# Advancing Solutions for Water Scarcity

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CRWUA
COLORADO RIVER WATER USERS ASSOCIATION

# WATER SUPPLY & SERVICE AREA


**3.1 MAFY** Apportionment

**2.6** MAFY Present Perfect Rights

**≈500,000** AFY QSA Conservation

**1,563** Square Mile Water Service Area

**448,000+** Irrigated Acres

**97%** Agriculture Use

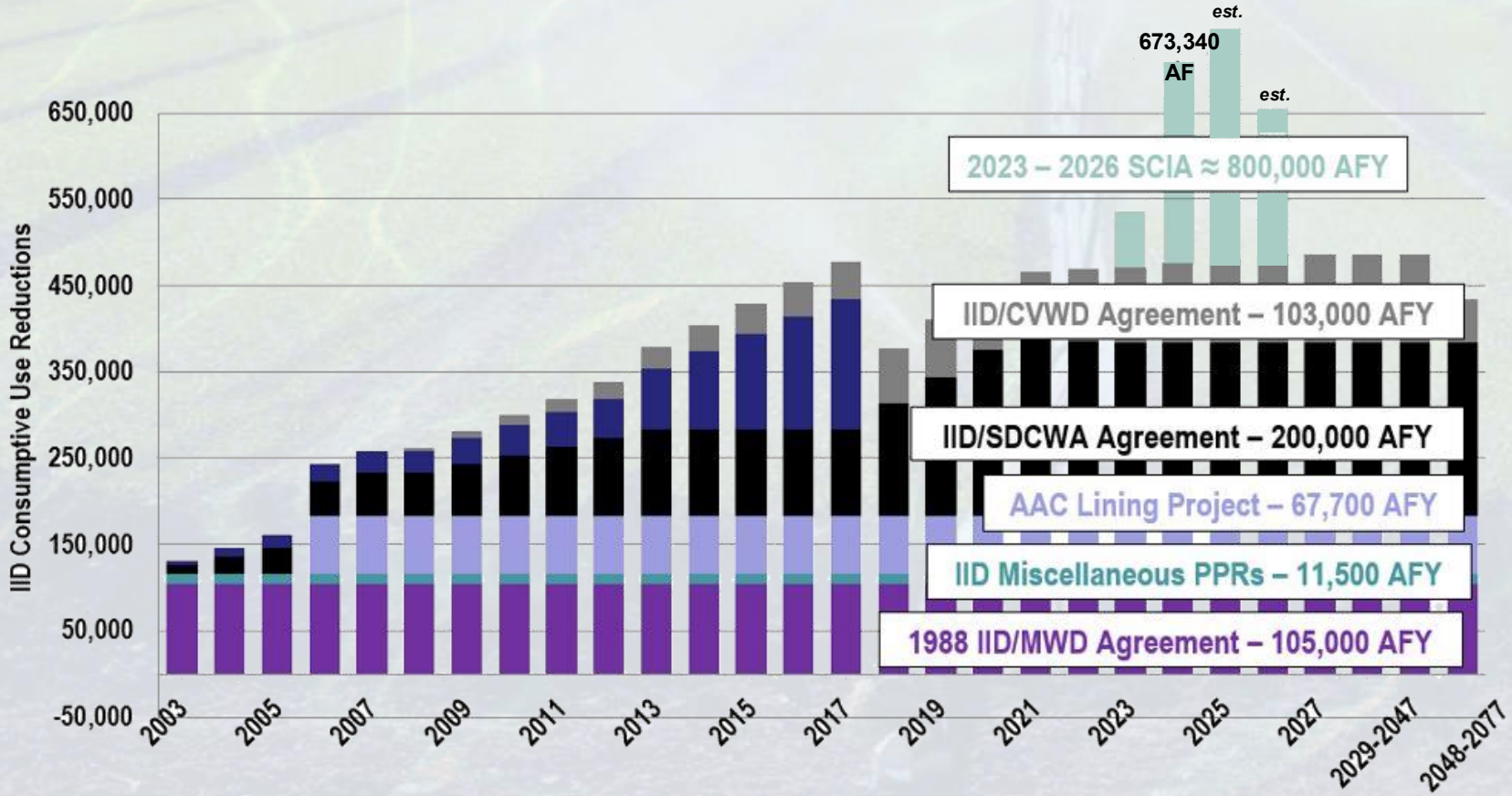
IID *"What's Growing On"* Video Series

https://www.iid.com

# CONSERVATION

## >9.1 MAF

**2003-2025 Total Verified Conservation**



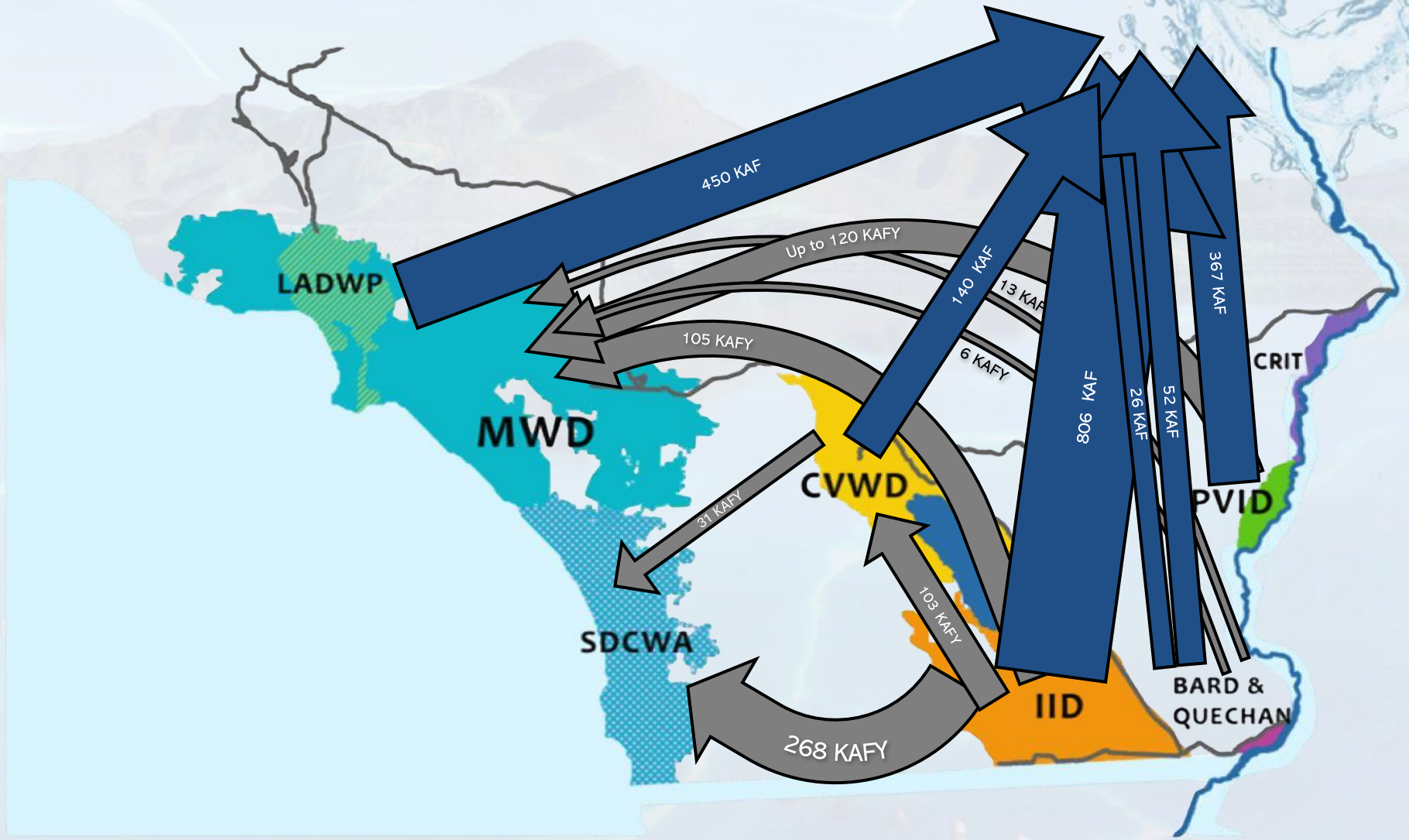

- 50% more water savings than IID's 2025 QSA conservation obligations
- In 2025, SCIA and OFECP conservation together generated water savings equivalent to more than 23% of IID's 3.1 MAFY entitlement.

