



Willcox AMA

***Management Plan Development:
Agricultural Conservation Program
Workshop***

October 23, 2025

Agenda

1. Welcome, Introductions, & Meeting Logistics
2. Willcox AMA Management Plan Development Updates
3. Agricultural Conservation Programs Background
4. Roundtable Discussion
5. Closing



Welcome and Introductions

October 23, 2025



Meeting Logistics

ADWR is holding this presentation and answering questions to provide public information and to receive public feedback. ADWR is facilitating a collaborative roundtable discussion for the development of the First Management Plan.

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.



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.

Providing Comments and Input to ADWR

Send comments regarding Management Goal & Plan:

managementplans@azwater.gov

Willcox AMA information & applications:

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

Other AMA questions:

AMA Customer Service email: earp@azwater.gov

AMA Customer Service phone: 602.771.8585



Applications for Grandfathered Rights

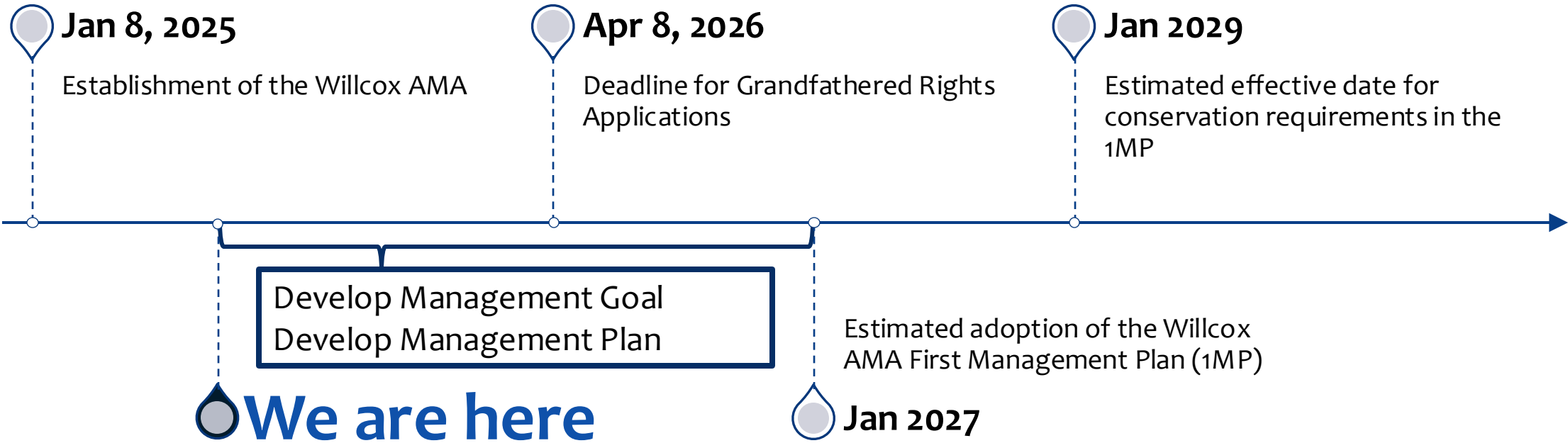
Remember:

- * 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.
- * Applications are available at www.azwater.gov/ama/willcox-ama.

Willcox AMA Management Plan Timeline & Development



Where are we now in the Willcox AMA Development Process?



How do Management Goals and Plans work?



The Management Goal sets the objective of the AMA.

The Management Plans establish policies and requirements to achieve the Management Goal over a set timeline, including Conservation Programs.

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?

Remember, “overdraft” is a net change in aquifer storage where outflows exceed inflows. This is not the same thing as water in storage.

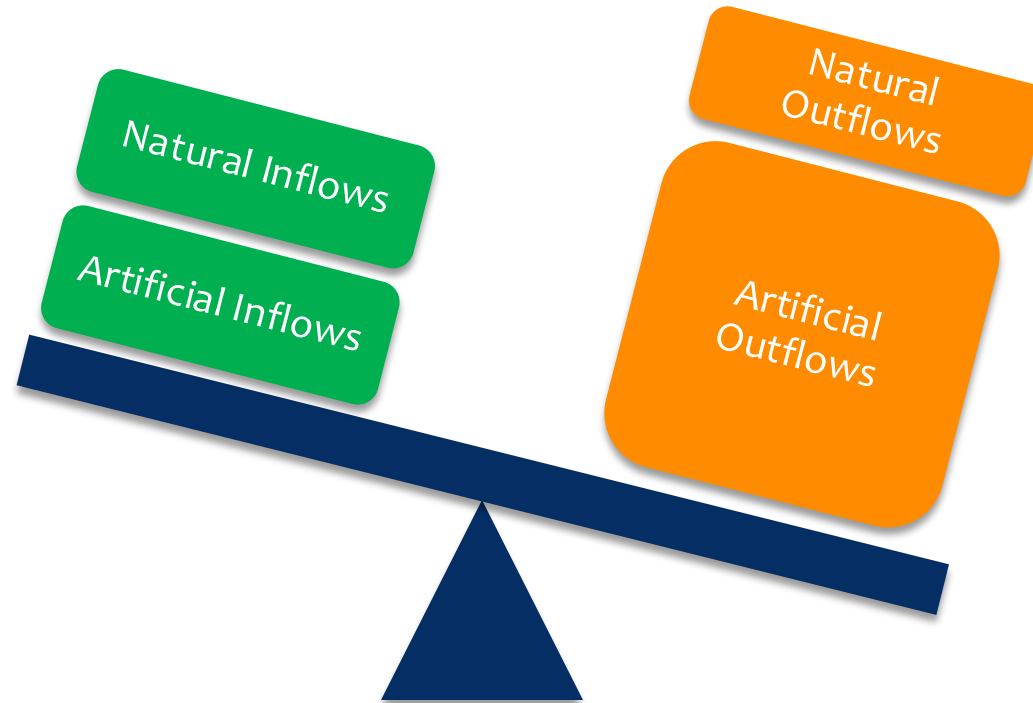
For the purposes of the First Management Plan, “overdraft” will mean the volume of natural and artificial outflows of water from the aquifer that exceeds the amount of natural and artificial inflows of water into the aquifer.

What is Overdraft?

