



CAP Water Users Shortage Briefing

Darrin Francom

Assistant General Manager

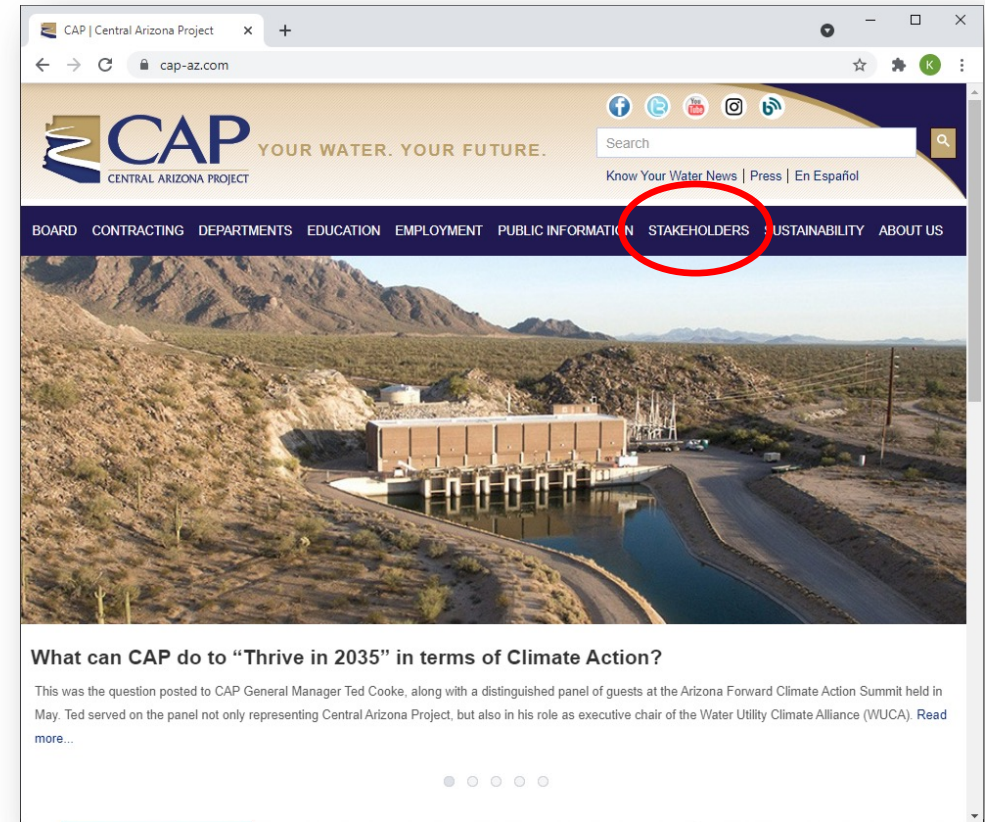
Operations, Maintenance and Engineering

June 24, 2021

YOUR WATER. YOUR FUTURE.

Meeting Logistics

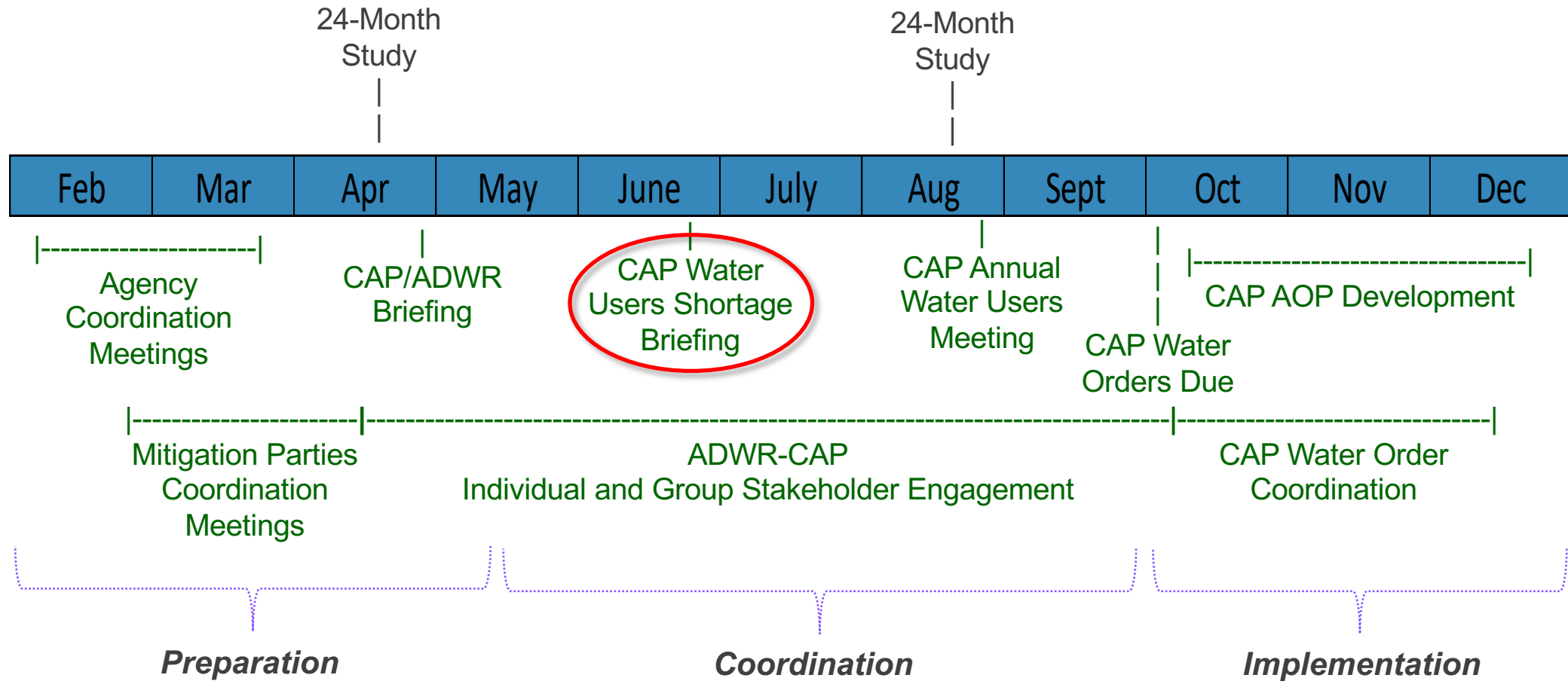
- Comments and questions may be sent by email to:
questions@cap-az.com
- Meeting material is posted on the CAP website under the “Stakeholders” link
 - **www.cap-az.com**



Meeting Agenda

1. Welcome & Meeting Purpose
2. Gila River Indian Community 2021 System Conservation Proposal
3. Colorado River Update and System Conservation Activities
4. CAP Shortage Impacts and Mitigation
5. Update from Mitigation Parties
6. Water Ordering Process
7. Next Steps and Closing Remarks

Preparation for Potential 2022 Shortage: Arizona's 2021 Activities



Gila River Indian Community 2021 System Conservation Proposal

Chuck Cullom

Colorado River Programs Manager

USBR - Gila River Indian Community (GRIC) 2021 System Conservation Project

- Reclamation proposing up to 40 KAF of System Conservation with GRIC in 2021
- Request to forgo collection of Fixed OM&R for System Conservation
- Out of cycle for CAWCD Supplemental Rate Policy for System Conservation Projects (March 2020)
- August CAWCD Board Meeting - will consider request to forgo collection of Fixed OM&R for the GRIC System Conservation Project
 - Staff have reviewed the project and determined it is based on water with an appropriate history of use
 - Board seeks stakeholder input on project
 - Could result in increase in Fixed O&M of approximately \$2.25/AF

