



# *Willcox AMA Management Goal & Management Plan*

*August 26, 2025*

# Agenda

1. Welcome, Introductions, & Meeting Logistics
2. Willcox AMA Development Updates
3. The Willcox AMA Management Goal
4. The Willcox AMA Management Plan
5. Public Discussion
6. Closing



# Welcome and Introductions

August 26, 2025



# Meeting Logistics

- Except for clarifying questions, please hold questions and comments until the public discussion portion.
- Specific questions about individual circumstances should be addressed separately via phone/email.
- Please be respectful to staff and to fellow attendees.
- Please speak into a microphone so those participating virtually can hear.
- Today's meeting is being recorded. The recording will be posted on ADWR's website within a few days.

# Meeting Logistics

ADWR is holding this presentation and answering questions to provide public information and to receive public feedback.

ADWR does not intend to provide comprehensive guidance and cannot give legal advice. If you have legal questions about your specific circumstances, you should consult with an attorney.



# Willcox AMA Development Updates



# Where are we now in the Willcox AMA Development Process?



# Providing Comments and Input to ADWR

## **Ben Bryce:**

[bbryce@azwater.gov](mailto:bbryce@azwater.gov)

## **Presentation and meeting recording:**

<https://new.azwater.gov/meetings>

## **Willcox AMA information & applications:**

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

## **Send comments regarding Management Goal & Plan:**

[managementplans@azwater.gov](mailto:managementplans@azwater.gov)

## **Other AMA questions:**

AMA Customer Service email: [earp@azwater.gov](mailto:earp@azwater.gov)

AMA Customer Service phone: 602.771.8585



# Applications for Grandfathered Rights

## Important Reminders:

Applications for grandfathered rights **must** be submitted by April 8, 2026. Failure to apply by this date will waive and relinquish the right to use groundwater from a non-exempt well. (A.R.S. 45-477.01)

### Irrigation Grandfathered Rights

- For lands legally irrigated between 10/23/2019 – 10/23/2024, and/or for lands where a substantial capital investment has been made during that time period to prepare the land for irrigation use.

### Non-Irrigation Grandfathered Rights

- Type 1 –Non-irrigation GFR based on the permanent retirement of irrigated acres.
- Type 2 –Non-irrigation GFR based on non-irrigation groundwater use between 10/23/2019 – 10/23/2024.

Applications available at <https://www.azwater.gov/ama/willcox-ama>

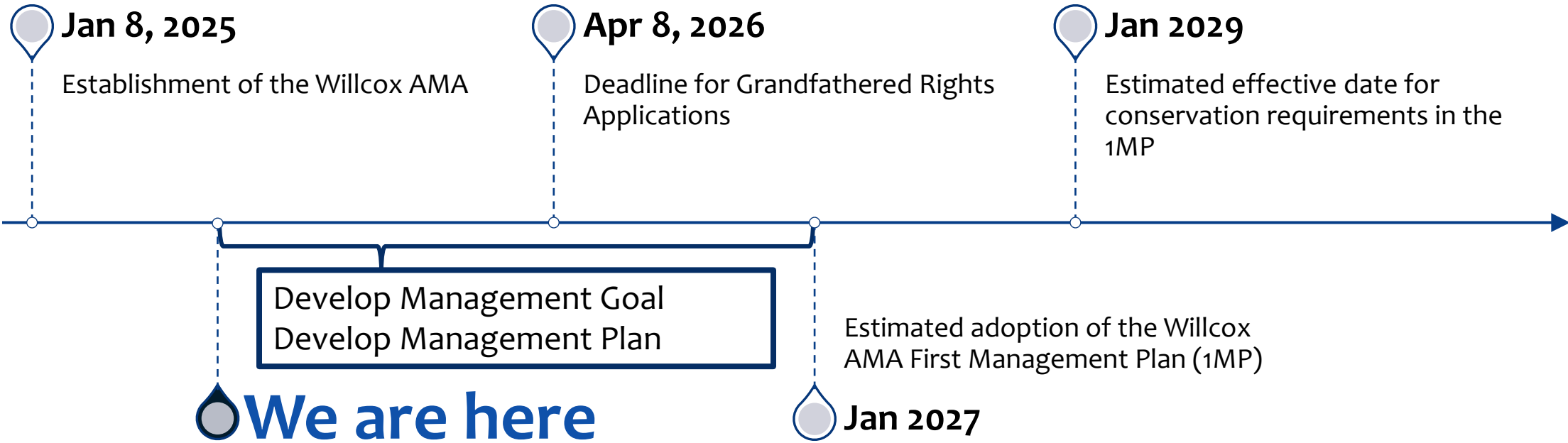
- All those requesting consideration of Substantial Capital Investment must submit Attachment A with an IGFR application.
- ADWR will hold additional workshops to discuss.



# Willcox Management Goal



# Where are we now in the Willcox AMA Development Process?



# Willcox AMA Management Goal

## Purposes of this section:

- Understand the concept and intention behind the proposed draft Willcox AMA Management Goal.
- Understand the relationship between the Management Goal and the Management Plan.
- Clarify important concepts about the Management Goal, including the nature of groundwater withdrawals and overdraft.

# Groundwater Conditions in the Willcox AMA

- Since the 1940s, groundwater pumping far exceeds natural recharge, primarily from agricultural pumping.
- Wells continue to go dry.
  - Since ADWR began monitoring wells, 71 have gone dry, including 29 in the last 10 years.
- Subsidence is as much as 11.5 feet in some areas of the Willcox AMA.
  - The rate of subsidence is accelerating. An increase from 1.2 in/year in 1996 to 2.8 in/year in 2023.

# Groundwater Conditions in the Willcox AMA

- Groundwater withdrawals are causing the land to fissure.
  - Nearly 50 miles of earth fissures exist in the basin as of 2023, per the Arizona Geological Survey.
  - These fissures damage public and private property like roads, fencing, and homes.
- Unless pumping trends change, severe groundwater drawdown will continue to imperil domestic wells, municipal water supplies, and agricultural and industrial access to water in the Willcox AMA.

# How do Management Goals and Plans work?

## The Management Goal

Under the Groundwater Management Act, an AMA must have a goal for the health of the groundwater basin and a timeline for the AMA to achieve that goal.

## The Management Plan

An Active Management Area works towards achieving its Management Goal through conservation programs and requirements in Management Plans over a specified period.

# Draft Willcox AMA Management Goal

***“To support the long-term viability of the regional economy, mitigate land subsidence, and extend the life of the aquifer by reducing groundwater overdraft by at least 50% by 2075.”***

# Does the Management Plan propose to cut 50% of groundwater withdrawals?

NO.

