

Governor's Water Augmentation,  
Innovation, and Conservation Council  
**Desalination Committee**  
**August 26, 2021**



# Agenda

- I. Welcome — *Henry Day, Committee Chair*
- II. Recap and Introduction — *Carol Ward, ADWR Deputy Assistant Director*
- III. Brackish Groundwater and Arizona Law — *Jennifer Heim, ADWR Deputy Counsel*
- IV. Discussion
- V. Next Steps
- VI. Adjournment



# Webinar Logistics

- Indicate you wish to speak by typing your name in the chat box, and you will be invited to unmute and speak. Please message “Everyone” in the chat.
- Please state your name when speaking.
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- If you have a written comment, please message “Everyone” in the chat.
- The meeting and chat will be recorded.

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# I. Welcome

*Henry Day, Committee Chair*



## II. Recap & Introduction

*Carol Ward, ADWR Deputy Assistant Director*



# III. Brackish Groundwater and Arizona Law

*Jennifer Heim, ADWR Counsel*



# What Is Brackish Groundwater?

Arizona statute (A.R.S. § 45-101):

- “ ‘Groundwater’ means water under the surface of the earth regardless of the geologic structure in which it is standing or moving. ”
- “Groundwater does not include water flowing in underground streams with ascertainable beds and banks.”

Arizona statutes do not use the term “brackish groundwater” or recognize it as a separate category of water. **“Brackish groundwater” is simply “groundwater” for purposes of Arizona law.**



# 3 “Tiers” of Groundwater Regulation

## State-wide

- \* Well registration requirements, well construction requirements, transportation rules

## Irrigation Non-Expansion Areas

- \* Limitations on irrigation of new lands, metering and reporting requirements for owners of large wells

## Active Management Areas





# Active Management Areas

- There are five AMAs: Prescott, Phoenix, Pinal, Tucson, and Santa Cruz. Each AMA has a management goal.
- Management goal of the Phoenix, Prescott, Tucson and Santa Cruz AMAs – safe-yield.
- Safe-yield is an attempt to achieve the long-term balance between the annual amount of groundwater being withdrawn in the AMA and the amount of natural and artificial recharge in the AMA.
  - Currently, no AMA has achieved safe yield



# Management Plans

- ADWR is required to adopt management plans designed to assist the AMA in meeting its management goal.
- Management plans must contain mandatory conservation requirements for persons withdrawing, distributing and using groundwater.



# Groundwater Withdrawals in AMAs

- In an AMA, a person may withdraw groundwater only as follows:
  - The groundwater is withdrawn from an exempt well (pump capacity  $\leq$  35 gpm and groundwater used for non-agricultural purpose). **OR**;
  - The groundwater is withdrawn pursuant to a groundwater withdrawal authority.
    - \* Grandfathered Rights
    - \* Service Area Rights
    - \* Groundwater Withdrawal Permits

ADWR levies groundwater withdrawal fees based on the acre-foot volume of groundwater withdrawn on an annual basis. (A.R.S. § 45-611(A)).



# Buckeye Water Logged Area

ARS § 45-411.01 provides exemptions through December 31, 2034 for:

- Irrigation users from irrigation water duties or intermediate water duties and groundwater withdrawal fees **AND**;
- Exempts certain irrigation districts from conservation requirements for the distribution of groundwater.

[2019 Buckeye Water Logged Area Review and Recommendations](#)



# Groundwater Withdrawal Permits

- A person may apply to the Department for a groundwater withdrawal permit.
- Groundwater withdrawal permits allow the permit holder to withdraw groundwater for a non-irrigation use, for a prescribed period of time, if certain conditions are met.



# Groundwater Withdrawal Permits

## Types of Withdrawal Permits:

- Dewatering
- Mineral extraction and metallurgical processing
- Poor quality groundwater
  - Maximum of 35 years
  - Must have no other beneficial use at the present time due to its quality
  - Withdrawal must be consistent with management plan
- Temporary
- Drainage (e.g., used in the Buckeye Water Logged Area)
  - Allows for drainage of irrigated lands if necessary for a reasonable economic return from agricultural production
  - Withdrawal must be consistent with management plan and goal
- General industrial use

Director required to monitor withdrawals and must revoke if conditions of permit are no longer met



# Assured Water Supply Program

- Within AMAs, a developer of a proposed subdivision (six lots or more) must have a 100-year assured water supply (AWS) in order to obtain plat approval and offer lots for sale.
- Two ways for a developer to demonstrate an AWS:
  - Obtain a commitment of water service from a water provider that has been designated by ADWR as having an AWS.
  - Obtain a Certificate of AWS from ADWR by demonstrating that the subdivision will have a 100-year AWS.