Colorado River Update and System Conservation Activities

Chuck Cullom

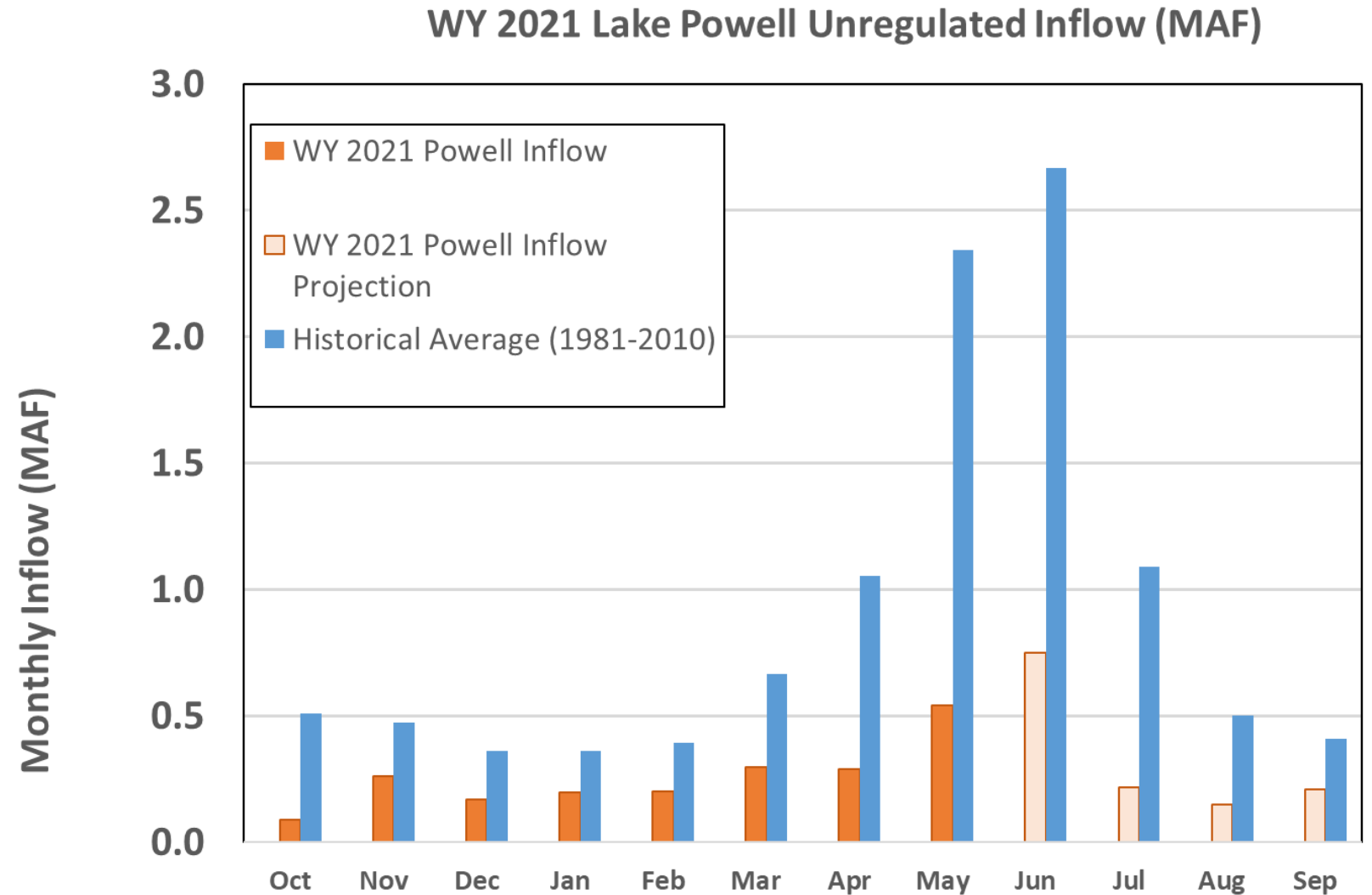
Colorado River Programs Manager

Deanna Ikeya

Senior Policy Analyst

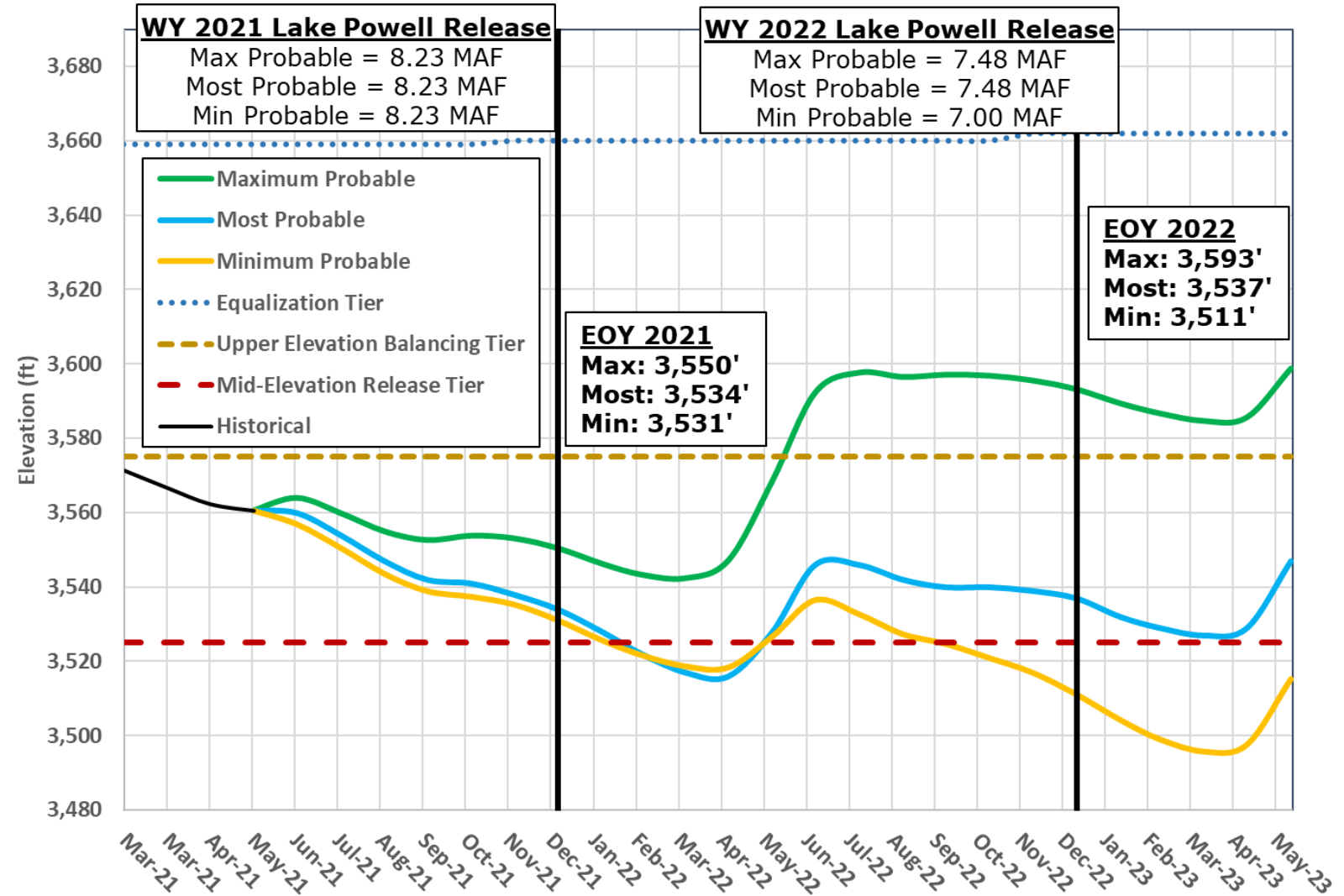
Powell Unregulated Inflow 2021

- WY 2021 projected to be 2nd lowest inflow
 - 3.38 MAF – WY 2021
- April – July inflow forecast projected to be 28% of 30-year average
- WY 2021 projected to be 31% of 30-year average