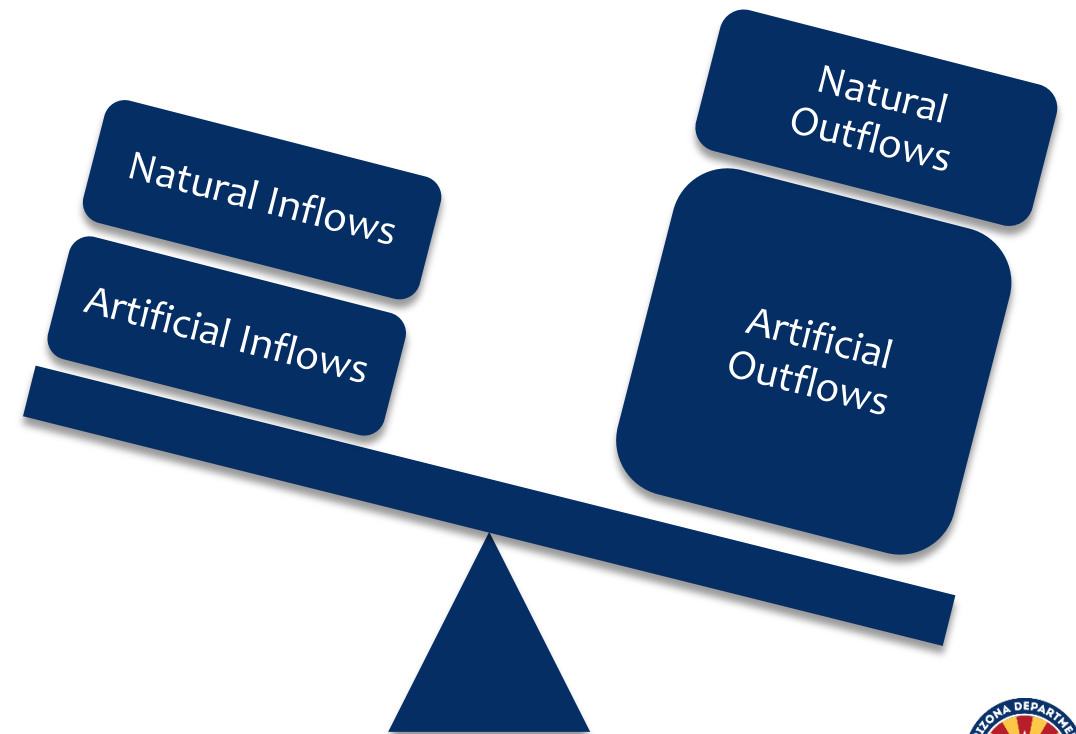
The Draft Management Goal proposes to reduce overdraft. Overdraft is not the same thing as the amount of water that is withdrawn from the aquifer or used by any one user.

# What is Overdraft?

Groundwater overdraft is not the amount of groundwater that is withdrawn from an aquifer.

Overdraft occurs when the amount of water going into the aquifer is less than the amount of groundwater coming out of an aquifer.

The imbalance is overdraft.

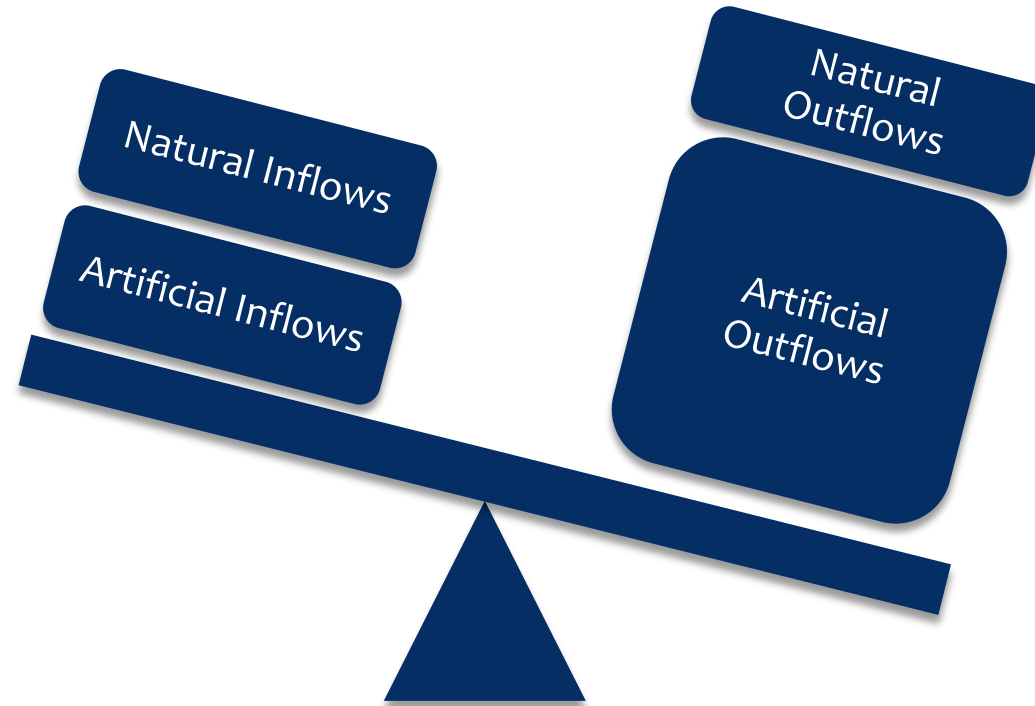


# What is Overdraft?

## Inflows

**Natural:** Groundwater inflow, streambed recharge, and mountain-front recharge.

**Artificial:** Groundwater recharge, including incidental agricultural, municipal, and industrial recharge.



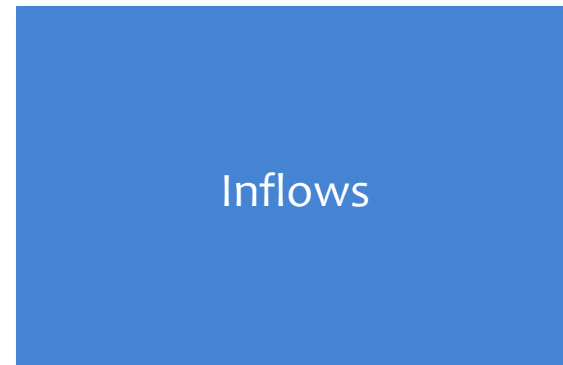
## Outflows

**Natural:** Groundwater outflows and riparian demands.

**Artificial:** Agricultural, municipal, industrial, and domestic pumping.

# What is Overdraft?

Imagine a hypothetical scenario where this light blue bar graph represents inflows: the amount of water that flows into an aquifer.



