



# ***Potential Subsequent AMAs*** ***Willcox and Douglas Groundwater Basins***

***Natalie Mast – AMA Director***  
***Jennifer Heim – Deputy Counsel***

***Informational Meeting – Willcox Community Center***  
***August 16, 2022***

# Agenda

- I. Welcome & Introductions
  - A. Welcome Statement, City of Willcox
- II. Informational Presentation
  - Jennifer Heim (ADWR)*
  - Natalie Mast (ADWR)*
- III. Q & A
- IV. Closing

***Today's meeting is being recorded. The recording will be posted on ADWR's website within a few days.***



*The content of today's presentation and any answers to questions are provided for informational purposes only. They are not intended to provide comprehensive guidance and are not intended to serve as legal advice. If you have legal questions about your specific circumstances, you should consult with an attorney.*



*We respectfully request that members of the public refrain from using the Q&A time to advocate. Questions should be limited to the content of the meeting.*



# A.R.S. § 16-192

**A.** Notwithstanding any other law, this state... and any public agency... shall not spend or use public resources to influence an election...

...

**C.** This section does not prohibit:

- 1.** The use of public resources, including facilities and equipment, for government-sponsored forums or debates if the government sponsor remains impartial and the events are purely informational and provide an equal opportunity to all viewpoints...



# Context for Today's Meeting

- ADWR is neutral and will not be advocating for or against any ballot measures. ADWR will not speak on behalf of any other entities. This meeting will focus on some of the process for establishing a subsequent AMA and general features of AMAs.
- Information on hydrology is available on ADWR's website.
- If either or both ballot measures pass, it will be the first time a subsequent AMA has been established by local initiation.
  - ADWR will provide guidance where it can, but some questions cannot be answered unless and until an AMA is designated.



# Information Available Online

- **FAQ Pages**
  - Willcox: <https://new.azwater.gov/ama/faqs-willcox-ama>
  - Douglas: <https://new.azwater.gov/ama/faqs-douglas-ama>
- **Hydrologic Information**
  - Land Subsidence: <https://new.azwater.gov/hydrology/e-library>
  - Statewide Groundwater Level Changes: “ADWR Open-File Report Number 19” - [https://new.azwater.gov/sites/default/files/WLCR2019\\_Final.pdf](https://new.azwater.gov/sites/default/files/WLCR2019_Final.pdf)
  - ADWR Groundwater Flow Model of the Willcox Basin (2018):  
[https://new.azwater.gov/sites/default/files/Willcox\\_Exec\\_Summary.pdf](https://new.azwater.gov/sites/default/files/Willcox_Exec_Summary.pdf)  
[https://new.azwater.gov/sites/default/files/Willcox\\_Report\\_2018.pdf](https://new.azwater.gov/sites/default/files/Willcox_Report_2018.pdf)
  - Water Resource Characteristics: “Arizona Water Atlas Volume 3, Southeastern Arizona Planning Area” - <https://prism.lib.asu.edu/items/49256>
- **Information about existing AMAs and Management Plans**
  - <https://new.azwater.gov/ama>
  - <https://new.azwater.gov/ama/management-plans>



# Q&A - Ground Rules

*Speaker cards are available at the sign-in table.  
Speakers will be called in the order cards are received.*

- **Please limit your questions to the topic at hand. Please refrain from making commentary for or against designation of AMAs.**
- **Please be respectful to staff and to fellow attendees.**
- **Today's meeting will end at 8pm. We request that each person limit themselves to one or two questions to give everyone who wishes the opportunity to ask a question.**