# COLLABORATION

- **California's Intrastate Conserved Water Transfer Collaborations (≈ 650 KAFY)**

| | |
|---|---|
| IID/MWD | 105 KAFY |
| PVID/MWD | Up to 120 KAFY |
| IID/CVWD | 103 KAFY |
| IID/SDCWA | 268 KAFY |
| Quechan/MWD | 13 KAFY |
| BARD/MWD | 6 KAFY |
| CVWD/SDCWA | 31 KAFY |

- **2022 – 2026 Lake Mead System Conservation (≈ 1.9 MAF) Est.**



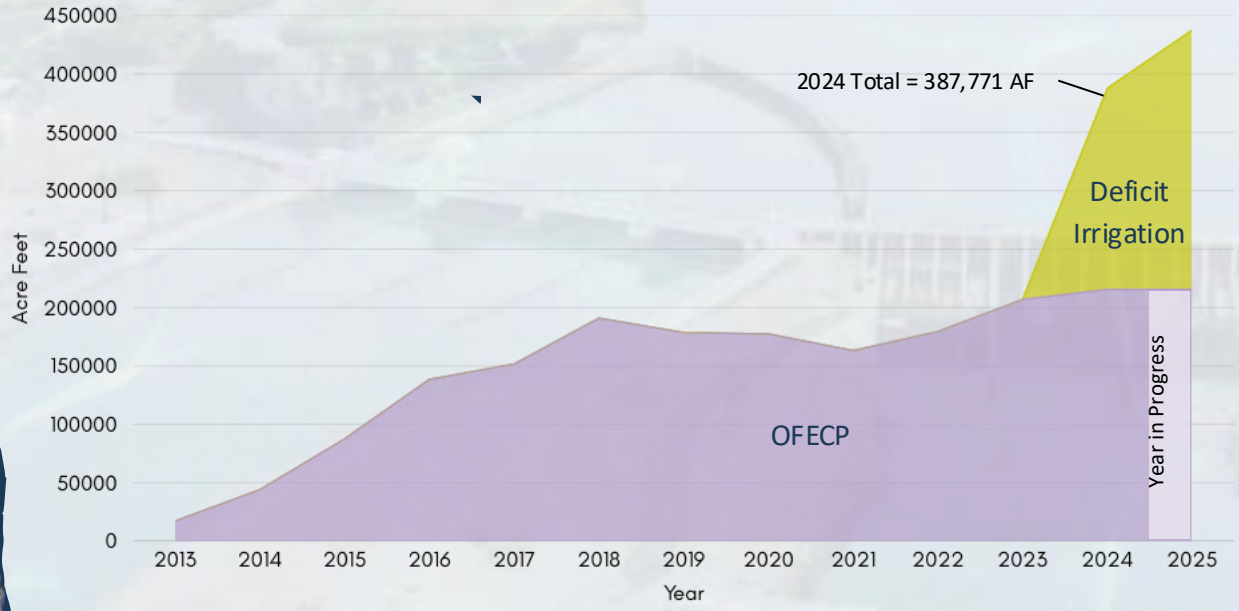
# GROWER PROGRAMS

## On-Farm Efficiency Conservation Program


*2024*
**215,382** AF
376,289 Acres

*2025*
**TBD** AF *(In Progress)*
397,348 Acres

## Annual Water Conserved Through Grower Programs (AFY)




# 2.3 MAF

**Conserved in 2013 -2025 Grower Programs**

## Deficit Irrigation Program


*2024*
**172,389** AF
154,245 Acres

*2025*
**222,274** AF
150,520 Acres

# System Conservation 2023-2026


**>800,000 AF**
IID System Conservation (2023-2026)

# Conservation Summary 2003-2025

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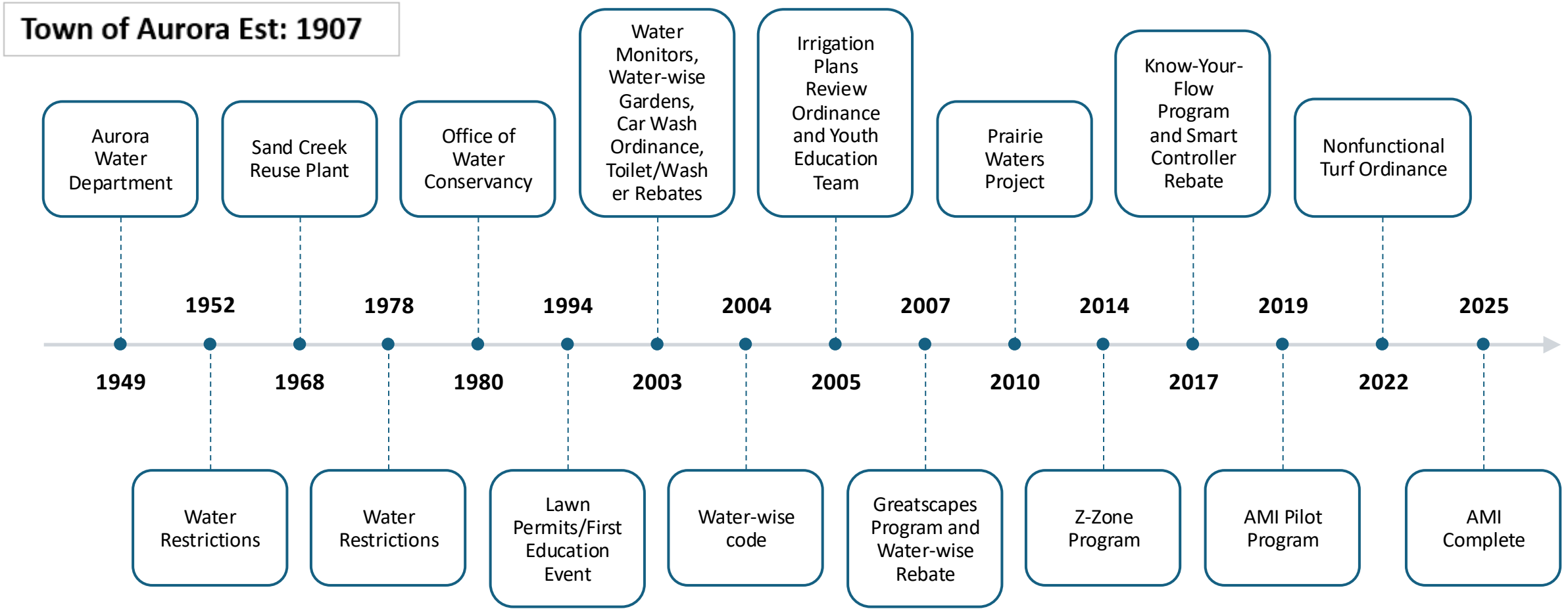
# Advancing Solutions for Water Scarcity


Alexandra L. Davis
Aurora Water Assistant General Manager
Water Supply and Demand

CRWUA 2025

Captured On: Fri August 02 2024 12:00:19

# Water Conservation History



# Potable Reuse - Prairie Waters

## Planned and developed after the 2002 drought

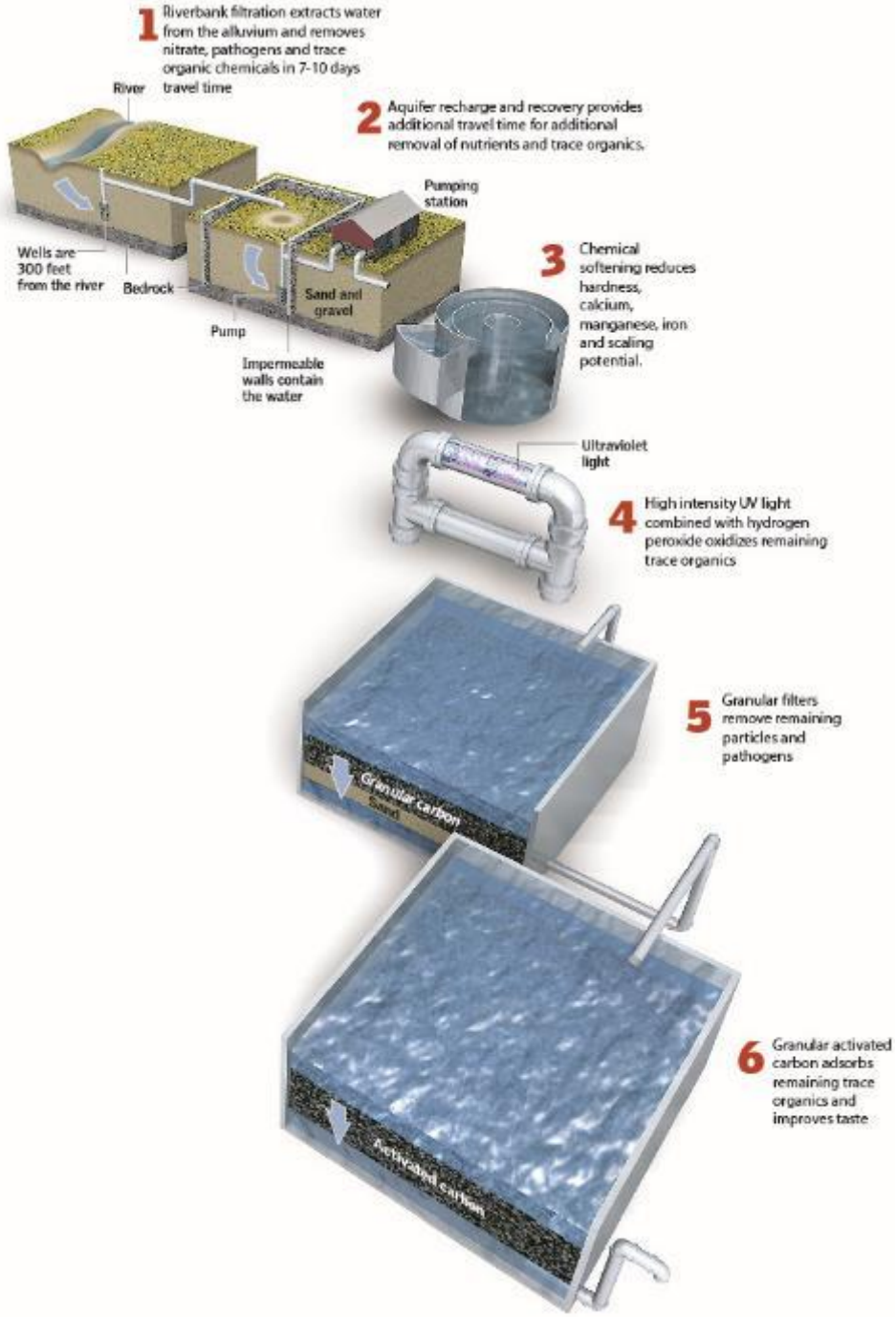
- Source water is fully consumable (return flows & effluent)
- Built to expand capacity over time

