

# Douglas AMA Management Plan Development: Agricultural Conservation Programs

November 27-28, 2023



# Agenda

## Information Session – 11/27 (4-6pm)

- I. Introduction and Meeting Logistics
- II. Agricultural Water Use Data
- III. Agricultural Conservation Programs
  - I. Douglas AMA Framework
  - II. Programs in Initial AMAs
- IV. Future Meetings
- V. Closing Remarks

## Workshop – 11/28 (9am-12pm)

- I. Breakout groups – discussion of program frameworks and options

## Conclusion Session – 11/28 (2pm)

- I. Recap of Sessions & Feedback
- II. Next Steps

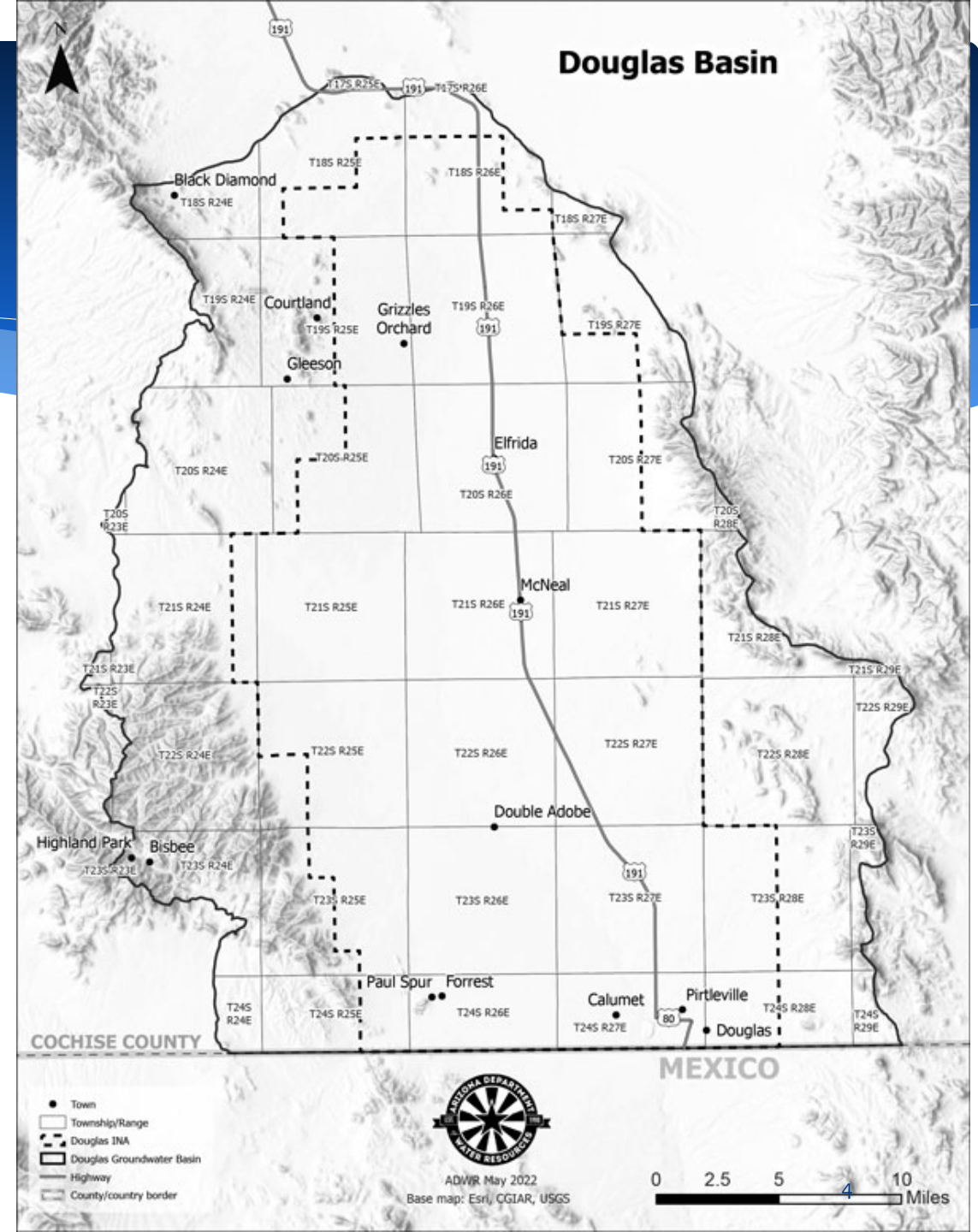
# Meeting Logistics

- \* Meetings are open to anyone who would like to participate.
- \* We are looking for ideas, feedback, and to learn from participants' expertise.
- \* We are expecting an open and collaborative process, including opportunity to challenge ideas in a transparent manner.