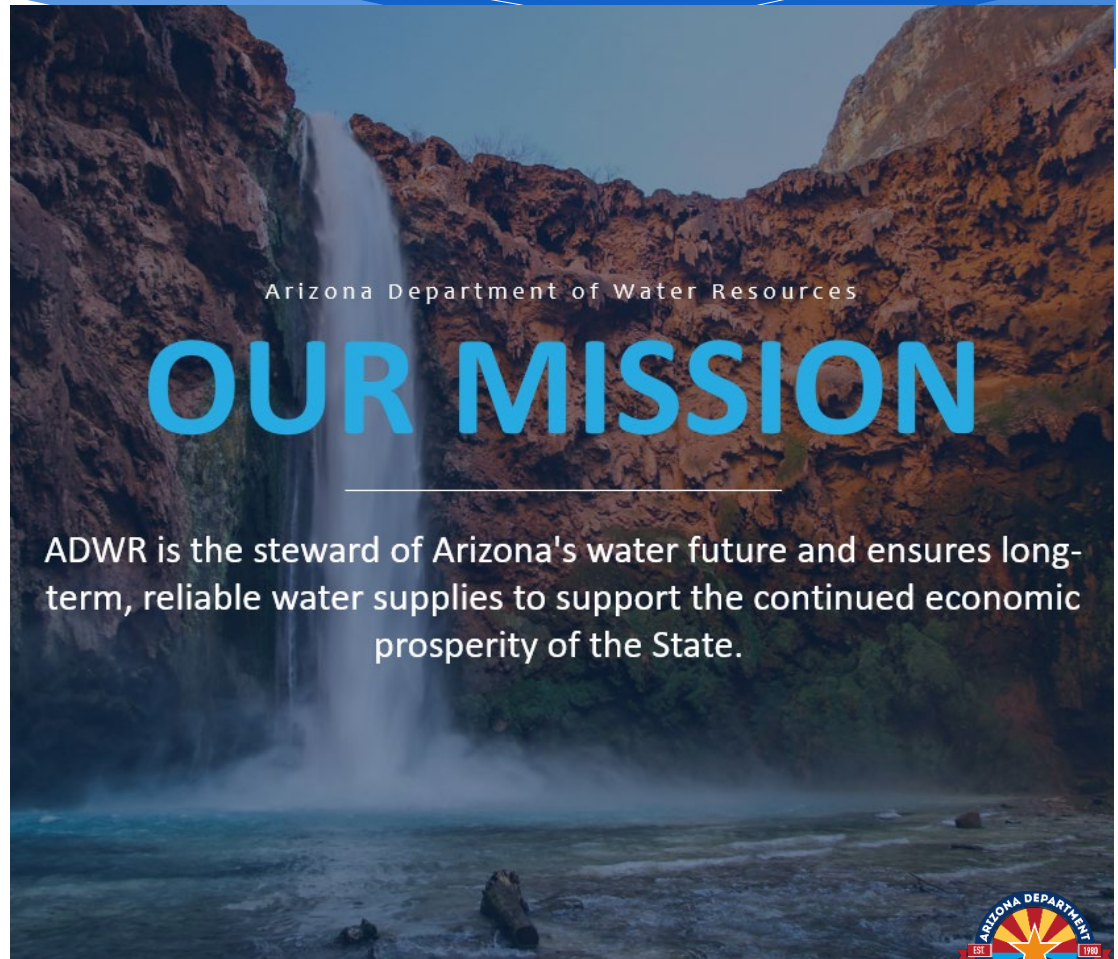




# **Informational Presentation: Subsequent AMAs**

# Groundwater Management Act of 1980

- Created the Arizona Department of Water Resources
- Imposes certain regulations statewide, but most regulations are limited to areas designated as “irrigation non-expansion areas” and “active management areas”
- Authorizes establishment of new AMAs by election



# Regulatory Structure

- Registration of all wells
- Adequate Water Supply
- Community Water Systems Documentation

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- Expansion of irrigated acres is prohibited
- Measuring and Reporting

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- Assured Water Supply
- Management Goals, Plans, & Conservation Programs
- Grandfathered Rights and Withdrawal Permits
- Lakes Bills, Transportation, Well Spacing, and Other

