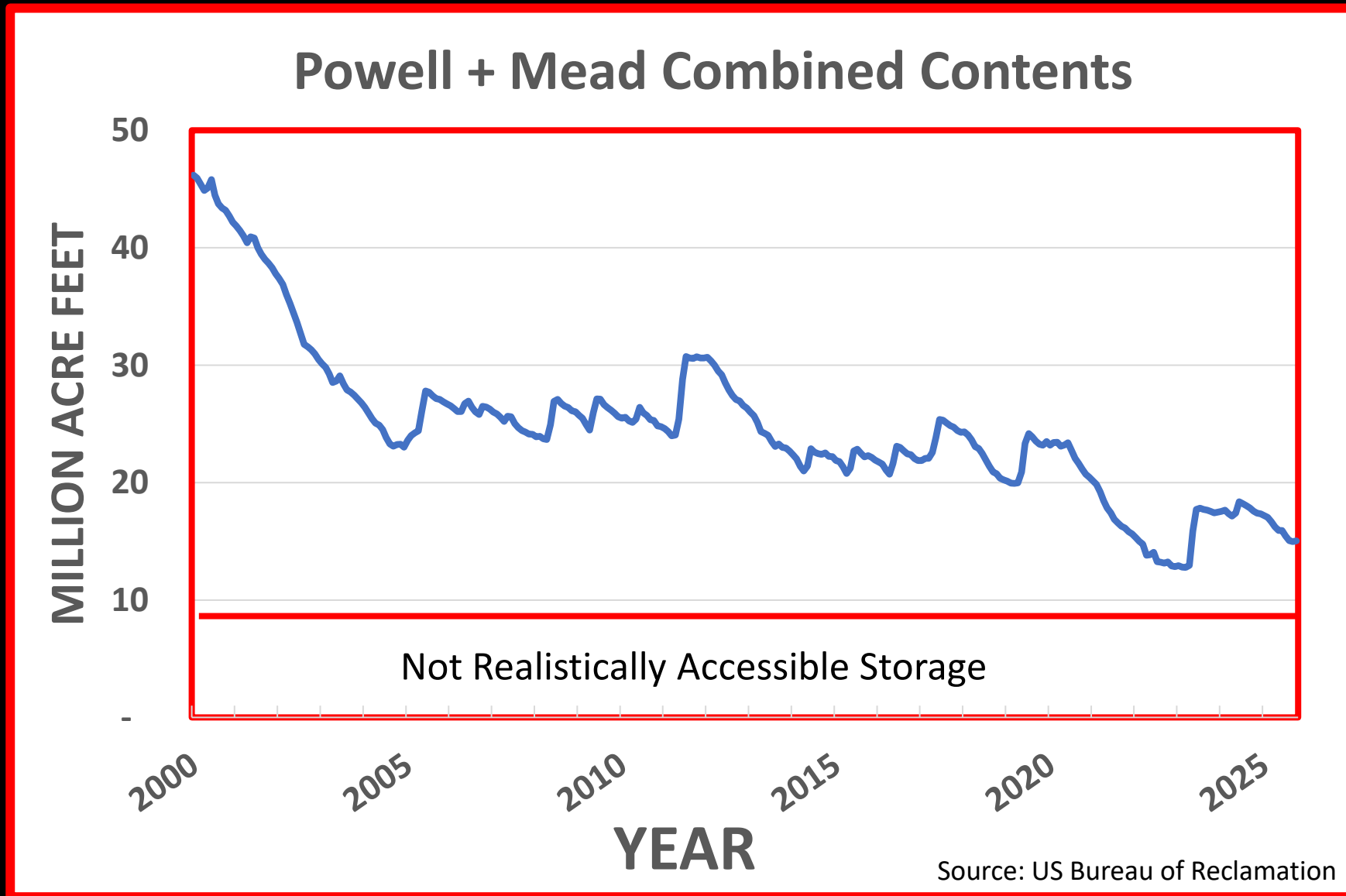
LB evap & losses 1.5

Mexico 1.4-1.5

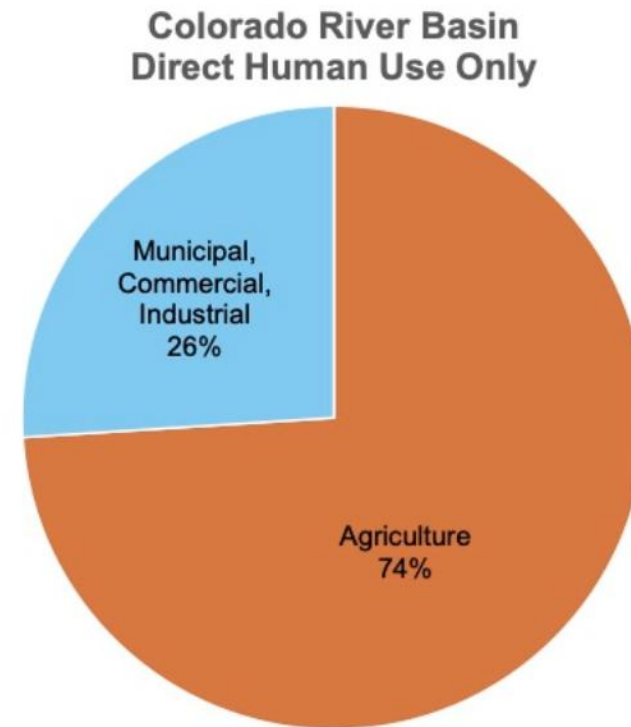
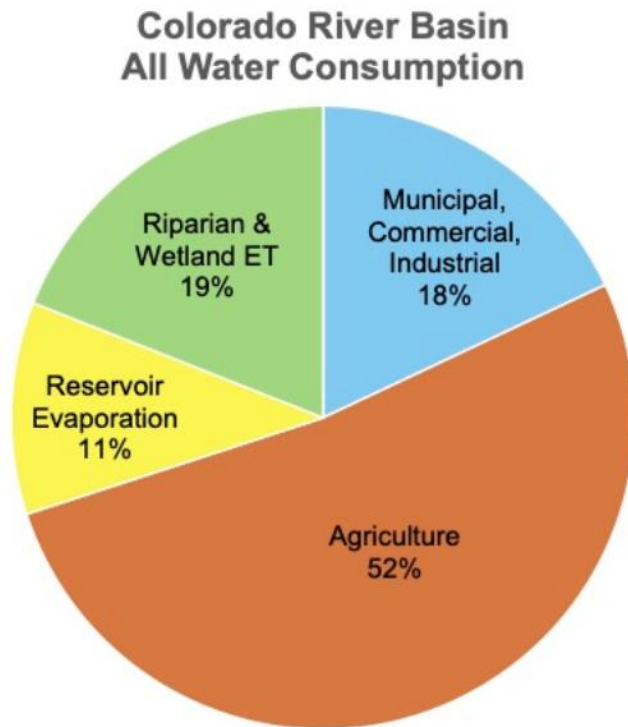
12.9 – 15.0

Deficit Balance **1.3 – 3.4**

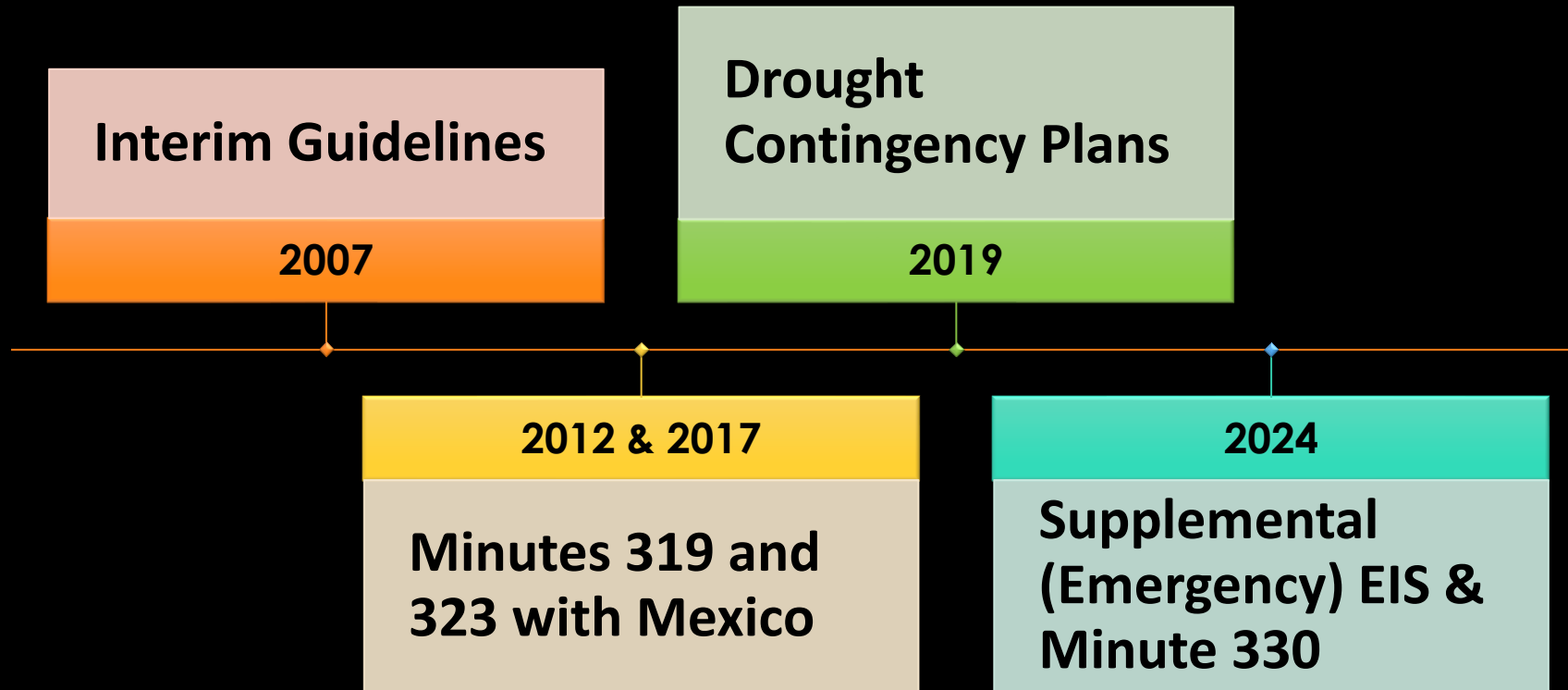
Results



Consumptive Uses of Water



21st Century Efforts to Address the Deficit



MAJOR FEATURES

- Cuts to Lower Basin allocations based on elevations in Lake Mead
- Cuts to deliveries to Mexico
- Balancing of contents of Mead and Powell
- Voluntary, temporary, and compensated additional conservation
- All expire in 2026
- They've all made it better, but they haven't solved the problem!