## Infrastructure

- 23 wells along South Platte River
- Aquifer Recharge and Recovery for pre-treatment
- 3 pump stations
- Numerous Gravel Pits
- 50 MGD advanced treatment plant
- Over $1 Billion invested in reclaiming water

## Allows water to be diverted when available outside of normal demands

- Drought protection
- Flexibility to operations



# Policy Driven Conservation

- Water Service Connection/Tap Fees
- Municipal Code Sec. 138-191
  - Prohibits non-functional turf in new development
  - Limits turf in residential back yards
  - Prohibits ornamental water features
  - Prohibits the removal of water-wise landscape for the purpose of installing turf
  - Large Water User Guide
  - Prohibits the waste of water

# Program Driven Conservation

- Incentive Programs
  - Commercial Washer Rebates
  - Grass Replacement Incentive Program
  - High-Efficiency Irrigation Components
  - Low-income Water Efficiency Program
  - “Smart” Irrigation Controller Rebates
  - Ultra-high Efficiency Toilet Rebates
  - GreatScapes Income-qualified Program
- New Development & Policies
  - Codes/Ordinances
  - Irrigation & Soil Inspections
  - Irrigation Plans Review
  - Water Management Plan Enforcement
  - Z-zone Program
- Efficiency & Education Programs
  - Advanced Metering Infrastructure (AMI)
    - Leak Notification and Investigation
  - Conservation Education Program
  - High-Use Outreach and Investigations
  - Indoor Water Assessments
  - Know Your Flow
  - Large Property Watering Variance Program
  - Outdoor Water Assessments
  - Aurora Water-wise Garden
  - Water-wise Landscape Design Program
  - Contractor Engagement Seminar (annual)
  - Water-wise Day

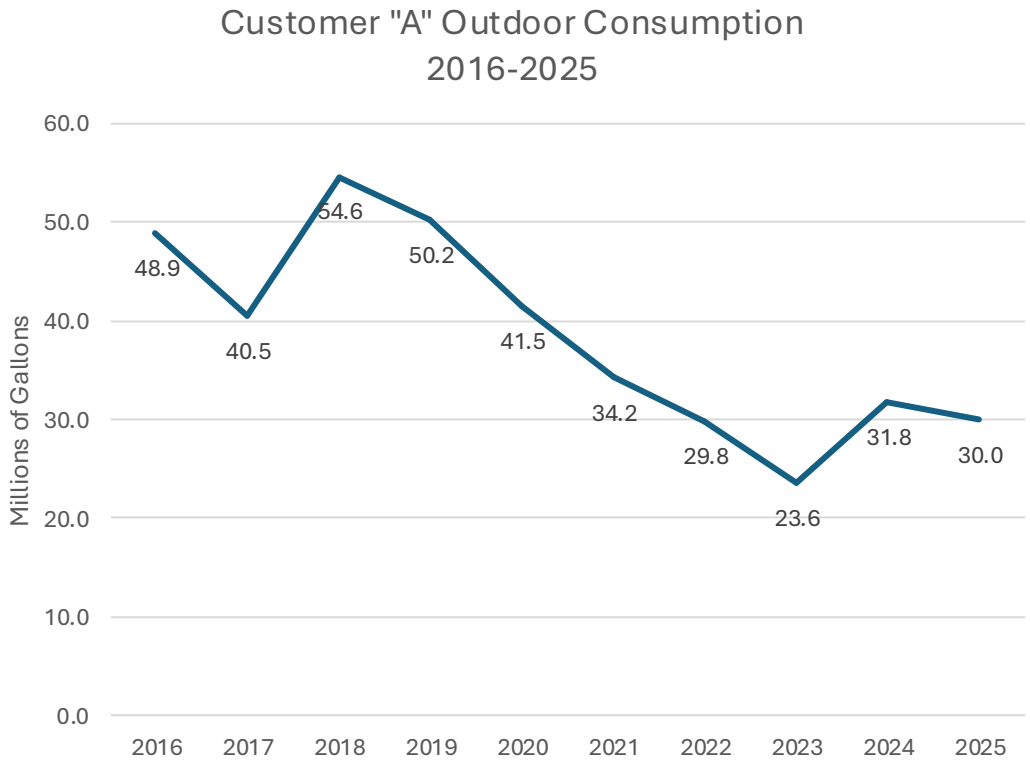
# Innovations

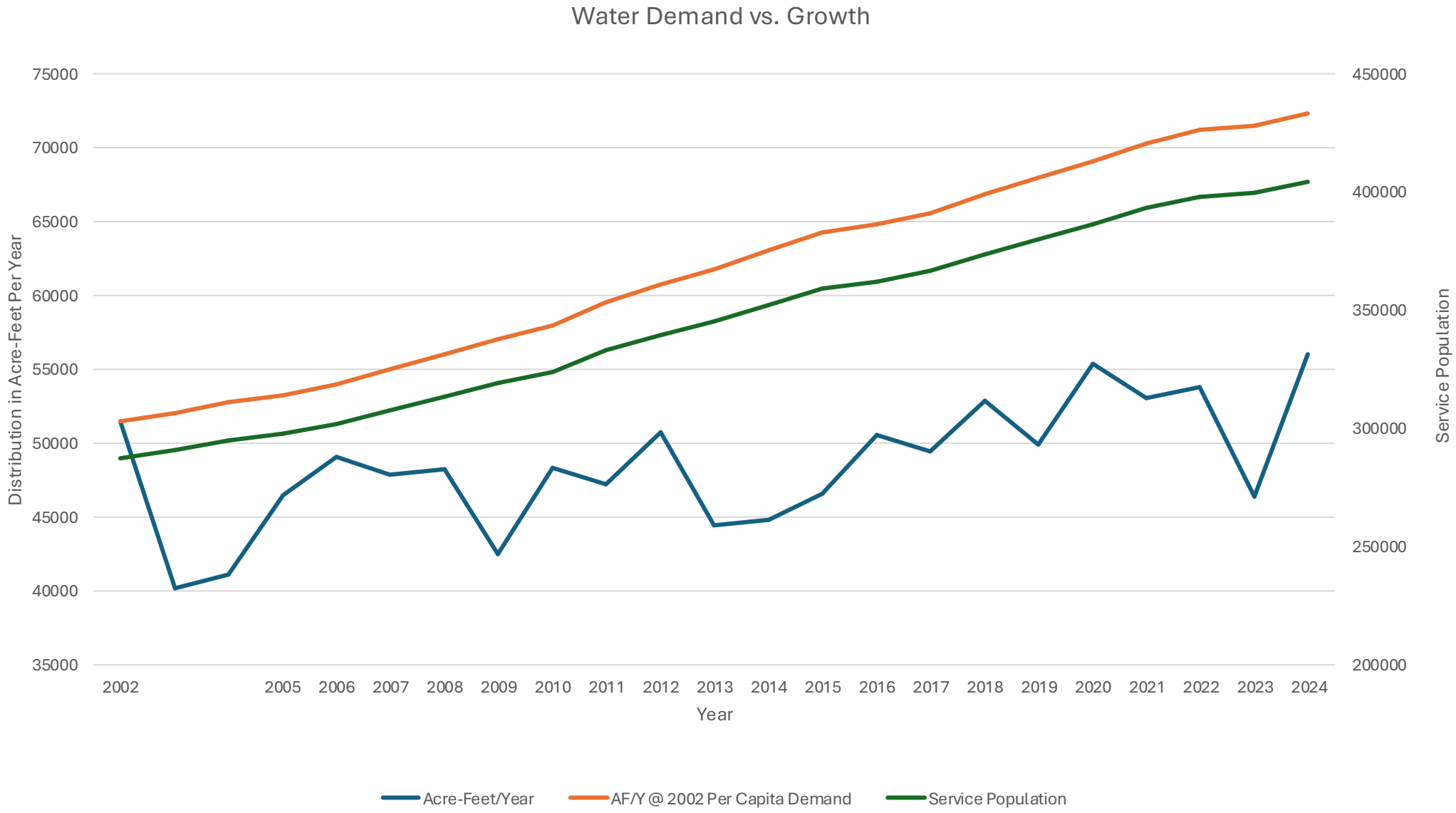
- Prairie Waters
- AMI
- Turf Ordinance
- Direct Potable Reuse
- Large Water User Guide
- Volumetric Fee Structure/Allocations

| Volumetric Use (Avg gal/acre/day) | Non-Recoverable Use ≤25% | 26% - 50% | 51% - 75% | 76% - 100% |
|---|---|---|---|---|
| ≤600 | Allowed - Low Volumetric Use Low Non-Recoverable | Allowed - Low Volumetric Use Low Non-Recoverable | Allowed - Low Volumetric Use/ Moderate Non-Recoverable | Allowed - Low Volumetric Use/ High Non-Recoverable |
| 601-1,000 | Allowed - Low Volumetric Use Low Non-Recoverable | Allowed - Low Volumetric Use Low Non-Recoverable | Allowed - Low Volumetric Use/ Moderate Non-Recoverable | Allowed - Low Volumetric Use/ High Non-Recoverable |
| 1,001 - 2,000 | Allowed - Avg Volumetric Use/ Low Non-Recoverable | Allowed - Avg Volumetric Use/ Low Non-Recoverable | Allowed - Avg Volumetric Use/ Moderate Non-Recoverable | Allowed - Avg Volumetric Use/ High Non-Recoverable |
| 2,001 - 2,500 | Allowed - Avg Volumetric Use/ Low Non-Recoverable | Allowed - Avg Volumetric Use/ Low Non-Recoverable | Allowed - Avg Volumetric Use/ Moderate Non-Recoverable | Allowed Under Exemption Only |
| 2,501 - 3,000 | Allowed - High Volumetric Use/ Low Non-Recoverable | Allowed - High Volumetric Use/ Low Non-Recoverable | Allowed Under Exemption Only | Not Allowed |
| 3,001 - 3,500 | Allowed Under Exemption Only | Allowed Under Exemption Only | Not Allowed | Not Allowed |
| 3,501+ | Allowed Under Exemption Only | Not Allowed | Not Allowed | Not Allowed |