# Douglas Active Management Area

- First subsequent AMA, first to be established by local election
  - Est. December 1, 2022
- Located entirely in Cochise County
- A portion of the basin was previously an INA
- Cochise County – Mandatory Adequacy



# Tentative Management Plan Timeline Douglas AMA (Development)

**Public Meeting:  
Introduction, Overview  
& Timeline**

Sept 2023

**Public Meetings:  
Sector Workshops –  
Agriculture, Municipal,  
Industrial**

Nov 2023 – Jan 2024

**Public Meeting:  
Other topics –  
recharge, voluntary  
measures**

Feb 2024

**Public Meeting:  
Follow-up re:  
framework, policies**

Mar 2024

**Publish initial  
regulatory language  
for comment**

Apr 2024



# Tentative Management Plan Timeline Douglas AMA (Adoption)

**GUAC Meeting:  
Informal Draft Review  
& Comments, including  
GUAC**

**Hearing Notice:  
Formal Comment  
Period Begins**

**Public Hearing:  
Formal Comment  
Period Ends**

**Adoption of First  
Management Plan**

**Effective date for  
Conservation  
Requirements**

Aug 2024

Oct 2024

Nov 2024

Dec 2024

Jan 2027



# GFR Application Reminder

## **Douglas AMA GFR Application Deadline: March 1, 2024**

*“... 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))*

**Failure to apply for a GFR by the deadline will result in the waiver and relinquishment of any right to use groundwater.**

Applications available: <https://new.azwater.gov/ama/douglas-ama>  
Online applications now available!

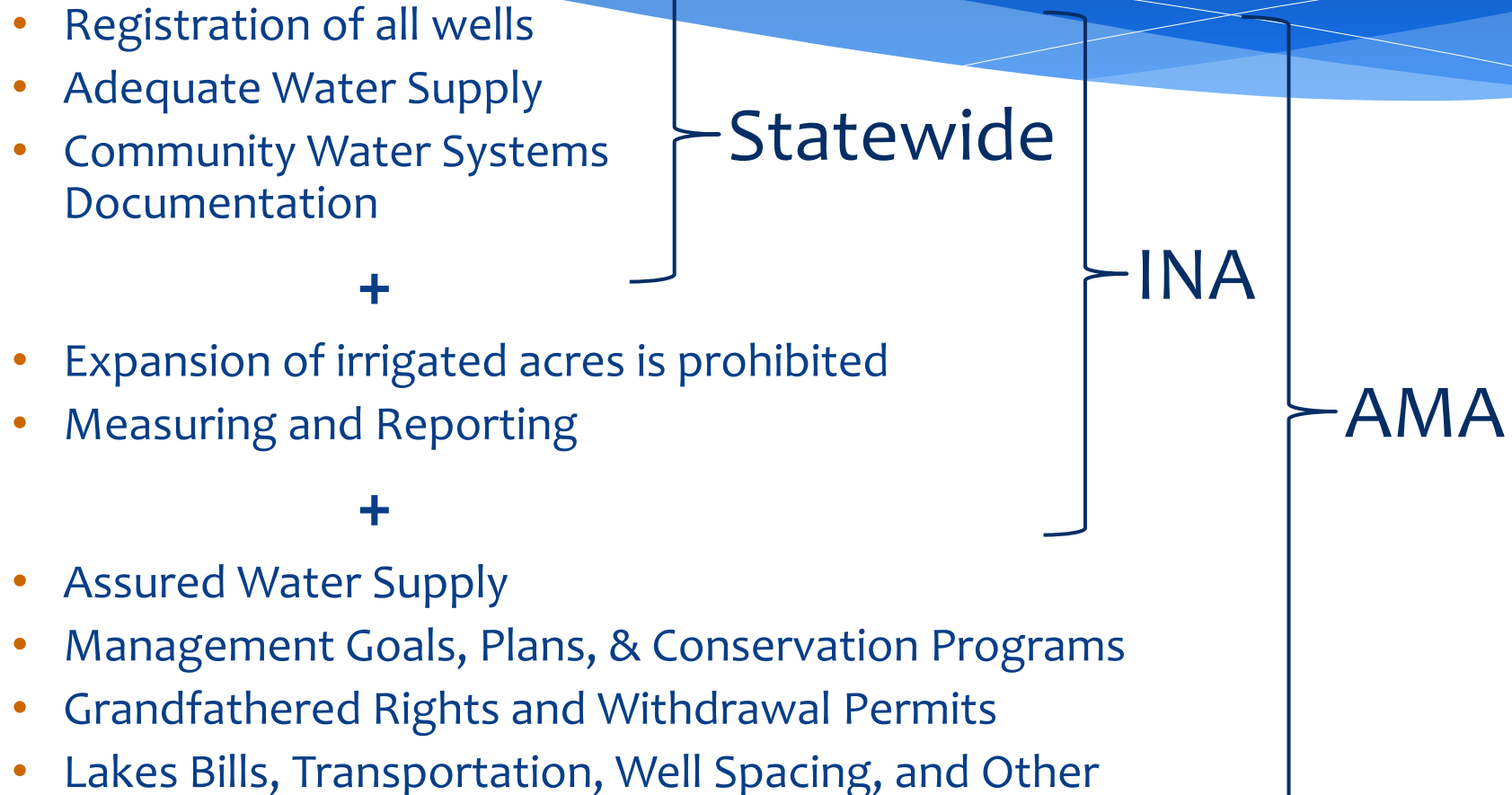
Online Office Hours: Tuesdays 3-4pm: <https://new.azwater.gov/meetings>