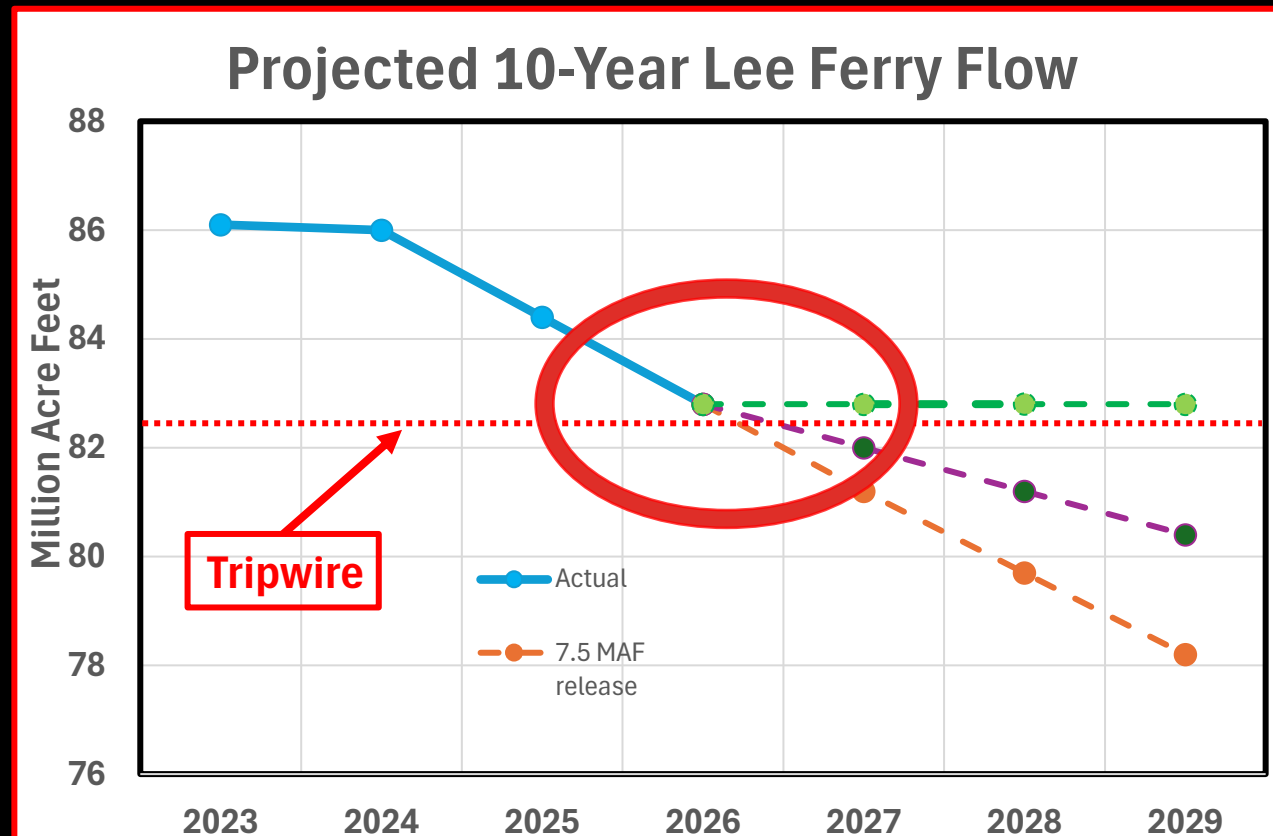
THE CHALLENGE



Because all the agreements/guidelines expire in 2026, new process started to determine future operations

LITIGATION?

- Compact requires 75 MAF + ½ of obligation to Mexico to pass Lee Ferry every 10 years \approx 82.5 MAF
- That “tripwire” will be triggered soon – 2026 or 2027
- To induce waiver of litigation, deal has to be sufficiently beneficial to all parties



A wide, brown river flows in the foreground, with a steep, rocky cliff rising in the background. The cliff face is rugged and layered, with some green vegetation at its base. The river's surface is textured with small waves and ripples.

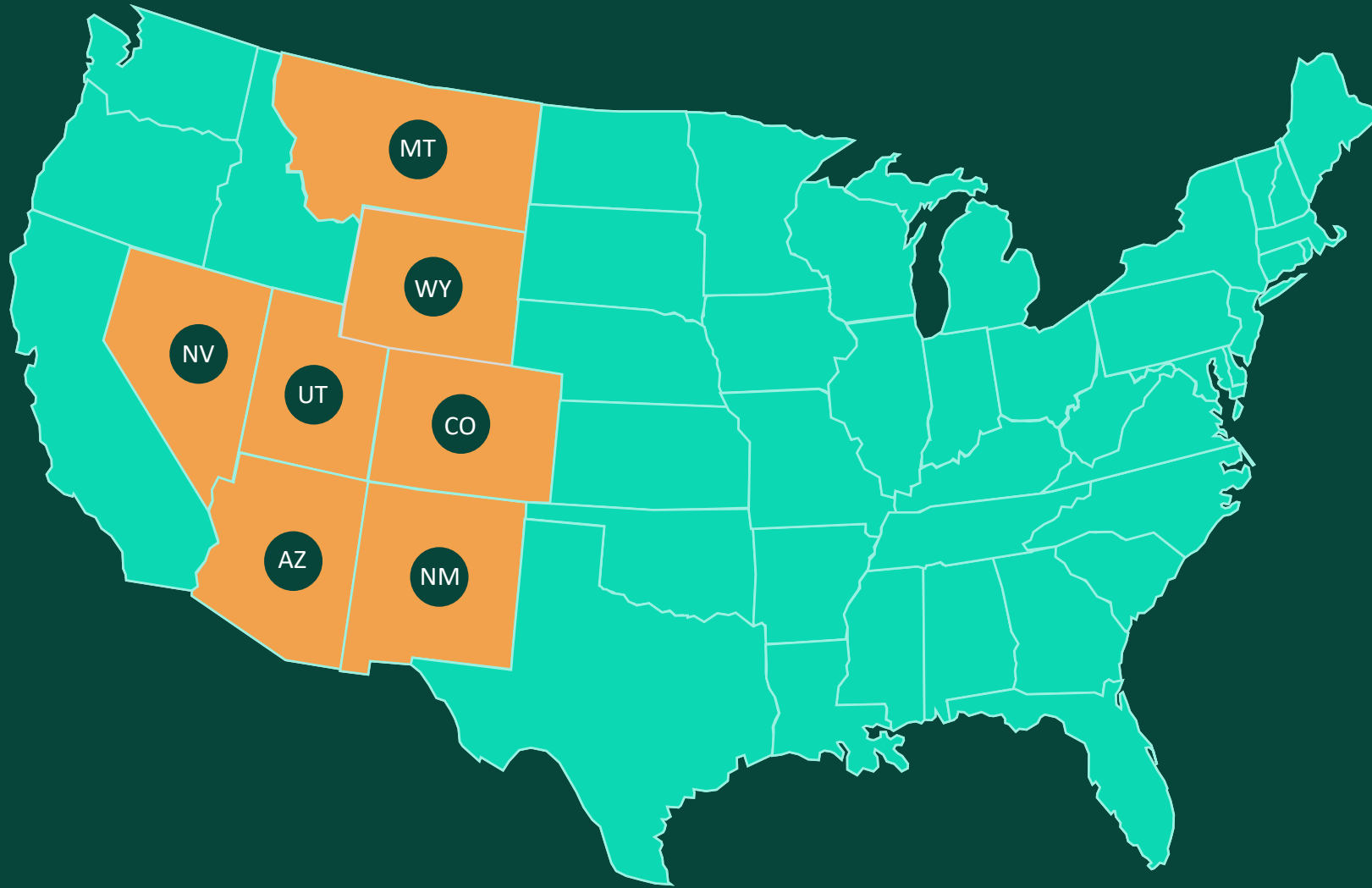
Post-2026 Guidelines for the Colorado River

Water Wise Development Coalition

November 19, 2025

westernresourceadvocates.org

wra Western
Resource
Advocates®



Where We Work

- Federal & Regional Collaboration
- State Legislatures
- State Agencies & Commissions
- Local Governments
- Electric Utilities
- Diverse Coalitions & Communities

WRA works across seven states in the **Interior West** to **protect our climate**, land, air, and water.





FEDERAL REGISTER

The Daily Journal of the United States Government



Notice

Colorado River Reservoir Operations: Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead

A Notice by the Reclamation Bureau on 10/20/2023



PUBLISHED DOCUMENT: 2023-23127 (88 FR 72535)



PDF



Document Details



Table of Contents



Public Comments



Regulations.gov Data



Sharing



Print

DOCUMENT HEADINGS

Department of the Interior
Bureau of Reclamation

[RR03040000, 23XR0680A1, RX187860005004001]

AGENCY:

Bureau of Reclamation, Interior.

ACTION:

Notice of availability.

SUMMARY:

The Department of the Interior (Department) has issued a Scoping Summary Report on the Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead. The





Why are Post-2026 Guidelines needed?

- DOI legally required to coordinate operations
- 2007 Interim Guidelines are expiring
- 2007 Interim Guidelines were insufficient to reduce risk
- Continued (and worsening) supply and demand imbalances
- More conservation is needed
- Need to address Tribal needs





— BUREAU OF —
RECLAMATION

Alternatives Report

Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead

Upper Colorado Basin Region
Lower Colorado Basin Region





Five Alternatives Being Analyzed

No Action

- Required by NEPA; revert to decades old operating framework





Five Alternatives Being Analyzed

Federal Contingency

- What Reclamation can do with existing authorities, without any new agreements





Five Alternatives Being Analyzed

Enhanced Coordination

- What Reclamation would like to do; developed in coordination with NPS, FWS, and with input from Tribes and hydropower



Photo Credit: Dave Papineau (with support from Lighthawk)



Five Alternatives Being Analyzed

Maximum Operational Flexibility

- Developed by NGOs;
promotes flexibility, system
stability, and environmental
stewardship





Five Alternatives Being Analyzed

Supply Driven

- Base operations on a recent average in "natural flows"






Maximum Operational Flexibility (formerly Cooperative Conservation Alternative)

 Audubon

 AMERICAN
RIVERS

 Environmental
Defense
Fund

 **TROUT**
UNLIMITED

 Theodore
Roosevelt
Conservation
Partnership

 **wra** Western
Resource
Advocates®

The Nature
Conservancy 



This alternative:

- Improves reservoir operations
- Integrates environmental stewardship and emphasizes mitigation
- Creates a new flexible tool for conservation
- Preserves binational opportunities for Delta restoration
- Broadens the range of options





Where do things stand?

- Reclamation moving forward with Draft EIS



Post-2026 Timeline

- June 2023: Notice of Intent to prepare an Environmental Impact Statement (EIS) formally initiated the Post-2026 Process
- October 2023: Scoping Summary Report and Federal Register Notice identified the Proposed Federal Action and Purpose & Need
- January 2025: Alternatives Report identified preliminary range of alternatives
- **Current: Overall process currently refining alternatives for Draft EIS**
- Fall-Winter 2025: Publication of Draft EIS
- Spring-Summer 2026: Publication of Final EIS
- Summer-Fall 2026: Adopt Record of Decision





Where do things stand?

- Reclamation moving forward with Draft EIS
- November 11th "deadline" was.... missed.



PRESS STATEMENT on the current Status of Colorado River negotiations from the seven Colorado River Basin States, the Department of the Interior, and the Bureau of Reclamation:

- "The seven Colorado River Basin states together with the Department of the Interior and the Bureau of Reclamation recognize the serious and ongoing challenges facing the Colorado River. Prolonged drought and low reservoir conditions have placed extraordinary pressure on this critical water resource that supports 40 million people, tribal nations, agriculture, and industry.
- While more work needs to be done, collective progress has been made that warrants continued efforts to define and approve details for a finalized agreement. Through continued cooperation and coordinated action, there is a shared commitment to ensuring the long-term sustainability and resilience of the Colorado River system."



Photo Credit: Dave Papineau (with support from Lighthawk)



Where do things stand?

- Reclamation moving forward with Draft EIS
- November 11th "deadline" was.... missed.
- States are still negotiating and face a February "deadline"

wra



Next steps?

