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## Plan Requirements

The Plan must include an estimate of CAGRD's projected groundwater replenishment obligation for current members and potential members for the 100 calendar years following the submission of the Plan, based on reasonable projections of real property and service areas that could qualify for membership in the ten years following the submission of the Plan.



August 18, 2022 CAGRD & US Committee presentation

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## August 2023 Obligation Projection

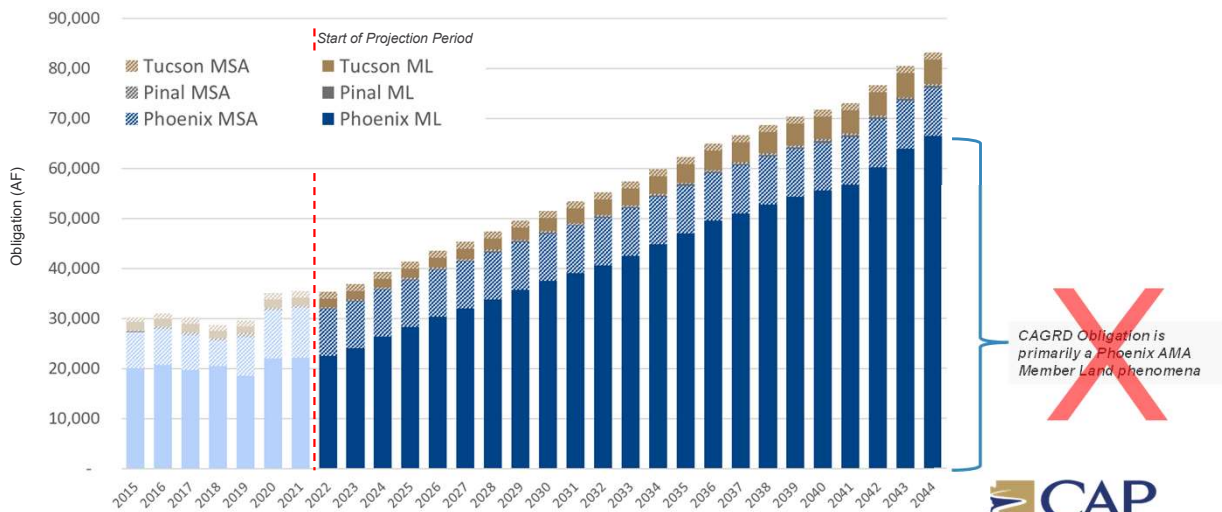
		Current (2021)	20-Year Forecast (AF/year)	100-Year Forecast (AF/year)
Member Lands	Previously Enrolled	24 KAF	56 KAF	63 KAF
	Newly Enrolled Lots	-	15 KAF	13 KAF
Member Service Areas		12 KAF	12 KAF	15 KAF
TOTAL		35 KAF	83 KAF	91 KAF

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## Obligation by AMA and Member Type



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## MLs vs MSAs

- **Member Lands** – individually enrolled subdivisions with Certificates of AWS
- Each ML parcel assessed on excess groundwater use, collected through the County property tax process
- Provider manages each ML groundwater allowance
- **Member Service Areas** – enrolled city, town or private water company with a Designation of AWS
- MSAs are directly invoiced for excess groundwater, based on all groundwater pumped minus groundwater allowance and incidental recharge
- Provider manages an overall groundwater allowance

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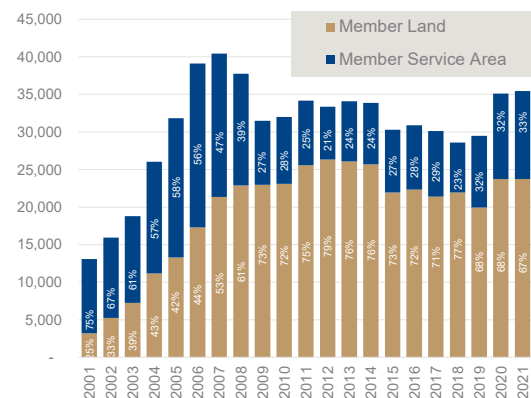


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## Current MSAs

- There are 22 current MSAs, with a wide range of characteristics
- The amount of MSA groundwater “on the CAGRD books” is large but very little of that is expected to require replenishment
  - Many MSAs have existing renewable supplies, including CAP M&I subcontracts, that can satisfy the AWS Rules on an annual basis, but weren’t included in their Designations
- In recent years, about 1/3<sup>rd</sup> of the CAGRD’s replenishment obligation has come from MSAs