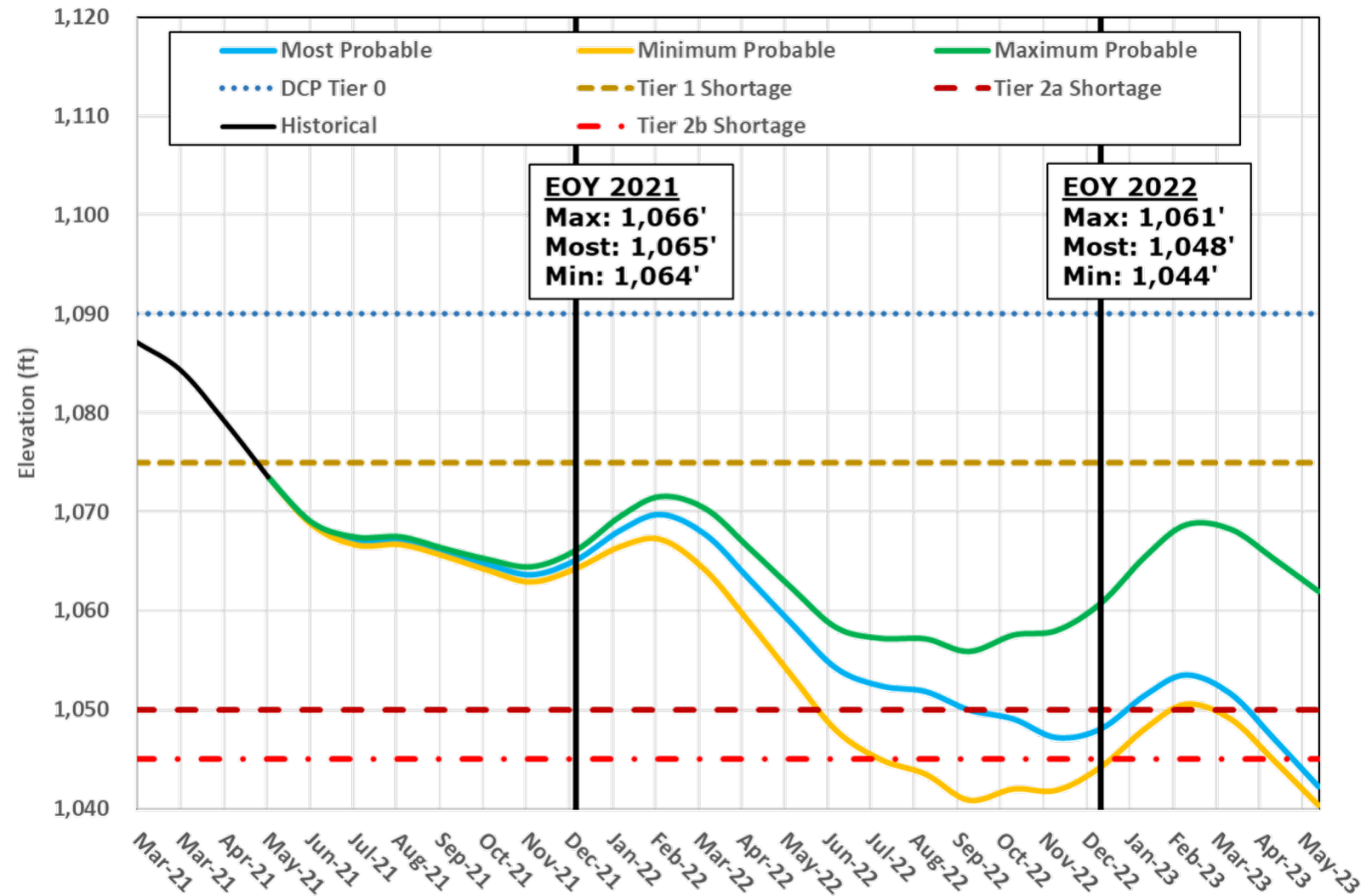
Powell End of Month Elevations

- June 2021 24-month study



Mead End of Month Elevations

- June 2021 24-month study

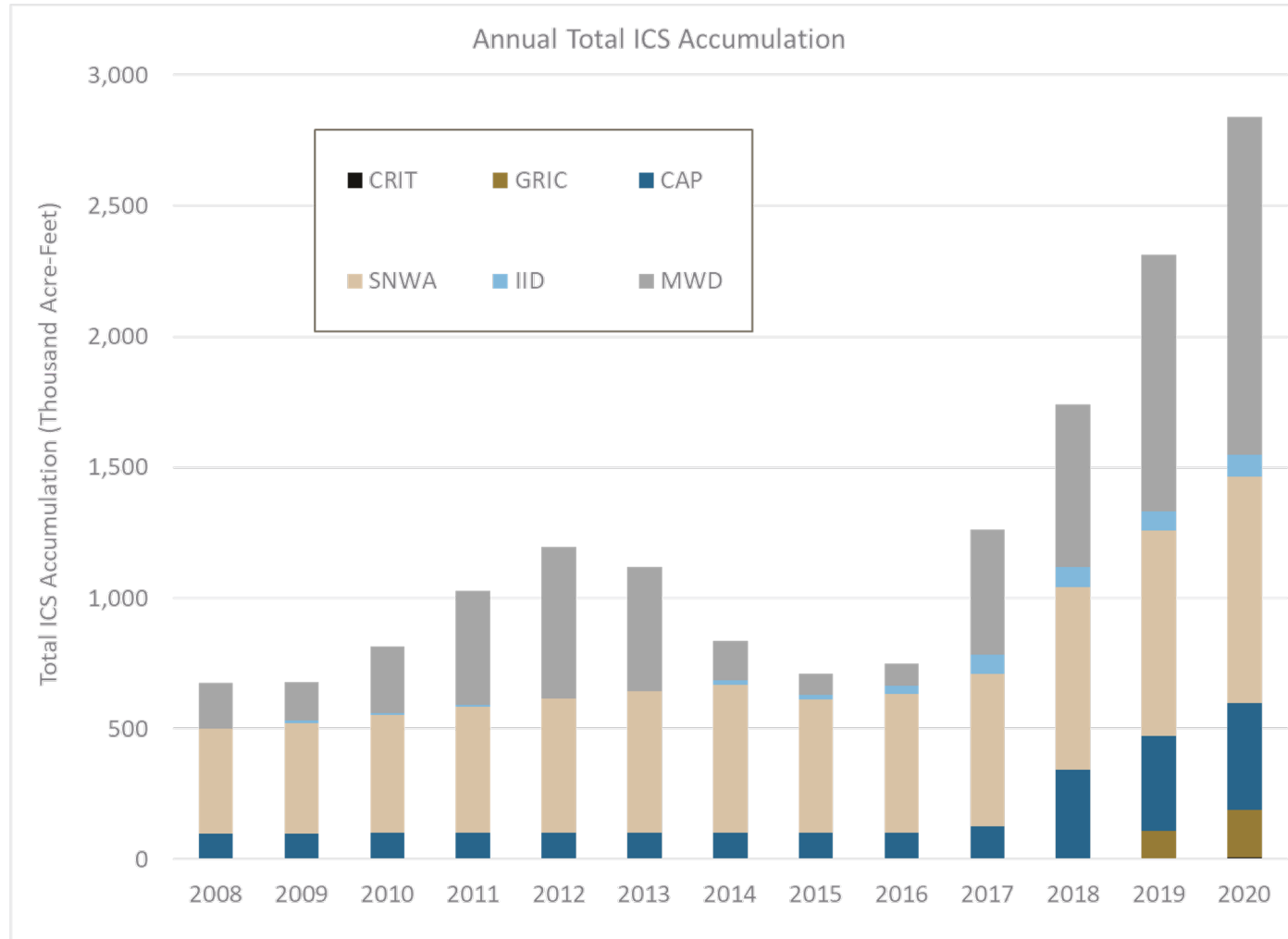


Arizona Contributions

- Arizona 2020 DCP Contribution was 11,392 AF short of the 192 KAF requirement
- Real-time operations taking into account higher priority water uses are involved and require reliable data
- Within the flexible constraints and expectations of operations under DCP
- This amount will be made up with additional DCP contributions in the same amount in 2021
- Arizona made over 140 KAF of additional contributions above the DCP requirements in 2020

| Arizona Lake Mead Contribution Volumes DCP Implementation & Related Actions | | ICS | 2019 (ac-ft) | 2020 Tier 0 (ac-ft) | 2021 Tier 0 (ac-ft) |
|--|--------------------------------|---------|-----------------|---------------------------|---------------------------|
| Arizona LBDCP (Tier 0: 192k ac-ft) | Ag Forbearance 3 Program | EC-ICS | 24,283 | 44,310 | |
| | Ag Forbearance 3 Program | DCP-ICS | | | 57,000 |
| | CAWCD Compensated Conservation | EC-ICS | | 3,124 | |
| | CAWCD Excess Water | | 119,942 | 133,174 | 146,392 |
| | LBDCP Total | | 144,225 | 180,608 | 203,392 |
| Additional CAWCD Conservation | CAWCD Compensated Conservation | EC-ICS | | | 3,500 |
| | CAWCD Total | | | | 206,892 |
| Arizona DCP Mitigation Offset (400k ac-ft total) | GRIC - Reclamation | EC-ICS | 100,000 | | |
| | GRIC - AWBA | EC-ICS | 17,000 | 33,000 | |
| | GRIC | EC-ICS | | 50,000 | 40,000 |
| | CRIT System Conservation | | | 50,000 | 50,000 |
| | Total | | 117,000 | 133,000 | 90,000 |
| Reclamation DCP | FMYN System Conservation | | | 10,000 | 13,933 |
| | MVIDD | | | 6,137 | 6,925 |
| | Total | | 0 | 16,137 | 20,858 |
| Additional Arizona ICS Creation | CRIT | EC-ICS | 6,274 | 3,736 | 4,685 |
| | Total | | 6,274 | 3,736 | 4,685 |
| Pilot System Conservation Program (PSCP) | Bullhead City | | 306 | 349 | 360 |
| | CRIT | | 26,805 | | |
| | FMYN | | 13,683 | | |
| | Total | | 40,794 | 349 | 360 |
| Total Arizona Lake Mead Contributions | | | 308,293 | 333,830 | 322,795 |

