

# Douglas AMA Management Plan



Introduction, Overview & Timeline  
September 28, 2023

# Agenda

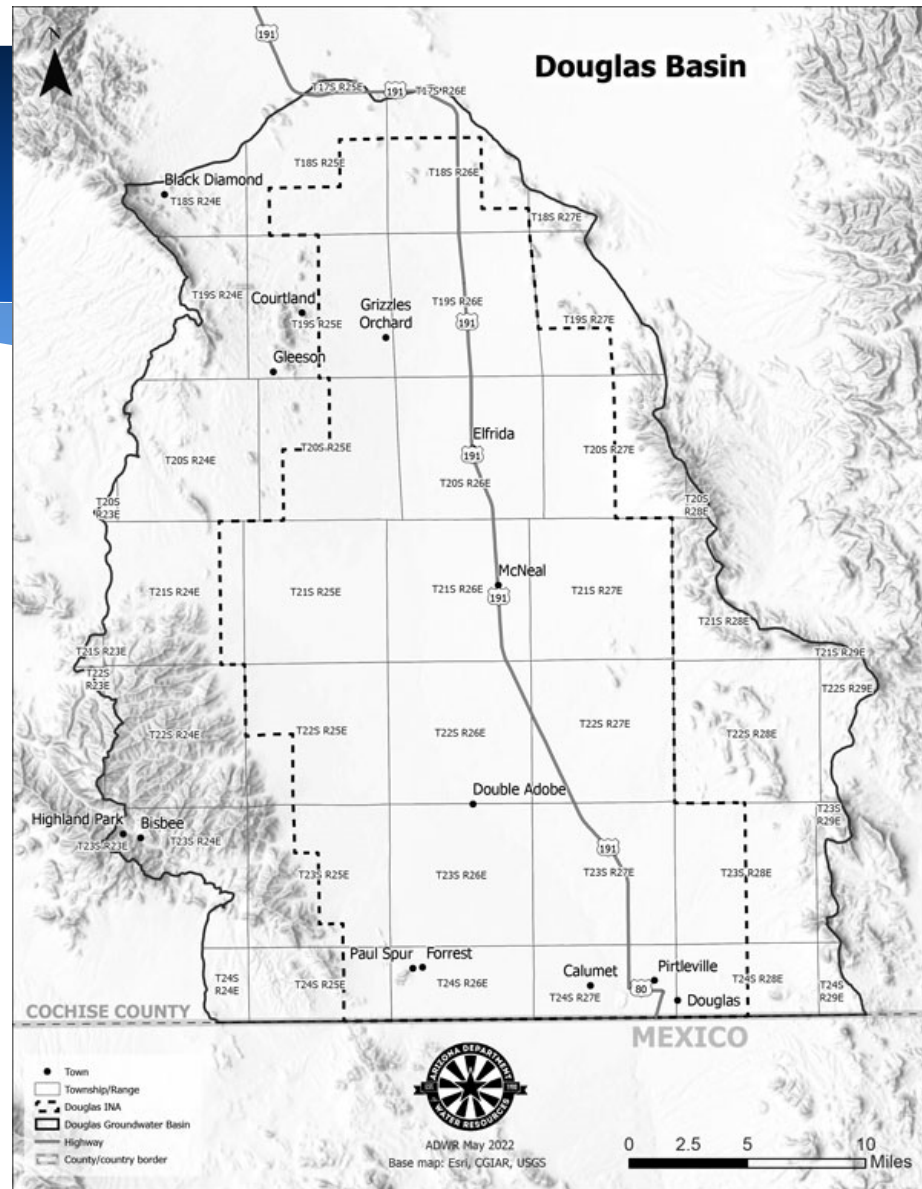
- I. Welcome & Introductions
- II. AMA Background Information
  - I. Map of Douglas AMA
  - II. Groundwater Regulatory Structure in Arizona
  - III. Wells, Definitions, Requirements
- III. Management Plan
  - I. Overview
  - II. Chapters
  - III. Conservation Requirements
  - IV. Tentative Timeline
  - V. Existing Data for Douglas AMA
- IV. Questions
- V. Closing

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

# Background Information: AMA & General Requirements

# 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



# Regulatory Structure



# Exempt vs. Non-exempt Wells

- \* 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.
  - \* Any person irrigating 2 or more acres or using 10 or more AF for a non-irrigation use must file an application for a grandfathered right or obtain a withdrawal authority.
  - \* **Failure to apply for a GFR by the deadline (March 1, 2024) will result in the waiver and relinquishment of any right to use groundwater (A.R.S. § 45-477.01).**

# Exempt vs. Non-exempt Wells

## An exempt well...

- ✓ 35 gallons per minute or less, AND...
- ✓ Uses less than 10 acre-feet per year for non-irrigation use, AND...
- ✓ Is not used to irrigate 2 or more acres of land.