# Allocation Agreement Rebate Success Story

- Large property, high water use customers
- Multi-year, phased implementation
- Customer “A” Success
  - Analysis, assessment, and education began 2018
  - “Smart” Irrigation Controller rebate ($250K) 2020
  - Turf conversions began 2021 and have continued
  - Planned 160,000 square feet of conversions in 2026
  - 2025 demand was 75 acre feet less than 2018 demand
- New “allocations” set to vegetation cover and area
- If savings goals not met, rebate is paid back over time




Water Demand vs. Growth
Distribution in Acre-Feet Per Year
Service Population
75000
70000
65000
60000
55000
50000
45000
40000
35000
450000
400000
350000
300000
250000
200000
2002
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Year
Acre-Feet/Year
AF/Y @ 2002 Per Capita Demand
Service Population


Aurora's Water Conservation team is one of 5 platinum recognized teams in the country (and the only one in Colorado).

# Questions?

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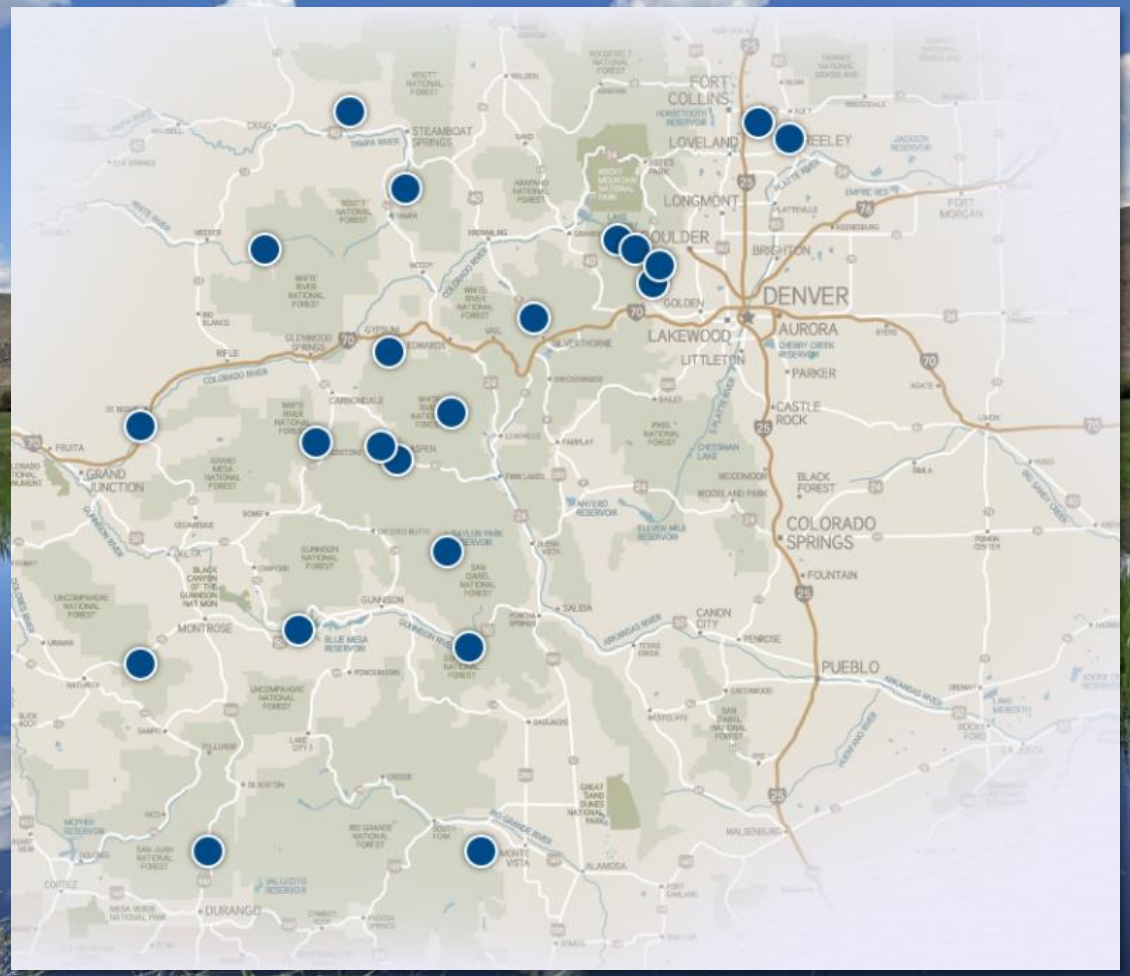
# ENVIRONMENTAL WATER: SOLUTION TO SCARCITY

COLORADO WATER TRUST

KATE RYAN, EXECUTIVE DIRECTOR
CRWUA

DECEMBER 2025




# COLORADO WATER TRUST

**26 projects, acquiring water rights to**

**add over 80,000 acre-feet of water to**

**814 miles of natural stream in Colorado**

# WHO WE ARE...

- Nonprofit organization, team of 9, $2.5 million core budget, and we work statewide to restore water to **COLORADO'S** rivers
- Formed in **2001** to partner with Colorado's Instream Flow Program and amplify its work
- Work with water users to put together **VOLUNTARY TRANSACTIONS** to benefit the environment
- Transactions are **TAILORED** for each water right and each water system
- Work within the prior appropriation system and compensate water rights owners at **FAIR MARKET VALUE**