Inflows

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

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

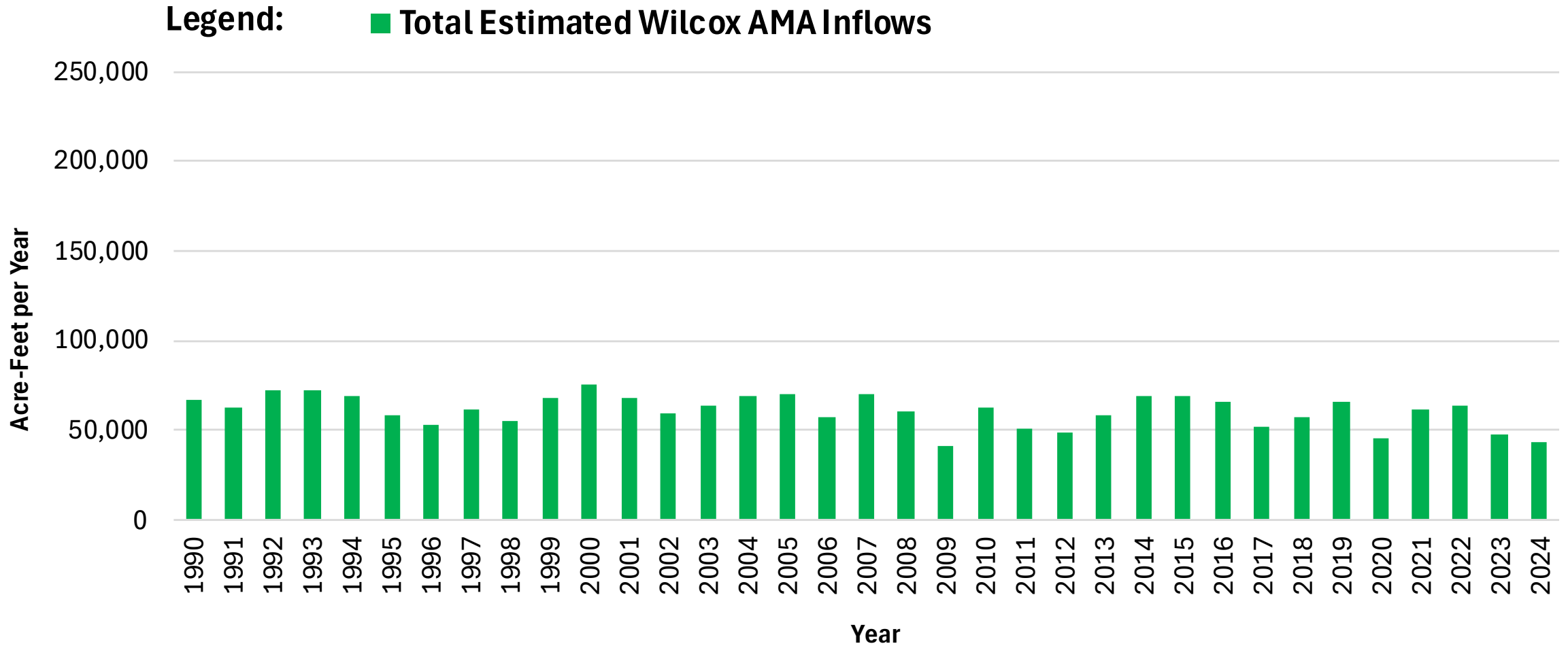


Outflows

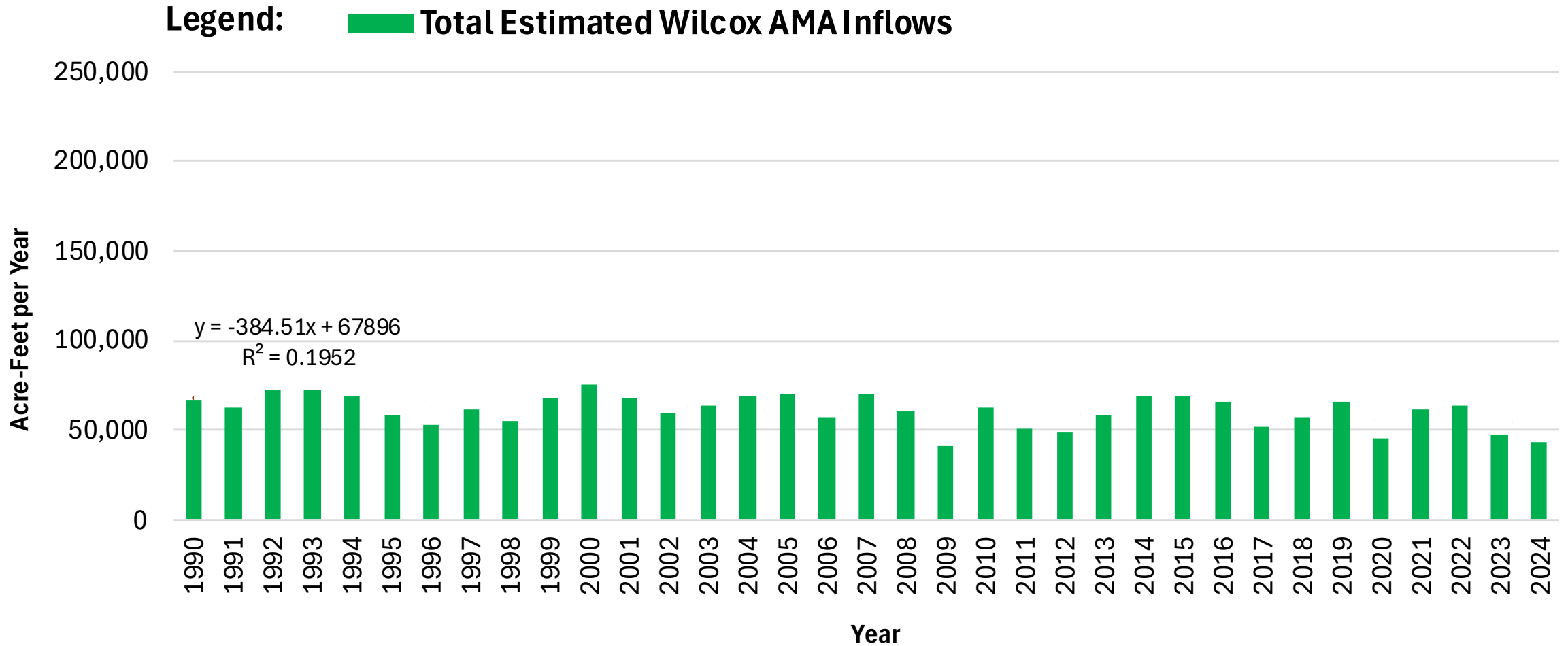
Natural: Groundwater outflows and riparian demands.

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

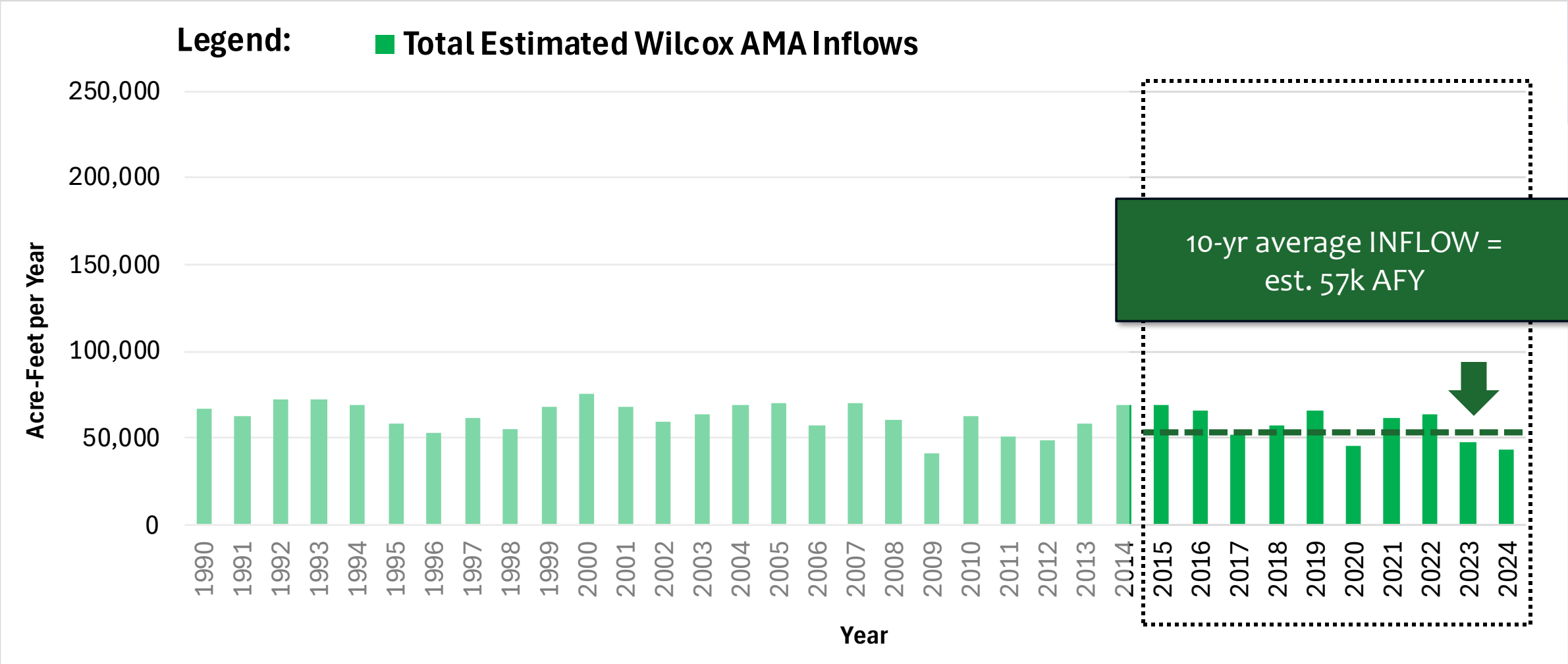
Estimated Willcox AMA Overdraft 1990-2024