CAGRD Obligation, by Membership Category



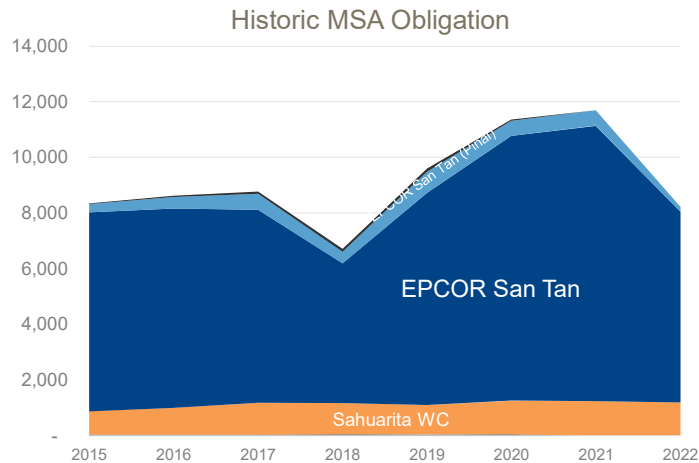
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## Current MSAs

- Current MSA Obligation is from 3-5 water providers
- Water provider feedback indicated most continue to view CAGR D as “supply of last resort”
- MSAs that currently rely on CAGR D expect to report similar amounts and to include CAGR D for future growth



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## ML to MSA Conversion

Under the proposed “Alternative Path to a Designation of Assured Water Supply (A-DAWS)” a water provider serving Member Lands would need to enroll as a CAGR D Member Service Area

In theory, this will increase CAGR D obligation because all current and future demands must satisfy the AWS Rules, not just subdivision demands

In practice, things are more complex, and depend on:

- The supplies available to the provider
- How the provider manages those supplies
- The reporting requirements in CAGR D's agreements

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## A-DAWS MSAs

- The calculations for an A-DAWS differ from a traditional DAWS in three respects:
  - Groundwater Physical Availability
    - A cap is set based on 2021 pumping and unbuilt CAWS lots
  - Groundwater Allowance
    - A one-time volume is granted to help encourage and manage the ML to MSA transition
  - New supplies added to the provider's DAWS
    - Physical Availability of groundwater is partially reduced, so the volume available to satisfy current, committed and projected demand would increase by less than 1:1

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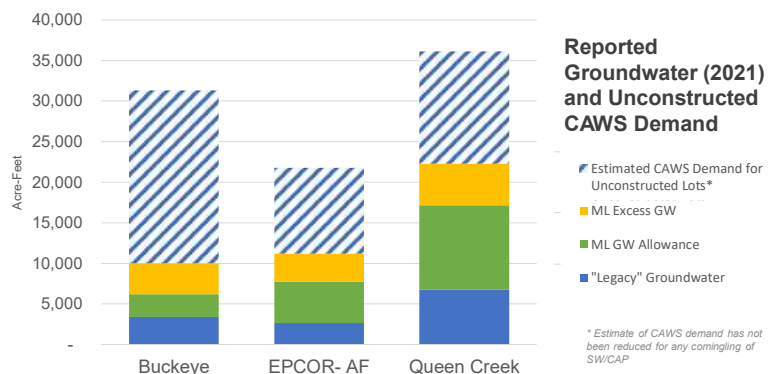
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## Potential A-DAWS Providers

- Three providers are commonly cited as likely candidates:
  - Buckeye, EPCOR Agua Fria, and Queen Creek
- The demands from issued CAWS (built and unbuilt) constitute a large part of the potential CAGRD obligation for those providers, and factor prominently in the A-DAWS calculations



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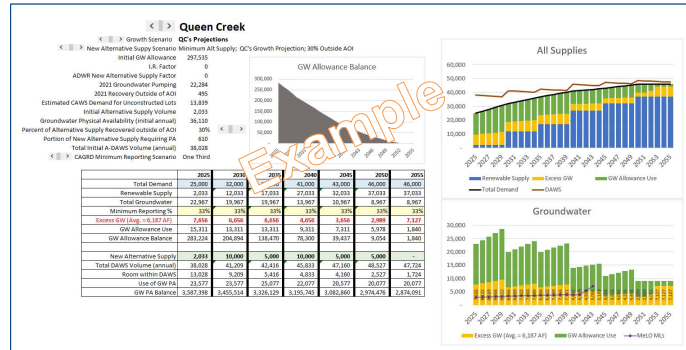


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## A-DAWS Modeling

- A scenario model was developed to simulate the key provisions of the A-DAWS proposal. Model parameters include:

- Total demand; Groundwater Physical Availability; Groundwater Allowance; Alternative Supply Acquisition Volume and Timing; percent of Alt Supplies recovered outside of Area of Impact; and CAGR Minimum Reporting Percentages