# 15-Mile Reach: 5000 AF/year to the Grand Valley

In exchange, CWT providing over $800,000 to upgrade hydropower infrastructure

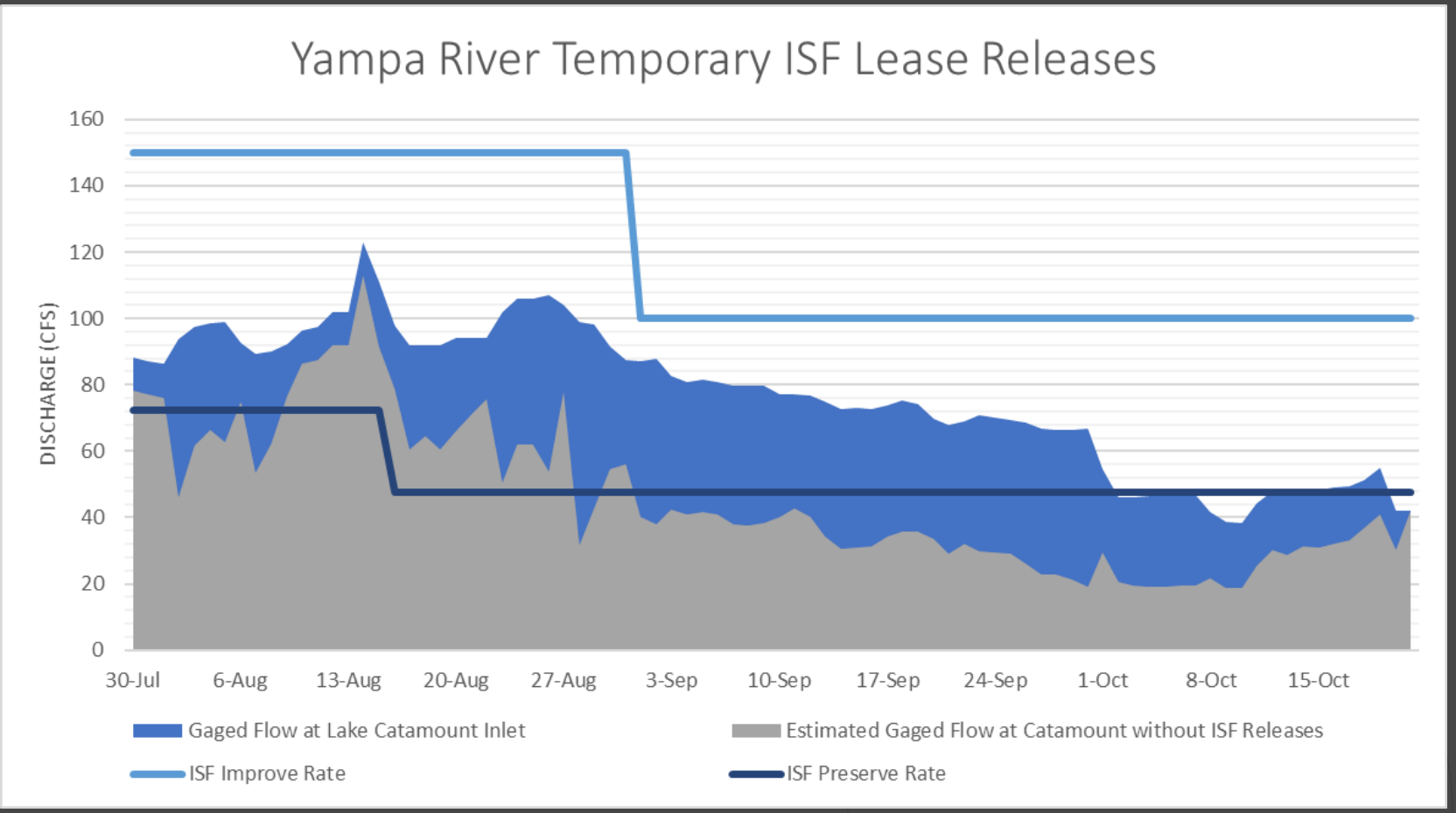
COLORADO WATER TRUST

# Project supports endangered fish species, agricultural water diversions, and local recreation


COLORADO WATER TRUST

COLORADO WATER TRUST
*Just Add Water*

# 2024 YAMPA RIVER RESERVOIR RELEASES




- 5,100 acre-feet released from July 30 – Oct. 20 (83 days)
- Release rates ranging from 10 cfs to 67.6 cfs
- 6 miles of ISF stream reach benefitted, 22+ miles of streamflow benefits
- 2025 operations keep downstream call off the Yampa River

COLORADO WATER TRUST
*Just Add Water*

# WATER SHARING WITH AGRICULTURE

- Compensated leases in the Colorado, Yampa, and Gunnison Basins
- Permanent water sharing via joint ownership on the Little Cimarron River and Boulder Creek
- Proving that environmental water transactions, like CWSAs or ATMs can permanently protect local economies and water for agricultural production

COLORADO
WATER TRUST
*Just Add Water*

**COLORADO WATER TRUST**
1312 17th St #766
Denver, CO 80202
www.ColoradoWaterTrust.org

**Kate Ryan**
Executive Director
720-570-2897, ext. 1
kryan@coloradowatertrust.org

# THANK YOU! …Questions?

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# Advancing Solutions for Water Scarcity

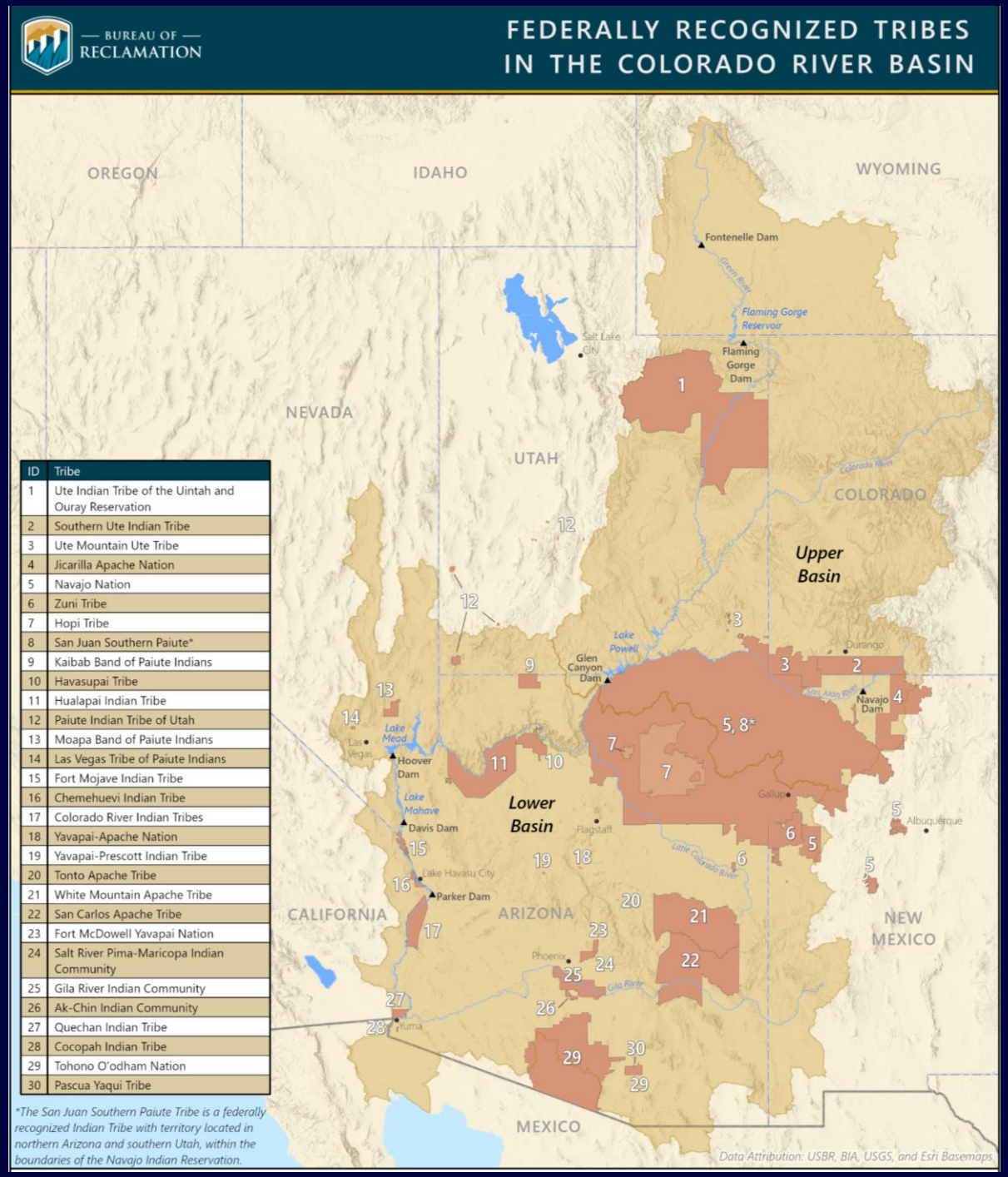
CRWUA 2025

UNIVERSAL ACCESS TO CLEAN WATER

FOR TRIBAL COMMUNITIES

# Initiative to Universal Access to Clean Water for Tribal Communities

The Initiative on Universal Access to Clean Water (UACW) was launched in 2020 to help close the water access gap for Tribal Communities and hold the federal government accountable under its treaty and trust responsibilities to Tribes.




| ID | Tribe |
|---|---|
| 1 | Ute Indian Tribe of the Uintah and Ouray Reservation |
| 2 | Southern Ute Indian Tribe |
| 3 | Ute Mountain Ute Tribe |
| 4 | Jicarilla Apache Nation |
| 5 | Navajo Nation |
| 6 | Zuni Tribe |
| 7 | Hopi Tribe |
| 8 | San Juan Southern Paiute* |
| 9 | Kaibab Band of Paiute Indians |
| 10 | Havasupai Tribe |
| 11 | Hualapai Indian Tribe |
| 12 | Paiute Indian Tribe of Utah |
| 13 | Moapa Band of Paiute Indians |
| 14 | Las Vegas Tribe of Paiute Indians |
| 15 | Fort Mojave Indian Tribe |
| 16 | Chemehuevi Indian Tribe |
| 17 | Colorado River Indian Tribes |
| 18 | Yavapai-Apache Nation |
| 19 | Yavapai-Prescott Indian Tribe |
| 20 | Tonto Apache Tribe |
| 21 | White Mountain Apache Tribe |
| 22 | San Carlos Apache Tribe |
| 23 | Fort McDowell Yavapai Nation |
| 24 | Salt River Pima-Maricopa Indian Community |
| 25 | Gila River Indian Community |
| 26 | Ak-Chin Indian Community |
| 27 | Quechan Indian Tribe |
| 28 | Cocopah Indian Tribe |
| 29 | Tohono O'odham Nation |
| 30 | Pascua Yaqui Tribe |

*The San Juan Southern Paiute Tribe is a federally recognized Indian Tribe with territory located in northern Arizona and southern Utah, within the boundaries of the Navajo Indian Reservation.

# Federal Trust Responsibility

The U.S. Government promised Tribes a permanent, livable homeland on their reservations.

This promise cannot be realized without access to clean drinking water.