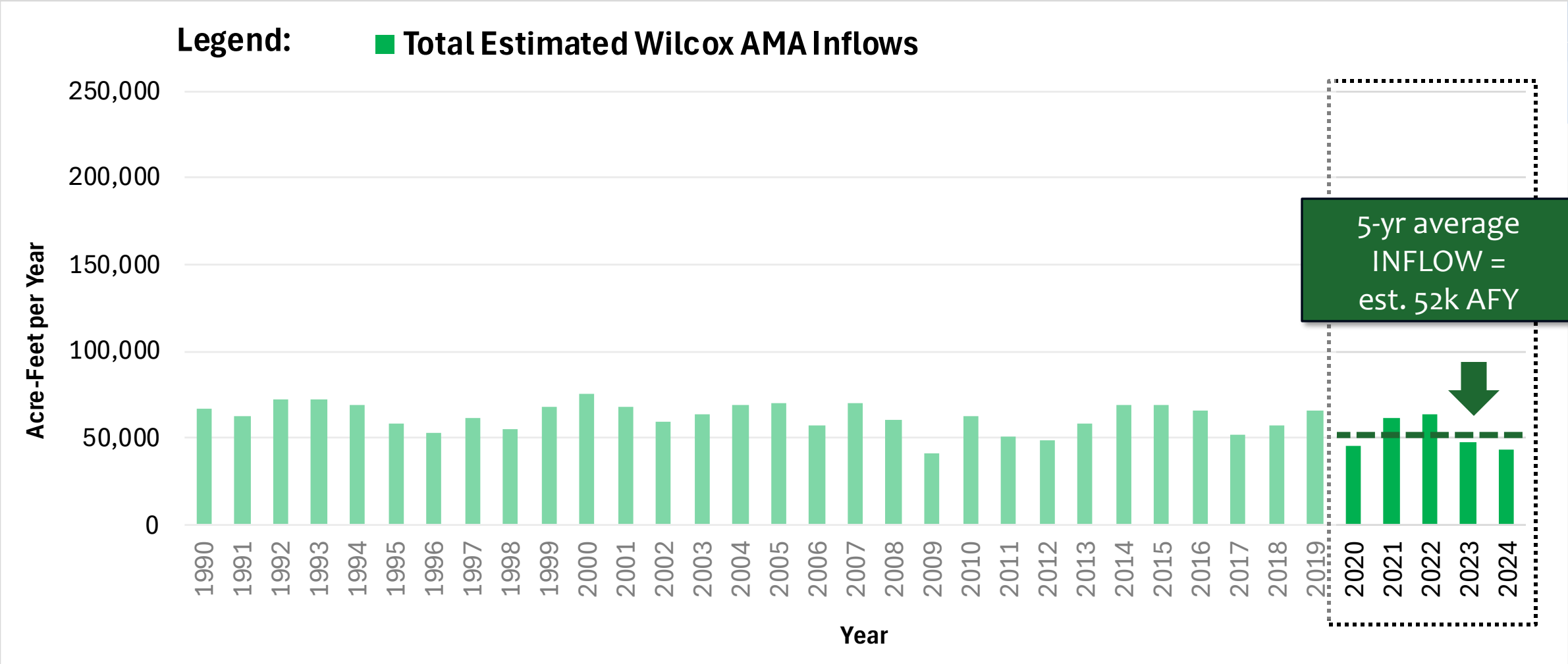
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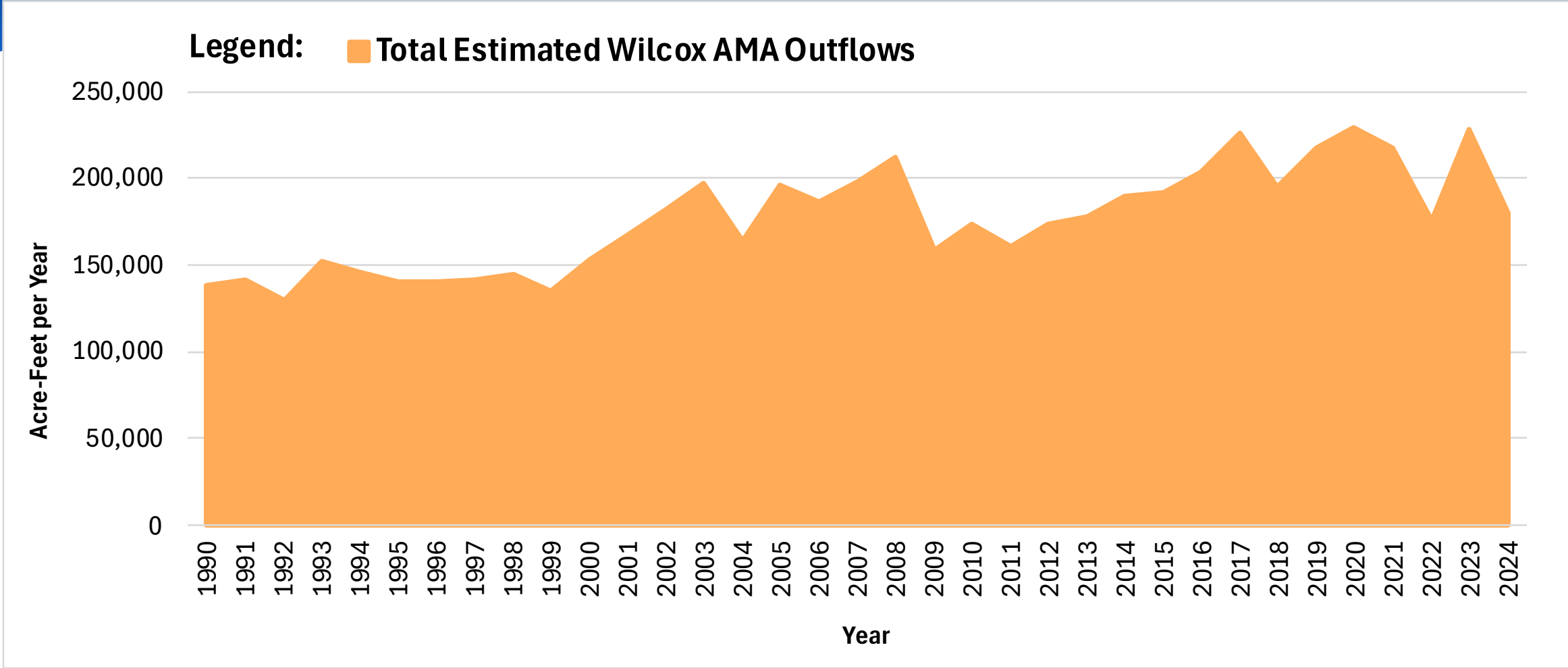
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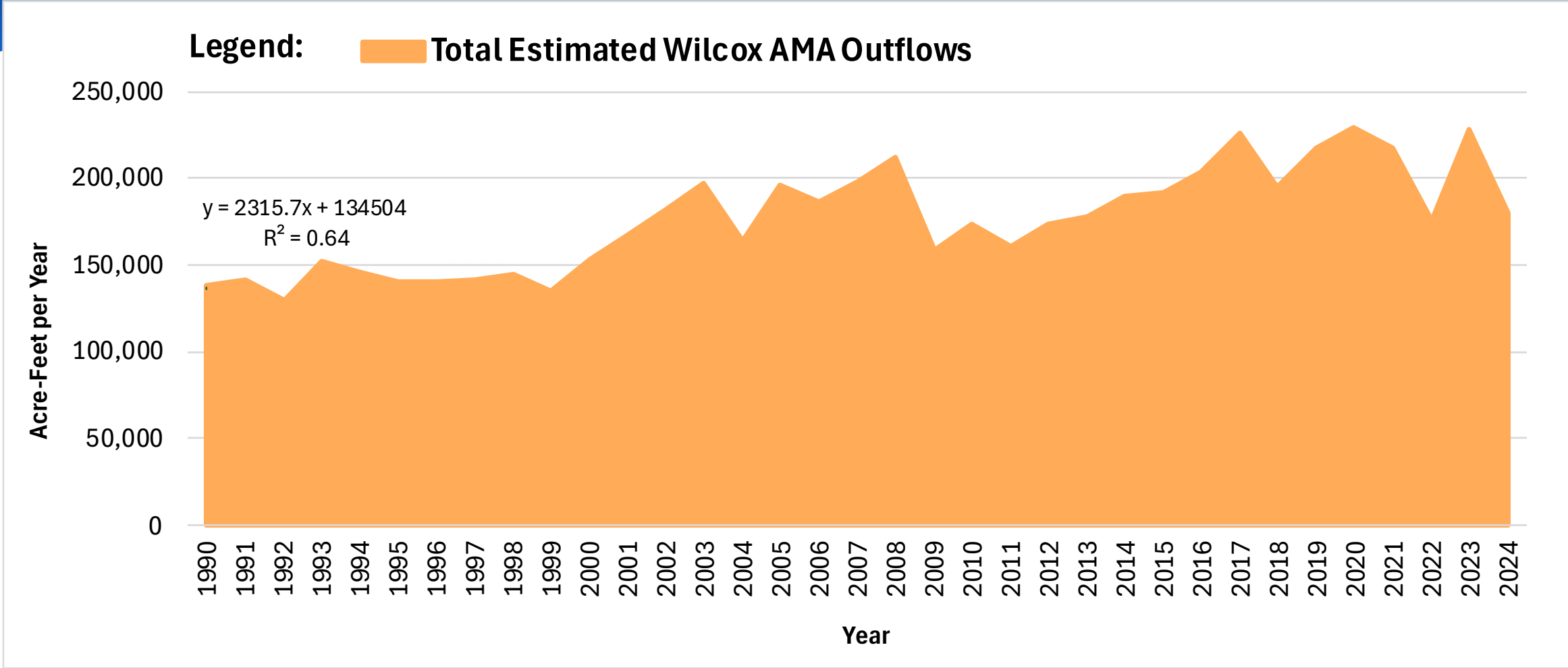