# Assured Water Supply

- Must show proposed supply is physically, continuously, and legally available for 100 years.
- Any groundwater use must be consistent with the management plan and management goal of the AMA
  - In the Phoenix, Pinal and Tucson AMAs, groundwater may be used if it is pursuant to the groundwater allowance balance or through the use of pledged extinguishment credits or will be replenished by the CAGR.





# Underground Water Storage and Recovery Program

- The Underground Water Storage and Recovery program allows persons to store the water underground and recover it at a later time for the storer's use.
- Groundwater is not eligible for storage and recovery within the AMA or basin from which it's pumped.



# Lakes Bill

- With certain exceptions, a person shall not use water other than effluent to fill or refill a body of water for landscape, scenic, or recreational purposes
- “Body of water” is a body of water that has a surface area greater than 12,320 square feet and is filled after 1987.
- A.R.S. § 45-132(C) allows the Director to issue a permit to use poor quality water to fill or refill such a body of water if certain showings can be made.



# Groundwater Transportation

Groundwater may be transported within a subbasin of an AMA pursuant to:

- A grandfathered right or groundwater withdrawal permit, subject to place of use limitations for IGFRs and Type 1 non-irrigation grandfathered rights
- A service area right
- An exempt well

Not subject to payment of damages



# Groundwater Transportation

Groundwater may be transported between sub-basins of an AMA or away from an AMA pursuant to:

- An IGFR or type 1 right, subject to place of use limitations
- A type 2 right (except from Pinal AMA for AWS purposes).
- A service area right (except for a city, town or private water company in the Pinal AMA).
- A groundwater withdrawal permit.
- An exempt well.

Transportation of groundwater away from an AMA (with some exceptions) is subject to payment of damages to injured landowners.



# Groundwater Transportation

Outside of an AMA groundwater may be transported:

- Within a subbasin of groundwater basin or within a basin if no subbasins, not subject to damages
- Between subbasins, subject to damages



# Groundwater Transportation

Groundwater may not be transported away from a groundwater basin.

Exceptions for:

- persons transporting water before September 1, 1993.
- certain withdrawals in the Little Colorado river plateau or the Parker groundwater basins
- city, town, or private water company serving residents in two basin as of July 1, 1993)
- city or town withdrawing groundwater from Coconino plateau as of January 1, 2001
- mineral extraction and processing
- transportation pursuant to a permit in Yuma basin to mitigate waterlogged conditions, subject to certain rights of users in the area and federal and state law related to return flows of Colorado River water