- "Bolting" together a Preferred Alternative that will become the new guidelines

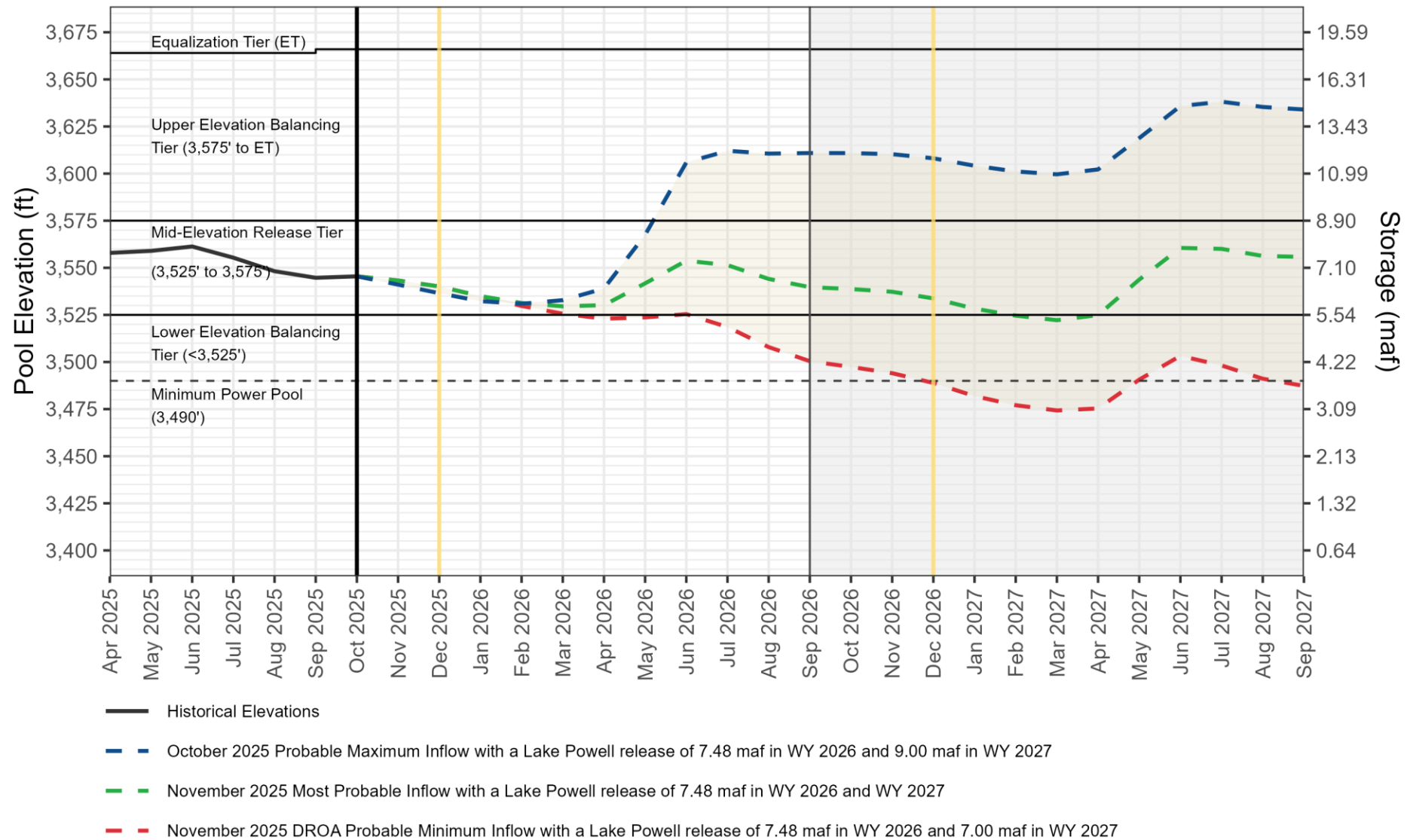


**Important
context...**



Lake Powell End-of-Month Elevations¹

Projections from October and November 2025 24-Month Study Inflow Scenarios

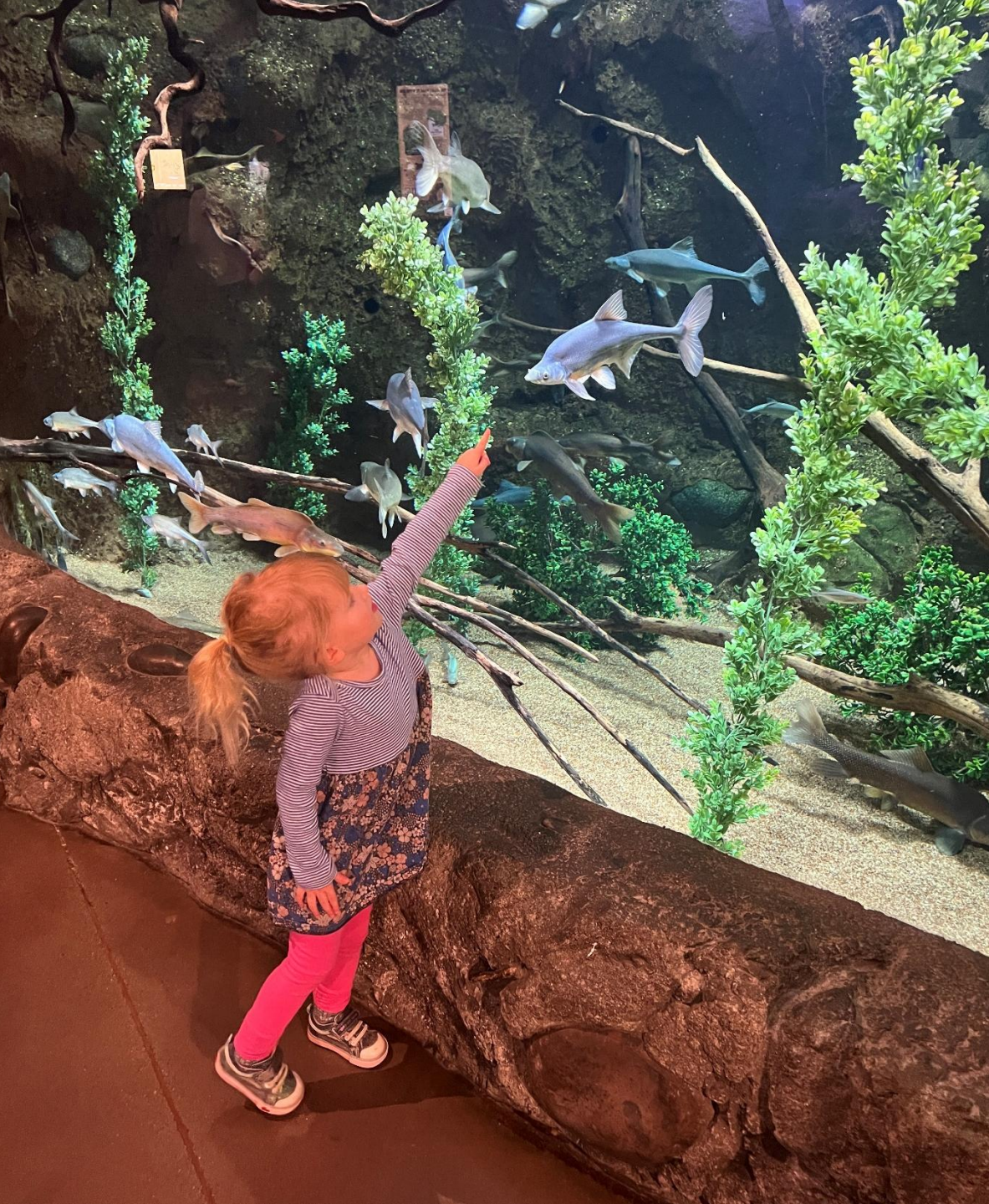


The Drought Response Operations Agreement (DROA) is available online at <https://www.usbr.gov/dcp/finaldocs.html>.

¹For modeling purposes, simulated years beyond 2026 assume a continuation of the 2007 Interim Guidelines including the 2024 Supplement to the 2007 Interim Guidelines (no additional SEIS conservation is assumed to occur after 2026), the 2019 Colorado River Basin Drought Contingency Plans, and Minute 323 including the Binational Water Scarcity Contingency Plan. With the exception of certain provisions related to ICS recovery and Upper Basin Demand management, operations under these agreements are in effect through 2026.



BUREAU OF
RECLAMATION



Thanks!

John.berggren@westernresources.org



2026 Negotiations impact to municipal water providers on Colorado's Front Range

Ken Ransford, Esq., CPA, is the Recreation Representative and Secretary to the Colorado Basin Roundtable. He is a former board member of the Aspen Valley Land Trust, American Whitewater, and the River Management Society. These are his views and they have not been endorsed by the Colorado River Roundtable.

ken@kenransford.com, 970-963-6800

132 Midland Ave Unit 3, Basalt, CO 81621

Colorado West slope hay irrigation rights are superior to a Compact Call and Front Range transmountain diversions.

Appropriation	1881	1921	1922	1930	1935	1946	1952	1956
	West slope hay irrigation	Moffat Tunnel to Denver Water	Colorado River Compact	Independence Pass Tunnel to Aurora, Co Springs, and Pueblo	Colorado Big Thompson: Grand Lake to Estes Park	Lake Dillon to South Platte	Homestake tunnel, Holy Cross to Aurora & Co Springs	Fry-Ark project from Roaring Fork Valley to Arkansas Basin
Average annual diversion	1,598,000	66,500	8,242,000	38,000	206,000	65,000	23,000	60,000

458,500 Total transmountain diversions to Front Range listed here. There are more.

2015 IBCC Conceptual Framework for new trans-basin diversions

1	Front Range would accept hydrologic risk, meaning that new reservoirs may not fill in dry years.
2	New transmountain diversion must be used conjunctively with East slope supplies, such as augmenting new diversions with groundwater pumping from the Denver Aquifer.
3	Front Range cannot divert if ecological warning bells go off.
4	An "insurance policy" must be in place in case the Lower Basin (e.g., Arizona) makes a Compact Call. Agricultural fallowing on the West slope will likely be the "insurance policy."
5	West slope can develop new supplies as well, such as the Eagle River MOU which plans to provide 20,000 af to Aurora and Colorado Springs and 10,000 af to Eagle River entities on the West slope.
6	New subdivisions on the Front Range will practice high municipal water conservation such as the Sterling Ranch development.
7	Environmental and recreation needs on the West slope must not be ignored.

Existing Front Range diversions could be cut off with a Compact Call. Additional diversions increase this risk.

<u>Transmountain diversion</u>	<u>Priority</u> <u>date</u>	<u>Acre-</u> <u>feet</u>						Compact Call:		400,000	325,000
Independence Pass	1930	38,000							-38,000		
Colo-Big Thompson	1935	206,000							-206,000	-177,000	
Dillon Reservoir	1946	65,000							-65,000	-65,000	
Homestake	1952	23,000							-23,000	-23,000	
Fry-Ark	1956	60,000							-60,000	-60,000	
New Flaming Gorge pipeline to Front Range	2015	150,000	150,000	150,000	150,000	150,000	150,000		0	0	150,000
	Water year:		2025	2026	2027	2028	2029	2030	2031		2032

Senior water rights	25%
Flaming Gorge pipeline water right	25%
Transmountain diversions at risk	50%

After Denver Water takes 8,377 more af, the Fraser River's average flow will be only 13 cfs through Winter Park, barely 1/8 of its natural flow (Gage 09024000)

CFS

900

600

300

0

Oct-23

Nov-23

Jan-24

Mar-24

May-24

Jul-24

9/30/24

- Simulated natural hydrograph before any Moffat Tunnel diversions: 75,187 annual acre feet, 104 cfs average daily flow all year
- Current annual flow (19,778 af in 2024, avg cfs = 27) since Denver Water began diverting 56,772 af annually in 1936
- Future annual flow: 10,038 af after diverting 8,377 more acre feet, reducing daily average flow to 13 cfs, only 13% of native flow

Upper Basin Conservation - System Conservation Pilot Program

		2023	2024	2025
		End of Season Estimated CCU (AF)	End of Season Estimated CCU (AF)	End of Season Estimated CCU (AF)
<u>Upper Division State</u>	<u>Share of water in the Upper Colorado River Basin Compact</u>			
Colorado	51.75%	2,024	18,335	SCPP program was not authorized
New Mexico	11.25%	5,554	4,933	
Utah	23.00%	15,301	23,390	
Wyoming	14.00%	8,477	20,810	
Total	100.00%	31,356	67,468	0