# Management Plans – Background & Statutes



# Regulatory Structure



# Management Goals, Management Plans, & Conservation Programs

## 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.”*

The management plans for a subsequent AMA follow the statutes for the management plans for the initial AMA as close as practical.



# Management Plans

A.R.S. § 45-569 (B)

“Not later than **two years** after the designation of a subsequent active management area, the director shall promulgate an initial management plan for the active management area...

**Douglas AMA Designation: December 1, 2022**

**Promulgation of Initial Management Plan: December 1, 2024**

**Effective Date for Conservation Requirements: January 1, 2027**



# Management Plans

## A.R.S. § 45-569 (B)

“Not later than two years after the designation of a subsequent active management area, the director shall promulgate an initial management plan for the active management area... If the director determines that active management is necessary to preserve the existing supply of groundwater for future needs... the director, in developing the plan or plans, shall include measures for reducing groundwater withdrawals which follow as closely as practicable the program set forth in sections 45-564 through 45-568...”

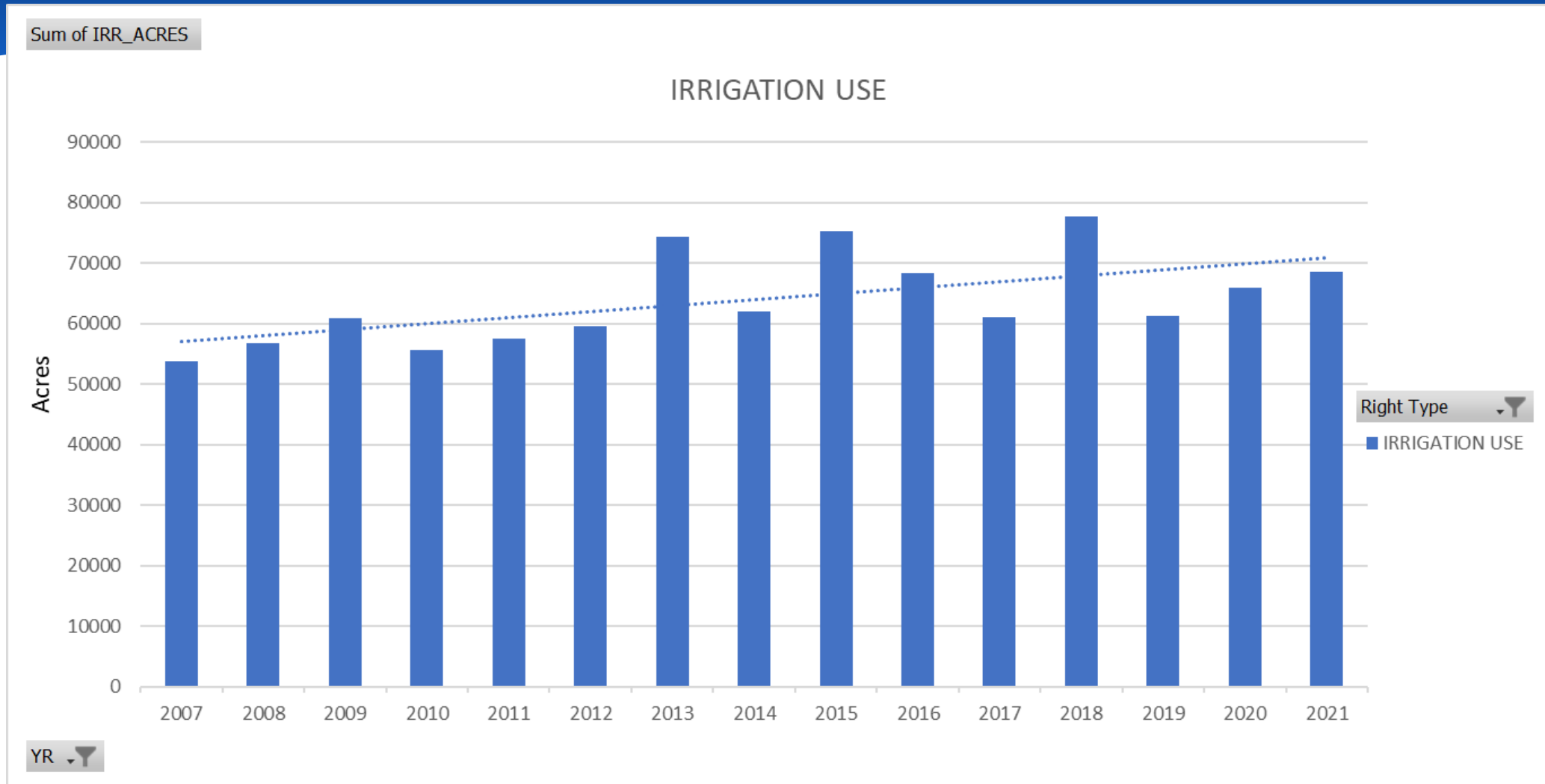
## Process & Principles

- \* Development
  - \* Series of public meetings to discuss and develop concepts for conservation programs & other plan details
- \* Initial Management Plan - Principles
  - \* “Reducing groundwater withdrawals”
  - \* Transitional plan
    - \* Works to educate on AMA requirements and processes
    - \* Introduces basic conservation requirements