## ...is exempt from :

- ✓ Requirement to obtain a grandfathered right or withdrawal authority
- ✓ Requirement to measure and report withdrawals
- ✓ Conservation requirements in the management plan
- ✗ Still must register well and document any well modifications/changes to well ownership

# 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>



# Non-Exempt Wells: Reporting & Impact Analyses

- \* 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.
- \* 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.

# Management Plan & Conservation Requirements

# 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**

# Management Plans

A.R.S. § 45-569 (B)

...If the director determines that... [it] is necessary to **preserve the existing supply of groundwater** for future needs or that **land subsidence or fissuring** is endangering property or potential groundwater storage capacity...[the plan] shall include measures for reducing groundwater withdrawals...

# Management Plans

A.R.S. § 45-569 (B)

"...If the director determines that active management is necessary because the use of groundwater is resulting in actual or threatened groundwater quality degradation, the director shall, in cooperation with the department of environmental quality, include in the plan or plans a program for prevention or amelioration of groundwater quality problems..."

# What is a Management Plan?

- \* Details **mandatory conservation programs** for groundwater users
  - \* Sector-specific
  - \* Additional requirements in subsequent management plans
- \* Discusses information about the *AMA*
- \* Describes policies on regulated groundwater use
  - \* Includes flexibility provisions & procedures for compliance
  - \* Includes information regarding support for regulated parties

# Management Plan Chapters

- \* **Executive Summary**
  - \* Background, Timelines, Resources
- \* **Chapter 1 – Hydrology**
  - \* Model Development, Water Quality
- \* **Chapter 2 – Supply and Demand**
  - \* Supply and Demand by Sector, Establish Targets
- \* **Chapter 3 – Underground Water Storage, Savings & Replenishment**
  - \* Recharge, Renewable Water Supplies



# Management Plan Chapters

- \* **Chapter 4 – Agricultural Conservation Program**
  - \* Irrigation Grandfathered Right Holders
- \* **Chapter 5 – Municipal Conservation Program**
  - \* Municipal water providers (service area right holders)
- \* **Chapter 6 – Industrial Conservation Program**
  - \* Type 1 or Type 2 non-irrigation grandfathered right or General Industrial Use permit holders.
- \* **Chapter 7 - Implementation, Compliance & Support**
  - \* Variances, Administrative Review, Measuring & Reporting, Public Engagement
- \* **Chapter 8 - Water Strategy**
  - \* Goal, Tools, Assured Water Supply, Subsequent Management Plans

# 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			💧	💧	💧

# 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

# Management Plan Chapters

## \* Chapter 5 – Municipal Conservation Program

- \* Applies to municipal water providers (service area right holders), not individual users
- \* Different requirements for small and large providers
- \* GPCD – Gallons per Capita per Day targets
  - \* Applies to designated providers
- \* NPCCP – Non-Per Capita Conservation Program – BMPs
  - \* Applies to large providers
- \* L & U – Loss & Unaccounted limits
  - \* Applies to all providers
  - \* Different ceilings for large and small providers

Municipal Water Providers – Douglas AMA
AZ Water Co - Bisbee
Naco Water - Bisbee
Twin Buttes MHP
City of Douglas
Monte Vista Water
La Costa Water
Cochise College Park WUA
Bisbee Douglas INTL Airport
NTM Aviation
McNeal WC
Elfrida WID
Sunizona WC

# Management Plan Chapters

## \* Chapter 6 – Industrial Conservation Program

- \* Applies to Type 1 or Type 2 non-irrigation grandfathered right or General Industrial Use permit holders.
  - \* E.g., Turf, Sand & Gravel, Metal Mining, Power Plants, Cooling Facilities, Dairies, Cattle Feedlots, etc.
- \* Focus: achieve greatest level of efficiency attainable given use of the latest commercially available conservation technology consistent with reasonable economic return.
- \* Some general requirements for all subsectors
  - \* Avoid waste, reuse or recycle water whenever possible, avoid single pass cooling or heating, use low flow plumbing fixtures, use low water landscaping
- \* Basic requirements for first management plan
  - \* Annual conservation targets
- \* Additional, unique requirements for subsectors
  - \* Thresholds within each subsector for conservation requirements (i.e. 10 ac - Turf, 100 AF/yr - Sand & Gravel)
  - \* May be required to submit conservation plans