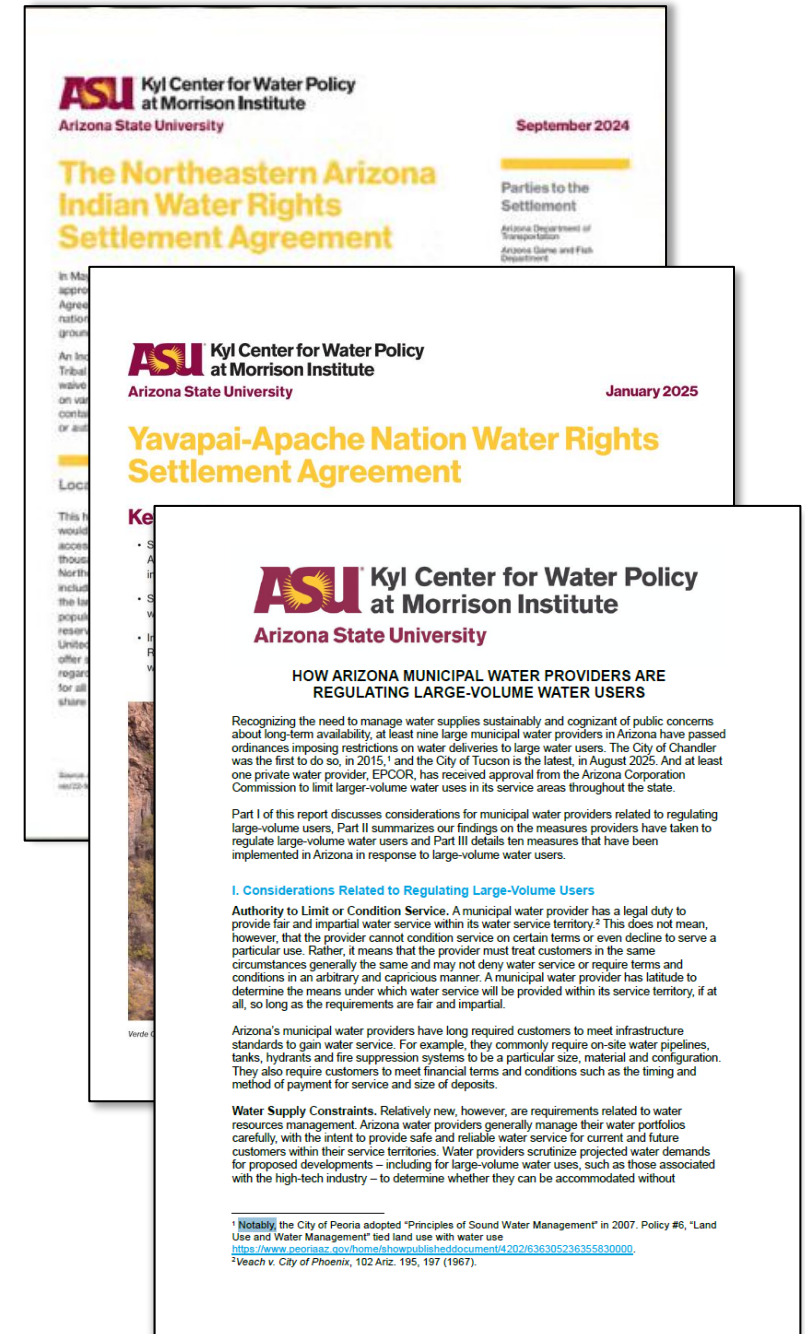
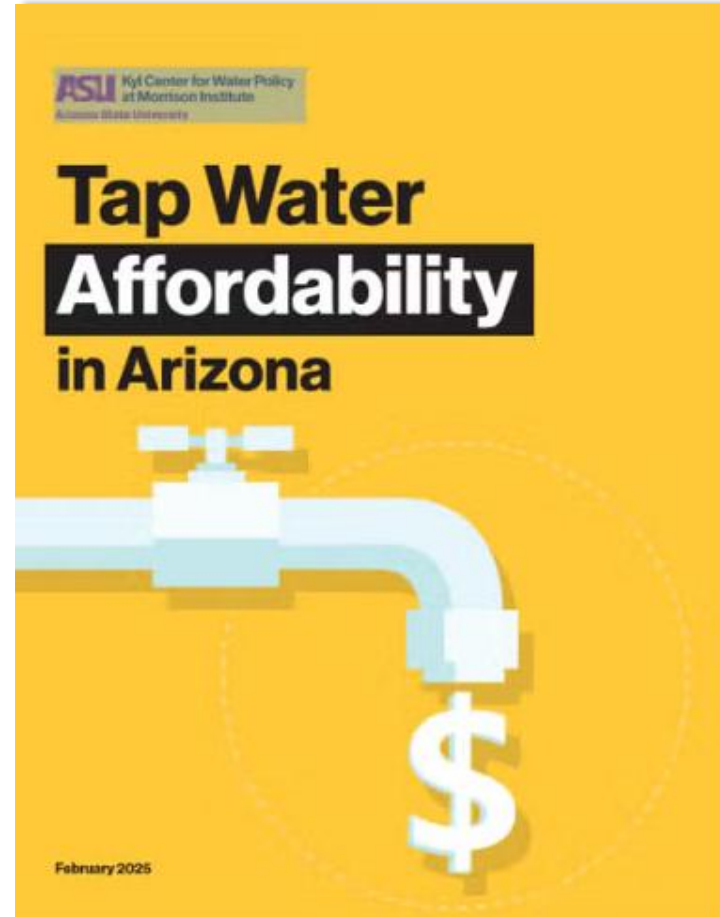
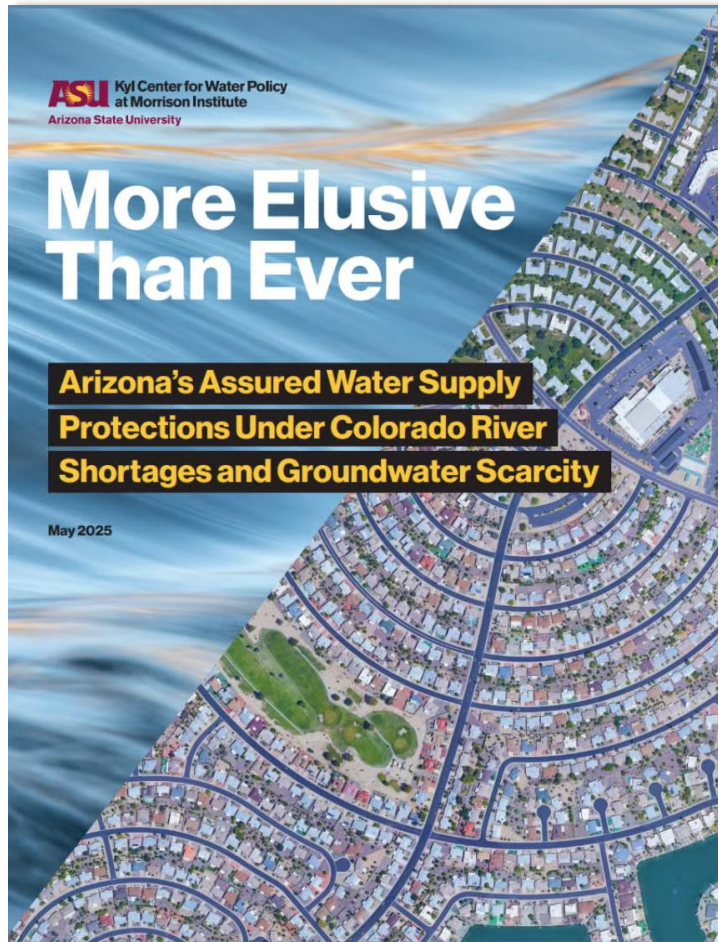
Arizona's changing water landscape

Sarah Porter – November 19, 2025

Mission: promote informed public dialogue on critical **water issues in Arizona and the West**

- **neutral & non-partisan**
- **research & analysis**
- **historical understanding**