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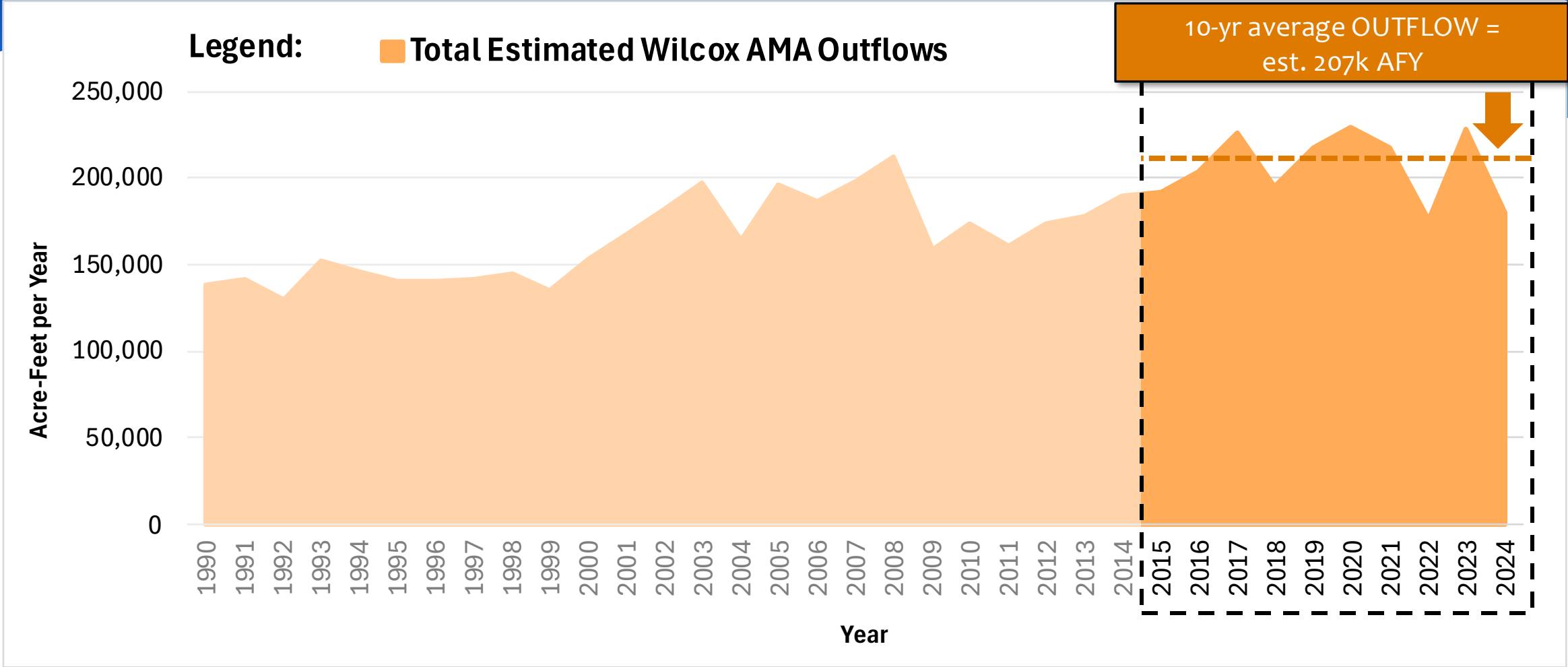
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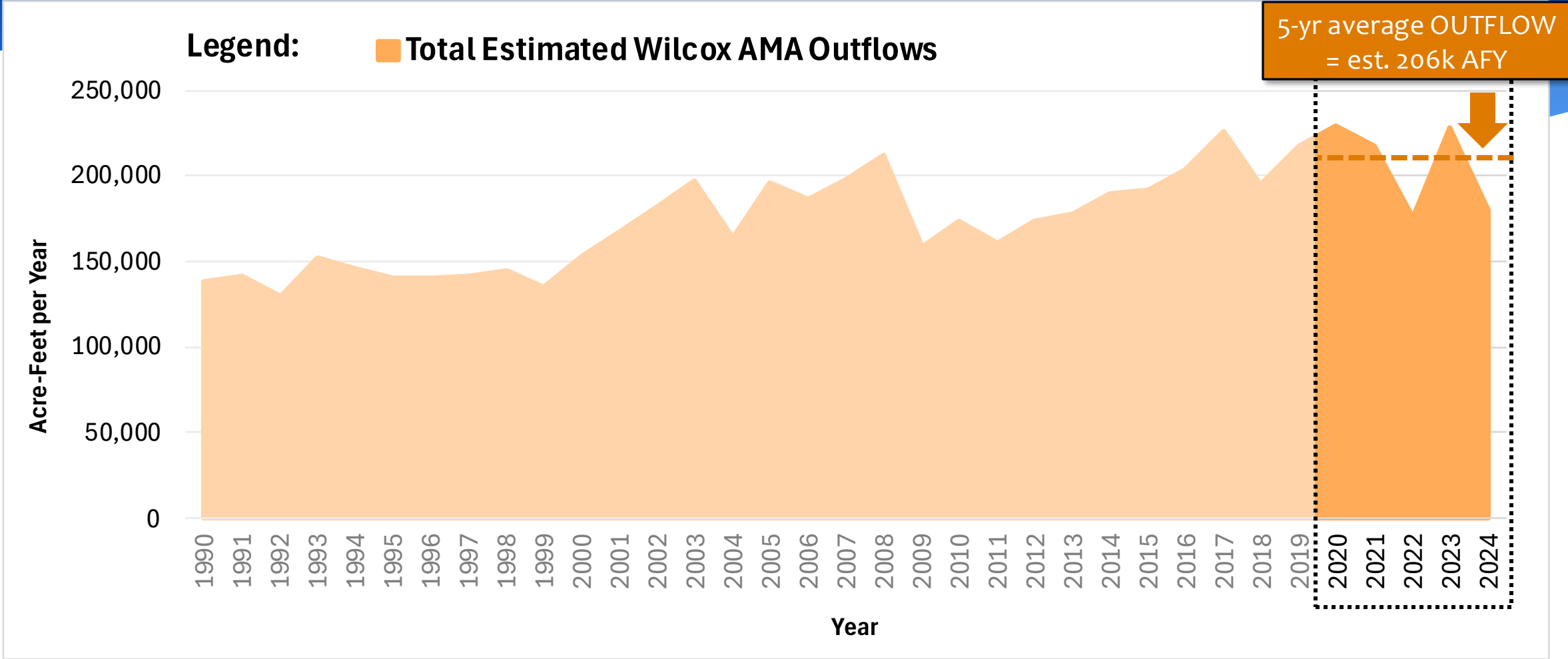
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