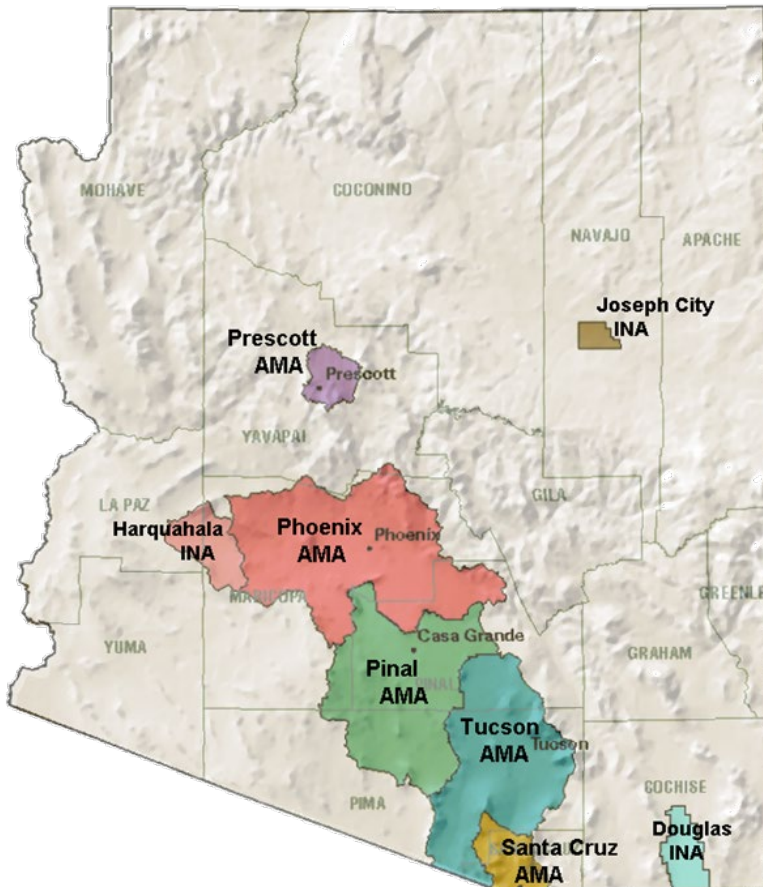
Statewide

INA

AMA



# Existing Active Management Areas (AMA) & Irrigation Non-Expansion Areas (INA)



## Five AMAs

- Prescott AMA
- Phoenix AMA
- Pinal AMA
- Tucson AMA
- Santa Cruz AMA

## Three INAs

- Joseph City INA
- Harquahala INA
- Douglas INA



# What is an Active Management Area?



# Examples of Major Characteristics & Programs in an AMA

- Management Goal
- Management Plans
  - Conservation Programs
  - Annual Reports and reporting requirements
- Wells Requirements
  - Non-exempt wells (>35 gpm)
    - Well Impact Analysis
- Groundwater Rights and Withdrawal Authorities
- Assured Water Supply