# What is Overdraft?

The dark blue bar on the left represents outflows: the amount of water leaving the aquifer.

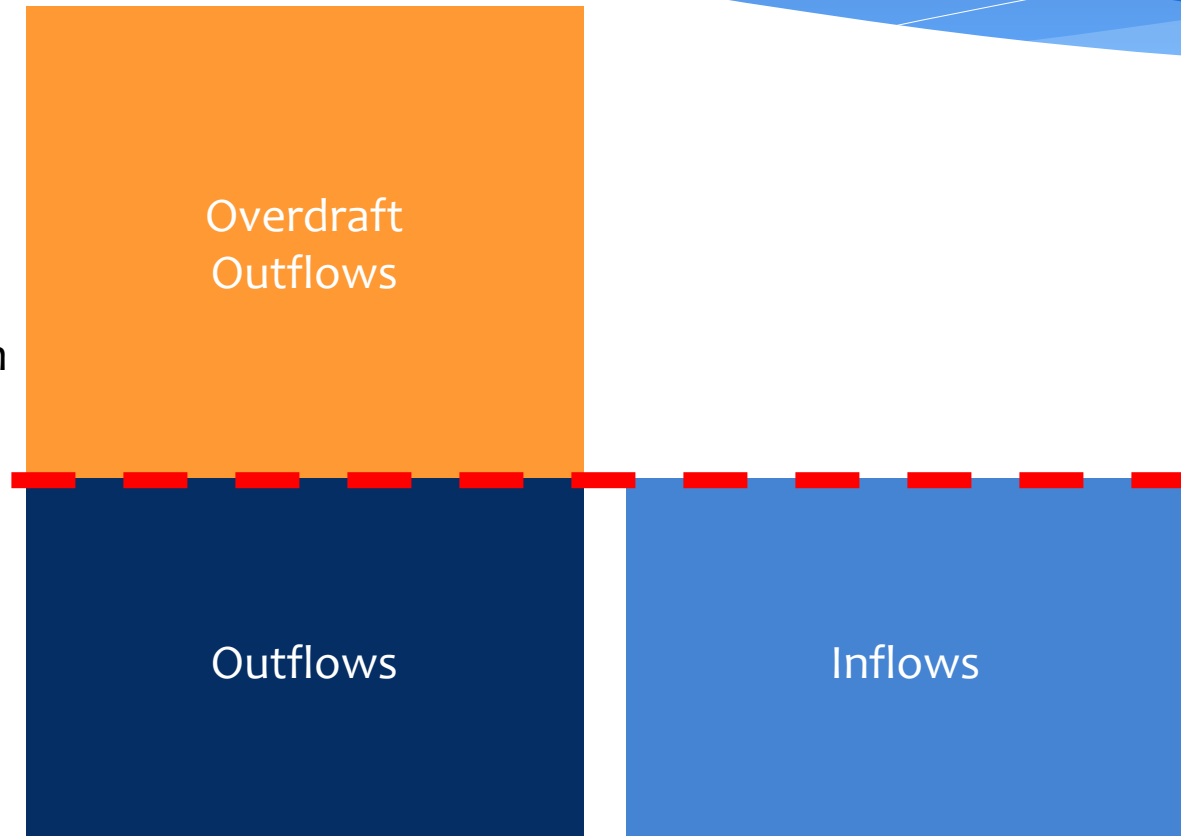
If the outflows are the same as the inflows, there is no overdraft.



# What is Overdraft?

Overdraft is when outflows exceed inflows.

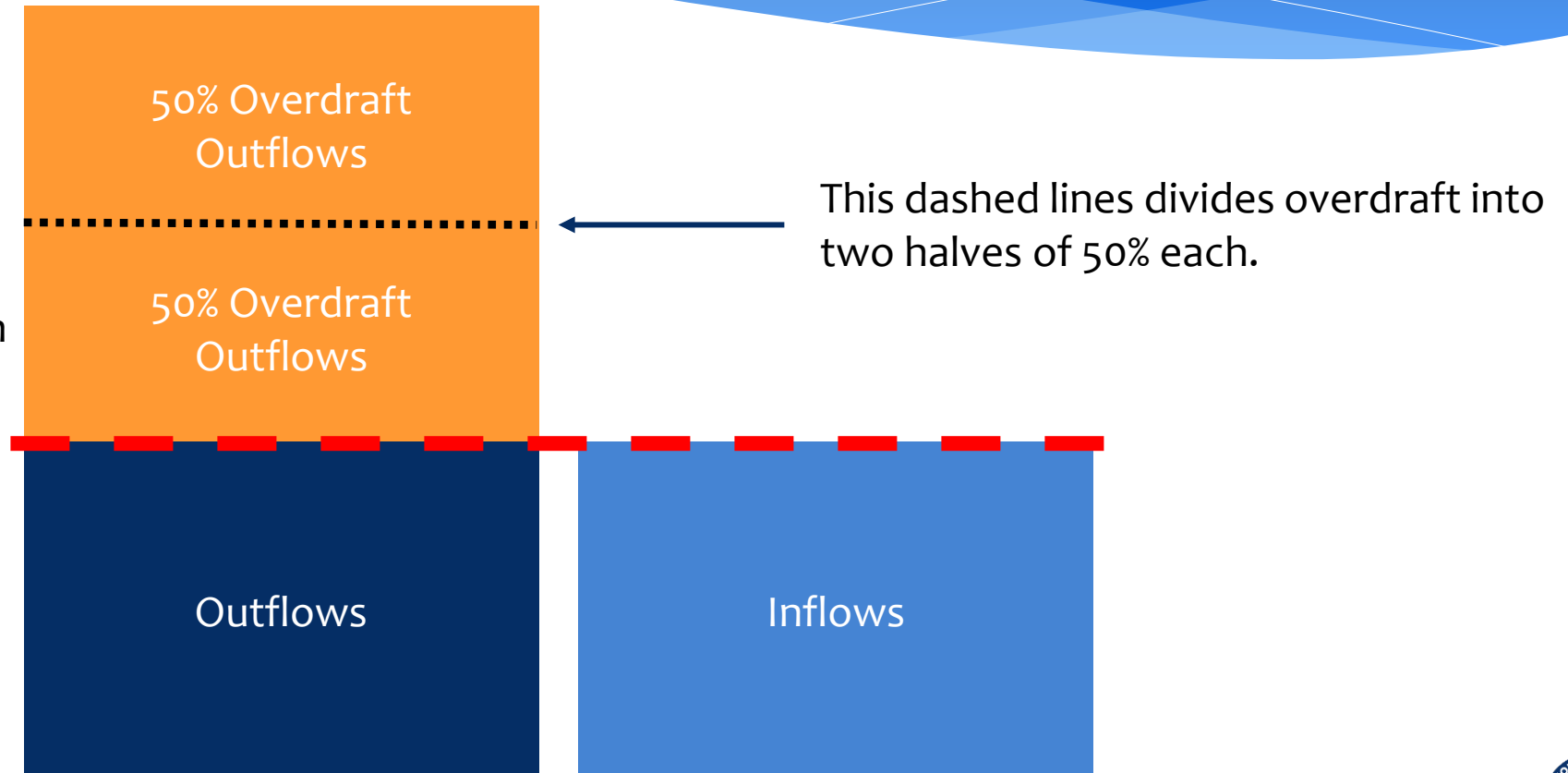
In this example, overdraft is shown in orange.