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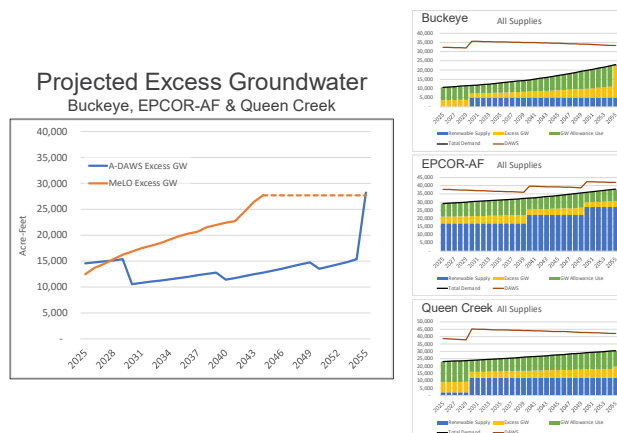
## A-DAWS Modeling: Scenario 1

### All Scenarios:

- CAGR minimum reporting percentages were set to minimize obligation jumps and to largely exhaust Groundwater Allowances by ~2050
- New Alternative Supplies are added only to ensure that DAWWS volume is greater than projected demand

### Scenario 1

- Moderate growth in demand
- 1/3<sup>rd</sup> Minimum CAGR Reporting



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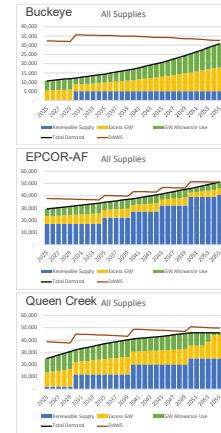
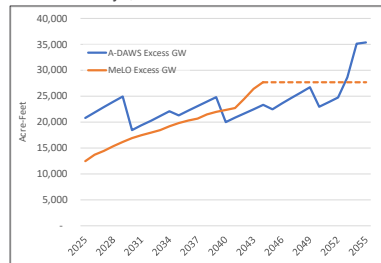


## A-DAWS Modeling: Scenario 2

### Scenario 2

- Faster growth in demand
- New Alternative Supplies acquired periodically to ensure DAWS volume satisfies Current, Committed & Projected demand
- 1/3<sup>rd</sup> Minimum CAGR reporting for EPCOR; 50% for Buckeye & Queen Creek

Projected Excess Groundwater  
Buckeye, EPCOR-AF & Queen Creek



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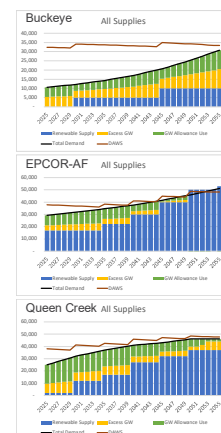
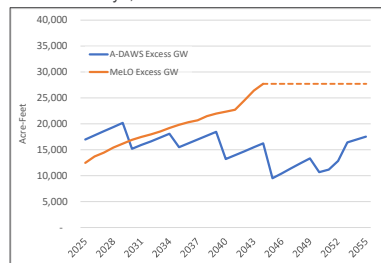
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## A-DAWS Modeling: Scenario 3

### Scenario 3

- Same faster growth as Scenario 2
- 30% of New Alternative Supplies stored & recovered outside of the Area of Impact
- 1/3<sup>rd</sup> Minimum CAGR reporting for EPCOR & Queen Creek; 50% for Buckeye

Projected Excess Groundwater  
Buckeye, EPCOR-AF & Queen Creek

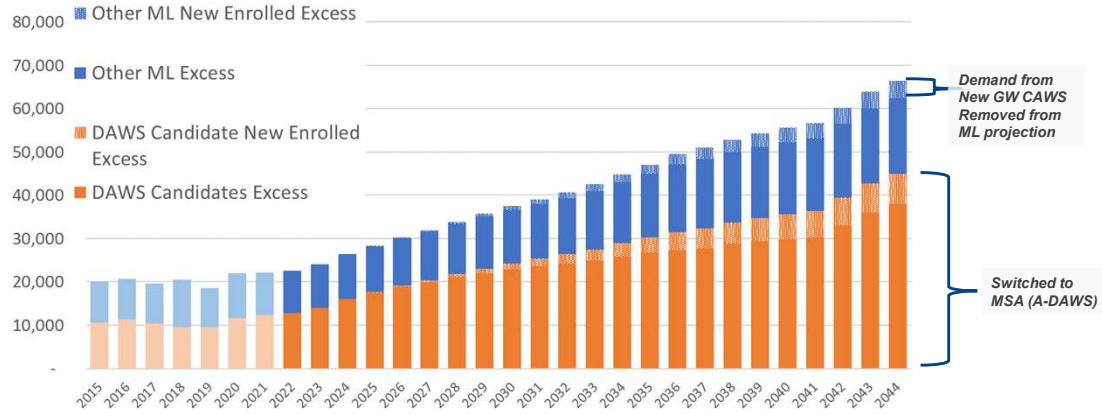


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## Remaining ML Obligation



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## ~~August 2023~~ Obligation Projection January 2024