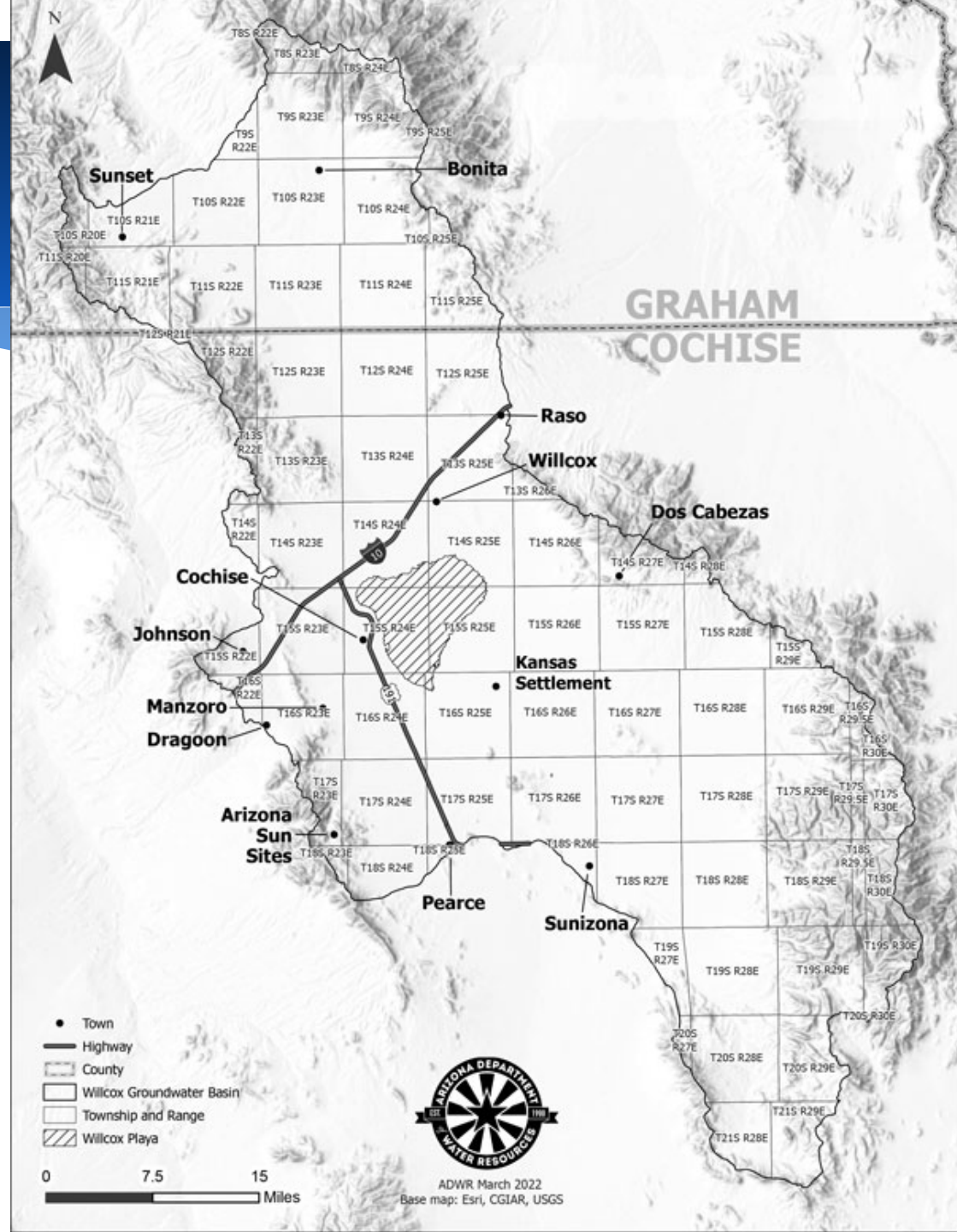
# Designation of New AMAs by Local Initiation & Election