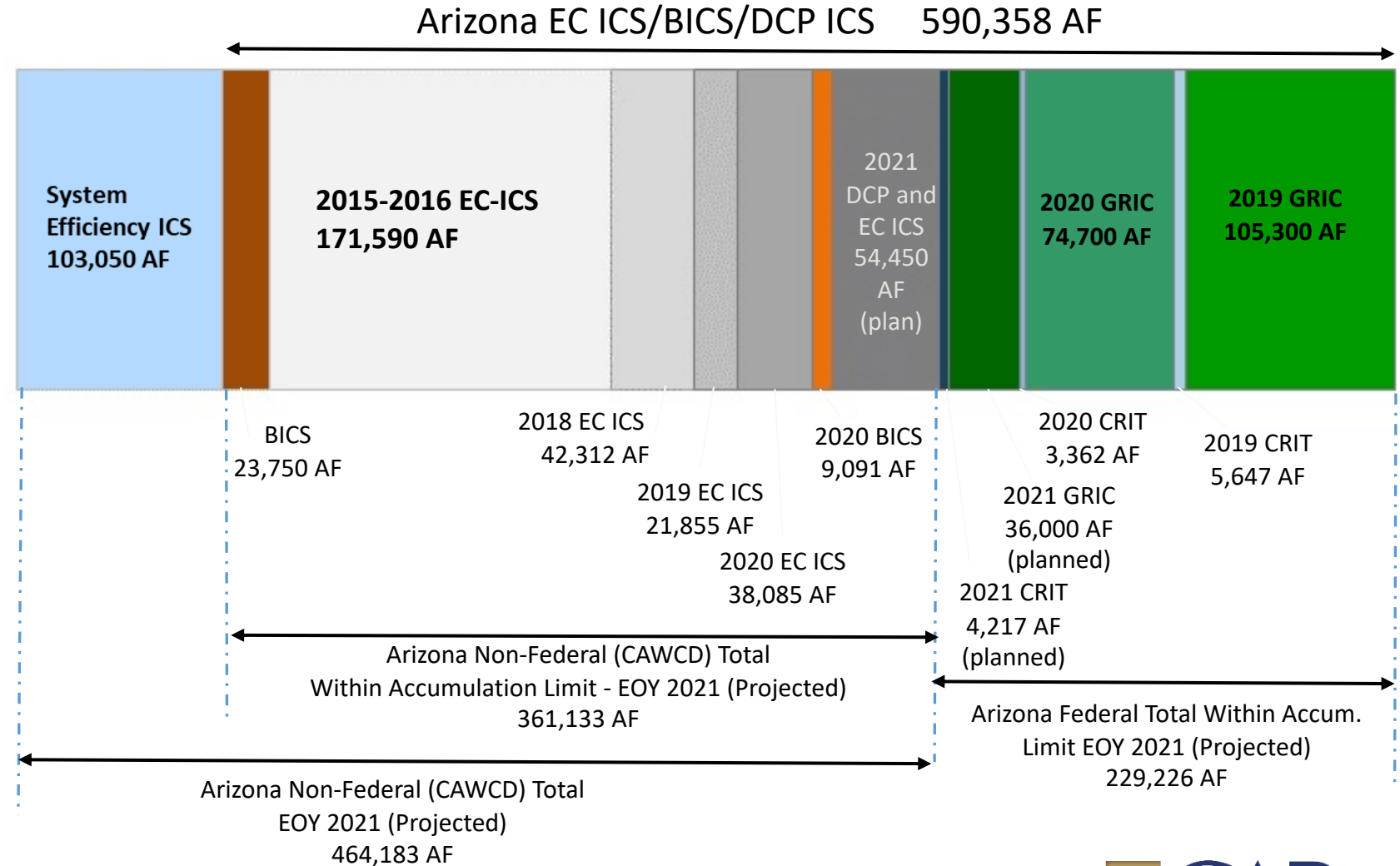
ICS Accumulation Totals by Year



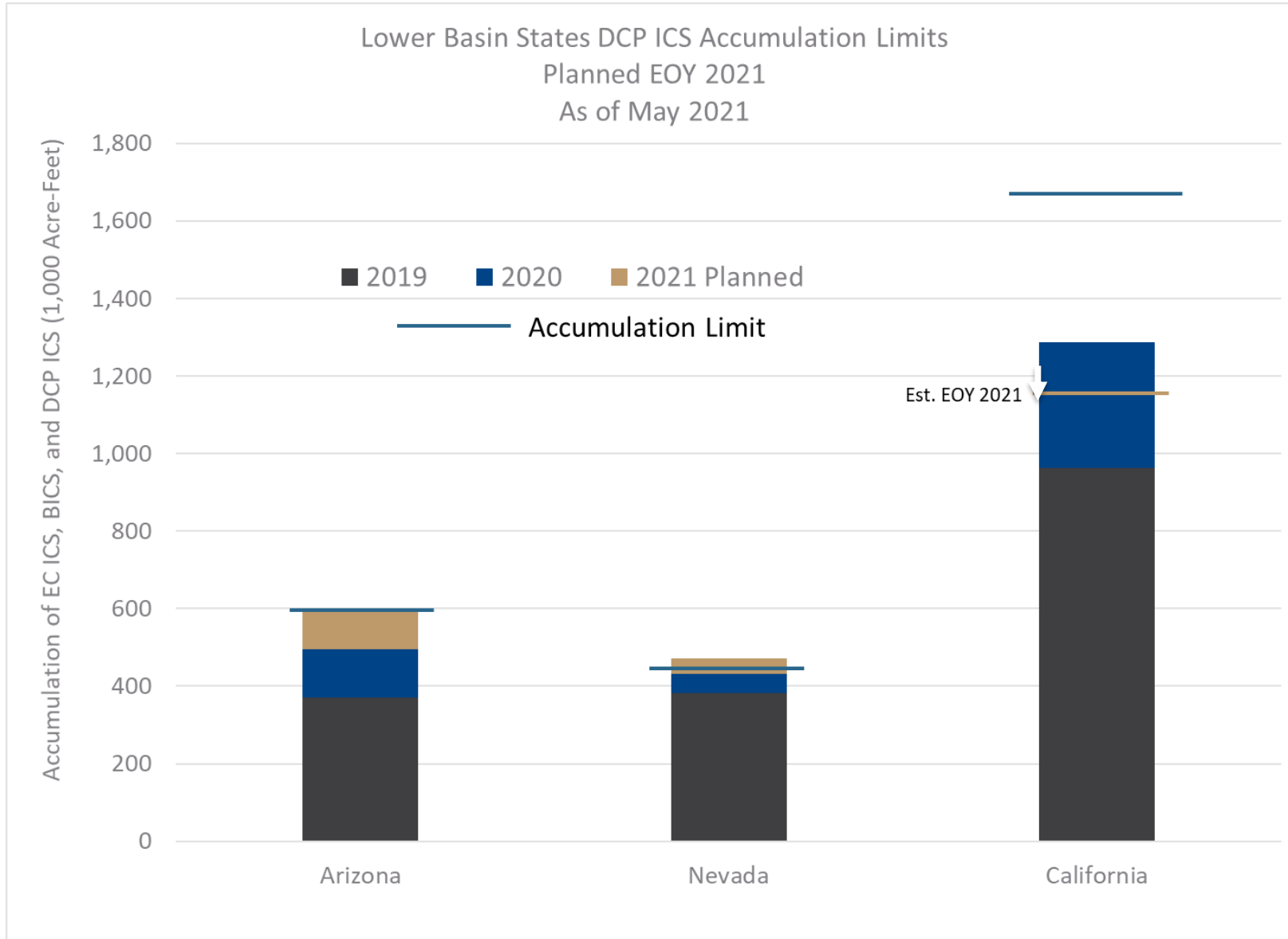
- The ICS Program - developed under the 2007 Guidelines and with updates under DCP Agreements
- Valuable tool that has encouraged conservation in Lake Mead
- One incentive has been the flexibility in use of ICS credits, shown in action by MWD
- This program, together with other efforts, has helped to keep the Lower Basin out of shortage conditions for several years
- The accumulation of ICS credits totaled 2.84 MAF at the end of 2020

Arizona ICS Accumulation – Planned EOY 2021

- Arizona approaching LBDP ICS Accumulation Limit of 600 KAF
- By EOY 2021, CAWCD is projected to have created over 450 KAF of ICS credits
- With 2022 projected in Tier 1 Shortage, ICS creation plans are being developed
- Potential for DCP ICS creation by CAWCD
- Tribal ICS creation under consideration



ICS and Accumulation Limits



- ICS accumulation through 2020 (blue bars) shows totals below limits for each state
- ICS plans through 2021
 - Arizona will approach shared-capacity limit
 - Nevada may exceed shared-capacity limit
 - California is below limit
- A capacity-sharing agreement was just signed that allows a state to borrow unused accumulation capacity from another state

Conservation Efforts Impacting Projected Future Conditions

- BOR-GRIC System Conservation Project
 - Up to 40 KAF for **2021**
- Conservation by fallowing in Palo Verde Irrigation District
 - ~ 65 KAF/yr. 2021 - 2024
- Expansion of 242 Wellfield capacity by Reclamation
 - Up to 32 KAF/yr. 2021 - 2026