Recent Publications





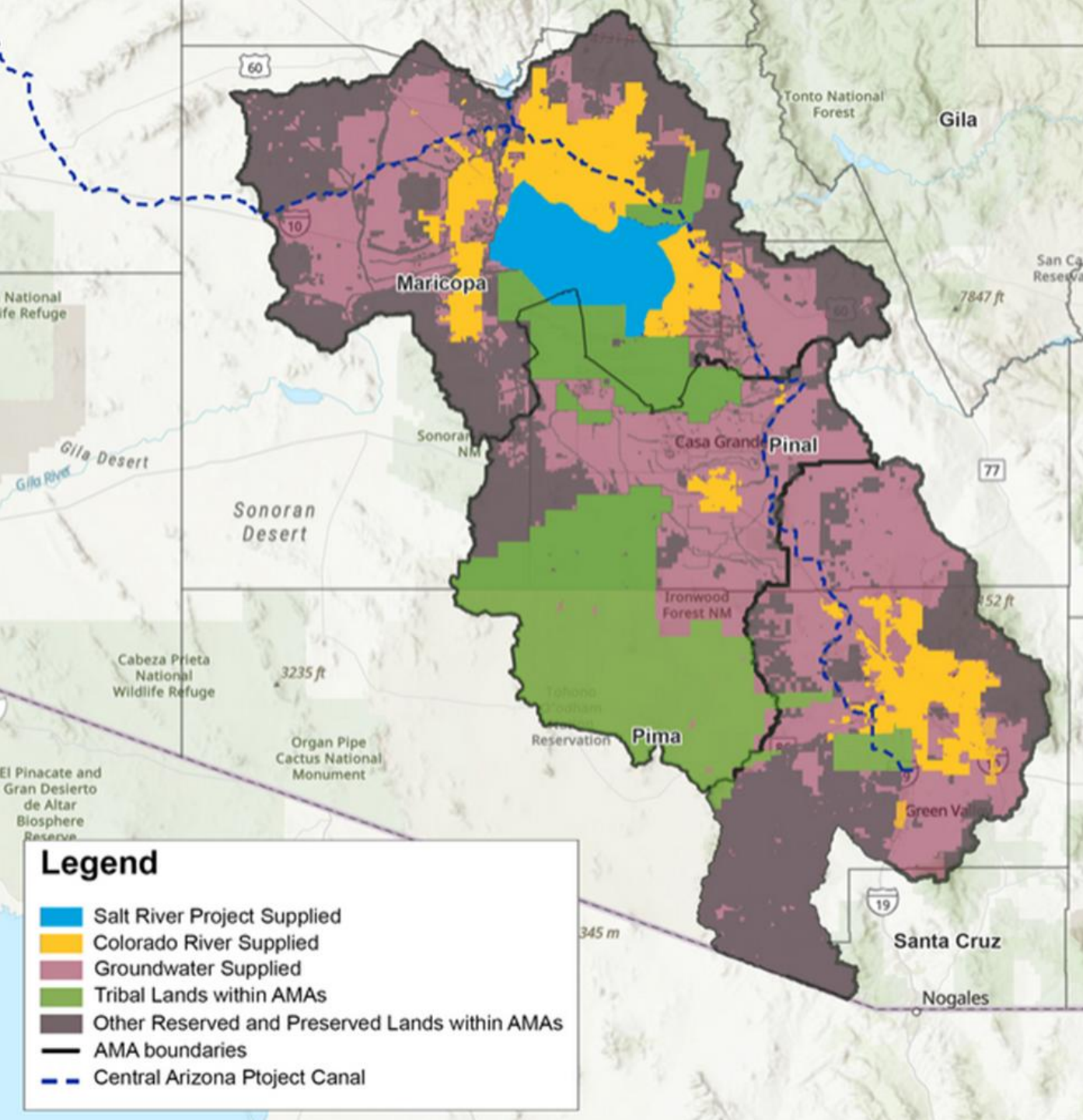
Arizona **Water** **Blueprint**

azwaterblueprint.asu.edu

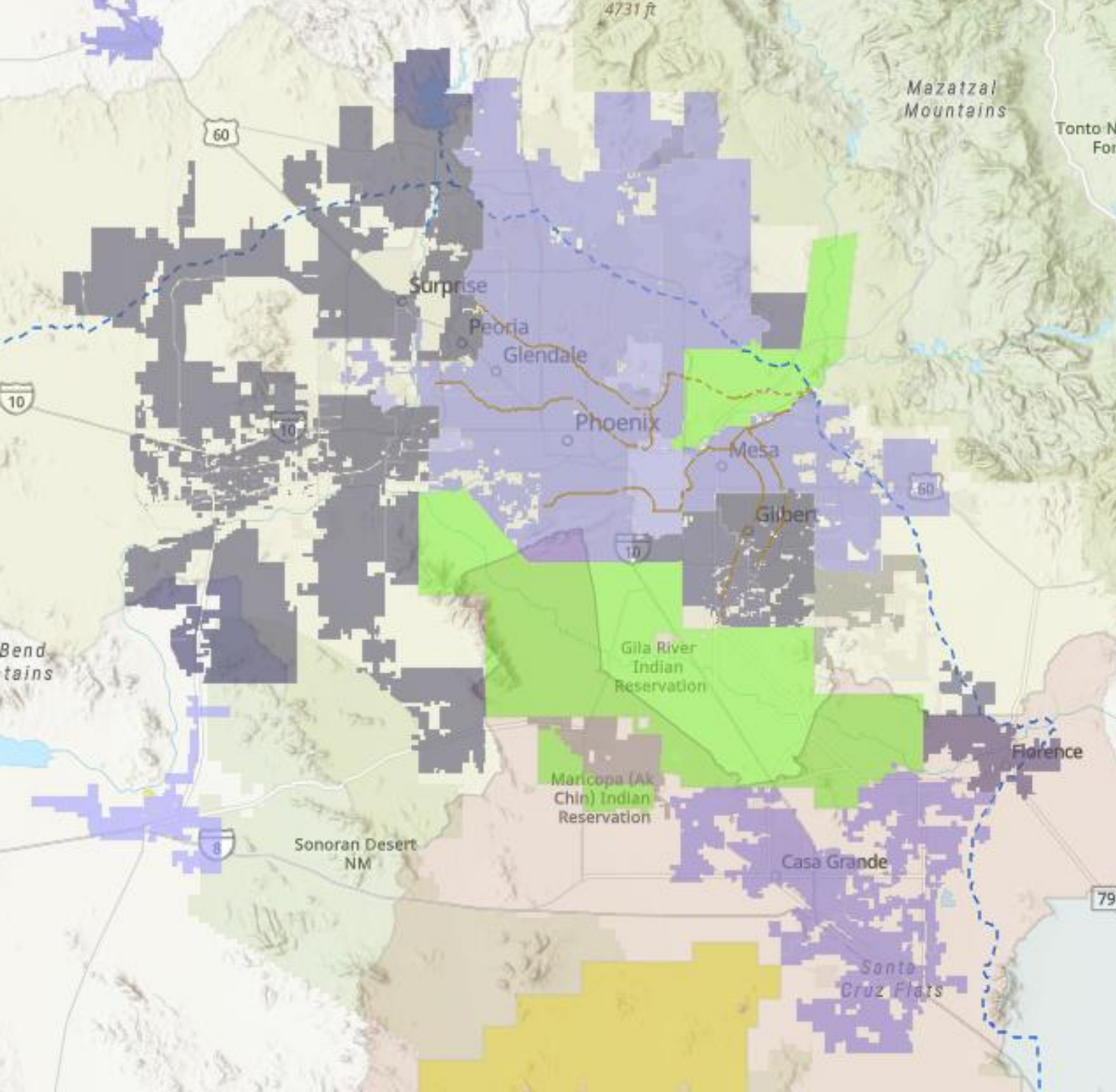
Water in Context



**Colorado River
water is used along
the mainstem and
in Central Arizona.**



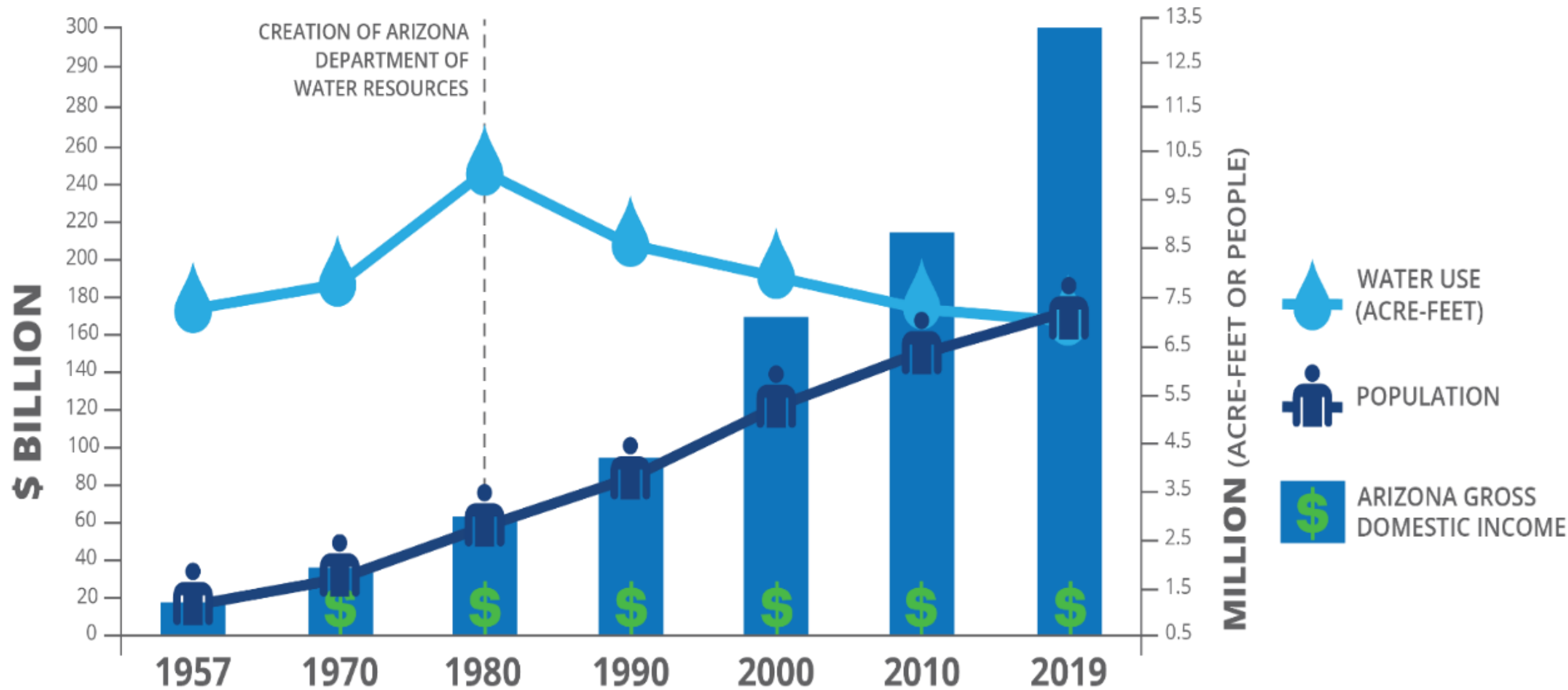
**Reliance on
Colorado River
supplies varies.**



**Growth on
groundwater is
constrained in
Greater
Phoenix.**

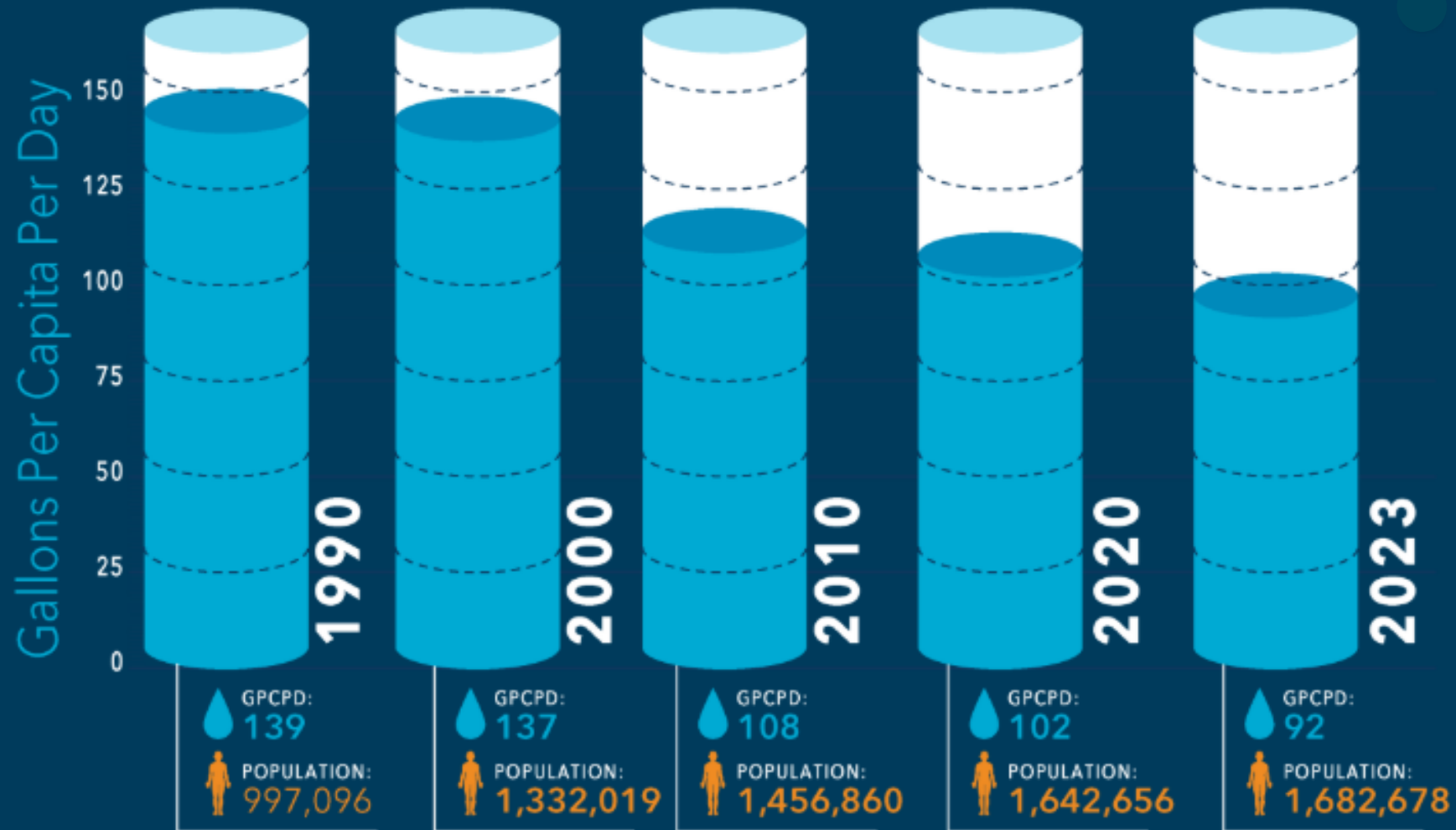
Water & Growth

Water Use Compared with Population & Economic Growth in Arizona



WATER USE IN PHOENIX

Population and Residential Water Consumption





“ But the city is expanding inward and upward, too, the once moribund downtown sprouting countless residential towers, a new light rail hub and other neighborhood draws.

October 29, 2025

LIVING IN

Downtown Phoenix, Expanding Upward

In the Valley of the Sun, summer heat has not stopped the downtown population from nearly tripling over 15 years.