# Willcox Groundwater Basin

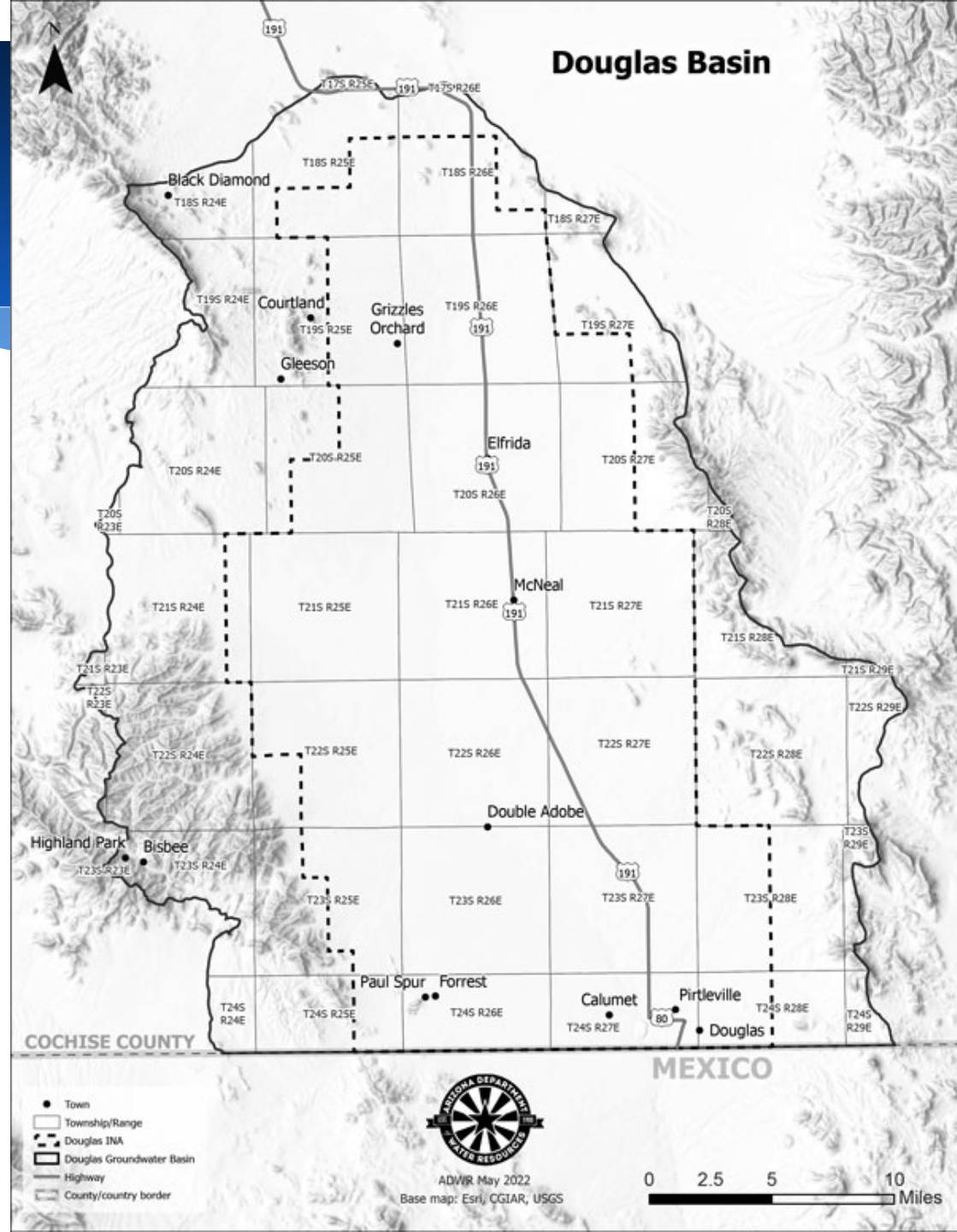
- Located in Cochise and Graham Counties
- No current regulation beyond statewide requirements
- Cochise County – Mandatory Adequacy





# Douglas Groundwater Basin

- Located entirely in Cochise County
- A portion of the basin is currently an INA; remainder has no regulation beyond statewide requirements
- Cochise County – Mandatory Adequacy



# Petitions to Designate a New AMA

***A.R.S. 45-415 allows for the designation of new AMAs upon petition by 10% of the registered voters within the boundaries of the proposed AMA and a subsequent election.***

- Petitions have been filed with Cochise County and Graham County for the Willcox Basin and with Cochise County for the Douglas Basin.
- Cochise County has informed ADWR that they have verified that the proper number of signatures were received for both petitions.
- Graham and Cochise County have indicated that they will call for an election on the Willcox Basin, and Cochise County will call for an election on the Douglas Basin on August 30, 2022.
- Election will occur on Tuesday, November 8, 2022.



# Irrigation Prohibition Pending Election

A.R.S. § 45-416

The call for the election (expected August 30) establishes a prohibition on the irrigation of any acres not legally irrigated at any time during the five years preceding the call for the election.

Only acres of land that were legally irrigated at any time prior to the five years preceding the call for an election may be irrigated.

- The limitation on the acres that may be irrigated within the area would continue until the final results of the election on whether to designate the Willcox Basin as an AMA are certified by the Board of Supervisors of Cochise County and the Board of Supervisors of Graham County.

\* *“Irrigate” means to apply water to two or more acres of land to produce plants or parts of plants for sale or human consumption, or for use as feed for livestock, range livestock or poultry.*



# If an AMA is designated...

- In a subsequent AMA, only acres of land that were legally irrigated at any time prior to the five years preceding the call for an election may be irrigated with any water, except as provided below.
  - Acres of land that were not irrigated during the relevant five-year time period may be irrigated with a decreed or appropriative (surface water) right established before the date of the call for the election.
- Acres of land not irrigated during the relevant five-year time period may be irrigated if a substantial capital investment (SCI) has been made to bring the land into irrigation within a particular window time.