# What is Overdraft?

Overdraft is when outflows exceed inflows.

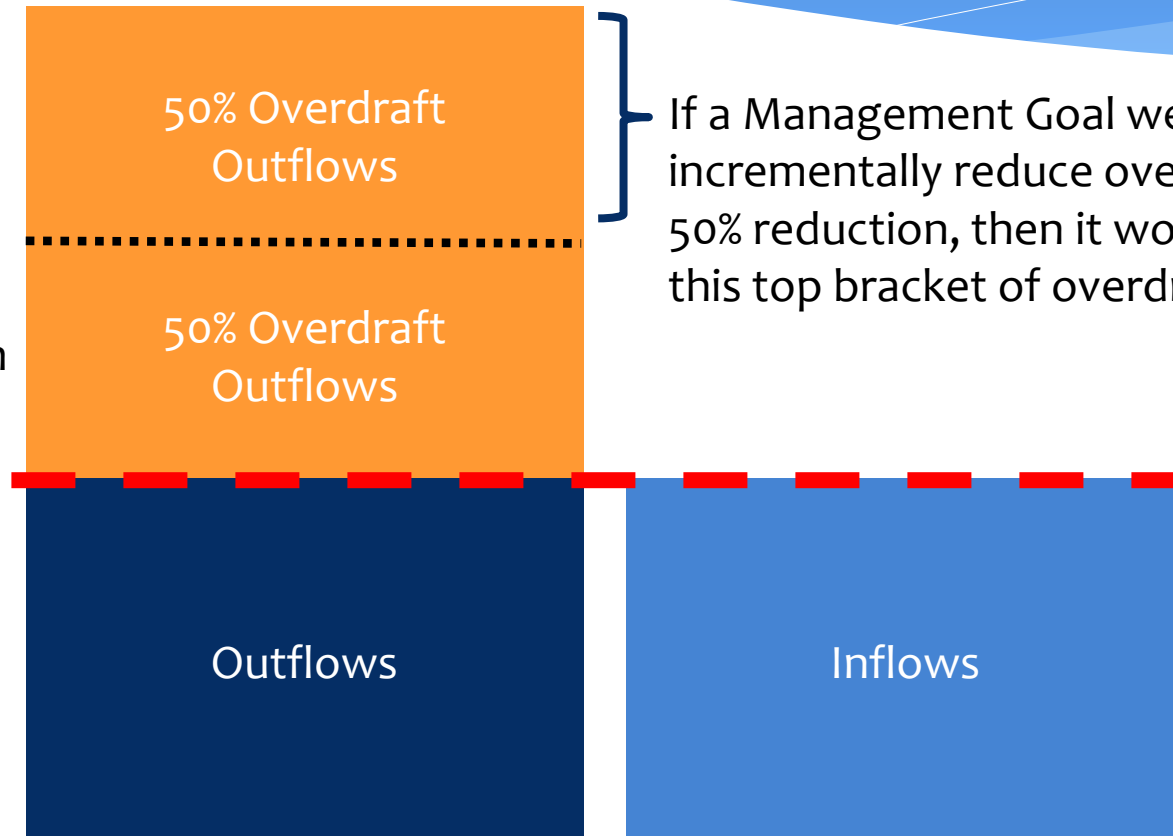
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# What is Overdraft?

Overdraft is when outflows exceed inflows.

In this example, overdraft is shown in orange.



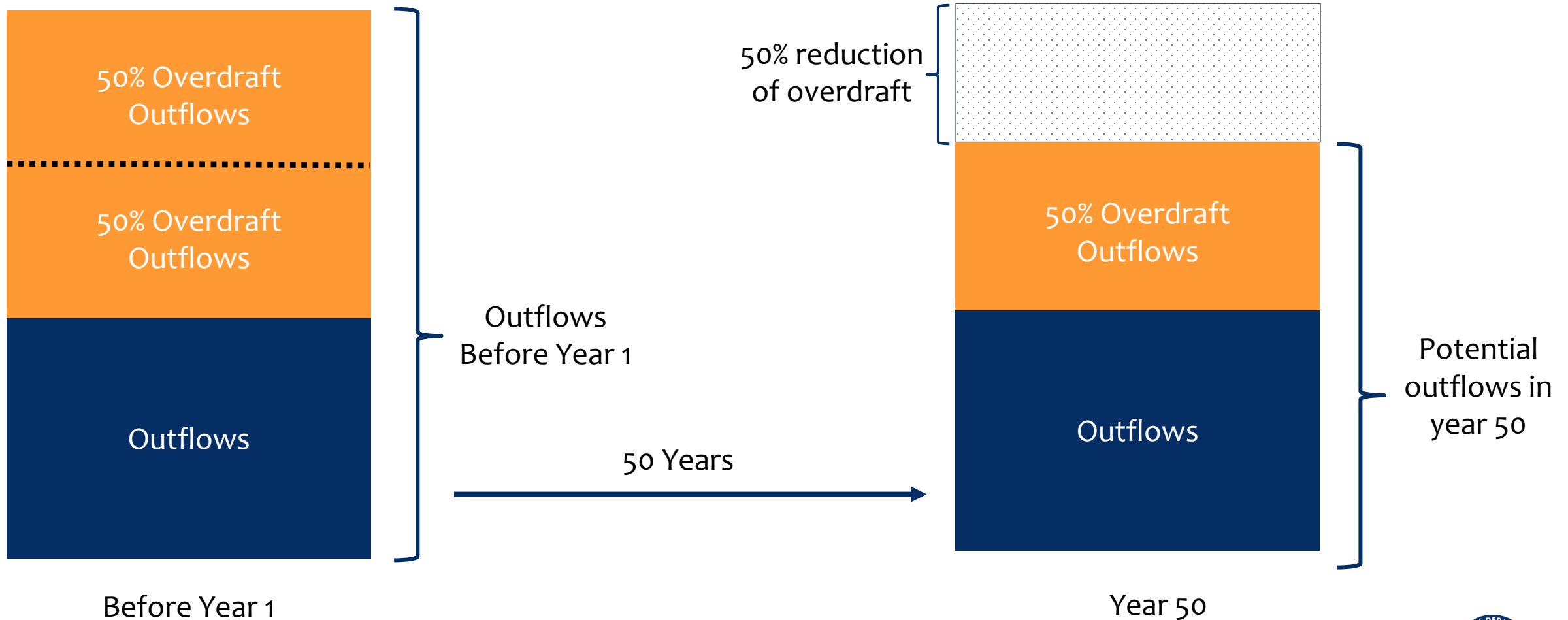
If a Management Goal were to incrementally reduce overdraft to reach a 50% reduction, then it would only target this top bracket of overdraft.