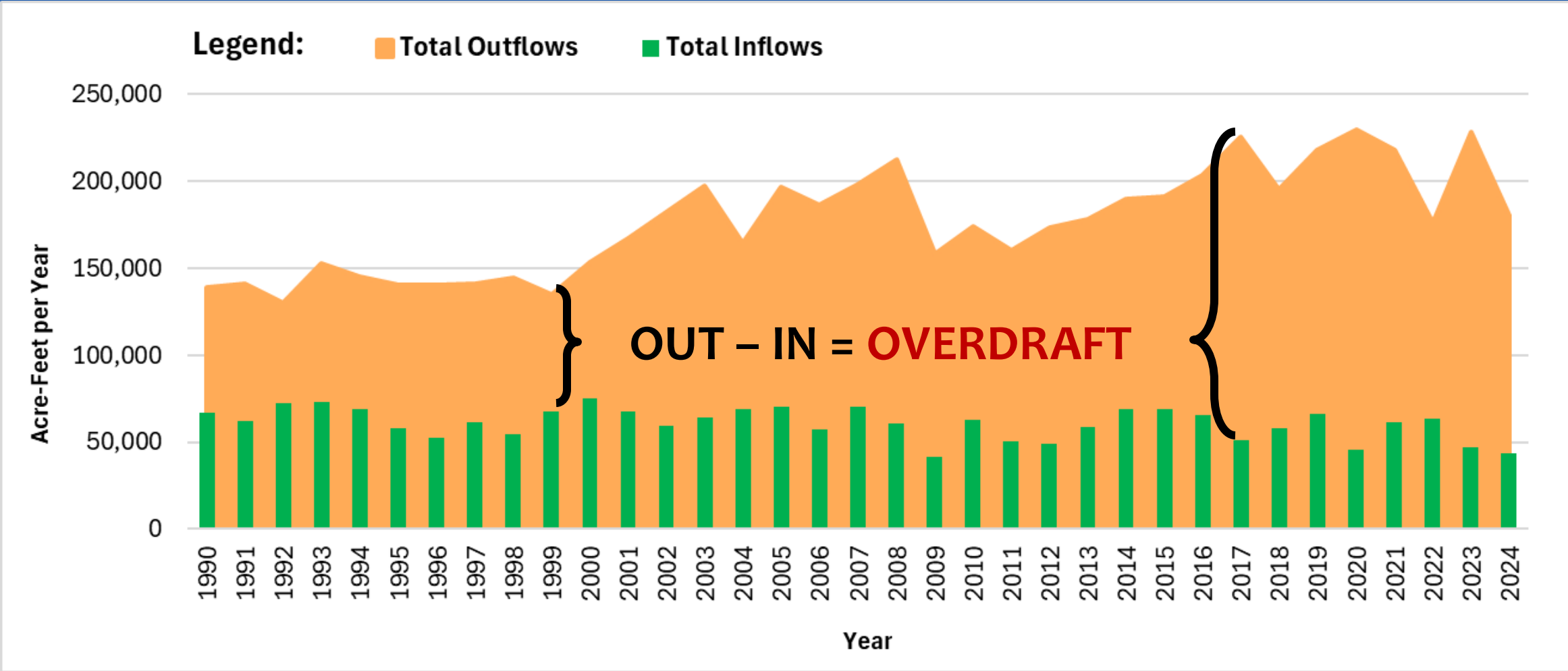
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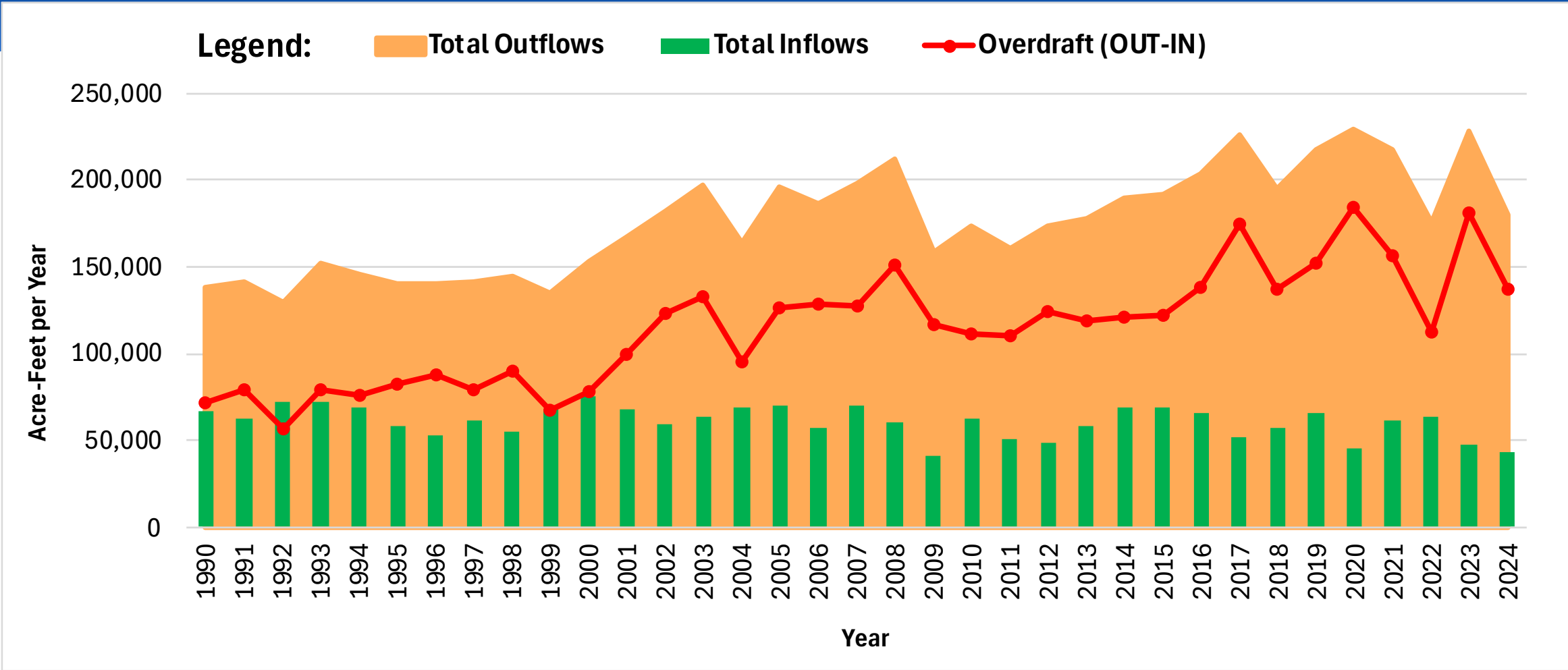
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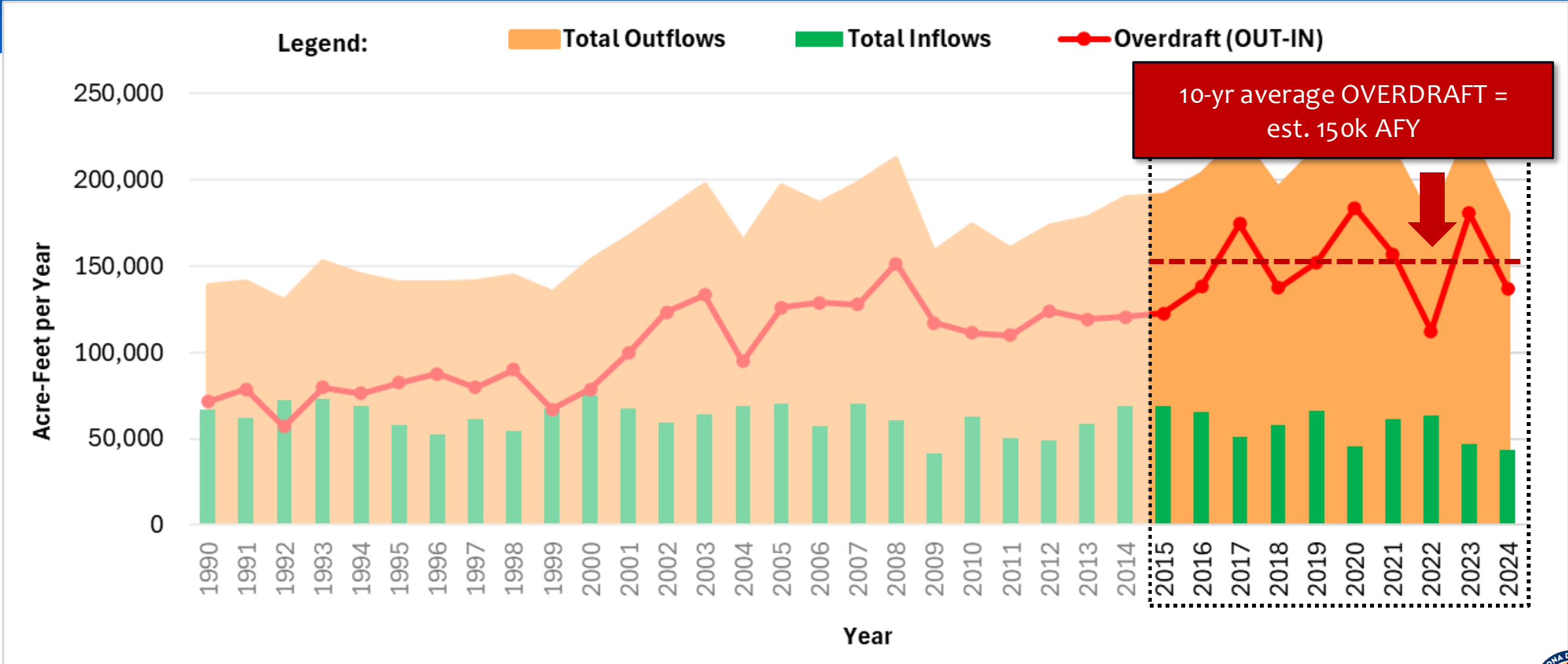