# The Water Access Gap

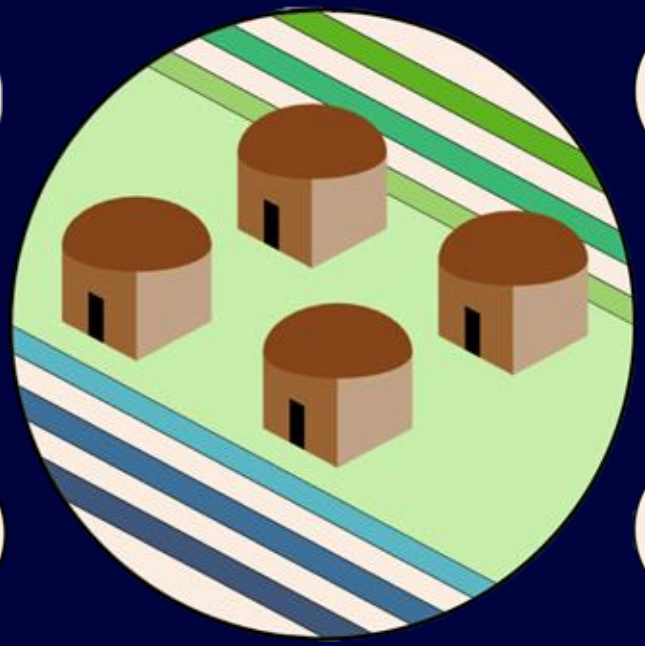
By some estimates, nearly 48% of Tribal homes do not have access to reliable water sources, clean drinking water, or basic sanitation.

Tribal homes are 19 times more likely than non-Tribal households to lack indoor plumbing.

# Elements of Secure Water Access

Sound Infrastructure

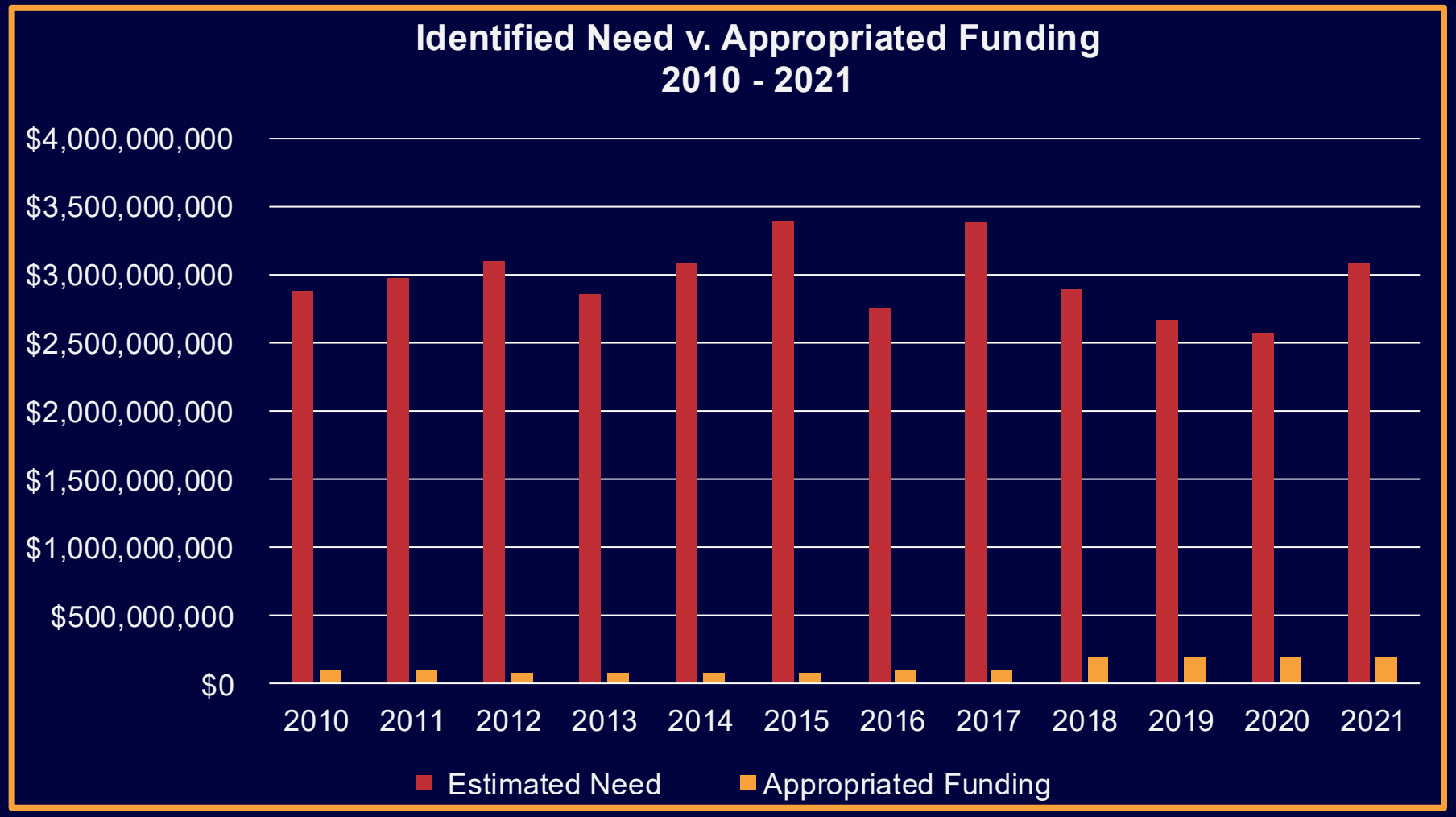
Sufficient Water Quality



Secure Water Quantity

Sustained Operations & Maintenance

# Indian Health Service




Source: Indian Health Service

# Bipartisan Infrastructure Law

## Historic Investments in Drinking Water Infrastructure for Tribal Communities

- IHS - $3.5 billion for Sanitation Deficiency
- EPA - Big plus ups for State Revolving Funds = $700 million more in Tribal Set-Asides
- Reclamation:
    - $1.0 billion for rural water supply projects
    - $1.0 billion for WaterSMART

# The Widening Gap

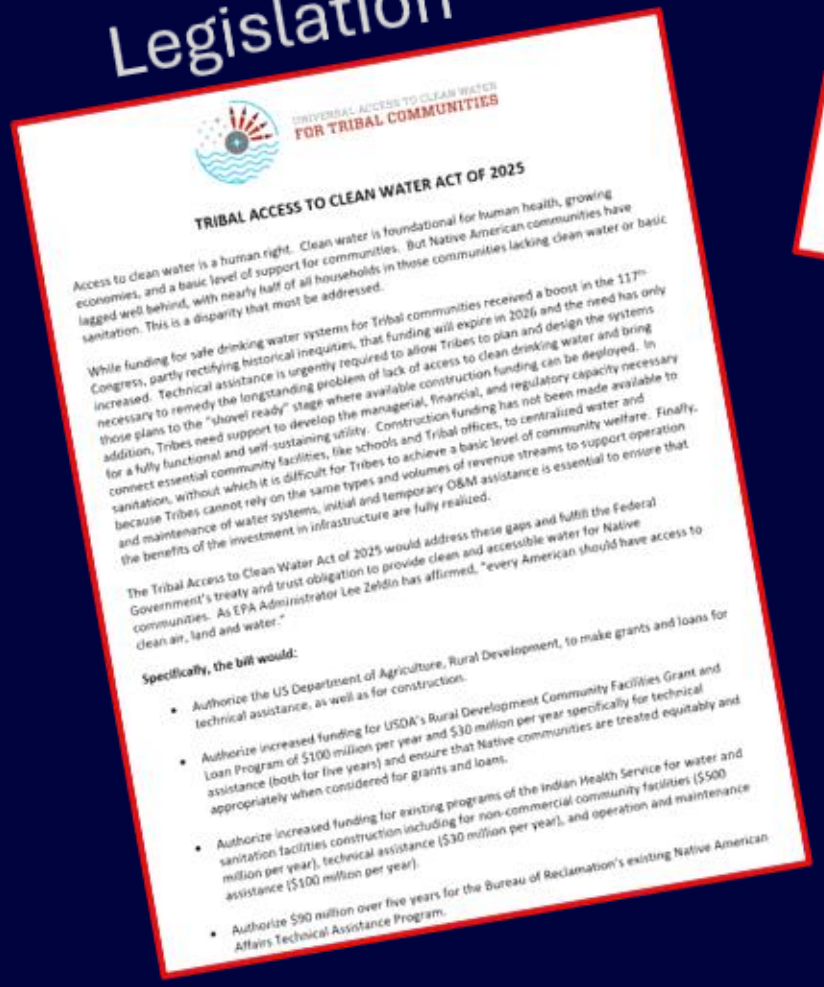
Vastly Reduced Federal Funding

Growing Water Scarcity Across the Basin

Need for Greater Public Awareness

# The Widening Gap

Fact Sheet on Legislation



UNIVERSAL ACCESS TO CLEAN WATER FOR TRIBAL COMMUNITIES

**TRIBAL ACCESS TO CLEAN WATER ACT OF 2025**

Access to clean water is a human right. Clean water is foundational for human health, growing economies, and a basic level of support for communities. But Native American communities have lagged well behind, with nearly half of all households in those communities lacking clean water or basic sanitation. This is a disparity that must be addressed.

While funding for safe drinking water systems for Tribal communities received a boost in the 117th Congress, partly rectifying historical inequities, that funding will expire in 2026 and the need has only increased. Technical assistance is urgently required to allow Tribes to plan and design the systems necessary to remedy the longstanding problem of lack of access to clean drinking water and bring those plans to the "shovel ready" stage where available construction funding can be deployed. In addition, Tribes need support to develop the managerial, financial, and regulatory capacity necessary for a fully functional and self-sustaining utility. Construction funding has not been made available to connect essential community facilities, like schools and Tribal offices, to centralized water and sanitation, without which it is difficult for Tribes to achieve a basic level of community welfare. Finally, because Tribes cannot rely on the same types and volumes of revenue streams to support operation and maintenance of water systems, initial and temporary O&M assistance is essential to ensure that the benefits of the investment in infrastructure are fully realized.