# Management Plan Chapters

- \* **Chapter 7 – Implementation, Compliance & Support**
  - \* Variances
    - \* 90d from water duty notice to file for variance
    - \* Up to 5 years variance for water duty compliance - "compelling economic circumstances"
  - \* Administrative Review
    - \* 90d from water duty notice to file for administrative
    - \* Miscalculation, unreasonable water duty – review water duty
  - \* Measuring & Reporting Requirements
  - \* No withdrawal fees in Douglas AMA
  - \* Public Engagement, GUAC, etc.

# Management Plan Chapters

- \* **Chapter 8 – Water Strategy**

- \* Recognition and discussion of local management activities and strategies
  - \* Recognizing the importance of local engagement
  - \* Discussion of potential for locally-driven strategies
    - \* Increasing recharge
    - \* Incentives re: conservation/efficiency
    - \* Emphasis on residents/small local farms
- \* Assured Water Supply
  - \* Model timeline
  - \* Rules
- \* Augmentation
  - \* Effluent

# Douglas AMA Regional Groundwater Flow Model Development Process & Tentative Timeline

## End 2023: Hydrogeologic Conceptualization

- Organizing Existing Data
- Identifying Data Gaps

## Beginning 2025: Focused Calibration

- Adjusting to match existing data
- Incorporating additional data as needed

## 2026: Publication

- All files and results available online
- Provide public overview of model and results