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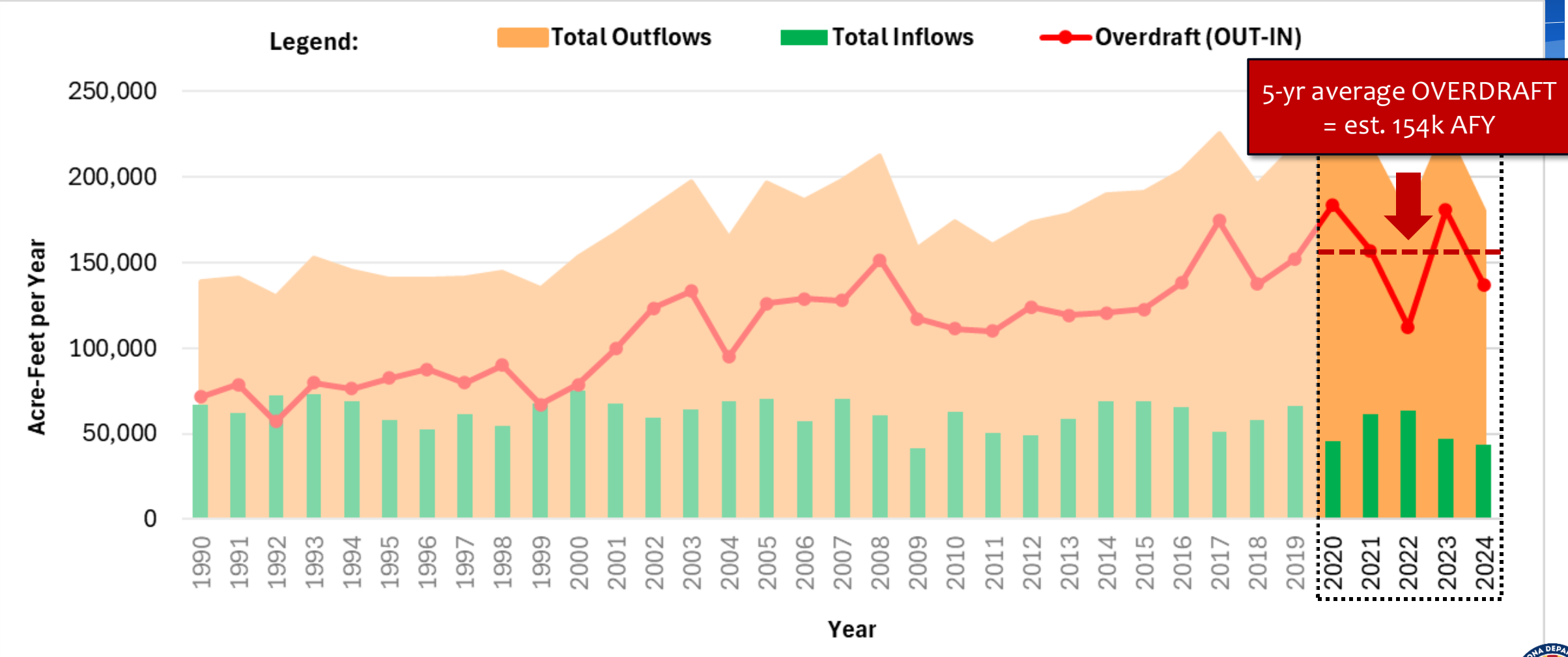
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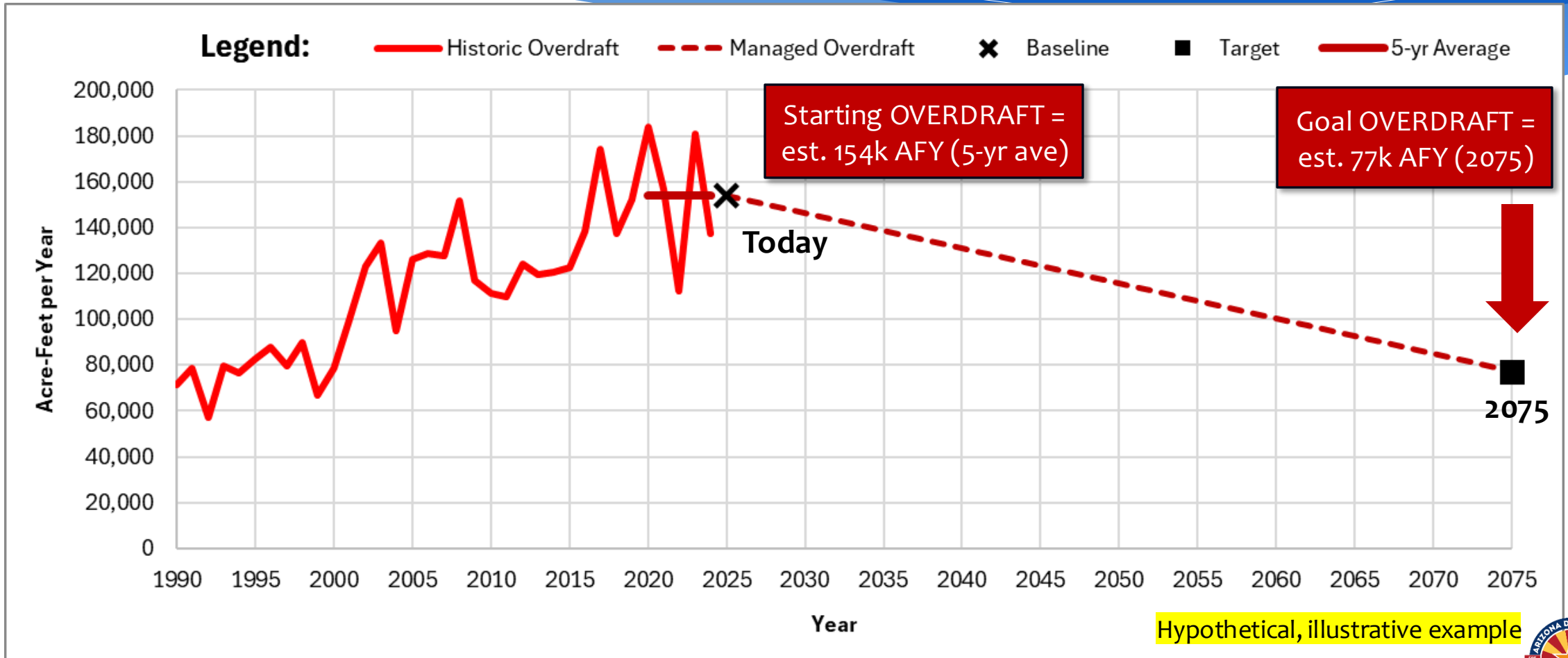
Estimated Willcox AMA Overdraft 1990-2024