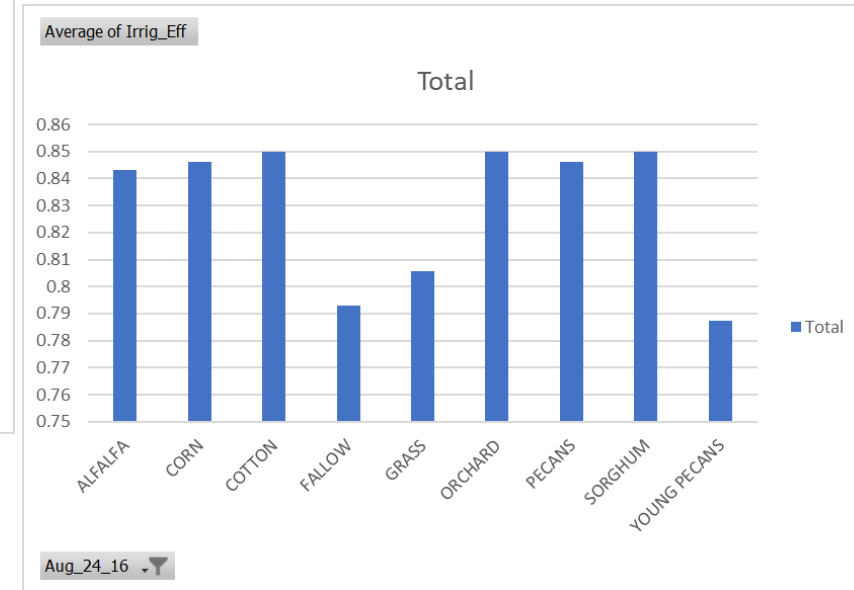
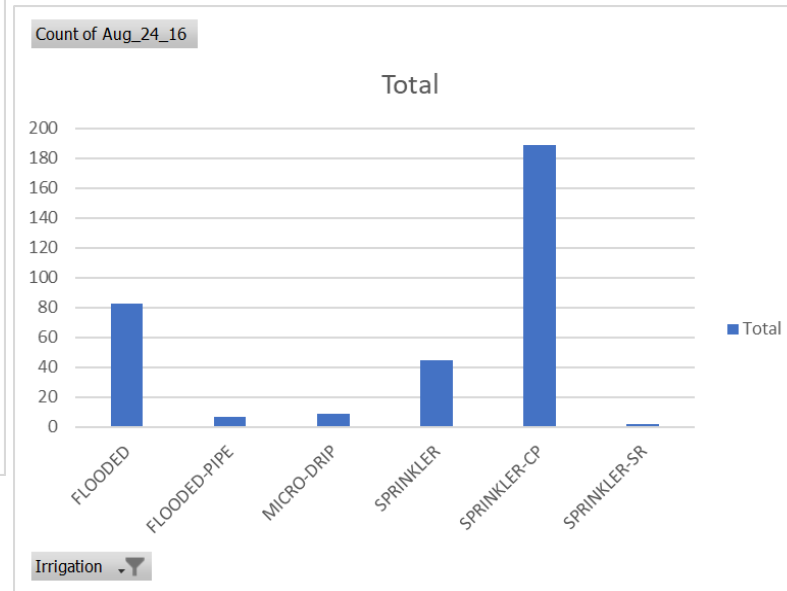
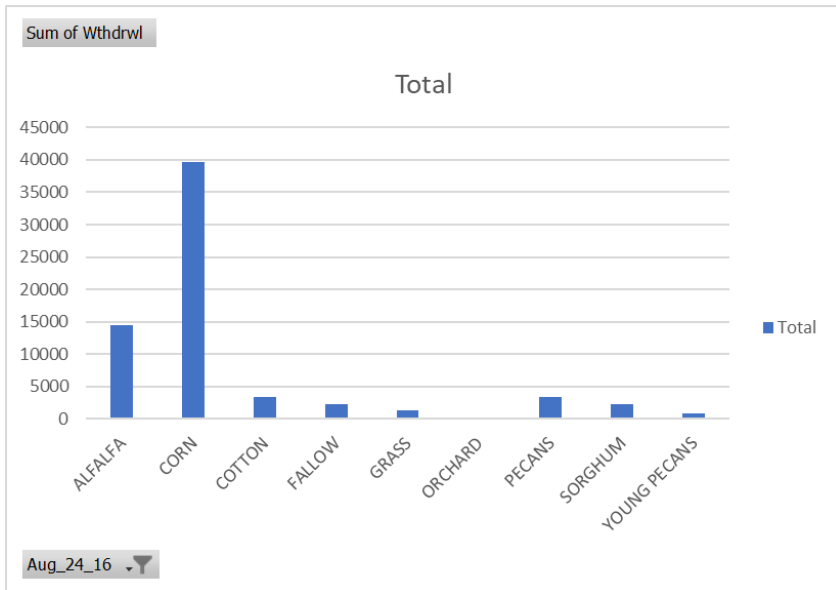
# Agricultural Water Use Data



# Irrigation Use Over time



# Water use, Types of irrigation, Efficiencies



# Agricultural Conservation Programs





# A.R.S. § 45-569 (B)

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# Management Plans

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# Statutory Requirements - Summary

A.R.S. § 45-564 et seq.	1MP	2MP	3MP	4MP	5MP
Calculate Water Duty	💧	💧	💧	💧	💧
Municipal GPCD Reduction	💧	💧	💧	💧	💧
Municipal Lost & Unaccounted for Water	💧	💧	💧	💧	💧
General Industrial Conservation	💧	💧	💧	💧	💧
Conservation for Untreated Providers		💧	💧	💧	💧
Conservation for Small Providers		💧	💧	💧	💧
Municipal Non-Per Capita Conservation		💧	💧	💧	💧
Incentives for Augmentation/Recharge		💧	💧	💧	💧
Assessment of Water Quality		💧	💧	💧	💧
Program for Conservation Assistance		💧	💧	💧	💧
Historical Natural Recharge		💧	💧	💧	💧
May Reduce Highest 25% of Water Duties			💧	💧	💧
Agricultural Historic Cropping Program			💧	💧	💧
Agricultural BMP Program			💧	💧	💧
Option for Alternative Agricultural Programs			💧	💧	💧
May Establish Cropped Acreage Program			💧	💧	💧
May Include Program for GFR Purchase & Retirement			💧	💧	💧
Recommendations to AWBA/for well locations			💧	💧	💧