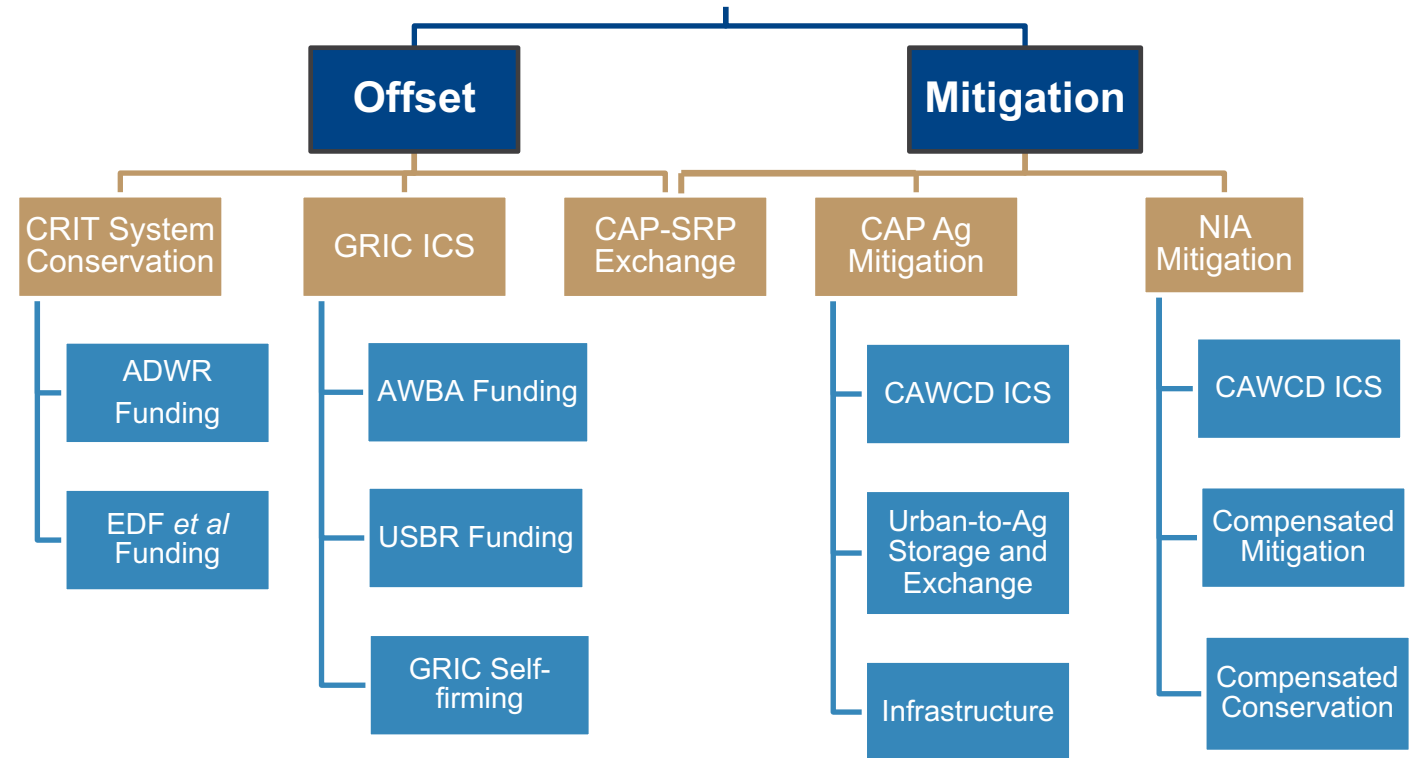
CAP Shortage Impacts and Mitigation

Ken Seasholes

Resource Planning & Analysis Manager

Arizona DCP Implementation Plan

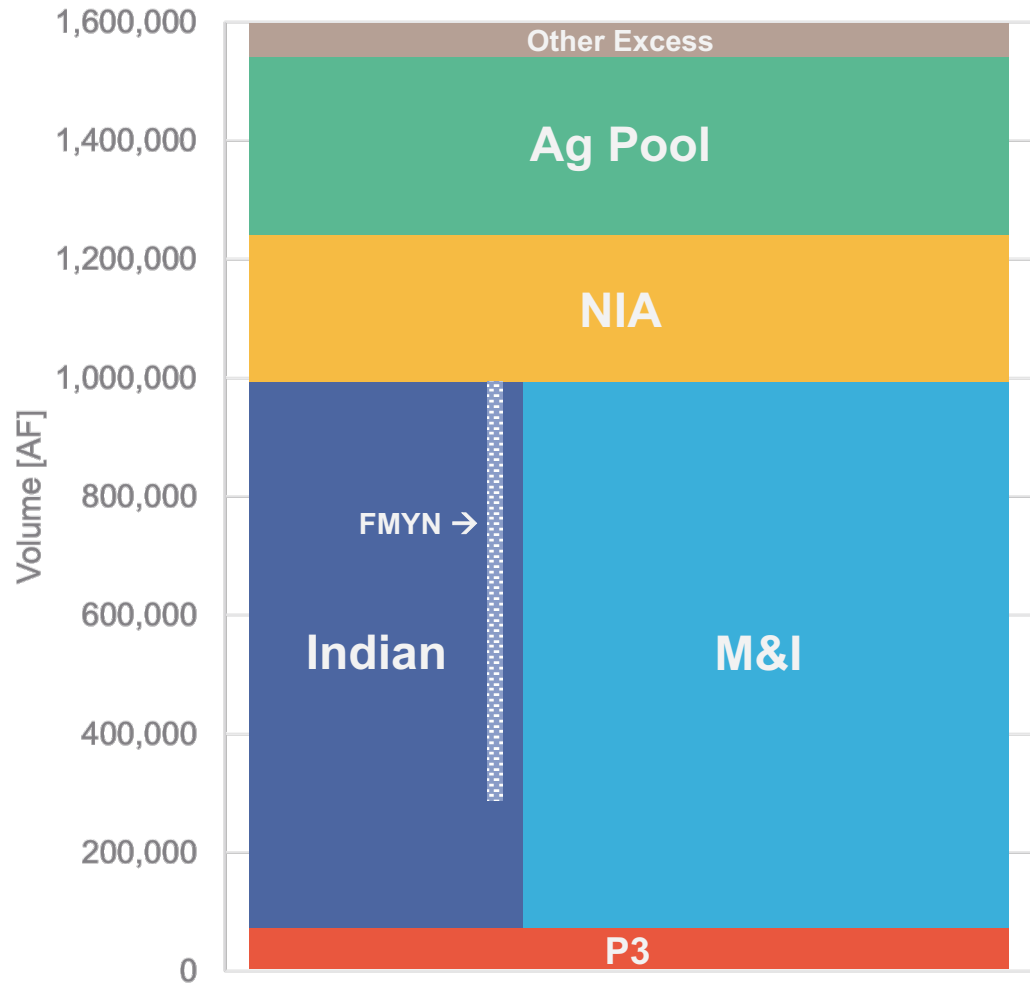
- **Mitigation** – lessens some of the impacts of DCP shortage reductions
- **Offset** - Additional Lake Mead contributions to offset potential impact to Lake Mead from use of CAWCD ICS for mitigation



Mitigation Commitments

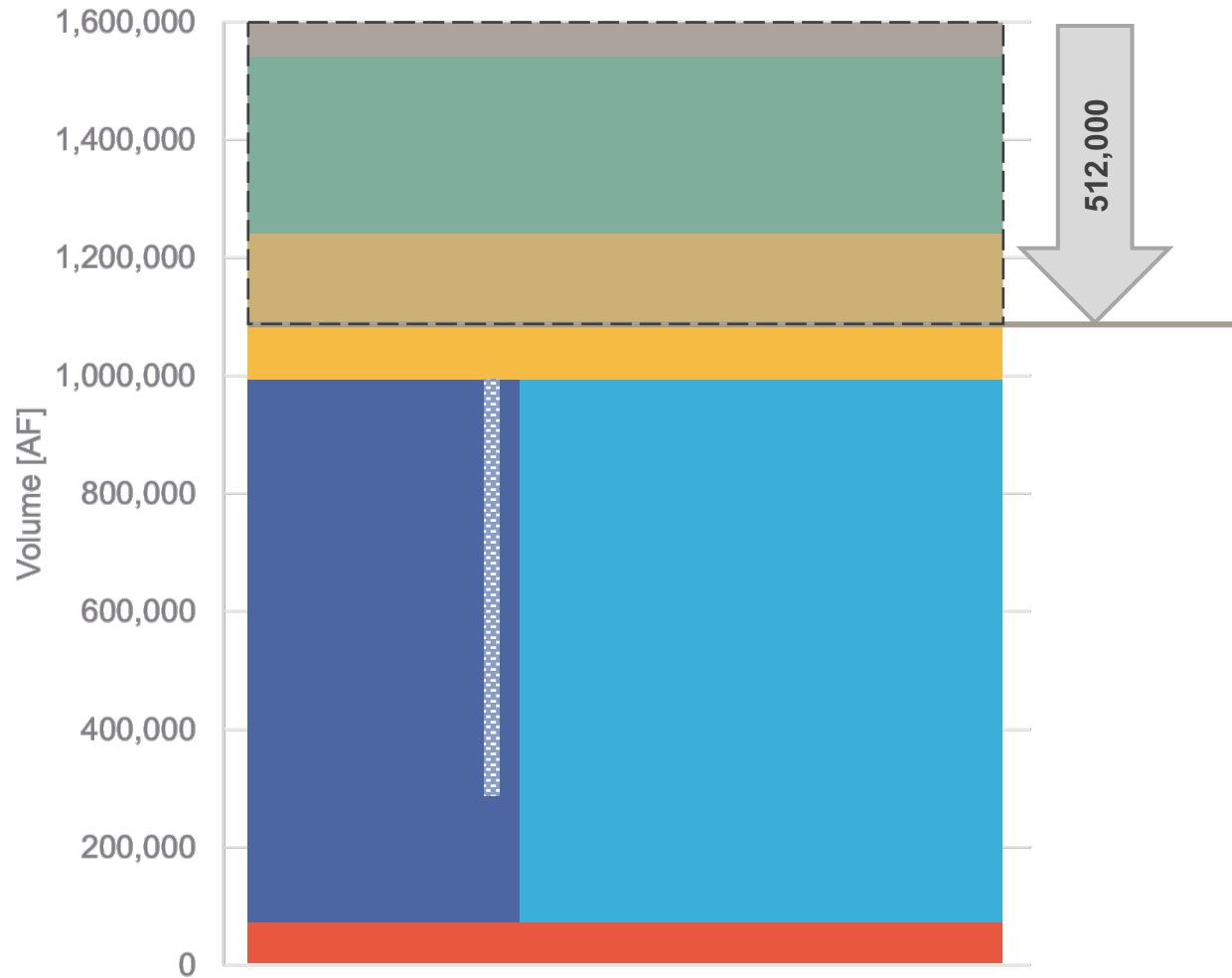
| | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|----------------------------------|--|------|------|--|------|------|----------------|
| Ag Pool Parties | <div> <div>105 KAF - Tier 1</div> <div>70 KAF - Tiers 2a/2b</div> <div>GW 16.5K</div> </div> | | | No CAP Wet Water Mitigation | | | |
| | | | | Groundwater Infrastructure Program 70 KAF / Yr | | | |
| NIA Contractors & Subcontractors | <div> <div>100%</div> <div>Tiers 1/2a/2b</div> </div> | | | | | | No Mitigation |
| | | | | <div>75%* - Tiers 1/2a</div> <div>50%* - Tier 2b</div> | | | 2026 or Tier 3 |