# Will the management plan require 50% reductions in 10 years?

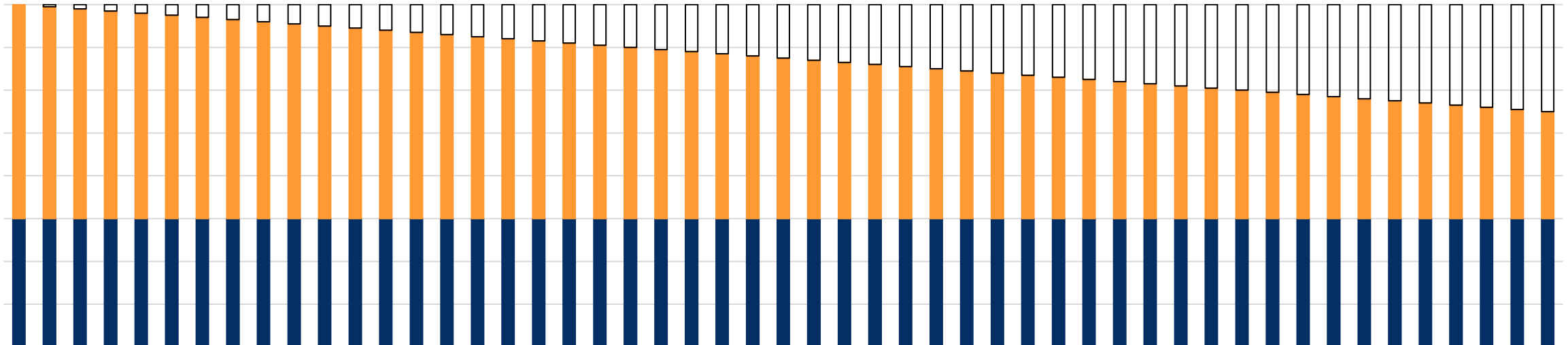
No. The draft Management Goal envisions **incremental** progress towards eventually reducing overdraft by 50% in 50 years.



# Overdraft Over Time



# Overdraft Over Time

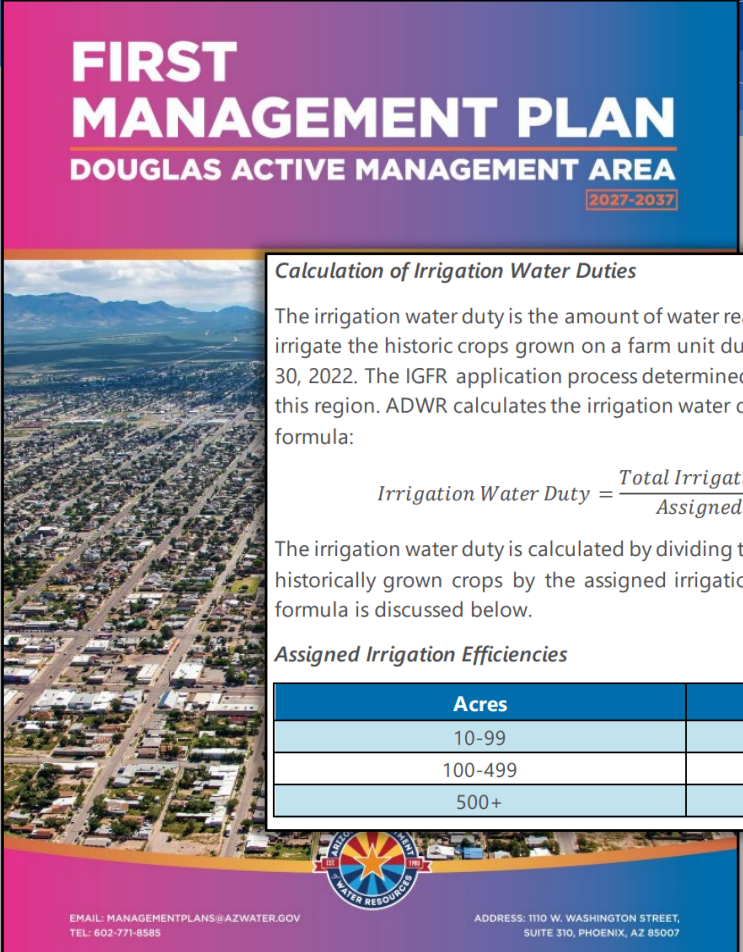


■ Balance ■ Overdraft



# Will the same conservation requirements apply to all water users?

- No. Conservation requirements are set by sector: agricultural, municipal, and industrial.
- Within sectors, we can establish a solution that works for the Willcox Basin.
- For example, the Douglas Management Plan applied different efficiency requirements to agricultural water users based on the number of acres.
- This kind of flexibility is available to the Willcox AMA as well.



## FIRST MANAGEMENT PLAN

### DOUGLAS ACTIVE MANAGEMENT AREA

2027-2037

#### Calculation of Irrigation Water Duties

The irrigation water duty is the amount of water reasonably required per acre to annually irrigate the historic crops grown on a farm unit during August 30, 2017, through August 30, 2022. The IGFR application process determined the list of crops historically grown in this region. ADWR calculates the irrigation water duty for each IGFR using the following formula:

$$\text{Irrigation Water Duty} = \frac{\text{Total Irrigation Requirements per Acre}}{\text{Assigned Irrigation Efficiency}}$$



The irrigation water duty is calculated by dividing the total water required to produce the historically grown crops by the assigned irrigation efficiency. Each component of the formula is discussed below.