# Conservation Programs

*“... the director, in developing the plan or plans, shall include measures for reducing groundwater withdrawals.” (A.R.S. § 45-569(B))*

- \* Programs for Three Sectors:

- \* Agricultural
- \* Municipal
- \* Industrial

- \* Conservation Programs include regulatory requirements related to water use, including:

- \* Reporting requirements
- \* Conservation targets
- \* Flexibility provisions
- \* Compliance provisions



# Reporting Requirements

- \* Non-exempt wells (>35 gpm) inside AMAs and INAs must meter well pumpage.
- \* Users subject to reporting requirements must submit Annual Water Withdrawal and Use Reports –
  - Due March 31st each year
- \* Volume of groundwater pumped by well
- \* Report movement of water
  - \* Types and Volumes of Water Delivered/Received
  - \* Types and Volumes of Water Stored/Recovered
  - \* Generation/Discharge of Effluent
- \* Report types of end use
- \* Additional information related to conservation requirements or any other information the director deems necessary



# Agricultural Data – Reporting Entities

## **Water use data reported to ADWR comes from:**

- \* Irrigation rights greater than 10 irrigation acres
  - \* Can be made up of multiple Irrigation Rights, but only submit one report
- \* Irrigation Districts
  - \* Some districts report on behalf of their right holders



# Agricultural Base Program – Initial AMAs

*Note: The Base Program was the only Agricultural Conservation Program for the 1MP in the Initial AMAs.*

## Components of the Base Program:

- \* **Water Duty** - The amount of water in acre-feet per acre that is reasonable to apply to irrigated land in a farm unit (A.R.S 45-402).
  - \* 
$$\frac{\text{Total Irrigation Requirement}}{\text{Assigned Irrigation Efficiency}} = \text{Water Duty}$$
- \* **Water duty acres** - The highest number of acres irrigated at any one year between in the 5-year historical period and are used for calculating the allotment for a given IGFR
  - \* Water duty acres x Water duty = Maximum annual groundwater allotment
- \* Each IGFR in the Base Program also has a **flexibility account** in which they can accrue credits or debits based on annual water use.



# Flexibility Accounts

A.R.S. § 45-467

- \* A flexibility account is maintained for each IGFR that is participating in the Base Program
- \* Based on the amount of water used in relation to the total allotment for that IGFR, as reported in each year's annual reports, credits or debits are made from this account.
  - \* Credits accrued in a single year may be sold only in the second calendar year after they are accrued.
  - \* An IGFR is considered to be out of compliance if it debits more than -50% from the flexibility account



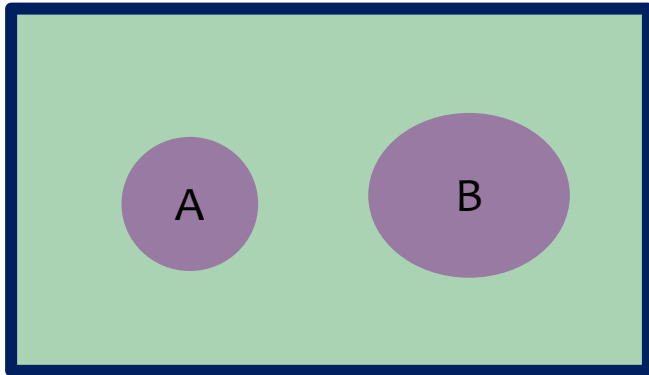


# Other Agricultural Conservation Programs

- \* Requirements for Districts
- \* Programs first adopted as a part of 3MPs for Initial AMAs
  - \* Best Management Practices Program (A.R.S. § 45-568.02(G))
  - \* Historic Cropping Program (A.R.S. § 45-568.02(A))
- \* Programs first adopted as a part of 5MPs for Initial AMAs
  - \* Integrated Farm Program



# Agricultural Conservation Programs



Base Program	Integrated Farm Program	BMP Program
Single Right Allotment	Combined Allotments	Required Conservation, Management, & Maintenance Practices
Single Right Reporting	Combined Reporting	Combined Reporting