# Some Additional Features of new AMAs

- Management Goal
  - A.R.S. § 45-569(A)
- Management Plan
  - A.R.S. § 45-569(B)
- Applications for Grandfathered Rights
  - Information needed: A.R.S. § 45-476
  - Notice of Requirement to Apply: A.R.S. § 45-478
    - ADWR will give notice of the requirement to apply for grandfathered rights pursuant to statute.
- Assured Water Supply



# Management Goals for Initial AMAs

**A.R.S. § 45-562**

## **Safe-yield:**

*“A groundwater management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area.”*

*(A.R.S. § 45-561(12))*

## **Prescott, Phoenix, and Tucson AMAs:**

Safe-yield by the year 2025

## **Pinal AMA:**

To allow development of non-irrigation uses and to preserve existing agricultural economies in the AMA for as long as feasible, consistent with the necessity to preserve future water supplies for non-irrigation uses.

## **Santa Cruz AMA:**

To maintain a safe-yield condition in the AMA and to prevent local water tables from experiencing long term declines



# Management Plans for Initial AMAs

## A.R.S. § 45-563 (A)

*“The director shall develop a management plan for each initial active management area for each of five management periods... and shall adopt the plans only after public hearings... The plans shall include a continuing mandatory conservation program... designed to achieve reductions in withdrawals of groundwater.”*





# Conservation Programs in Initial AMAs

*A.R.S. § 45-563(A): “... The plans shall include a continuing mandatory conservation program for all persons withdrawing, distributing or receiving groundwater designed to achieve reductions in withdrawals of groundwater.”*

- Programs for Three Sectors:
  - Agricultural (Chapter 4)
    - Base Program
    - Historic Cropping Program
    - Best Management Practices Program (BMP)
  - Municipal (Chapter 5)
    - GPCD Program
    - Non-Per Capita Program (NPCCP)
  - Industrial (Chapter 6)
    - General Requirements
    - Specific Subsector Programs
- Conservation Programs include:
  - Regulatory requirements related to water use
  - Reporting requirements
  - Conservation targets
  - Flexibility provisions
  - Compliance provisions





# How Would the Management Goal and Plan(s) be adopted?

- ADWR Director would propose a management goal for the AMA and the number of years in which the goal is to be achieved (A.R.S. § 45-569(A))
- ADWR Director would promulgate an initial management plan for the AMA not later than two years after the designation of the AMA and could provide for subsequent management plans (A.R.S. § 45-569(B))
- ADWR Director would appoint an area director for the AMA, and the Governor would appoint members to a groundwater users advisory council (GUAC) for the AMA.
  - The GUAC would consist of five members chosen to represent users of groundwater in the AMA on the basis of their knowledge of, interest in and experience with problems relating to the development, use, and conservation of water.
  - The area director and the GUAC would provide input to the Director regarding the proposed management goal and management plans. (A.R.S. § 45-421(1))
- Prior to adopting a management plan, the Director would conduct a public hearing on the proposed goal and proposed management plan in accordance with A.R.S. § 45-570. The public would have an opportunity to provide oral or written evidence for or against the adoption of the management plan, including the management goal.

# Who would be allowed to use groundwater?

- Exempt wells:
  - Generally, a person may withdraw groundwater for a non-irrigation use from a well having a pump with a maximum pump capacity of **35 gallons per minute or less** (“exempt well”) without a right or permit. However, there are some limitations on the use of exempt wells within AMAs. Some of these limitations include:
    - Only one exempt well may be used to serve the same use at the same location.
    - Withdrawals from an exempt well for a non-irrigation purpose other than domestic use and stock watering are limited to 10 acre-feet per year.
- Non-exempt wells:
  - Within an AMA, a person may withdraw groundwater from a well having a pump with a maximum capacity greater than 35 gallons per minute (“non-exempt well”) **only if the person holds a right or permit** to withdraw the groundwater.