#### Assigned Irrigation Efficiencies

Acres	Set Irrigation Efficiency
10-99	80%
100-499	83%
500+	85%

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TEL: 602-771-8585

ADDRESS: 110 W. WASHINGTON STREET,  
SUITE 310, PHOENIX, AZ 85007



# Will the community have more input on the draft Management Goal and Plan?

1 ARIZONA DEPARTMENT OF WATER RESOURCES  
2 BEFORE THE DIRECTOR

3 IN RE: SUBSEQUENT  
4 MANAGEMENT  
5 OF GROUNDWATER  
6 IN GRAHAM AND  
7 COCHISE COUNTIES

8 Pursuant to  
9 Arizona Department  
10 to designate the  
11 ("Basin"), Arizona  
12 set forth herein.

13 I. Director  
14 On September  
15 or ("Department")  
16 information, acceptance  
17 initiation of procedure  
18 presented by the Director  
19 for this matter. Pursuant  
20 October 21, 2024  
21 ("Technical Memorandum")  
22 including the information  
23 hereby incorporated  
24

25 Technical Memorandum  
Buschhatzke, Director, et al.

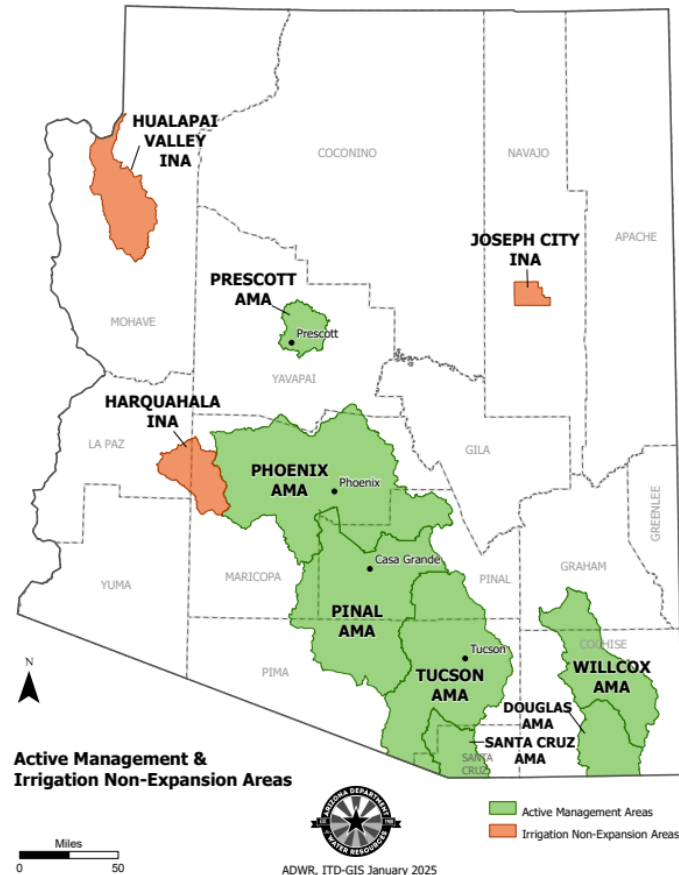
ADWR July 2025  
Base map: ESRI World Hillshade

Absolutely.

Stakeholder engagement is vital to the development of this management goal & plan. ADWR will continue to seek your input.



# Will this affect other AMAs like Phoenix, Pinal, or Tucson?



No.

Arizona law has already determined elements of the Management Plans for “Initial AMAs” (Phoenix, Pinal, Tucson, Santa Cruz, Prescott).

“Subsequent AMAs”, like the Willcox AMA, follow the same structure as closely as practicable but have flexibility beyond what is required for the Initial AMAs.

# Will this affect other AMAs like Phoenix, Pinal, or Tucson?

**It makes sense to treat the Willcox AMA differently.**

When groundwater demand outstrips the groundwater supply, you have two options: increase supply or decrease demand. Willcox does not have access to reliable surface water supplies that other AMAs have and has limited potential for effluent supplies. In Willcox, the realistic option is to decrease demand.



# Overdraft in the Willcox Basin

## Estimating overdraft in the Willcox Basin:

- ADWR will estimate overdraft in the Willcox Basin using a 5-year average.
- ADWR is evaluating the last few years and will release overdraft estimates this fall.

## Important things to remember:

- The Management Goal to reduce overdraft by 50% by 2075 does not apply to any single water user and is expected to take many years to achieve.
- Determining the “how” we will reach a 50% reduction will be done through conservation programs in the Management Plans.
- Establishing the Management Plans will take public workshops, data analysis, and public input.

# Willcox AMA Management Plan



# Willcox AMA Management Plan

## Key takeaways from this section:

- Understand the role of the Management Plan in achieving the Management Goal.
- Understand why the Willcox AMA Management Plan is different from the Phoenix, Tucson, Pinal, and other AMAs.
- Understand why the Willcox AMA Management Plan must include measures to reduce groundwater withdrawals.
- Understand the timing and structure of the Management Plan.