The Tribal Access to Clean Water Act of 2025 would address these gaps and fulfill the Federal Government's treaty and trust obligation to provide clean and accessible water for Native communities. As EPA Administrator Lee Zeldin has affirmed, "every American should have access to clean air, land and water."

**Specifically, the bill would:**

- Authorize the US Department of Agriculture, Rural Development, to make grants and loans for technical assistance, as well as for construction.
- Authorize increased funding for USDA's Rural Development Community Facilities Grant and Loan Program of $100 million per year and $30 million per year specifically for technical assistance (both for five years) and ensure that Native communities are treated equitably and appropriately when considered for grants and loans.
- Authorize increased funding for existing programs of the Indian Health Service for water and sanitation facilities construction including for non-commercial community facilities ($500 million per year), technical assistance ($30 million per year), and operation and maintenance assistance ($100 million per year).
- Authorize $90 million over five years for the Bureau of Reclamation's existing Native American Affairs Technical Assistance Program.


Toolkit on funding cuts to Tribal water programs

Available at uacw.org

# Imagine a Colorado River Basin

...where we see ourselves in the other 40 million people with whom we share this river. We ALL need and deserve access to clean drinking water.

...where every Tribal family turns on the tap and clean water flows.

...federal commitments and infrastructure investments match the scale of need.

**This is possible.**
**This is necessary.**
**This is the right thing to do.**

# Thank you

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# WIFA:

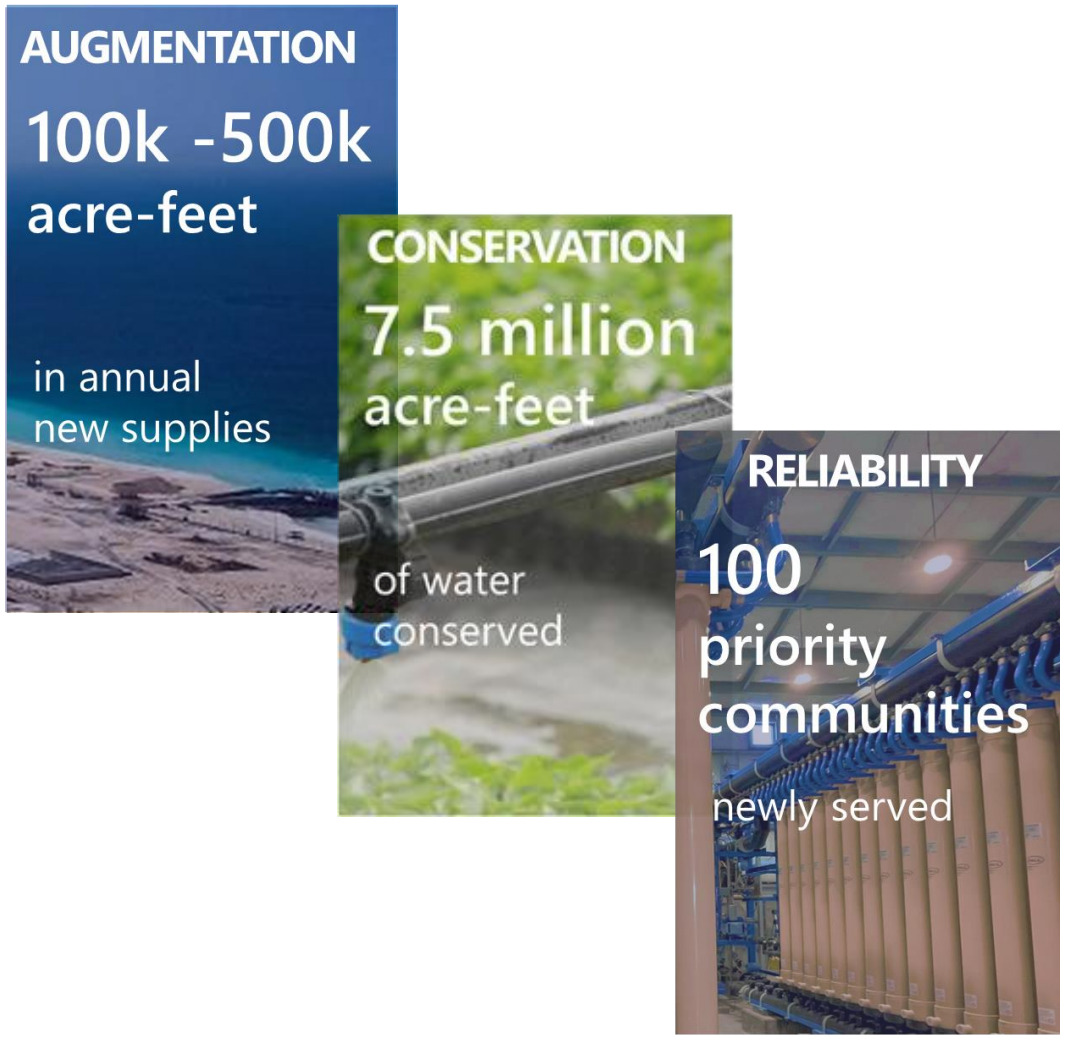
## Innovative Financing for Innovative Solutions

Advancing Solutions for Water Scarcity

WATER INFRASTRUCTURE
FINANCE AUTHORITY OF ARIZONA


“
To ensure the sustainability of Arizona's present and future water supply through financial investments in effective augmentation, conservation, reuse, and water quality actions.

# Leveraging Resources, Driving Behavior




→ **Clean Water State Revolving Fund**
Loans, technical assistance to political subdivisions for wastewater and stormwater projects

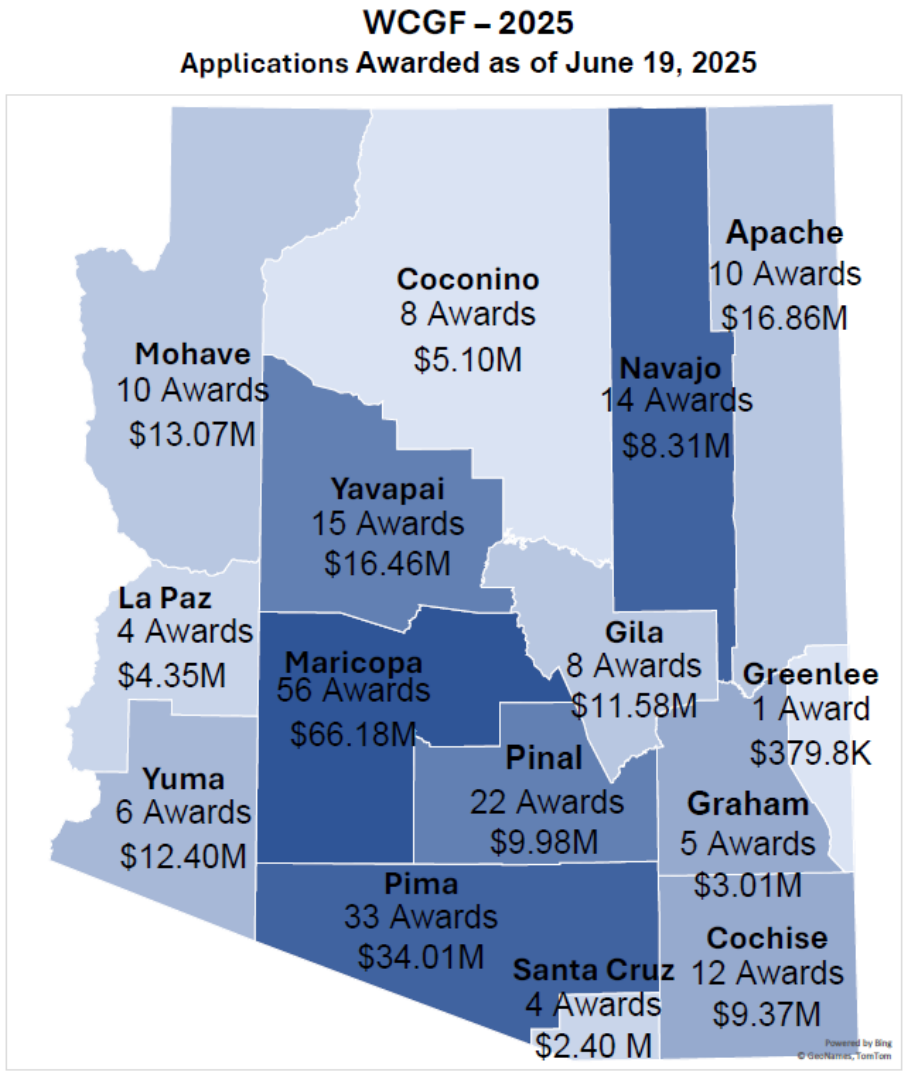
→ **Drinking Water State Revolving Fund**
Loans, technical assistance to public water systems for drinking water infrastructure

→ **Water Supply Development Revolving Fund**
Loans and technical assistance for water supply development outside of urban centers

→ **Water Conservation Grant Fund**
Grants to governmental and non-governmental organizations for projects that promote conservation and decrease water use

→ **Long-Term Water Augmentation Fund**
For projects that import water into Arizona and in-state augmentation projects