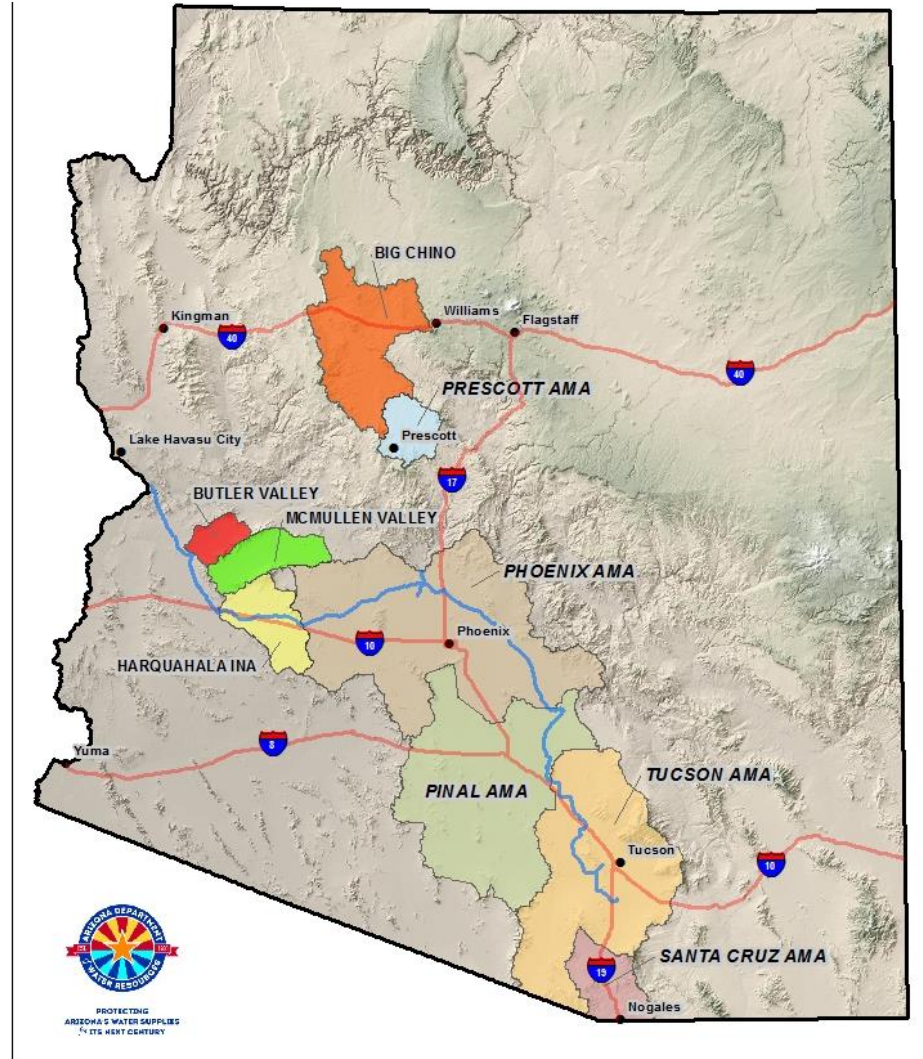
# Groundwater Transportation

Transportation of groundwater from a basin outside of an AMA into an AMA is prohibited with four exceptions:

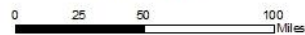
- McMullen Valley Groundwater Basin into Phoenix AMA.
- Butler Valley Groundwater Basin into any AMA.
- Harquahala Irrigation Non-Expansion Area into any AMA.
- Big Chino Sub-Basin of Verde River Groundwater Basin into Prescott AMA



# Map of Active Management Areas and Groundwater Transfer Basins



**State of Arizona**  
Active Management Areas  
and  
Subbasins



- CAP Canal
- Interstates
- Cities
- BIG CHINO SUBBASIN
- BUTLER VALLEY SUBBASIN
- MCMULLEN VALLEY SUBBASIN
- HARQUAHALA INA
- PHOENIX AMA
- PINAL AMA
- PRESCOTT AMA
- SANTA CRUZ AMA
- TUCSON AMA

Map created by Daniel Fielder, ADWR, on 4/7/2015





# Issues Related to Transportation of Groundwater Into an AMA

- Financial Issues:
  - Cost of acquiring and maintaining land from which groundwater can be transported.
  - Payments in lieu of taxes and groundwater transportation fee if groundwater will be transported away from a county.
  - Cost of transporting the groundwater – either through construction of a pipeline (construction costs and costs of rights-of-way) or use of CAP canal.
- Environmental Issues:
  - Potential ESA challenges if groundwater withdrawals impact endangered species or habitat.

# Brine Disposal

A.R.S. §49-203(A)(5) “[t]he director [of ADEQ] shall: adopt, by rule, the permit program for underground injection control, described in the safe drinking water act.”

ADEQ is currently pursuing approval of primacy over an underground injection control program. Would seek to streamline approval for UIC wells, and would consider both state and federal restrictions including, e.g., National Historical Preservation Act, ESA, CERCLA, Resource Conservation and Recovery Act, as applicable.



# UNDERGROUND INJECTION CONTROL RULEMAKING

< RETURN TO UNDERGROUND INJECTION CONTROL RULEMAKING

## Stakeholder Materials | UIC Rulemaking

Revised on: July 22, 2021 - 7:49am

### July 2021

ADEQ has concluded an extensive, preliminary stakeholder outreach and dialogue over Permit, LTF & Fee rules and will file the Notice of Proposed Rulemaking (NPRM) soon.

### January 2021

Virtual Meeting Agenda | [View/Download >](#)

- January 19 attendee list | [View/Download >](#)
- January 19 presentation | [View/Download >](#)
- January 19 questions & responses | [View/Download >](#)
- **Draft Rule Text** (*Changes in draft documents are highlighted in yellow*)
  - Draft Licensing Time Frames (LTF) Rule | [View/Download >](#)
  - Draft Fee Rule | [View/Download >](#)

### November 2020

Draft UIC Program Rule | [View/Download >](#)

- Executive Summary | [View/Download >](#)

### m CONTACT

UIC Rulemaking Team  
[Email >](#)

### UPCOMING MEETINGS

[Subscribe to Receive Updates >](#)  
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### a SEE MORE

[UIC Rulemaking >](#)  
[Stakeholder Materials >](#)

### ADDITIONAL RESOURCES

[EPA - UIC Website >](#)  
[EPA - UIC Program Region 9 \(Includes AZ\) >](#)



# Summary

- Brackish groundwater is already “accounted for” as groundwater throughout the programs administered by ADWR.
- Consideration of proposals that would “carve out” brackish groundwater from certain regulations may have impacts to existing water users, some of whom may have “relied” on the current framework.
- Such proposals should also be considered in view of the primary objectives of the Groundwater Code.



Questions?

# IV. Discussion



# V. Next Steps



# VI. Adjournment