2022 – Normal Supply



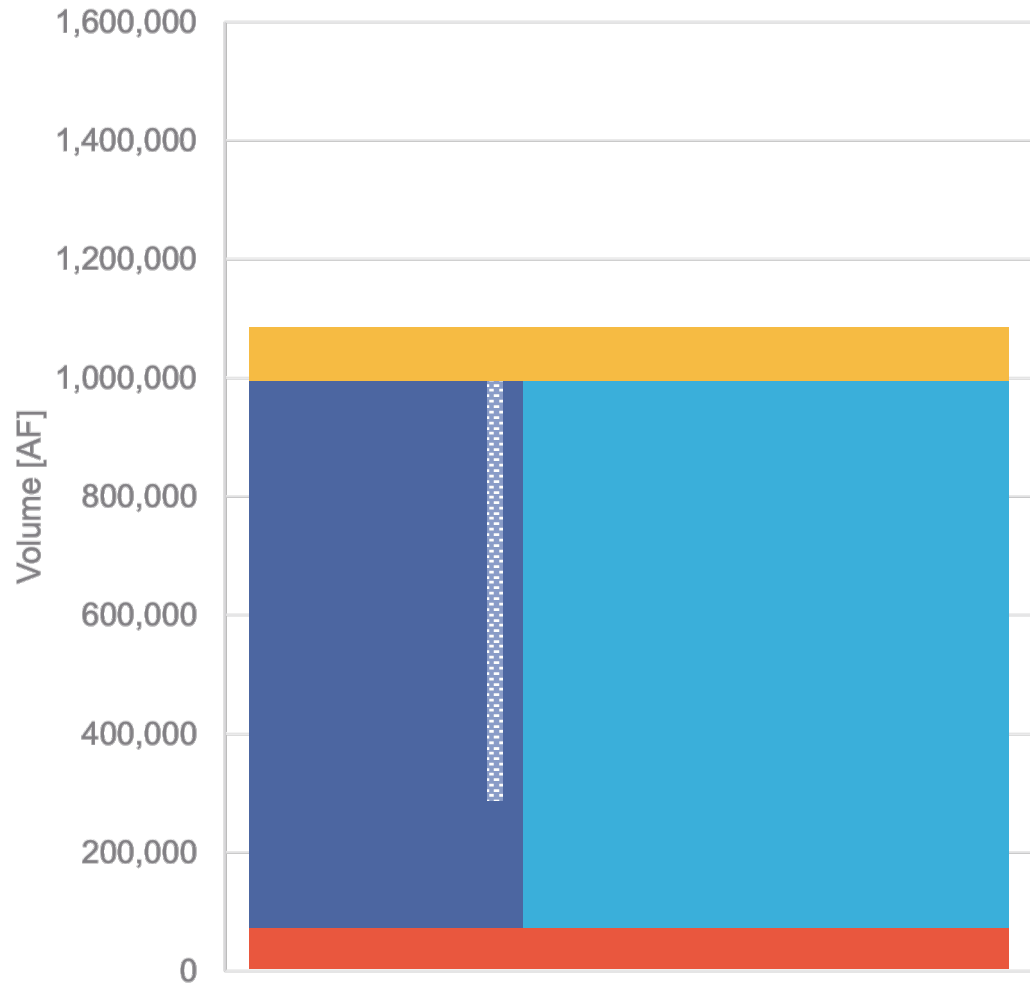
- Assumptions:
 - 1.595 MAF delivery supply
 - Estimated 2022 Orders Adjusted modestly upward from April estimate
 - Includes NIA Reallocation
- The block chart is a roll-up of individual orders
- Anticipated ongoing conservation
 - Ag Pool Forbearance
 - FMYN system conservation

2022 – Tier 1 Shortage



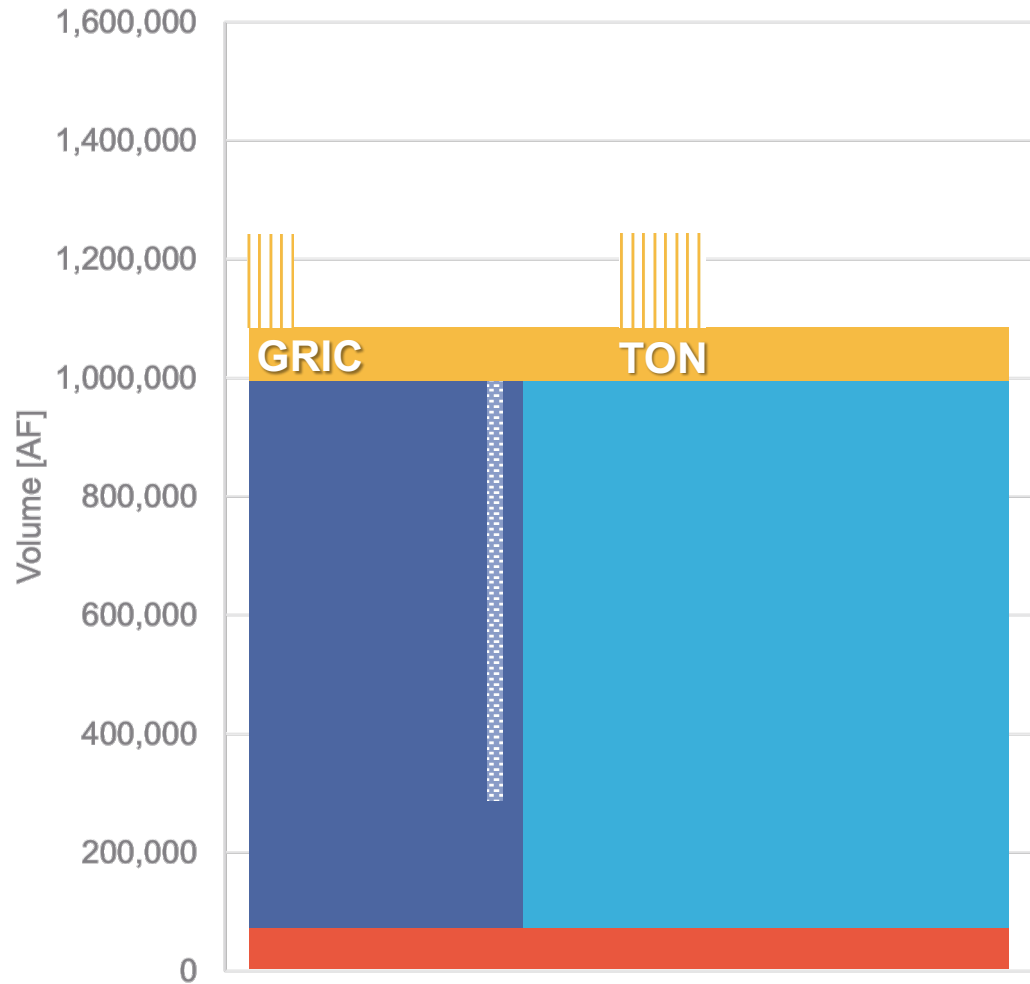
- 512,000 AF Reduction/Contribution
 - 320,000 AF per 2007 Guidelines
 - 192,000 AF per LBDCP
- Pre-Mitigation Impacts
 - 100% Reduction to Ag Pool
 - ~63% Reduction to NIA Pool
- Mitigation Commitments
 - 100% mitigation for NIA pool
 - 105,000 AF of mitigation for Ag Pool parties