## Beginning 2024: Begin constructing numerical model

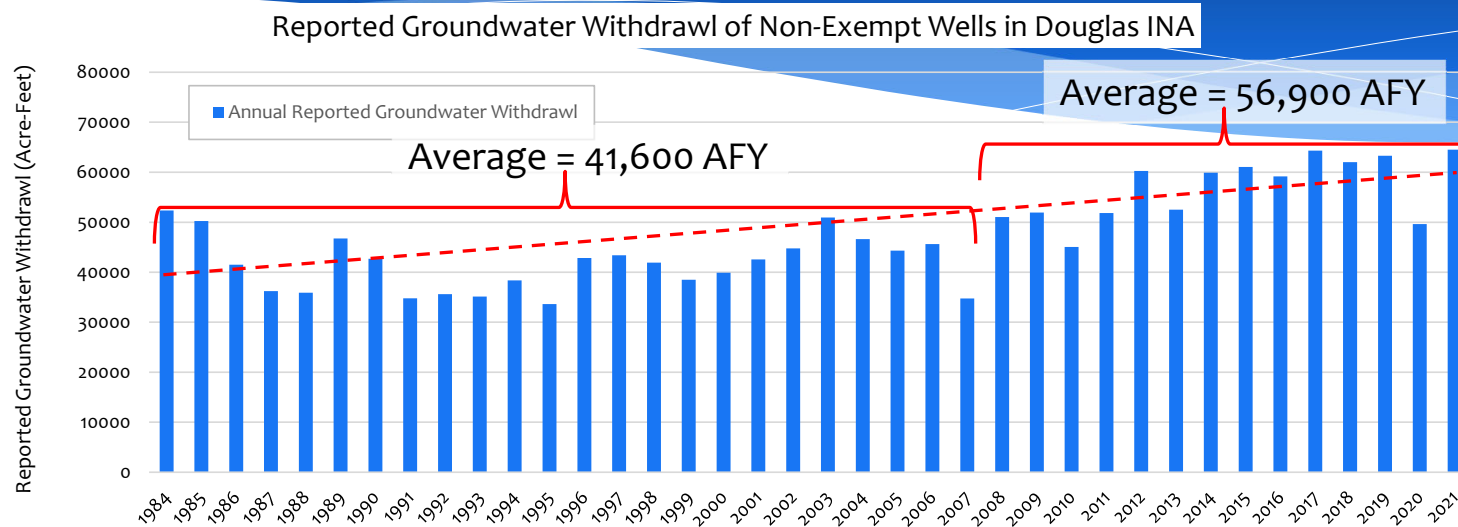
- Define model boundaries

## End 2025: Documentation and Report

- Prepare model files and data for publication
- Draft and review report



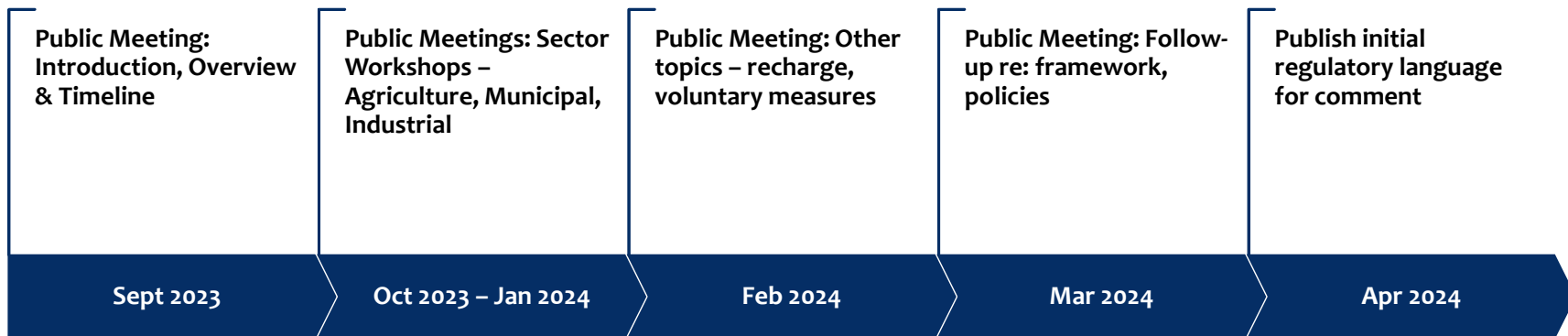
# Douglas INA Reported Pumpage Data



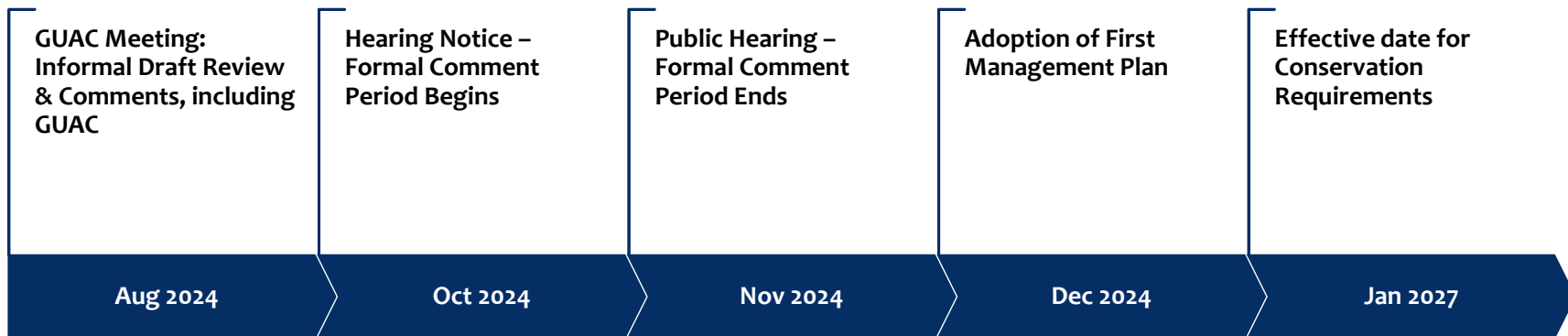
- \* Reported Groundwater Withdrawals for Non-Exempt wells (>35gpm) between 1984 and 2021
- \* 1984-2007 average = 41,600 AFY
- \* 2007-2021 average = 56,900 AFY
- \* ~23% increase over 37 years (statistical trend of + ~610 AF year/year – or – +198 Million Gallons year/year)

# Douglas AMA Management Plan Timeline

# Tentative Management Plan Timeline Douglas AMA (Development)



# Tentative Management Plan Timeline Douglas AMA (Adoption)



# Douglas AMA Management Plan

- \* Emails can be sent to:  
[managementplans@azwater.gov](mailto:managementplans@azwater.gov)
- \* Douglas AMA Webpage:  
<https://new.azwater.gov/ama/douglas-ama>
- \* Public Meetings Calendar (includes Online Office Hours with link):  
<https://new.azwater.gov/meetings>