Managing Groundwater in Arizona

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Arizona Department of Water Resources

WRRC Conference
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Groundwater Management: Past
Regulatory Structure

- Registration of all wells
- Adequate Water Supply
- Community Water Systems Documentation
  + Expansion of irrigated acres is prohibited
  + Measuring and Reporting
  + Assured Water Supply
- Management Goals, Plans, & Conservation Programs
- Grandfathered Rights and Withdrawal Permits
- Lakes Bills, Transportation, Well Spacing, and Other

Statewide

INA

AMA
Initial Active Management Areas (AMAs) & Irrigation Non-Expansion Areas (INAs)

Four AMAs
- Prescott AMA
- Phoenix AMA
- Pinal AMA
- Tucson AMA

Two INAs
- Joseph City INA
- Douglas INA (now superseded by Douglas AMA)

Also on this map: Harquahala INA (est. 1981)

Map from Phoenix AMA First Management Plan (1984)
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.”
Management Goals
A.R.S. § 45-562 for Initial AMAs
A.R.S. § 45-569 for Subsequent AMAs

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goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area.”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

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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.
A.R.S. § 45-563 (A)

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Assured & Adequate Water Supply

Requirements

- Physical, Legal, & Continuous Availability
- Financial Capability
- Quality
- Assured: Consistency with Management Plan & Goal

Adequate Water Supply

Outside AMAs

Notification Step
- Water Report provided to first buyer – can indicate inadequate water supply

Mandatory Adequacy

Outside AMAs, Local governments may opt-in

Permitting Step
- Required to obtain water adequacy report

Assured Water Supply

Inside AMAs

Permitting Step
- Required to obtain determination of Assured Water Supply

Assured & Adequate Water Supply Requirements
- Physical, Legal, & Continuous Availability
- Financial Capability
- Quality
- Assured: Consistency with Management Plan & Goal
Groundwater Management: Present
Existing Active Management Areas (AMAs) & Irrigation Non-Expansion Areas (INAs)

Six AMAs

- Prescott AMA
- Phoenix AMA
- Pinal AMA
- Tucson AMA
- Santa Cruz AMA (est. 1994, considered “initial”)
- Douglas AMA (est. December 1, 2022)

Three INAs

- Joseph City INA
- Harquahala INA (est. 1981)
- Hualapai Valley INA (est. December 19, 2022)
Methods to Establish a New...

Irrigation Non-Expansion Area

- Local Initiation (A.R.S. § 45-433)
  - Petition
  - Hearing
- Director Designation (A.R.S. § 45-432)
  - Hearing
    - Harquahala INA
    - Hualapai Valley INA

Active Management Area

- Local Initiation (A.R.S. § 45-415)
  - Petition
  - Election
    - Douglas AMA
    - Willcox – did not pass
- Director Designation (A.R.S. § 45-412 et seq)
  - Hearing
Subsequent INAs - Establishment

- Prohibition on the irrigation of acreage not historically irrigated
- Requirement for measurement of withdrawals from non-exempt wells
- Application for irrigation authorities
  - No deadline
- Annual reports
Subsequent AMAs - Establishment

- Prohibition on expansion of irrigated acres
- Measuring and reporting requirements
- Withdrawal fees (not authorized)
- Creation of GUAC
- Management Goal
  - A.R.S. § 45-569(A)
- Management Plan
  - A.R.S. § 45-569(B)
- Wells Requirements
  - Impact Analysis for new Non-Exempt Wells
- Grandfathered Rights and Withdrawal Authorities
  - Applications available: https://new.azwater.gov/ama/douglas-ama
- Assured Water Supply
Management Goals

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A.R.S. § 45-569 for Subsequent AMAs

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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.

**Douglas AMA (PROPOSED):**
To support the general economy and welfare of water users in the basin by attempting to reduce the rate of aquifer depletion by 2035 and every 10 years thereafter.
# Management Goal Process & Timeline

<table>
<thead>
<tr>
<th>December 1, 2022</th>
<th>January 5, 2023</th>
<th>April 11, 2023</th>
<th>May 24, 2023</th>
<th>June 28, 2023</th>
<th>July 2023 (estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• AMA Established</td>
<td>• Information Session • Goal Framework • Informal Public Comment</td>
<td>• Draft Goal • Informal Public Comment</td>
<td>• Hearing Notice • Formal Public Comment Period Begins</td>
<td>• Public Hearing • Formal Public Comment Period Ends</td>
<td>• ADWR Decision on Adoption of the Goal</td>
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Management Plan

- ADWR begins Management Plan Development Process (August 2023, estimated)
- ADWR begins Management Plan Adoption Process (October 2024, earliest estimated)
- ADWR Adopts Management Plan (December 2024, earliest estimated)
- Conservation Requirements become Effective (January 1, 2027, earliest estimated)
Types of Grandfathered Rights (GFRs)

- **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

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**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](https://new.azwater.gov/ama/douglas-ama)
Groundwater Management: Future
1) The Governor’s Water Policy Council (the “Council”) is created to analyze and recommend updates, revisions and additions to the GMA and related water legislation, which shall include, without limitation, analysis and recommendations for groundwater management outside current Active Management Areas.

• Created by Executive Order on January 9, 2023
• Tasked with providing recommendations to update, revise, and improve Arizona’s water management framework
Objective:

Review and make recommendations for changes to Assured Water Supply policies—legislatively, administratively, or by executive action—to address the challenges revealed by Assured Water Supply modeling projections, while continuing to:

- strengthen the integrity of the Assured Water Supply program,
- protect consumers and aquifers, and
- ensure future growth is not reliant on mined groundwater.
AWS Principles

- Proposals must protect the strength and integrity of the Assured Water Supply program.
- Proposals should enable future growth without reliance on mined groundwater.
- Proposals may not reduce the 100-year requirement or increase the depth to which groundwater may be pumped.
- Proposals must ensure there is water before growth.
- Proposals must protect consumers.
Objective: Recommendations for a Water Management Framework

Develop recommendations for a water management framework to assist rural Arizona communities to manage their groundwater resources.

"The Governor’s Water Policy Council is created to analyze and recommend updates, revisions and additions to the GMA and related water legislation, which shall include, without limitation, analysis and recommendations for groundwater management outside current Active Management Areas."
Data & Analysis
A.R.S. § 45-105(B)(14)

“Not later than December 1, 2023 and on or before December 1 of each year thereafter, prepare and issue a water supply and demand assessment for at least six of the [fifty-one] groundwater basins established pursuant to section 45-403. The director shall ensure that a water supply and demand assessment is completed for all groundwater basins at least once every five years...”
“In Arizona, we’re going to have to make tough policy choices about water management. We’ll have to make choices about which aspects of our lifestyle we can give up and which we will maintain.”

ADWR Director Tom Buschatzke
Questions?

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PROTECTING ARIZONA’S WATER SUPPLIES FOR CURRENT & FUTURE GENERATIONS