## Legend

 Irrigation Right, same owner/operator



# Management Plans

## A.R.S. § 45-569 (B)

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## Process & Principles

- \* Development
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# Management Plan Chapters

- \* Chapter 4 – Agricultural Conservation Program
  - \* Applies to Irrigation Grandfathered Right holders
    - \* Irrigation is defined as the application of water to two or more acres of land to produce plants or parts of plants for sale or consumption
    - \* Exemptions: 2-10ac (IGFR required); <2ac (not defined as irrigation, no IGFR required)
  - \* Base Program – Water Duty (allotment) based on crop consumptive use data, with flexibility for annual precipitation variations
  - \* Modest conservation requirements starting out and then move to more stringent requirements in the future
  - \* Option to develop new program unique to Douglas AMA



# Tomorrow's Sessions

## Workshop – 11/28 (9am-12pm)

- \* Breakout groups – discussion of program frameworks and options

## Conclusion Session – 11/28 (2pm)

- I. Recap of Sessions & Feedback
- II. Next Steps



# Workshop Topics

- \* Discussion:

- \* Would the way the initial AMAs addressed these items work for Douglas? Why/why not?
- \* What characteristics or details specific to Douglas might need to be considered as a part of these?

- \* Base Program – Default

- \* Water duty calculation
  - \* Irrigation efficiencies
  - \* Consumptive use data
  - \* Leaching and other needs

- \* Options:

- \* BMP
- \* IFP
- \* Historic

- \* Other

- \* What characteristics/goals would a program specific to Douglas have?

**Deadline for additional comments: December 8, 2023**

# Questions?

managementplans@azwater.gov

Douglas AMA Information and Applications:

<https://www.azwater.gov/douglas-ama>



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# Workshop Feedback

- \* Base Program – Default
  - \* Water duty calculation
    - \* Irrigation efficiencies
    - \* Consumptive use data
    - \* Leaching and other needs
- \* Options:
  - \* BMP
  - \* IFP
  - \* Historic
- \* Other
  - \* What characteristics/goals would a program specific to Douglas have?
- \* Tiered program
  - \* Higher assigned efficiencies based on one or more of the following:
    - \* Acreage
    - \* Consumptive use
    - \* Location – areas of subsidence/fissure
- \* Recognition of differences between cover/double cropping
- \* Leaching considerations needed, varies by location
- \* Consumptive use data available from UA, USDA (AZ), Yavapai College, ASU. Focus on peer-reviewed and published.

**Deadline for additional comments: December 8, 2023**

# Workshop Feedback

- \* Base Program – Default
  - \* Water duty calculation
    - \* Irrigation efficiencies
    - \* Consumptive use data
    - \* Leaching and other needs
- \* Options:
  - \* BMP
  - \* IFP
  - \* Historic
- \* Other
  - \* What characteristics/goals would a program specific to Douglas have?
- \* BMP
  - \* Preference to exclude?
  - \* Drip irrigation
    - \* Require specific inspections, materials, and maintenance (winterization)
- \* IFP
  - \* Preference to include?

**Deadline for additional comments: December 8, 2023**



# Workshop Feedback

- \* Base Program – Default
  - \* Water duty calculation
    - \* Irrigation efficiencies
    - \* Consumptive use data
    - \* Leaching and other needs
- \* Options:
  - \* BMP
  - \* IFP
  - \* Historic
- \* Other
  - \* What characteristics/goals would a program specific to Douglas have?
- \* Distinguish between large and small farming operations
- \* Incentives for low water use/high economic value crops
- \* Funding/grants for:
  - \* Pilot projects re: new technologies/crops/methods
    - \* Concern that this is a small solution
- \* Considerations for preserving historic farms
- \* Engage with NRCS/NRCD, consideration for farms that work with them
- \* Considerations re: non-irrigation issues, ability to bring in new industry

**Deadline for additional comments: December 8, 2023**



# Douglas AMA Management Plan Development

## Next Steps

- \* Additional comments should be submitted to [managementplans@azwater.gov](mailto:managementplans@azwater.gov) by December 8, 2023.
- \* ADWR will use input gathered through the workshop and comments to begin to develop initial conservation program concepts to be discussed at future meetings.
- \* Additional meetings will be announced soon to continue developing these concepts and to develop other sector programs.
- \* All documents and information will be posted at <https://www.azwater.gov/douglas-ama>.



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