# Management Plans

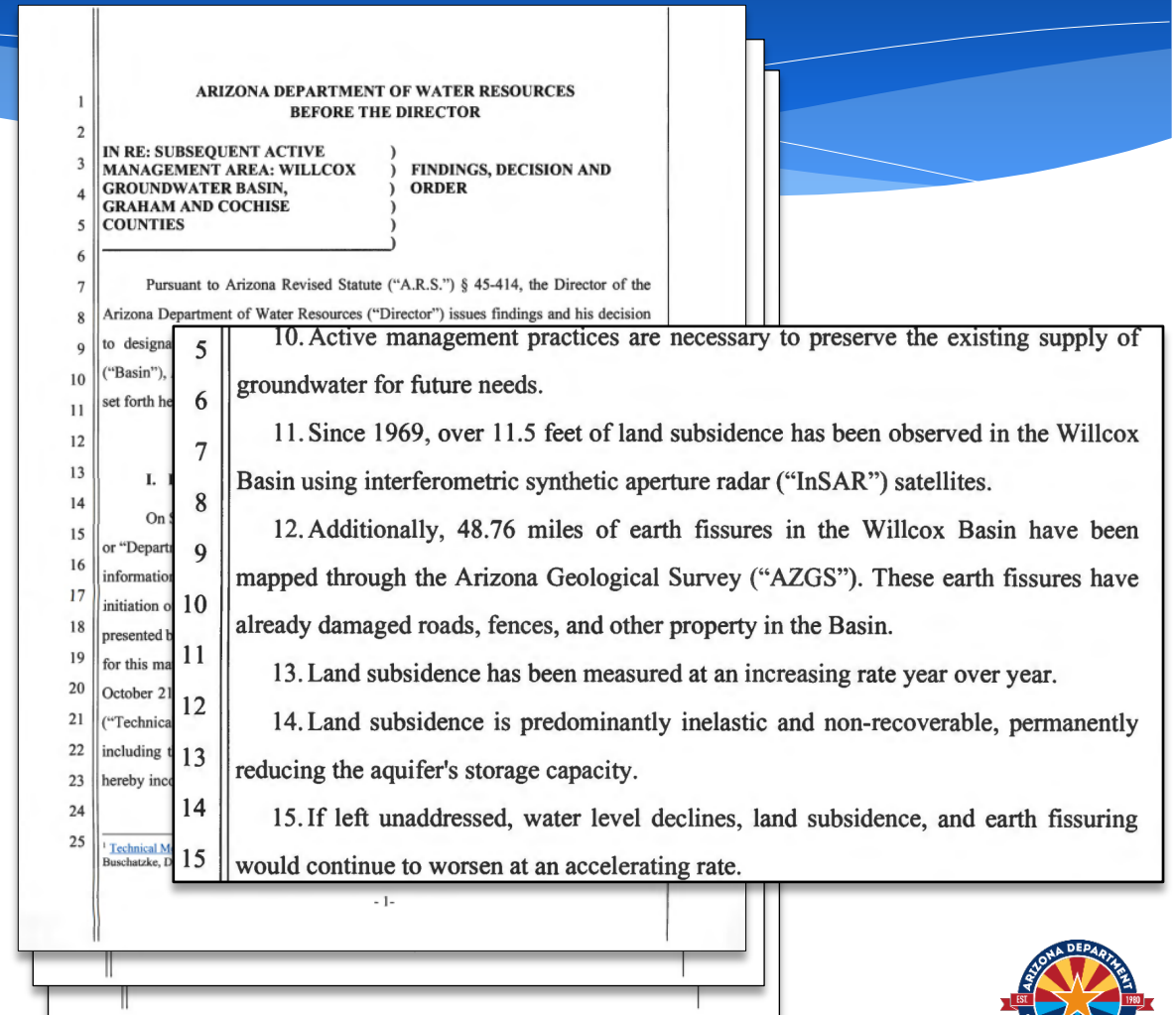
An Active Management Area works towards achieving its Management Goal through requirements set in Management Plans over a set period.



# Management Plans

The Willcox AMA Management Plan must include measures to reduce groundwater withdrawals.

To achieve this, and to reach the Management Goal, the Management Plan will set mandatory conservation requirements, including volumetric groundwater withdrawal reductions.

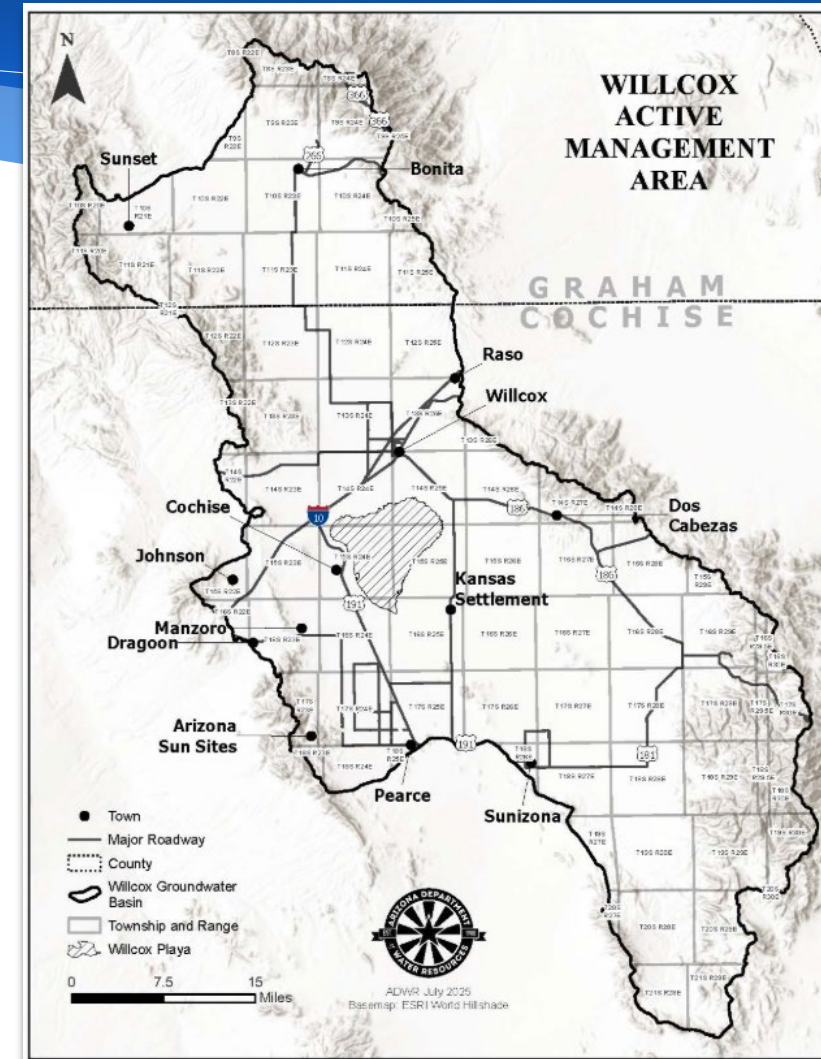


# How will the Conservation Programs be structured?

The Willcox AMA Conservation Programs will be tailored to the Willcox basin to create meaningful reductions in groundwater use.