2022 – Tier 1 Shortage



- NIA Pool @ 37% Availability
 - ~ 92,300 AF

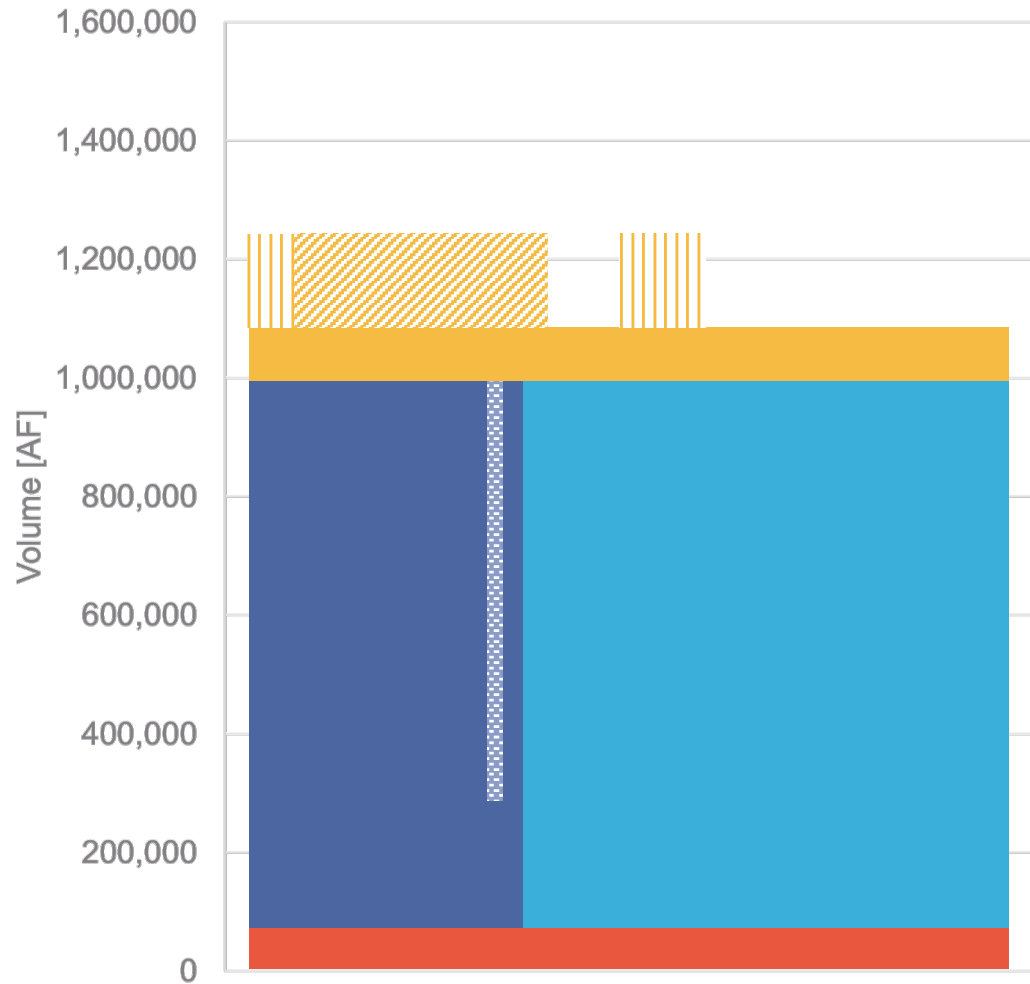
2022 – Tier 1 Shortage



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| NIA Mitigation | | |
|----------------|---|-------------|
| Order | Resource | Volume [AF] |
| 1 | GRIC and TON Firming (State & Federal) | 27,100 |

2022 – Tier 1 Shortage

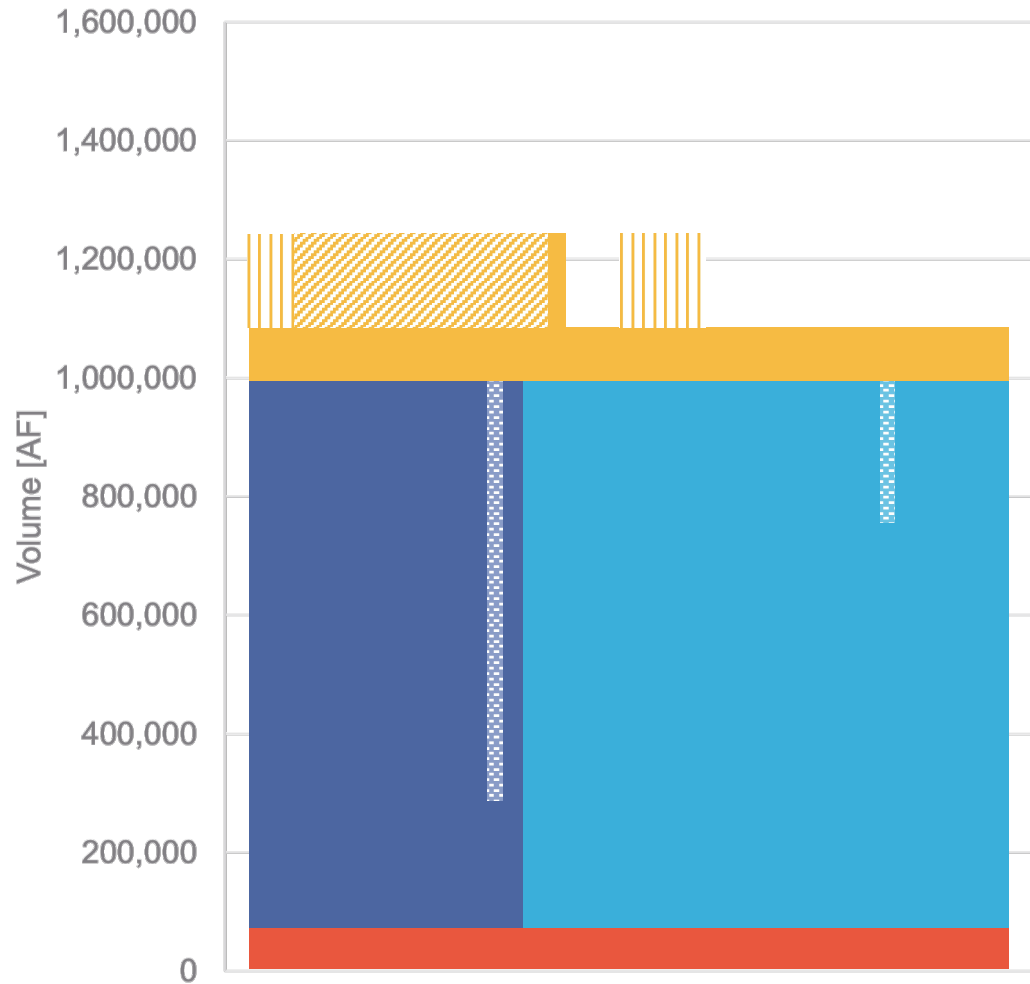


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| NIA Mitigation | | |
|----------------|--|-------------|
| Order | Resource | Volume [AF] |
| 1 | GRIC and TON Firming (State & Federal) | 27,100 |
| 2a | GRIC Compensated Mitigation (@ 80%) | 52,900 |