Estimated Willcox AMA Overdraft 1990-2024



Overdraft Reduction Over Time



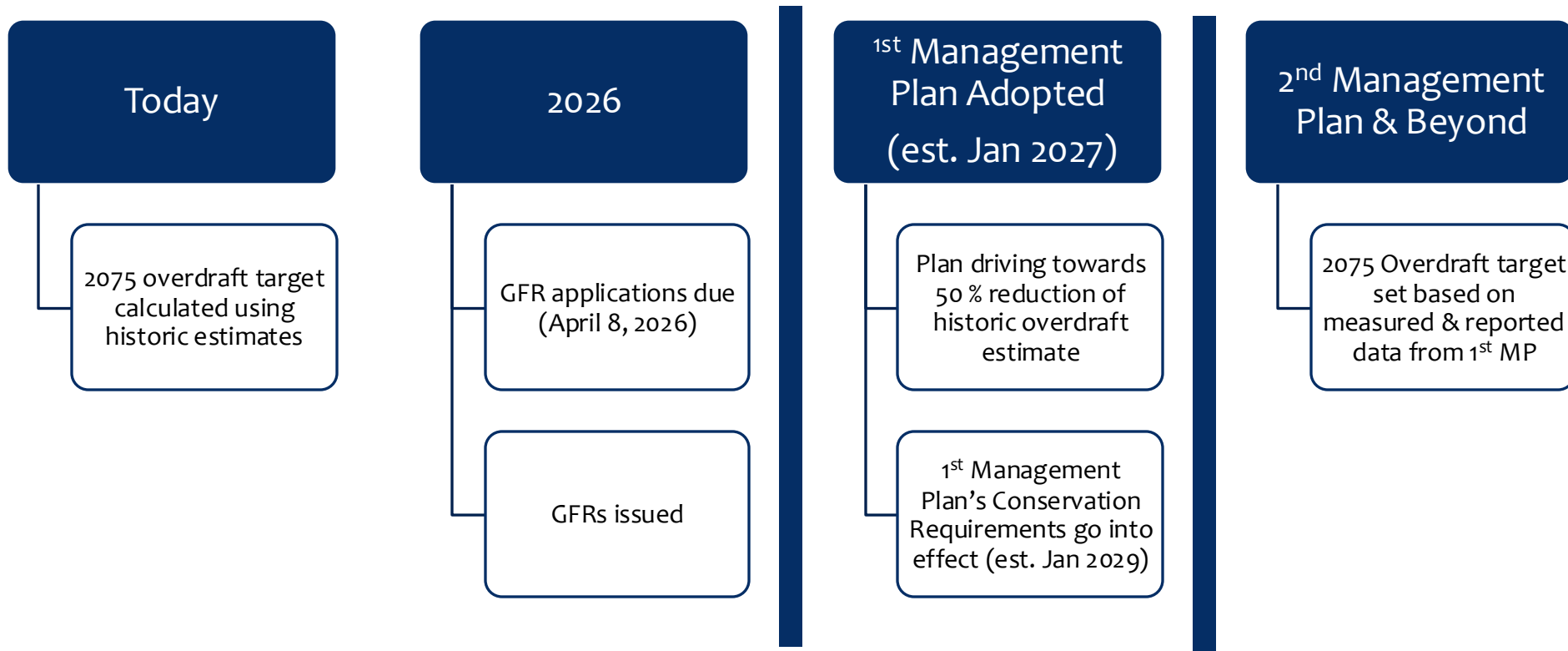
Reducing Overdraft

- * Willcox AMA's management goal calls for incremental progress towards a 50% reduction of annual overdraft by 2075.
- * There are two options to reduce overdraft:
 - * increase supply
 - * decrease demand
- * Willcox does not have access to reliable surface water supplies and has limited potential for effluent supplies. The realistic option is to decrease demand.

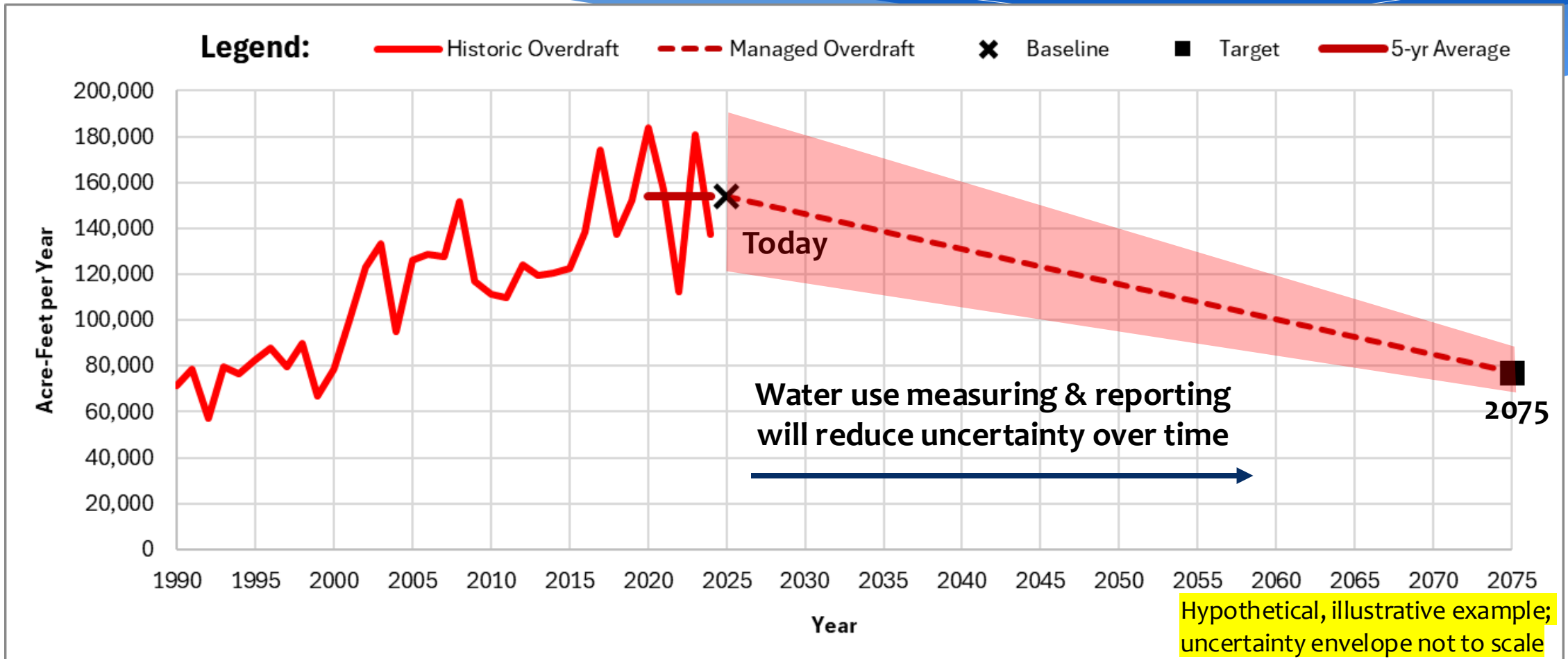
Transitional Plan - Overdraft and Management

- * The First Management Period for the Willcox AMA will be a “Transitional Period.” This is because we will transition from estimated groundwater use and overdraft to measured and reported data on all non-exempt water use in the AMA.
- * ADWR will begin with estimated overdraft baseline & target numbers (77k overdraft by 2075) during the First Management Plan.
- * IGFRs will be issued based on historic acreage and crops, as well as substantial capital investment, as applicable.
- * Conservation requirements during First Management Period will be based on initial estimates (reducing overdraft to 77k by 2075).
- * Conservation requirements in Second Management Plan will be re-calculated based on reported and measured data and will go into effect in the Second Management Period.

Transitional Plan - Overdraft and Management



Transitional Plan - overdraft and management



Questions?

Roundtable Discussion

Willcox AMA Management Plan



Mandatory Conservation Programs

According to state law, the Management Plan must include measures to reduce groundwater withdrawals. While these measures will follow the programs in other Active Management Areas where practicable, the Willcox AMA has flexibility to create a program that will allow it to reach its Management Goal while accounting for the AMA's unique situation and makeup.