The Programs encompass three sectors:

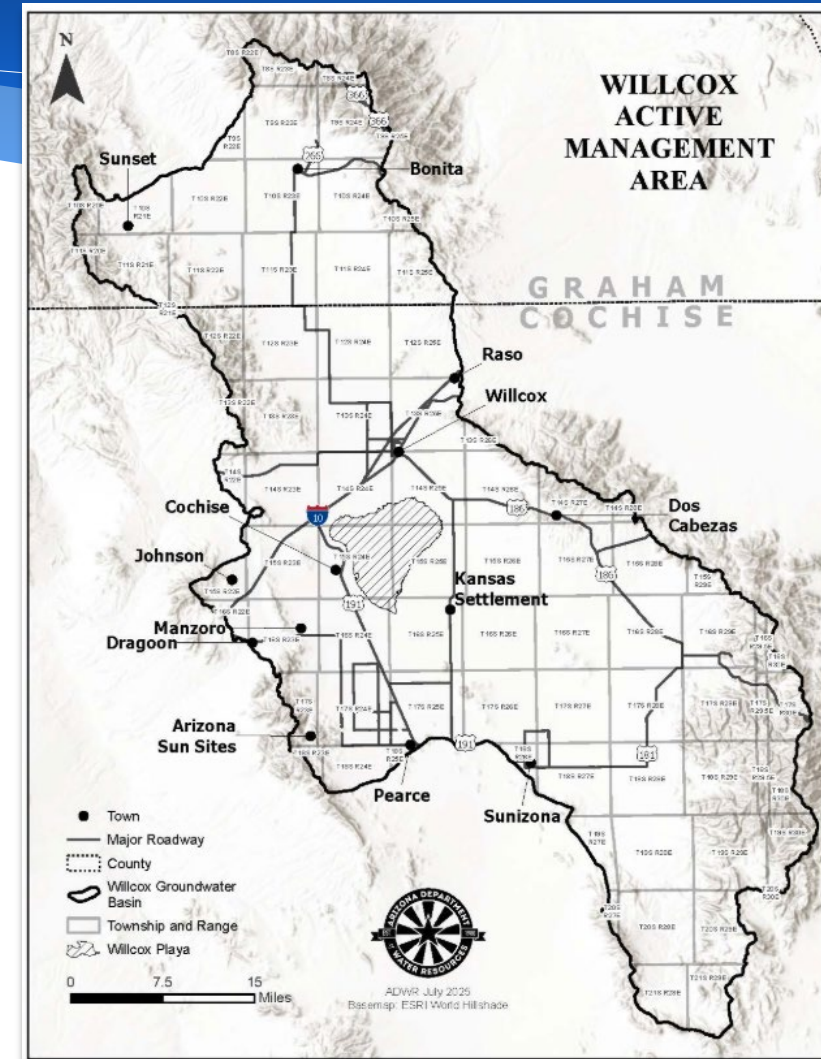
1. Agricultural
2. Municipal
3. Industrial



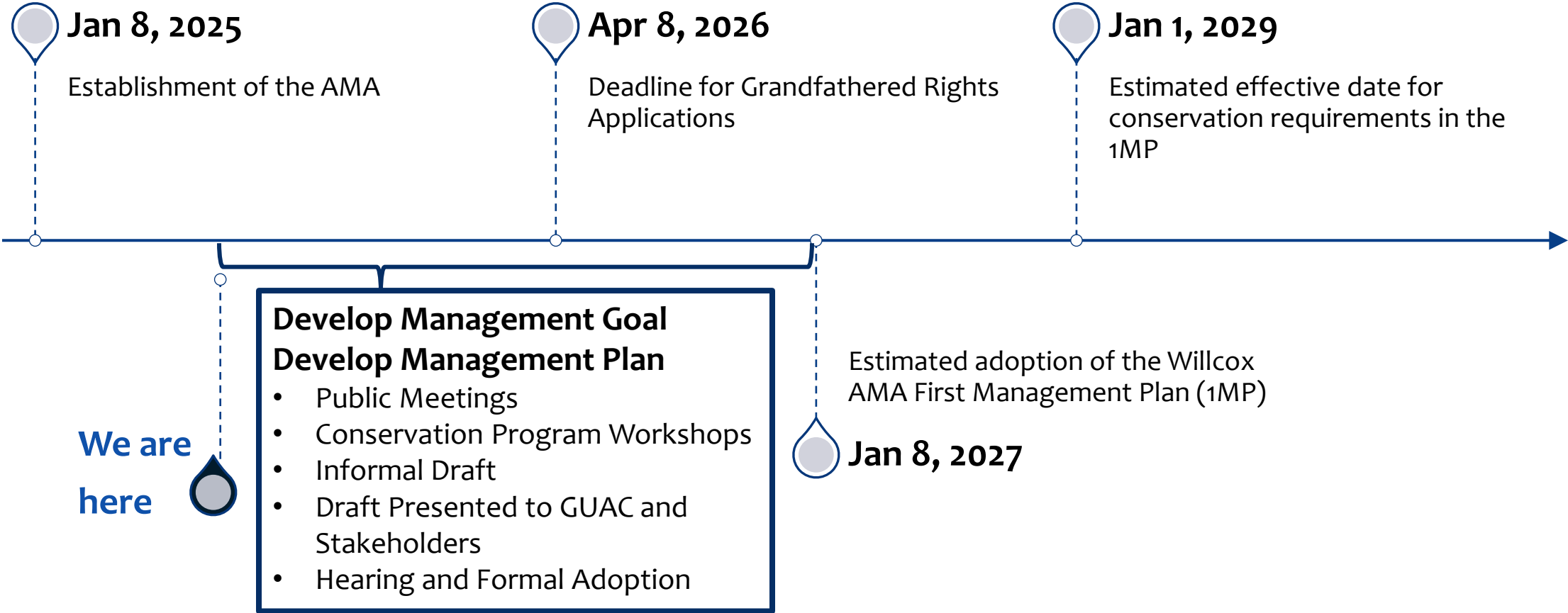
# How will the Conservation Programs be structured?

The Conservation Programs will include:

- Conservation and regulatory requirements, including volumetric reductions
- Reporting requirements
- Flexibility provisions
- Compliance provisions
- Planning requirements



# Where are we now in the Willcox AMA Development Process?



# Coming up: Individualized Sector Workshops

Individualized sector workshops begin with background information and dig into new ideas to develop for the Willcox AMA First Management Plan.

- September: Municipal and Industrial Conservation Program Workshops.
- This Fall: Agricultural Program Workshop and other data analysis.
- Workshops will examine existing conservation programs and collaborate with stakeholders to develop programs that work for the Willcox Basin.
  - Creation of new and innovative programs that are realistic to the needs of the stakeholders of the basin utilizing stakeholder input.

# Public Discussion



# Public Discussion

## Requests for input from the public:

- Feedback on the proposed Draft Management Goal.
- Input on whether to ease into the volumetric reductions required by the Conservation Programs or use a more immediate but steady approach.
- Input on whether to apply different conservation requirements to water users. For example, should the Plan hold larger users to more stringent standards than smaller users or users with low water-use crops?

# Closing

**Ben Bryce:**

[bbryce@azwater.gov](mailto:bbryce@azwater.gov)

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