Community Water Use Intensity

Community Water Systems:

-
- CITY OF CHANDLER

CITY OF EL MIRAGE

CITY OF ELOY

CITY OF GLENDALE

CITY OF GOODYEAR

CITY OF MESA

CITY OF PEORIA

CITY OF PHOENIX

CITY OF SCOTTSDALE

CITY OF TEMPE

CITY OF TOLLESON

CLEARWATER UTILITIES

COMMUNITY WATER COMPANY OF GREEN VALLEY

COPPER MOUNTAIN RANCH COMMUNITY FACILITIES DISTRICT

CORONADO FOREST DRIVE WATER COOPERATIVE

DAVIS RANCH LANDOWNERS

DEEP WELL COOPERATIVE

DESERT WATER COOPERATIVE

DOME WELL COOPERATIVE

EPCOR AGUA FRIA

EPCOR ANTHEM

EPCOR CHAPARRAL CITY

EPCOR PARADISE VALLEY

EPCOR SAN TAN

EPCOR SAN TAN ANTHEM

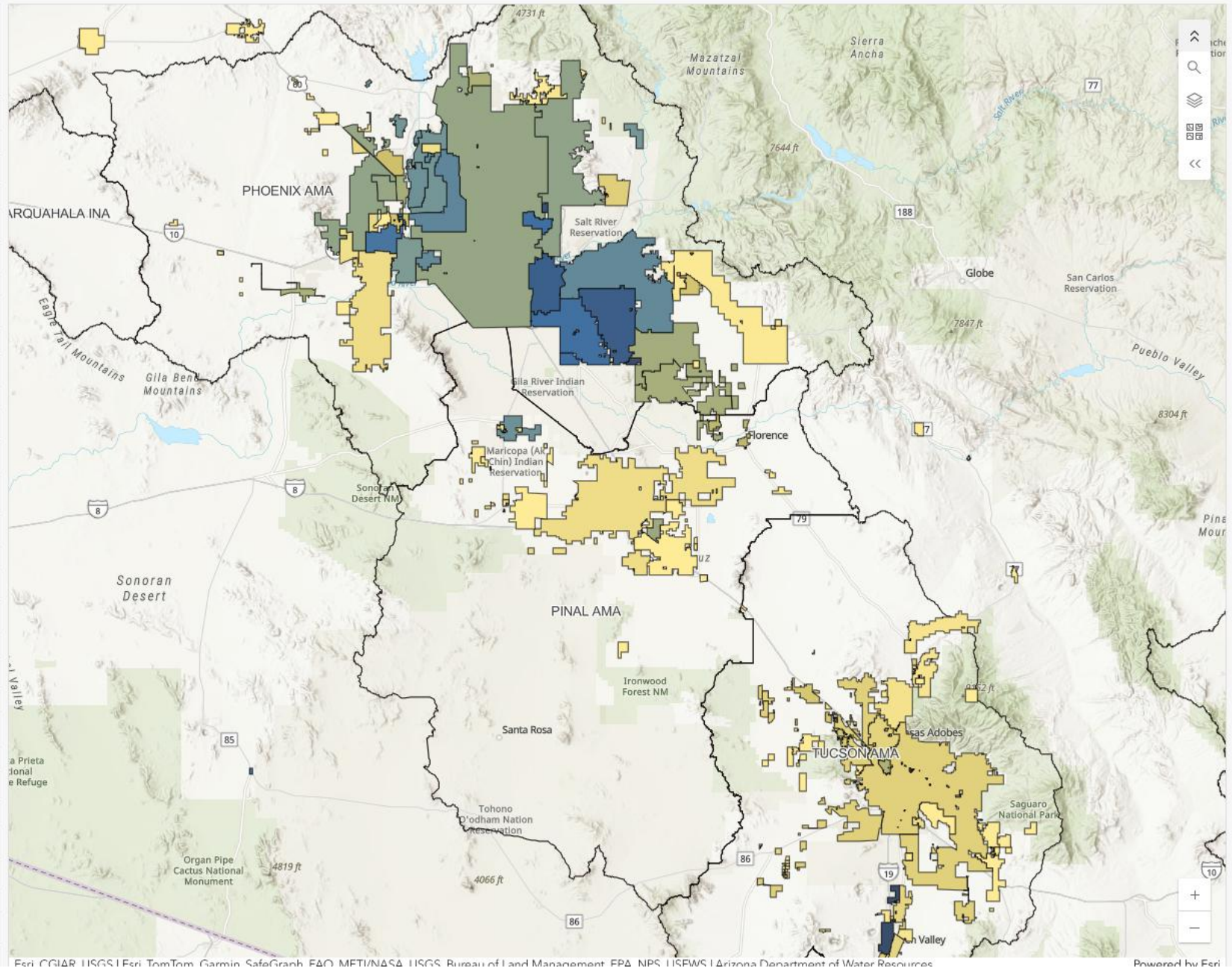
EPCOR SUN CITY WEST

EPCOR SUN CITY

FARMERS WATER COMPANY

FARMERS WATER COMPANY

FARMERS WATER COMPANY



Community Water Systems

Water Use Intensity (AF/Acre)

- > 2.50
- 1.50
- < 0.50

Active Management Areas (AMAs) and Irrigation Non-expansion Areas (INAs)



2023 Socioeconomic Projections

Toggle visible planning area

RAZ **MPA** Jurisdiction Heatmap

☒ Show Labels

Select Field

Total Population Total Jobs

☒ Display by Density

More fields coming soon!

Select Year

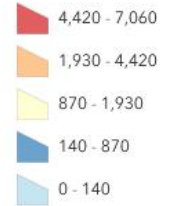
2020 2030 2040 2050 2060

Documents

Projections Methods

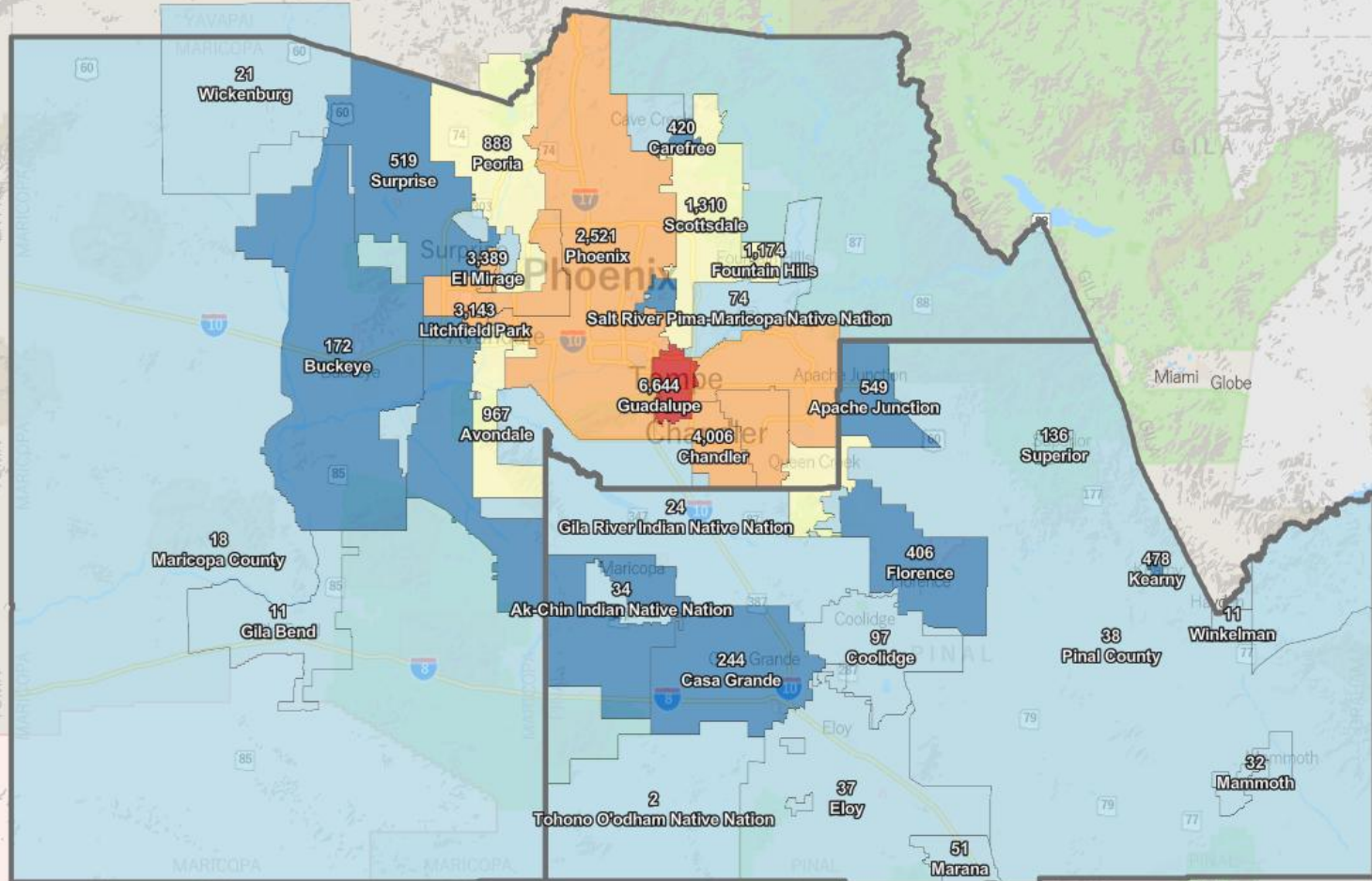
Notes, Caveats & Contact

Municipal Planning Areas (MPAs) Total Population / Square Mile (2020)



Adjust Transparency

☐ Show Streets





2023 Socioeconomic Projections

Toggle visible planning area

RAZ **MPA** Jurisdiction Heatmap

☒ Show Labels

Select Field

Total Population Total Jobs

☒ Display by Density

More fields coming soon!

Select Year

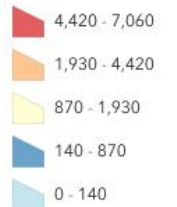
2020 **2030** 2040 2050 2060

Documents

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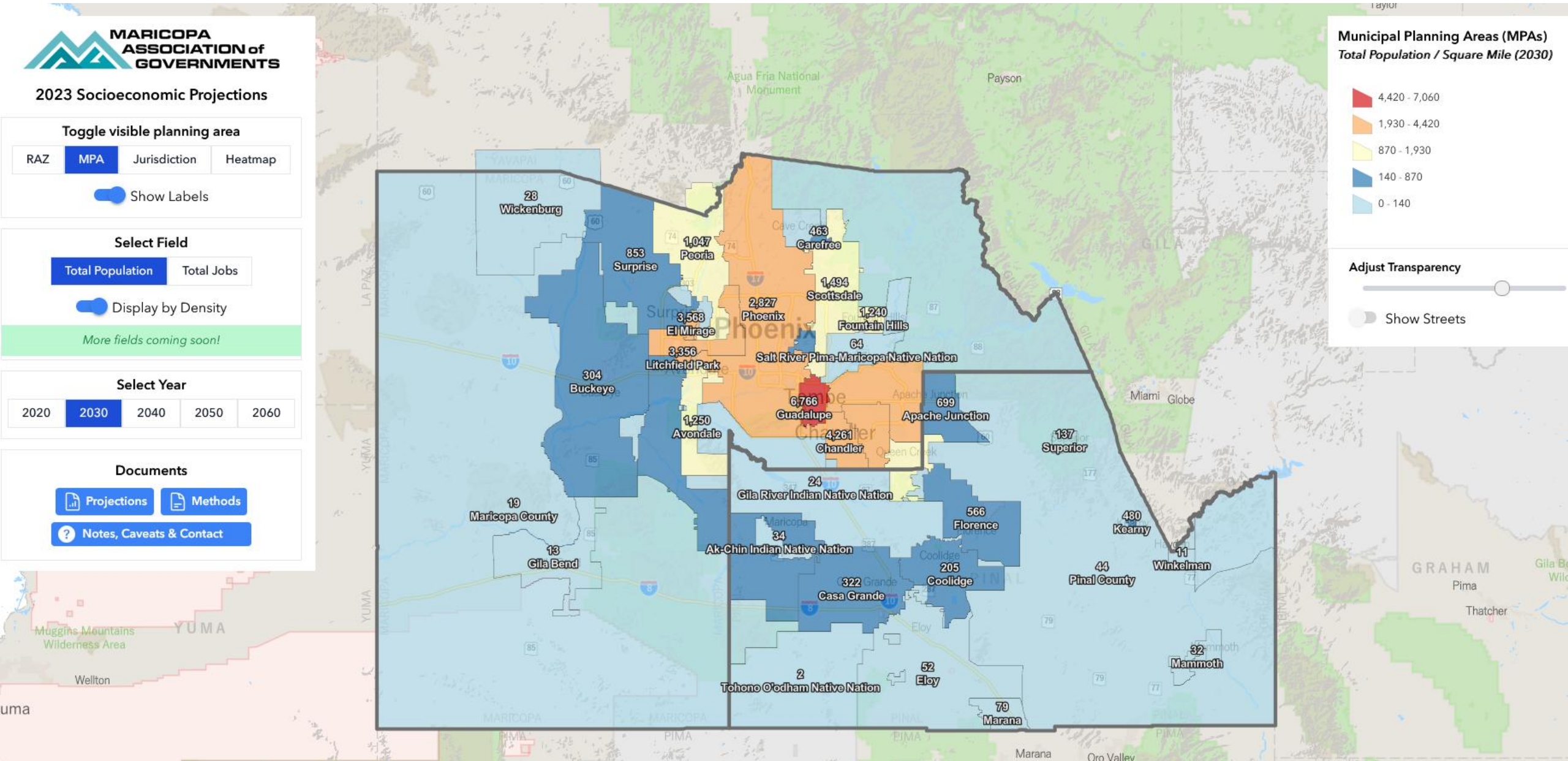
Municipal Planning Areas (MPAs)
Total Population / Square Mile (2030)