# Types of Grandfathered Rights (GFRs)

***“...a person claiming the right to withdraw or receive and use groundwater pursuant to a grandfathered right shall file an application for a certificate of grandfathered right with the department not later than fifteen months after the date of the designation of the active management area...” (A.R.S. 45-476(A))***

- Irrigation Grandfathered Right (IGFR or IGR)
  - Allows the holder to irrigate acres of land that were irrigated in the five years preceding the call for the election
  - Tied to the land
- Type 1 Non-Irrigation GFRs
  - Created from the permanent retirement of an IGFR, may be used for non-irrigation purposes
  - Maximum of 3 acre-feet/acre, but may be less.
- Type 2 Non-Irrigation GFRs
  - Right that can be used for non-irrigation purposes, based on non-irrigation pumping in the five years preceding the designation of the AMA.
  - Flexible, may be sold separately from the land. May not be divided, but a portion may be leased, and it may be used anywhere within the AMA..



# Irrigation Grandfathered Rights

- Irrigation Grandfathered Rights allow the holder to irrigate acres of land that had been irrigated within the five-year time period preceding the call for the election.
- Land without an Irrigation Grandfathered Right may not be irrigated with groundwater.
- An Irrigation Grandfathered Right may not be sold apart from the associated land.



# Substantial Capital Investment (SCI)

A.R.S. § 45-452(G)

**Because the inquiry is very fact-specific, ADWR cannot make SCI findings or provide SCI interpretations prior to the designation of an AMA.**

- If an AMA is created, property owners who believe they qualify for consideration of SCI may apply to ADWR, and ADWR will evaluate each application on a case-by-case basis.
- For an area that was not previously an INA:
  - Acres of land will be deemed to have been in irrigation if SCI was made within the **five-year period** preceding the call for the election “for the subjugation of such land for an irrigation use **including on-site irrigation distribution facilities and a well or wells the drilling and construction of which were substantially commenced before the date of the ... call for the election.**”
- For an area that was previously an INA:
  - Acres of land will be deemed to have been in irrigation if “the director finds that substantial capital investment has been made in the **twelve months before the date of the ... call for the election, for the improvement of the land and on-site irrigation distribution facilities including the drilling of wells, for an irrigation use.**”



# Irrigation Water Duties and Allotments in Initial AMAs

**\*MAY BE DIFFERENT FOR SUBSEQUENT AMAs\***

- Established as a part of management plans for each AMA
- Irrigation Requirement:

*Irrigation Requirement*

*= Consumptive Use + Leaching Allowance + Other Needs – Effective Precipitation*

- Water duty (AF/ac):

$$\text{Water Duty} = \frac{\text{Irrigation Requirement}}{\text{Assigned Irrigation Efficiency}}$$

- Assigned irrigation efficiency is 80% except in specific circumstances. Assigned irrigation efficiency cannot exceed 80%.
- Allotment:

*Maximum Annual Allotment = Water Duty × Water Duty Acres*



# Type 1 Non-Irrigation Grandfathered Rights

- Type 1 Non-Irrigation Grandfathered Rights, which is associated with land permanently retired from farming and converted to a non-irrigation use.
- This right, like an Irrigation Grandfathered Right, may be conveyed only with the land.
- The maximum amount of groundwater that may be pumped each year using a Type 1 right is three acre-feet per acre, though it may be less.



# Type 2 Non-Irrigation Grandfathered Rights

- Type 2 Non-Irrigation Grandfathered Rights, which can only be used for a non-irrigation purpose.
- The right is based on historical pumping of groundwater for a non-irrigation use and equals the maximum amount pumped in any one year in the five-year period preceding the designation of the AMA.
- Type 2 rights are the most flexible because they may be sold separately from the land or well, and the point of withdrawal may be moved anywhere within the same AMA, subject to ADWR approval.
- It is possible to lease all or a portion of a Type 2 right, but if the right is sold, it may not be divided; instead, the entire right must be sold.