Based on A-DAWS Scenario 2 Assumptions, and removal of any newly enrolled Member Land lots

		Current (2021)	20-Year Forecast (AF/year)	100-Year Forecast (AF/year)
Member Lands	Previously Enrolled	24 KAF	<del>16 KAF</del> 56 KAF	<del>15 KAF</del> 63 KAF
	Newly Enrolled Lots	-	<del>-</del> 15 KAF	<del>-</del> 13 KAF
Member Service Areas		12 KAF	<del>37 KAF</del> 12 KAF	<del>40 KAF</del> 15 KAF
TOTAL		35 KAF	<del>53 KAF</del> 83 KAF	<del>55 KAF</del> 91 KAF

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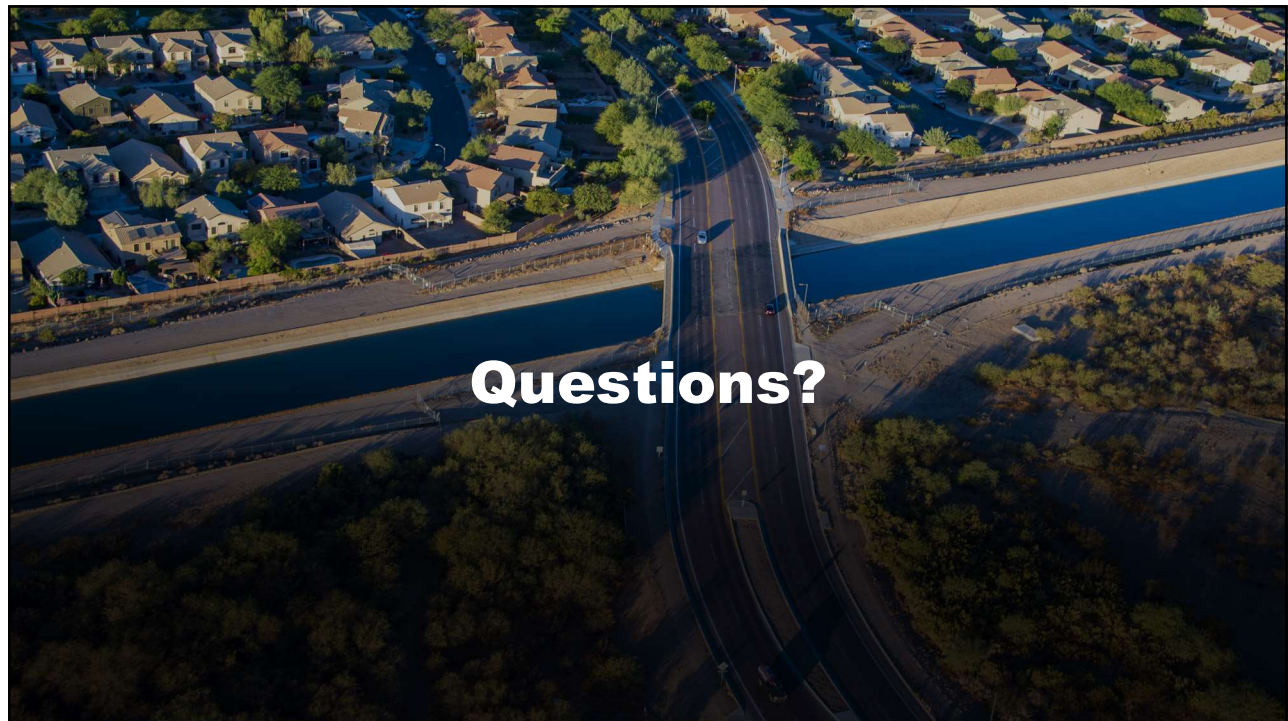
## Summary

- Projecting obligation for MSAs is inherently less certain than for ML providers
- The A-DAWS proposal would initially put more groundwater “on the CAGRDR books,” but the Groundwater Allowance and Alternative Supply calculation reduce that impact
- The pace of growth in A-DAWS MSAs will have a large impact on CAGRDR reliance
- The terms included in the MSA agreements for A-DAWS providers will strongly affect the timing of obligation from those providers

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