Adjust Transparency



☐ Show Streets





2023 Socioeconomic Projections

Toggle visible planning area

RAZ MPA Jurisdiction Heatmap

Show Labels

Select Field

Total Population Total Jobs

Display by Density

More fields coming soon!

Select Year

2020 2030 2040 2050 2060

Documents

Projections Methods

Notes, Caveats & Contact

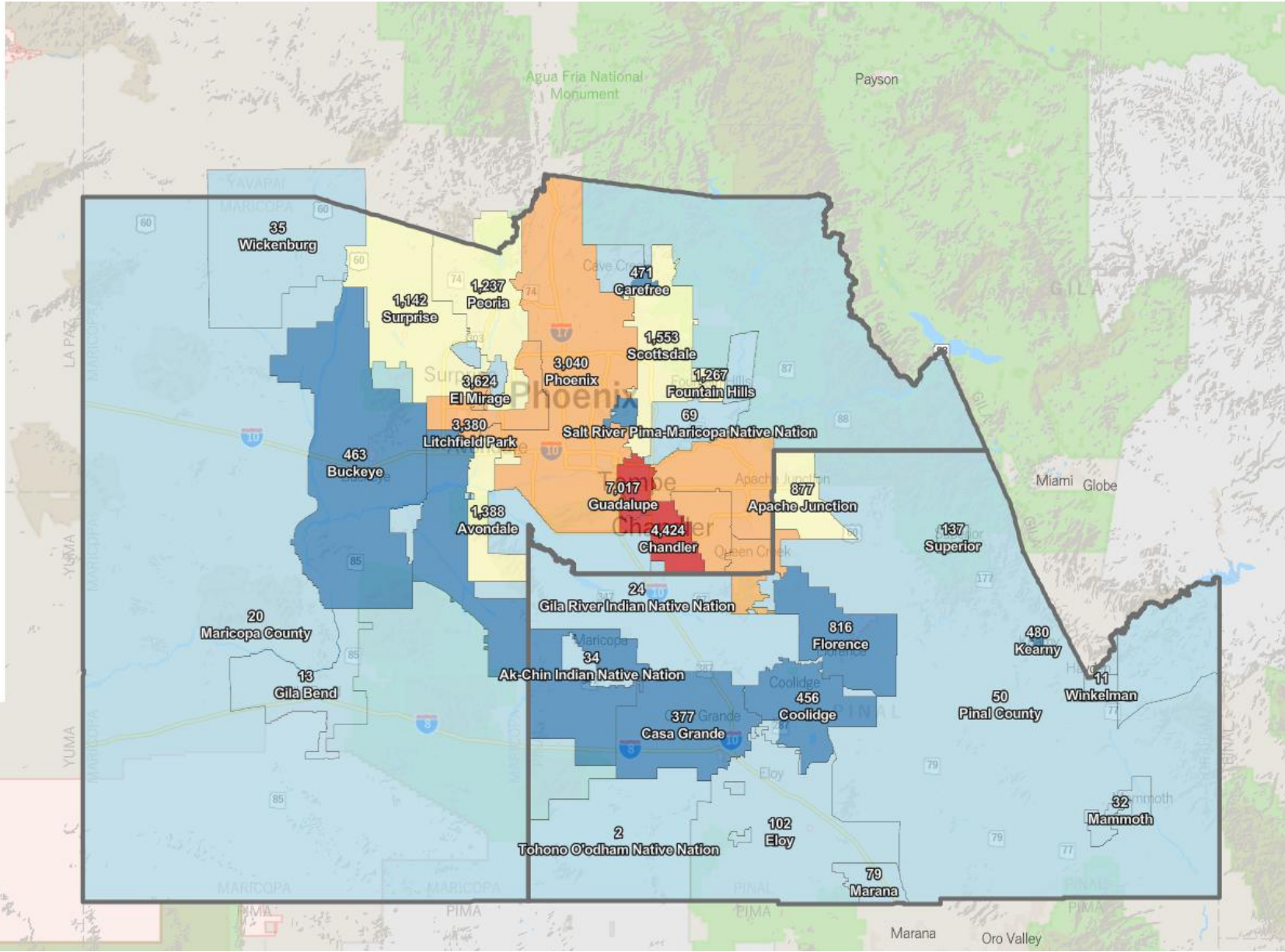
Municipal Planning Areas (MPAs)
Total Population / Square Mile (2040)



Adjust Transparency



Show Streets





2023 Socioeconomic Projections

Toggle visible planning area

RAZ MPA Jurisdiction Heatmap

Show Labels

Select Field

Total Population Total Jobs

Display by Density

More fields coming soon!

Select Year

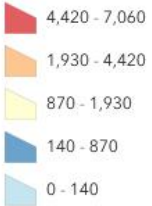
2020 2030 2040 2050 2060

Documents

Projections Methods

Notes, Caveats & Contact

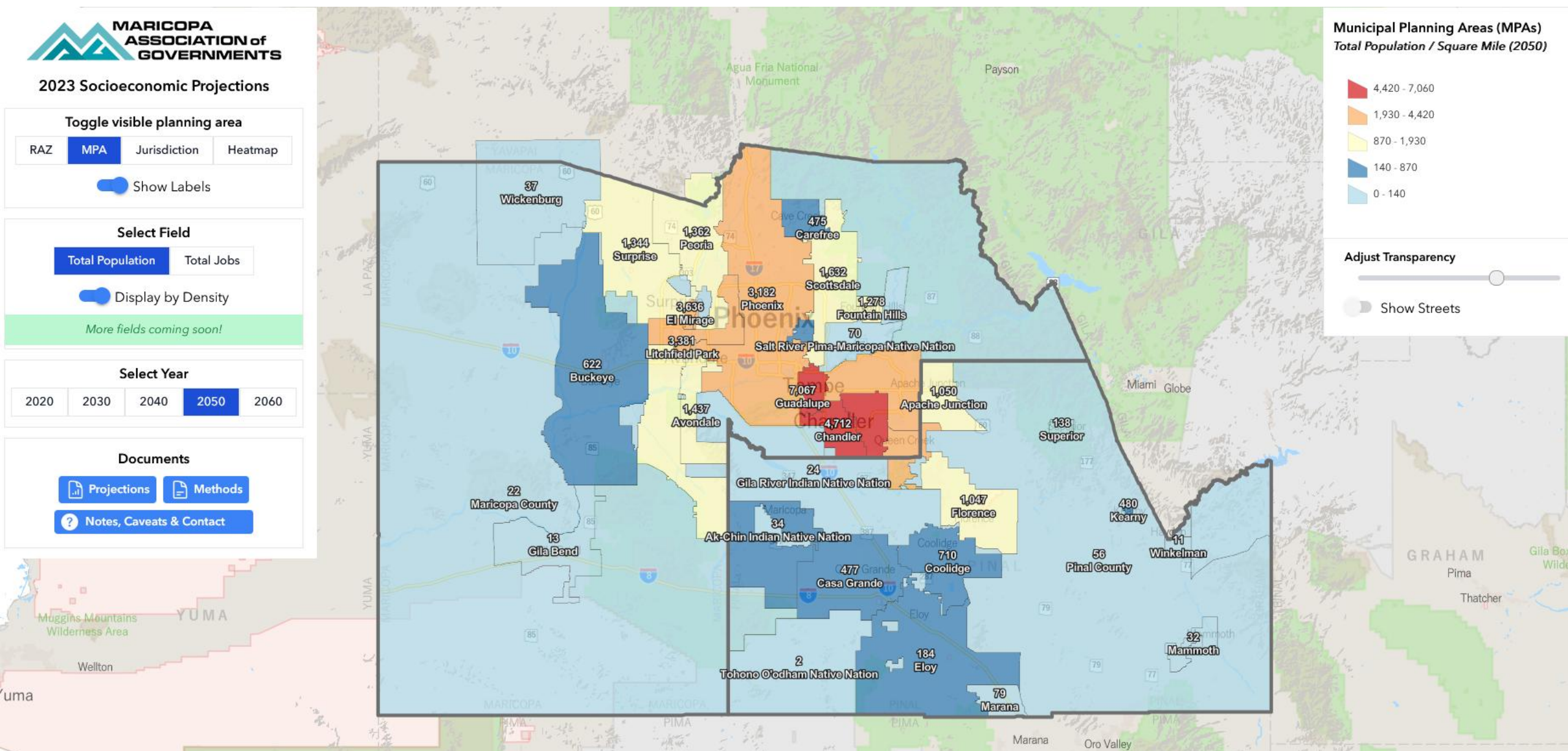
Municipal Planning Areas (MPAs)
Total Population / Square Mile (2050)



Adjust Transparency



Show Streets





2023 Socioeconomic Projections

Toggle visible planning area

RAZ **MPA** Jurisdiction Heatmap

☒ Show Labels

Select Field

Total Population Total Jobs

☒ Display by Density

More fields coming soon!