# 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.
- Types of Withdrawal Permits
  - Hydrologic testing permits (10 AF or less/up to 1 year)
  - Poor quality groundwater permits
  - Temporary electrical energy generation permits for emergency situations
  - Mineral extraction permits
  - Drainage and dewatering permits
  - General industrial use permits



# Service Area Rights

- A service area right is a right of a city, town, private water company or irrigation district to withdraw groundwater for delivery to customers within its service area.
- The right expands as the service area expands.



# Adequate Water Supply

- Both Cochise County and Graham County are currently subject to the Adequate Supply Program.
- Outside the AMAs, a developer of a proposed subdivision must obtain from ADWR a report on the adequacy of the water supply for 100 years.
- Groundwater is physically available only if it is available above 1,200 feet below land surface.
- In Graham County, the plat can be approved if the water supply is inadequate, however the inadequate water supply must be disclosed to the first buyer.
- Cochise County has adopted an ordinance **requiring** an adequate water supply in order to get plat approval.
  - Referred to as Mandatory Adequacy



# Assured Water Supply

- General Requirements under Assured Water Supply

- Adequacy Requirements

*NOTE: The details of these requirements may be different under Assured Water Supply.*

- Physical, legal, and continuous availability
- Financial capability
- Water quality

- Additional Requirements

- Consistency with management plan and management goal



# Measuring and Reporting

- With a few narrow exceptions, persons withdrawing groundwater from **non-exempt wells** are required to measure their groundwater withdrawals with a measuring device and method that is approved by ADWR and must report the groundwater withdrawals to ADWR.
  - Annual reports are due March 31 of each year.
  - Requirements for water measuring devices: A.R.S. § 45-604 and A.A.C. R12-15-901 et seq.
- Persons withdrawing groundwater from **exempt wells** (wells having a pump with a maximum pump capacity of 35 gallons per minute or less) for a **non-irrigation use** generally are not required to measure and report the groundwater withdrawals.



# Well Drilling

***NOTE: Requirements regarding well drilling, registration, and construction apply both inside and outside AMAs.***

- Before drilling, deepening or replacing a well, a person must file a Notice of Intent (NOI) to drill with ADWR and obtain a drilling card.
- The well must be drilled by a licensed well driller and the well must be constructed in compliance with ADWR's well construction standards.
- For exempt wells, impacts on other wells are not considered. Inside AMAs, non-exempt wells may be subject to well spacing requirements.



# Well Spacing Requirements for Non-Exempt Wells in AMAs

- An application for a permit to drill a new non-exempt well in an AMA must be denied if the proposed well would cause unreasonably increasing damage to surrounding land and other water users.
- ADWR has adopted rules defining what is unreasonably increasing damage.



# Q&A – Instructions

- Speaker cards can be found on the sign-in table and can be handed to any ADWR staff.
- Please come to the microphone at the podium to ask your question. This allows those on the webinar to hear and participate fully.
- We will call people up in the order that we receive cards, alternating those in-person with those online.





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# Thank you

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## FAQ Pages

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- Douglas: <https://new.azwater.gov/ama/faqs-douglas-ama>

Additional Questions: [nlmast@azwater.gov](mailto:nlmast@azwater.gov)



**PROTECTING  
ARIZONA'S WATER SUPPLIES  
*for* ITS NEXT CENTURY**

# Definitions

- **Irrigation:** The application of water to two or more acres of land to produce plants or parts of plants for sale or consumption.
- **Grandfathered right:** A right to withdraw and use groundwater based on lawful withdrawals and use of groundwater prior to the designation of the active management area.
- **Exempt well:** a well with a pump capacity of 35 gpm or less, which is used to withdraw groundwater for non-irrigation purposes. An exempt well may not exceed 10 AF/year for non-irrigation purposes other than domestic use and stock watering.
- **Groundwater Users Advisory Council (GUAC):** A council in each active management area consisting of five members appointed by the governor to represent the users of groundwater in the active management area.
- **Acre-foot (AF):** A unit of volume that is equal to the amount of water that would be required to fill one one acre of land one foot deep. Equivalent to 325,851 gallons.