# Water Conservation Grant Fund




## $214 million

AWARDED FOR CONSERVATION GRANT FUND PROJECTS

UP TO

## 6.5 million

ACRE-FEET OF WATER TO BE SAVED

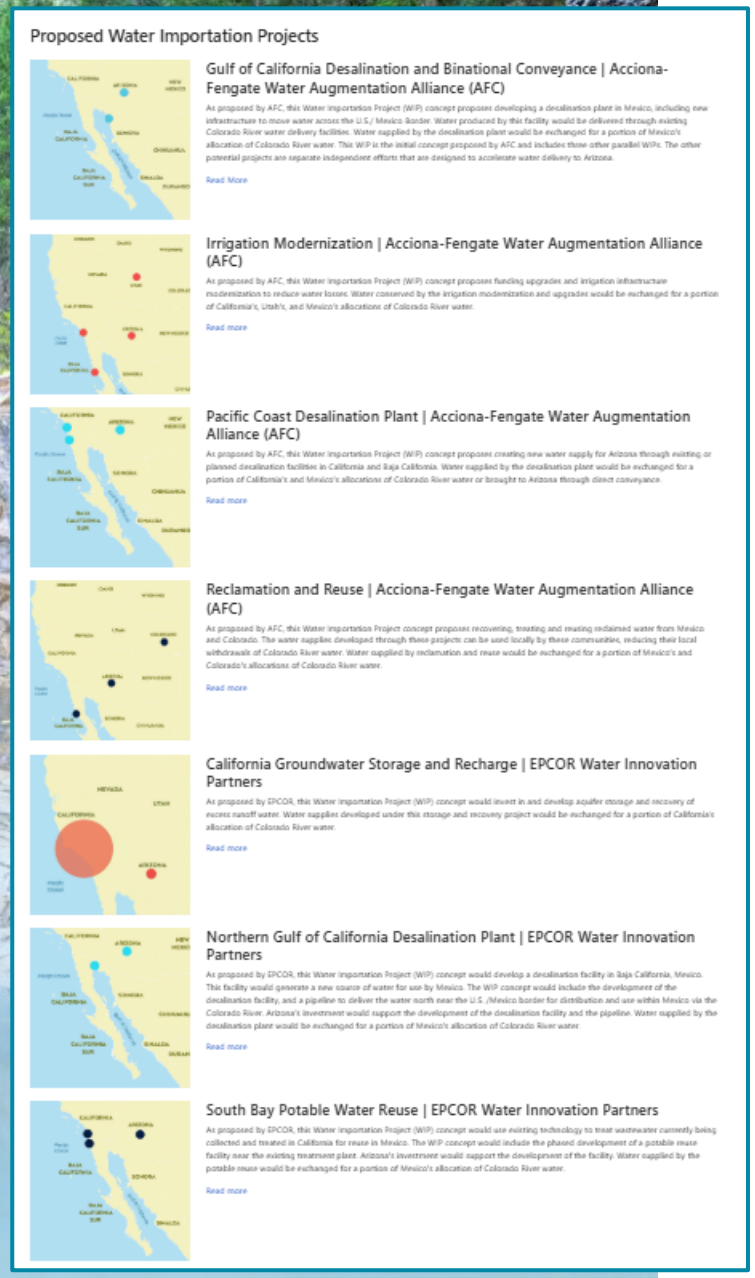
# Long-Term Water Augmentation Fund

**100k-500k** Acre-feet in annual demand for new water

**$378M** State dollars to dedicate to projects

**17** Initial responses to RFQ

**7** Unique projects identified for further development




# Long-Term Augmentation Fund

- Importation Landing Page:
  - https://ltwaf.azwifa.gov/importation
- Contracts & Task Orders
- Public Outreach
- Regional Outreach

WATER INFRASTRUCTURE
FINANCE AUTHORITY OF ARIZONA

# Thank you!

Chelsea McGuire, Director
cmcguire@azwifa.gov

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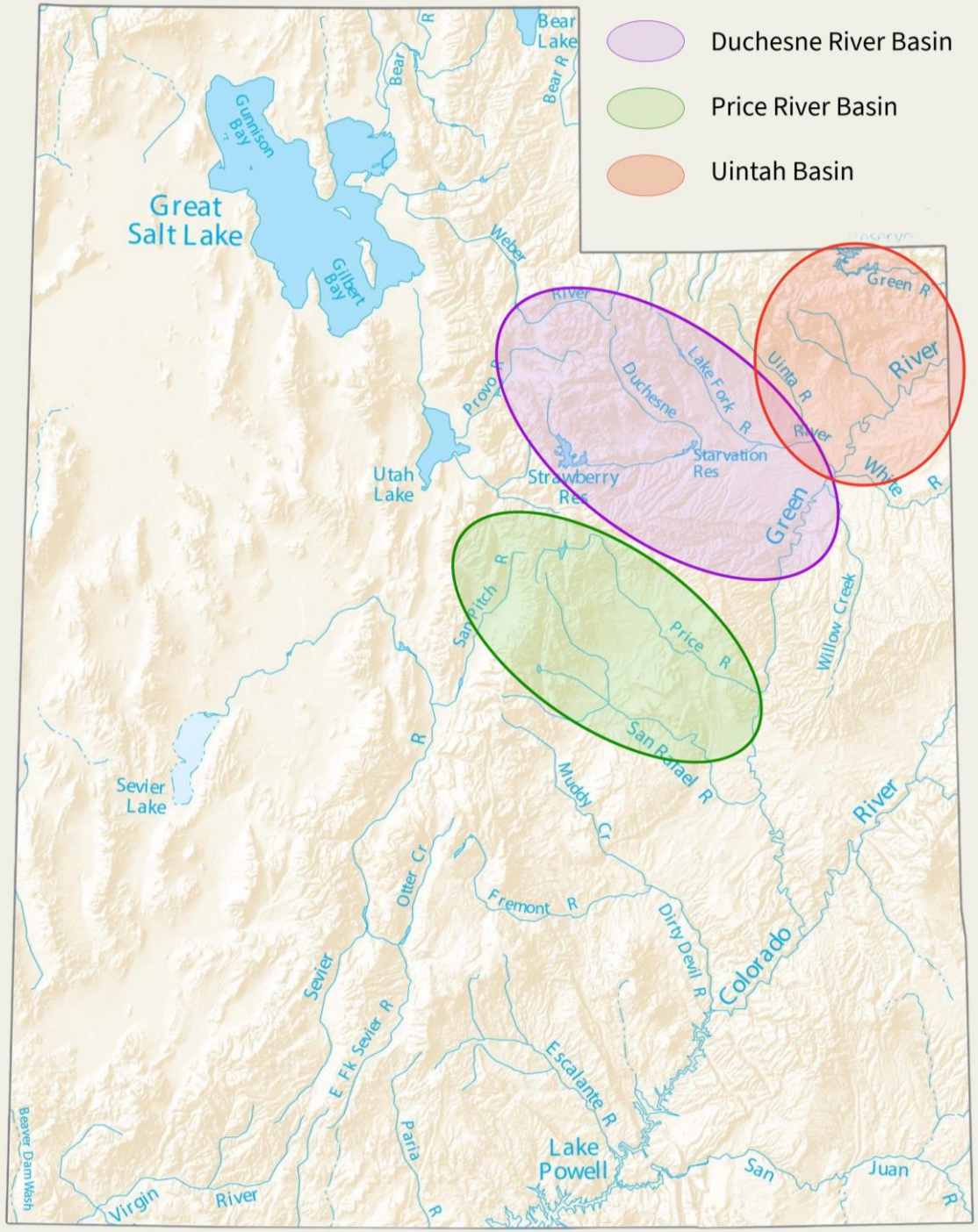
# State of Utah



# Summary of Utah 2025 & 2026 Projects

| All Cycle 1 & 2 Projects | | | |
|---|---|---|---|
| | Conservered Consumptive Use (acre-feet) | | |
| Project | 2025 | 2026 | 2025 & 2026 |
| Full Season Lease - SE Tributary 1 | 2,631 | 2,313 | 4,944 |
| Full Season Lease - E Green River | 2,039 | 2,115 | 4,154 |
| Storage - SE Tributary 1 | 1,377 | 1,442 | 2,819 |
| Storage - E Tributary 1 | 1,000 | 4,500 | 5,500 |
| Full Season Lease - DMPP26_01 | - | 63 | 63 |
| Full Season Lease - DMPP26_03 | - | 280 | 280 |
| Full Season Lease - DMPP26_04 | - | 137 | 137 |
| Full Season Lease - DMPP26_05 | - | 468 | 468 |
| Full Season Lease - DMPP26_06 | - | 256 | 256 |
| Full Season Lease - DMPP26_07 | - | 633 | 633 |
| Full Season Lease - DMPP26_08 | - | 73 | 73 |
| Full Season Lease- DMPP26_09 | - | 130 | 130 |
| Full Season Lease - DMPP26_10 | - | 190 | 190 |
| Storage - DMPP26_11 | - | 278 | 278 |
| Total | 7,047 | 12,878 | 19,925 |

# Tehran, Iran

*"Of all of our options, the most effective one is to reduce consumption by the citizens. To get there,* ***you must earn their trust."***

-Iran's Energy Minister, November 2025

SHAYNA KOROL

Bio

Mellat Park in Tehran, in early November, as Iran faces sever water shortages. Atta Kenare/AFP/Getty

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