Select Year

2020 2030 2040 2050 **2060**

Documents

Projections Methods

Notes, Caveats & Contact

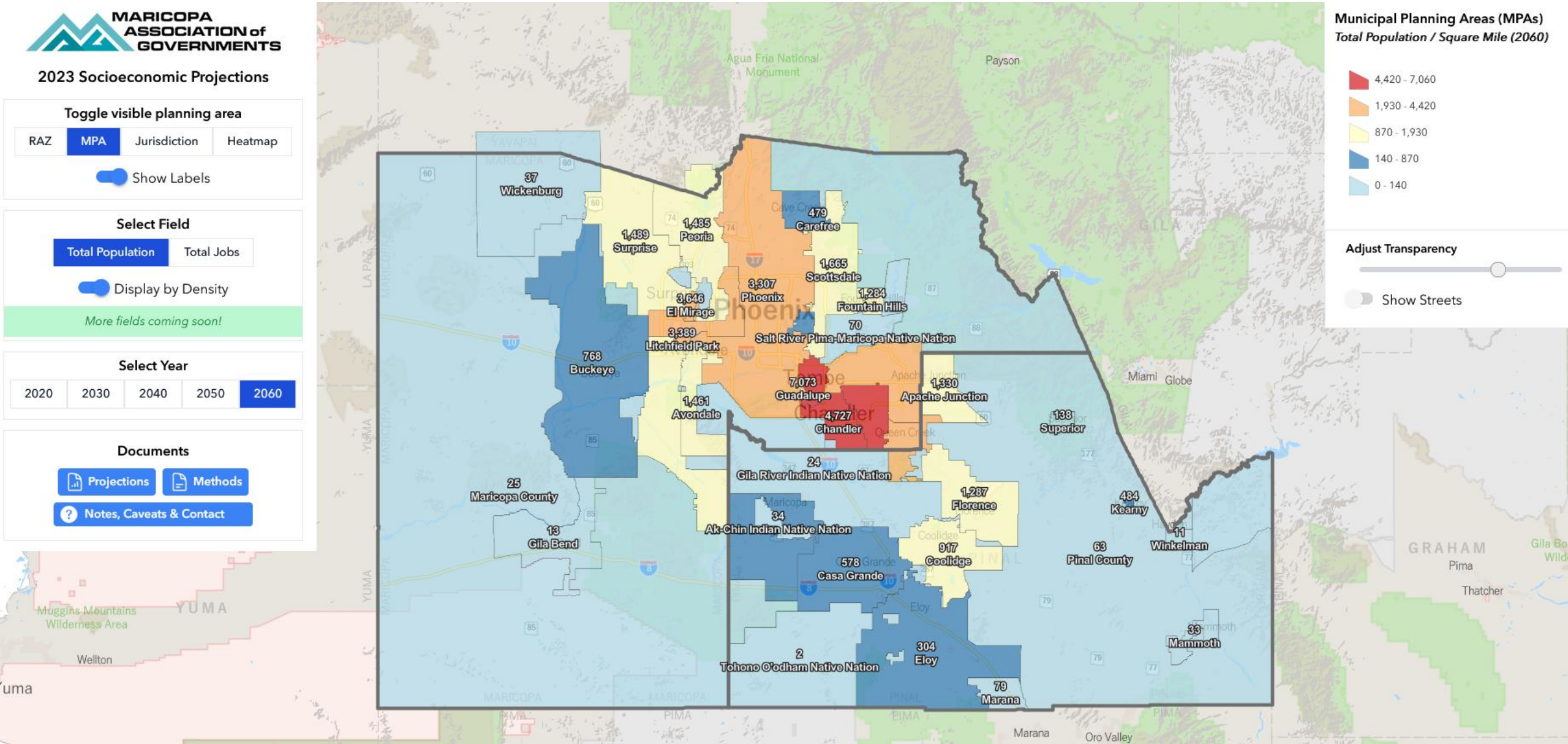
Municipal Planning Areas (MPAs)
Total Population / Square Mile (2060)



Adjust Transparency



☐ Show Streets





Big Conclusions



Deeper cuts in Colorado River supply are expected, and the impacts of these cuts will vary from city to city.

Water availability will be a bigger determinant of how cities in Arizona grow.

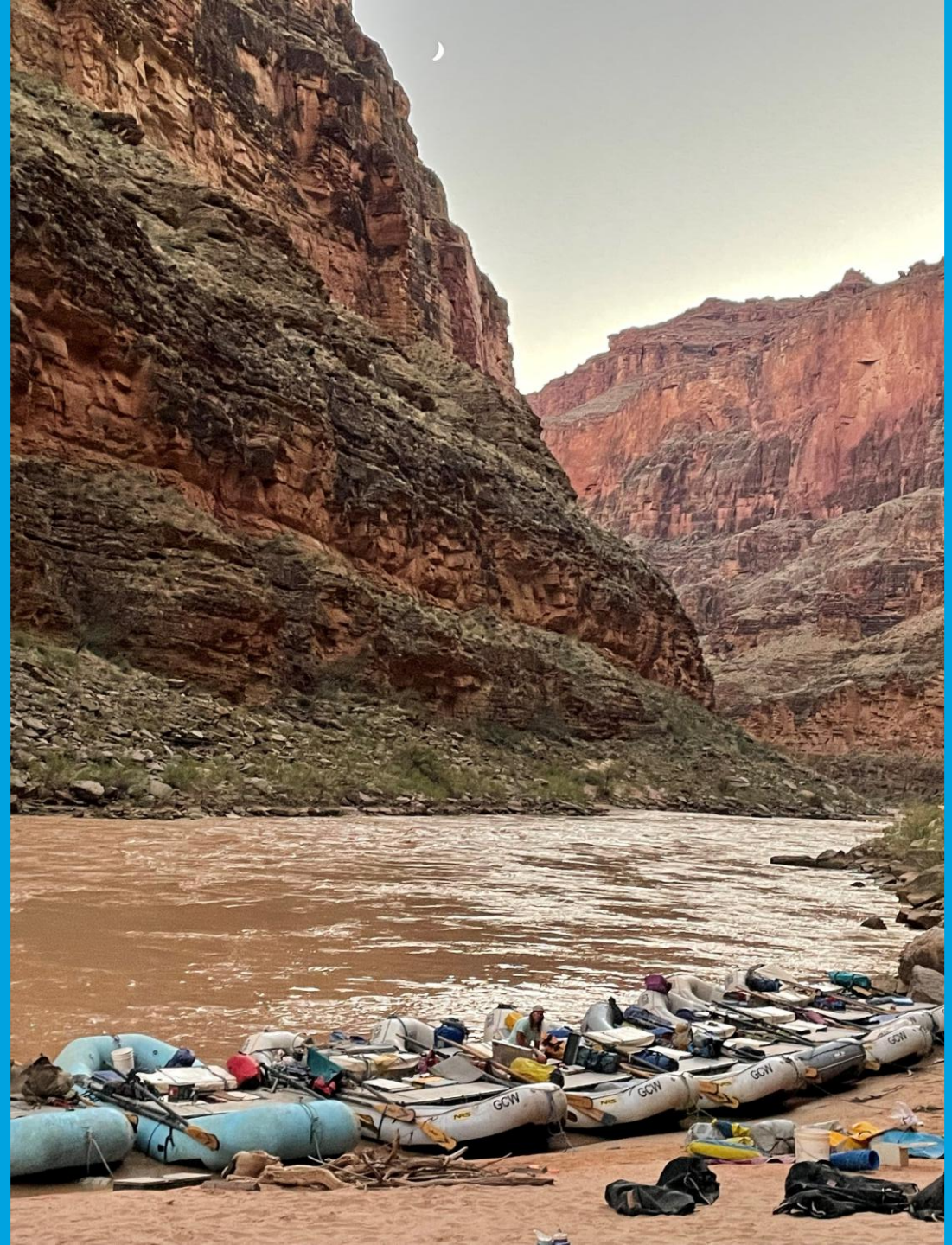
Per capita water consumption will continue to decline with population and economic growth.

Sarah Porter
s.porter@asu.edu



**Arizona
Water
Blueprint**

[**azwaterblueprint.asu.edu**](http://azwaterblueprint.asu.edu)





AWE UPDATES

ULI Water Wise Development Coalition Meeting

November 19, 2025

Alliance for Water Efficiency

NEWLY RELEASED: WRF 5265

EVALUATING CHANGES IN PEAK WATER DEMAND AND HOW THAT MAY AFFECT THE CHOICE, DESIGN, MANAGEMENT, AND EVALUATION OF DEMAND MANAGEMENT STRATEGIES

The Report includes:

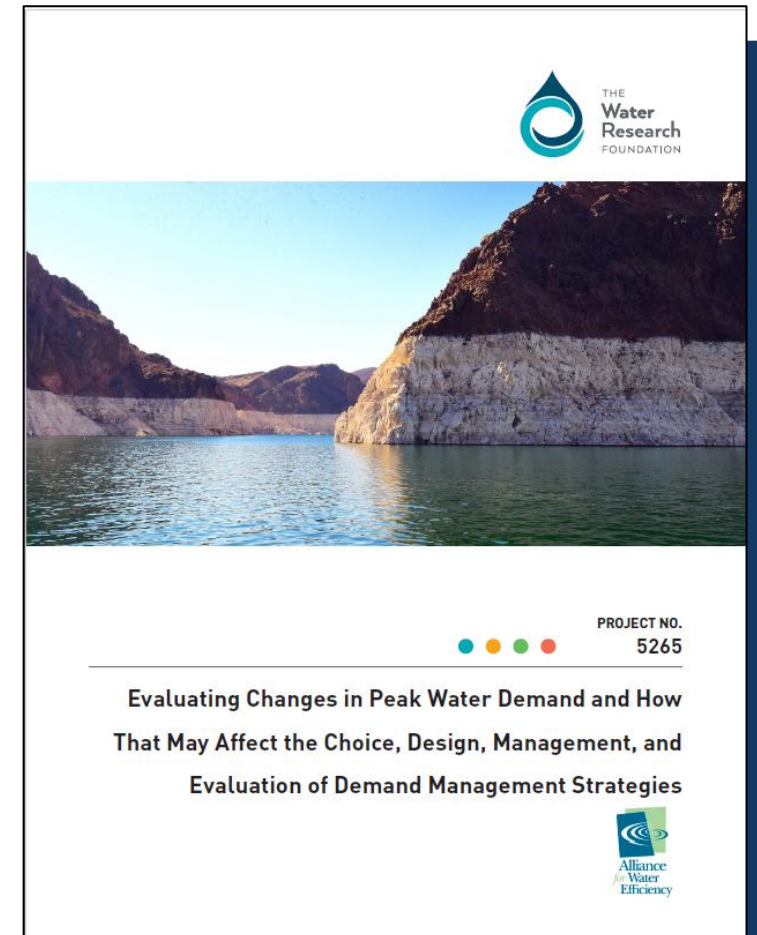
- An overview of water demand trends across various peak-related metrics
- Case study analyses of peak water demand history and trends
- An assessment of peak demand management strategies



[Access the
report here!](#)



Upcoming WRF Webcast:
December 9, 3:00 pm ET.
Registration details to come!



RESEARCH DEVELOPMENT: WATER REUSE & EFFICIENCY

Pre-Proposal for WRF's Tailored Collaboration Program, in partnership with Water Reuse Association: **"Strategies for Integrating Water Reuse and Water Efficiency / Conservation to Maximize Benefits"**



Identify examples & best practices for integrating centralized water reuse systems and WUE / conservation strategies



Develop a guidance offering practical insights, planning approaches, technologies, and organizational practices



Convene a peer network of water professionals working on reuse and conservation

Reach out to Johanna DeCotis Smith at Johanna@a4we.org to learn more and participate in this research.

Resources & Updates

ULI Opportunities

- **Convening local roundtables and/or focus groups between public and private sector** land use and water professionals, aimed at supporting water-wise real estate and supportive policies. Reach out if you or someone you know is interested!
- **Documenting the business case for water-wise land uses.** Please let me know if you have case studies that demonstrate the financial ROI for water-wise real estate and built environments!
- **NEW article series in Urban Land Magazine** about coalition meeting topics – opportunity for authorship!

Interested? Email Marianne.Eppig@uli.org

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Programming Brainstorm

Let us know what you want for coalition meetings!

Cohort Programming Agenda	Subject Brainstorm
Jan/Feb 2026	Data center water use and industry best practices
April/May/June 2026	Water Demand Calculator (IAPMO, Fort Collins?)
July/Aug/Sept 2026	Agriculture/development interface? (Robert Sakata, Sonoran Institute/Waverly Klaw on Bridging the Gap)
Oct/Nov/Dec 2026	Development review process and developer/government interface?
Jan/Feb/March 2027	MLS listings and water use/efficiency?

Join us for the 2026 Resilience Summit!

May 8, 2026
Nashville, TN



SURVEY

We'd love to hear from you!

Please take 5 minutes to complete the program survey:

- Using the QR code here
- Or using the link:
https://urbanlandinstitute.qualtrics.com/jfe/form/SV_cveKlXilqshnjwy

Impact stories/testimonials may be featured by ULI!





THANK YOU FOR JOINING US!

You can reach me at Marianne.Eppig@uli.org