There is flexibility in creating these programs, because -

- Statute allows for greater flexibility in subsequent AMAs
- The Willcox AMA is unique in its scope and limited alternate water resources

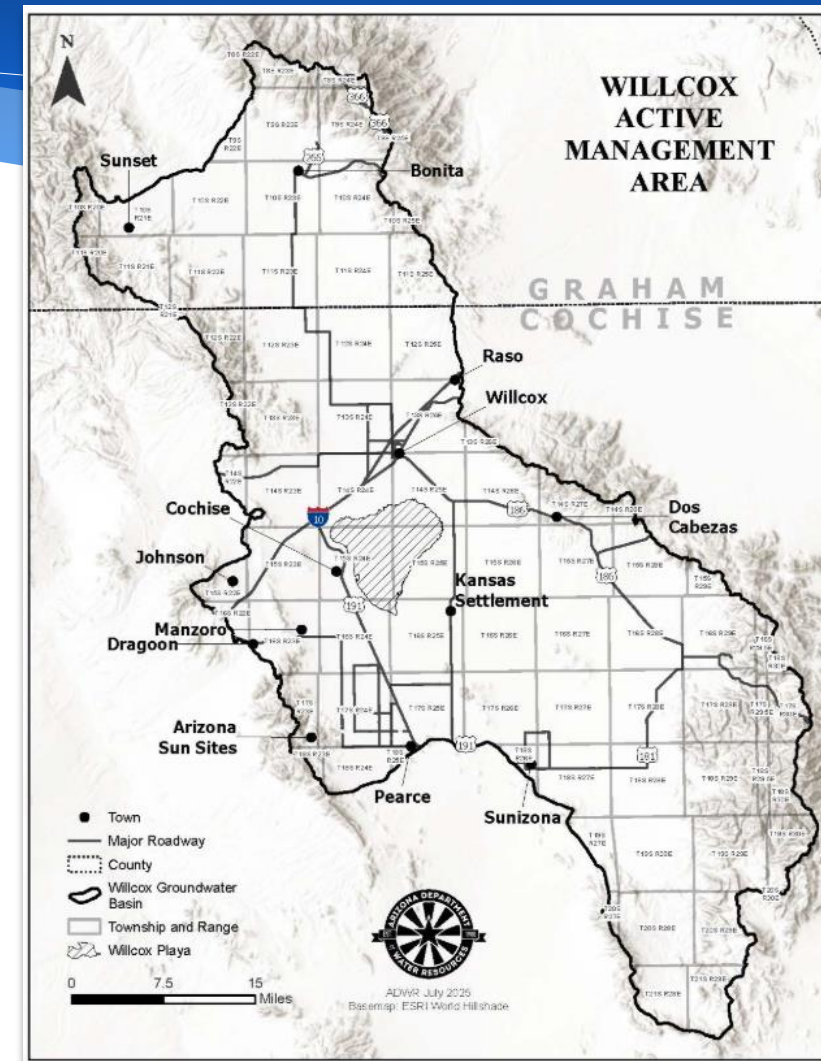
Public participation is essential

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.

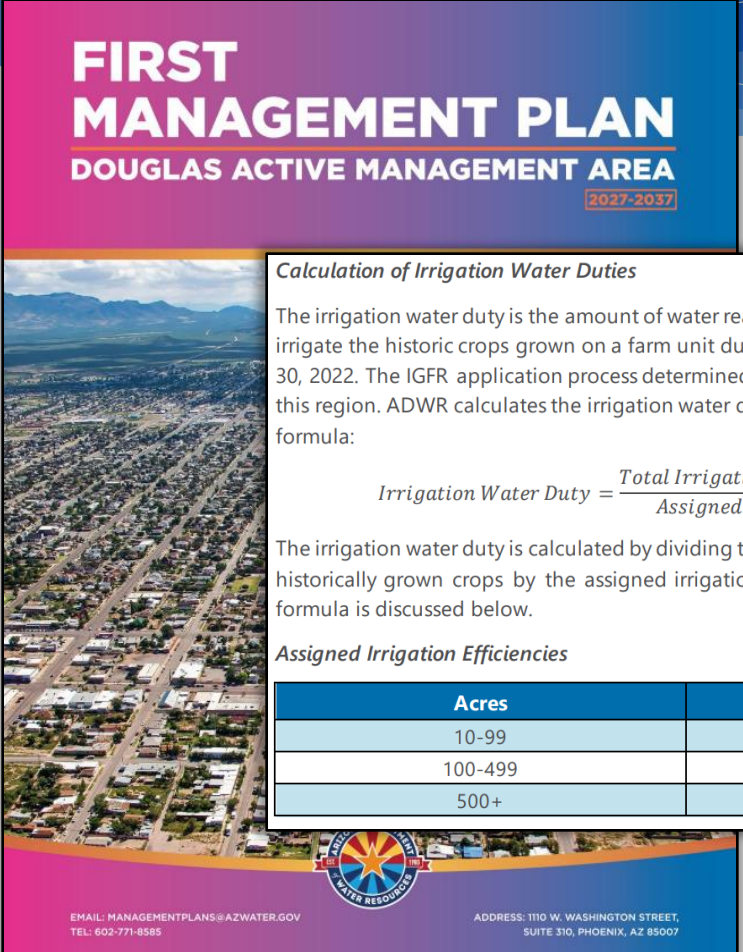
The Programs encompass three sectors:

1. **Agricultural**
2. **Municipal**
3. **Industrial**



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%

EMAIL: MANAGEMENTPLANS@AZWATER.GOV
TEL: 602-771-8585

ADDRESS: 1110 W. WASHINGTON STREET,
SUITE 310, PHOENIX, AZ 85007



Agricultural Conservation Programs

Irrigation Grandfathered Rights

- * Based on the highest number of acres which were legally irrigated during any one year in the five years preceding the date of notice of the initiation of designation of the AMA (October 23, 2019 – October 23, 2024).
- * Each Irrigation Grandfathered Right issued will have an Irrigation Water Duty that is determined through an equation determined in the Management Plan.

Setting the Water Duty

The Base Program is an allotment-based program where the irrigation water duty will be determined by the amount of water that is reasonably required per acre to annually irrigate the historic crops grown on a farm unit.

The irrigation water duty is calculated by dividing the total water required to produce the historically grown crops by the assigned irrigation efficiency.

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



Setting the Water Duty: Calculations and Formula Components

- * Total Irrigation Requirements mean the amount of water that is needed to grow the kinds of crops historically grown.
- * Assigned Irrigation Efficiency is a way for the Department to account for water that is needed to grow that historic crop but is not consumptively used by the crop (e.g., evaporative loss, soil intake rates, and other factors requiring water not consumptively used by the crop).

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



Flexibility Accounts

- * An IGFR has the ability to save flex credits in a “rainy day” account and to borrow water from the account. The ability to store credits and/or be in a deficit without being out of compliance allows for fluctuation in pumpage due to weather patterns and market conditions.
- * Example:
 - * A farm has an annual groundwater allotment of 1,000 acre-feet.
 - * In a wetter year, the farm only uses 900 acre-feet — saving 100 acre-feet.
 - * That 100 acre-feet is credited to the farm’s *flexibility account*.
 - * In a later dry year, the farm may withdraw some or all of that 100 acre-feet to meet crop needs.
 - * The account ensures the farm’s long-term average use stays within conservation limits - even if annual use fluctuates.



History of Water Duty within AMAs

The initial AMAs structure of calculating water duties is outlined in statute, where there is no flexibility to adapt to the challenges of the basin.

Within the Douglas AMA, the first subsequent AMA, the water duty calculation was created through stakeholder collaboration and applies different efficiency requirements to agricultural water users based on the number of acres.

Within the Willcox AMA, we have the opportunity to develop a calculation that is unique to the basin's challenges.



Equitable Management- Treating Different Size Operators Differently

- * **In the Douglas AMA**

- * Developed **tiered irrigation efficiency standards** based on farm size (acres irrigated)
- * Recognized differences in capital capacity and operational complexity between small and large farms
- * Allowed **smaller operations** more flexibility

- * **We Need Your Input**

- * What is the baseline for water duties?
 - * Consumptive use & irrigation efficiencies?
- * how do we treat different users?
 - * Tiered by acreage, crop type, or water-use intensity

Your feedback will shape how the baseline is designed for Willcox

Closing

- 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.

Questions?

Roundtable Discussion

Willcox AMA Management Plan Development Next Steps

- * Additional comments should be submitted to managementplans@azwater.gov by **October 31th, 2025**.
- * ADWR will use input gathered through the workshop and comments to begin to develop initial conservation program concepts to be discussed at future meetings.
- * All documents and information will be posted at <https://www.azwater.gov/ama/willcox-ama>.



Homework for next time

If you'd like to read ahead and gather ideas for conservation programs, please feel free to do so!

Chapter 4 of the Management Plans contain the Agricultural conservation programs that are within each initial AMA and the Douglas AMA (available at <https://www.azwater.gov/ama/ama-management-plans>).

Providing Comments and Input to ADWR

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