Adjusted up from 70% in April presentation

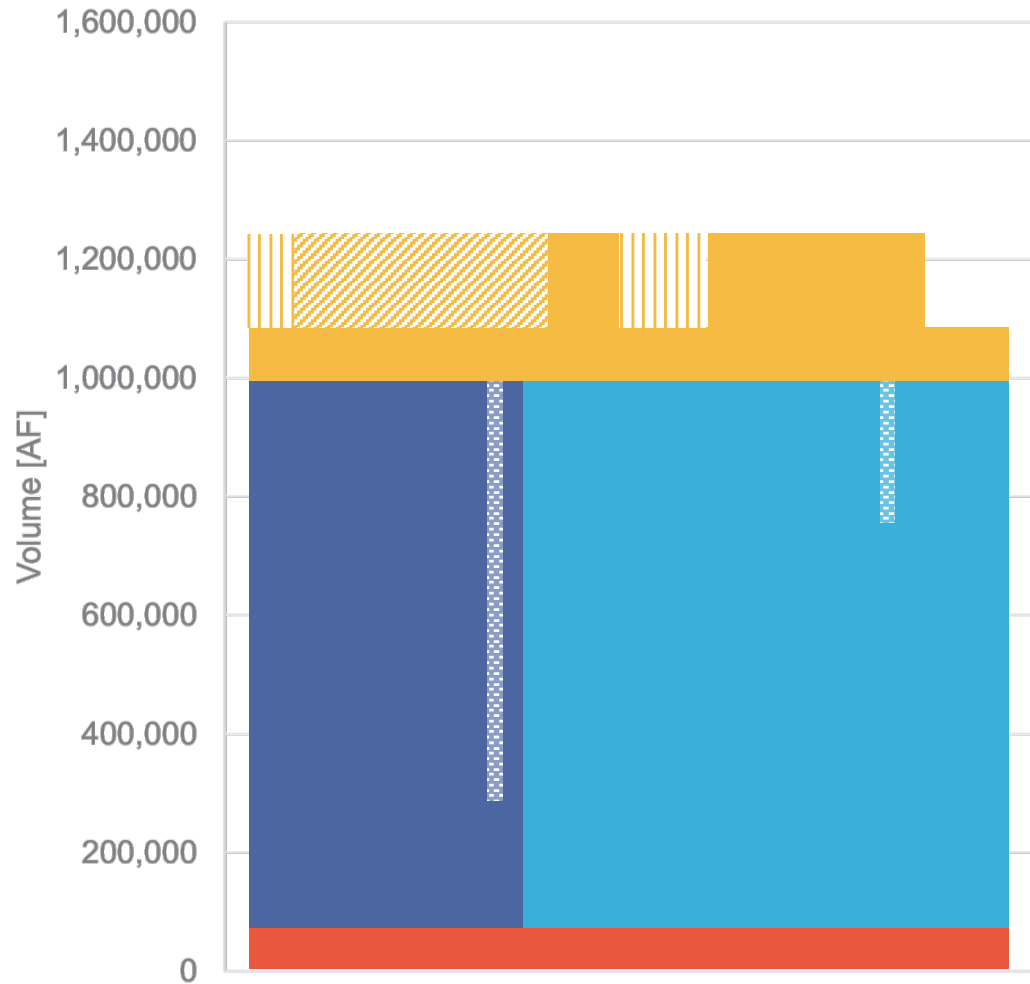
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| 2b | MDWID Compensated Mitigation | 3,500 |

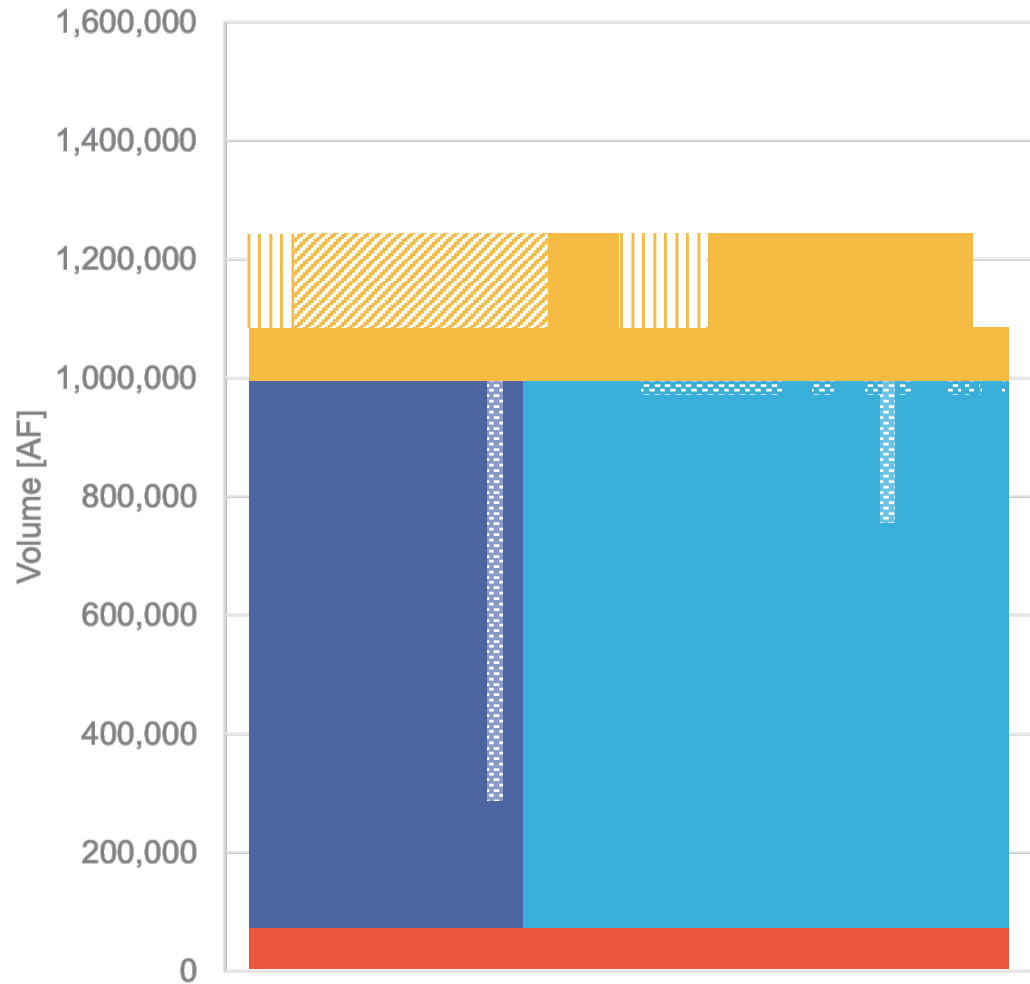
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| 3 | Lake Pleasant Water | 55,000 |

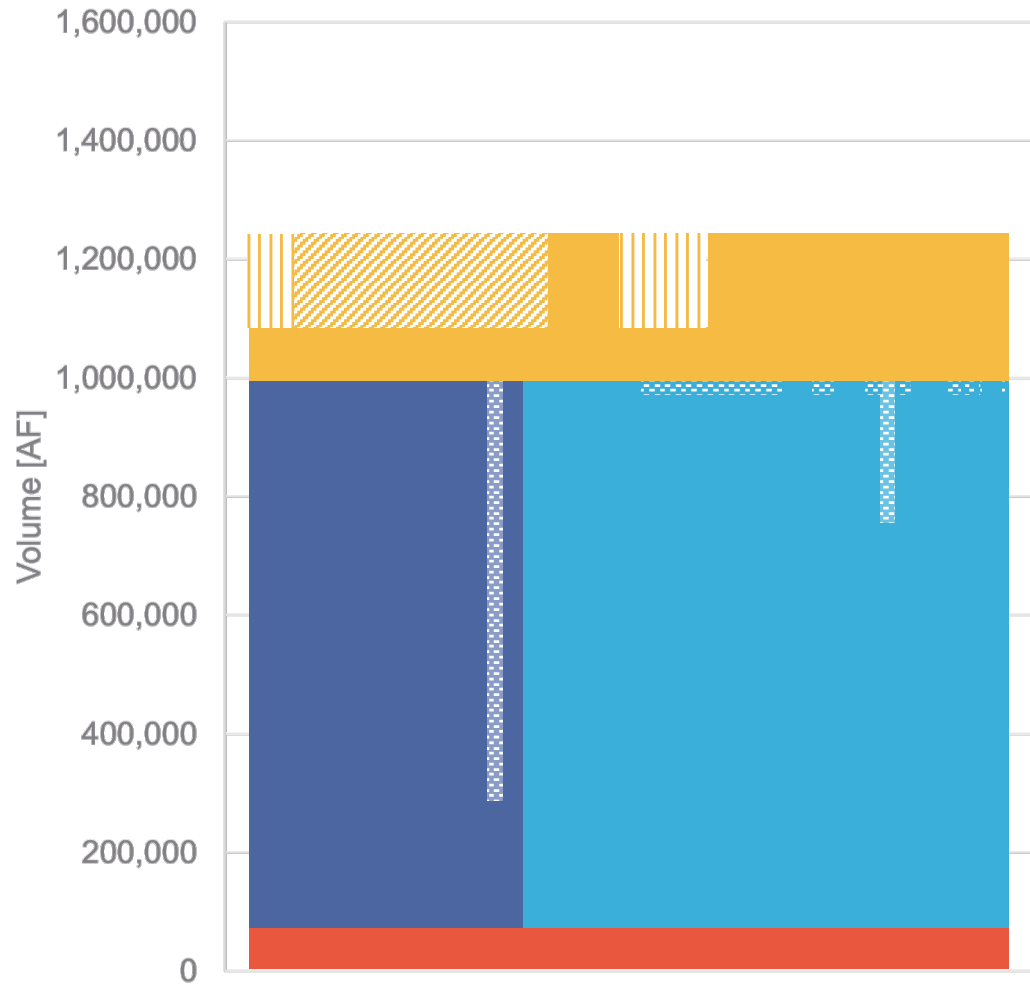
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| 3 | Lake Pleasant Water | 55,000 |
| 4 | SRP Exchange | 10,000 |

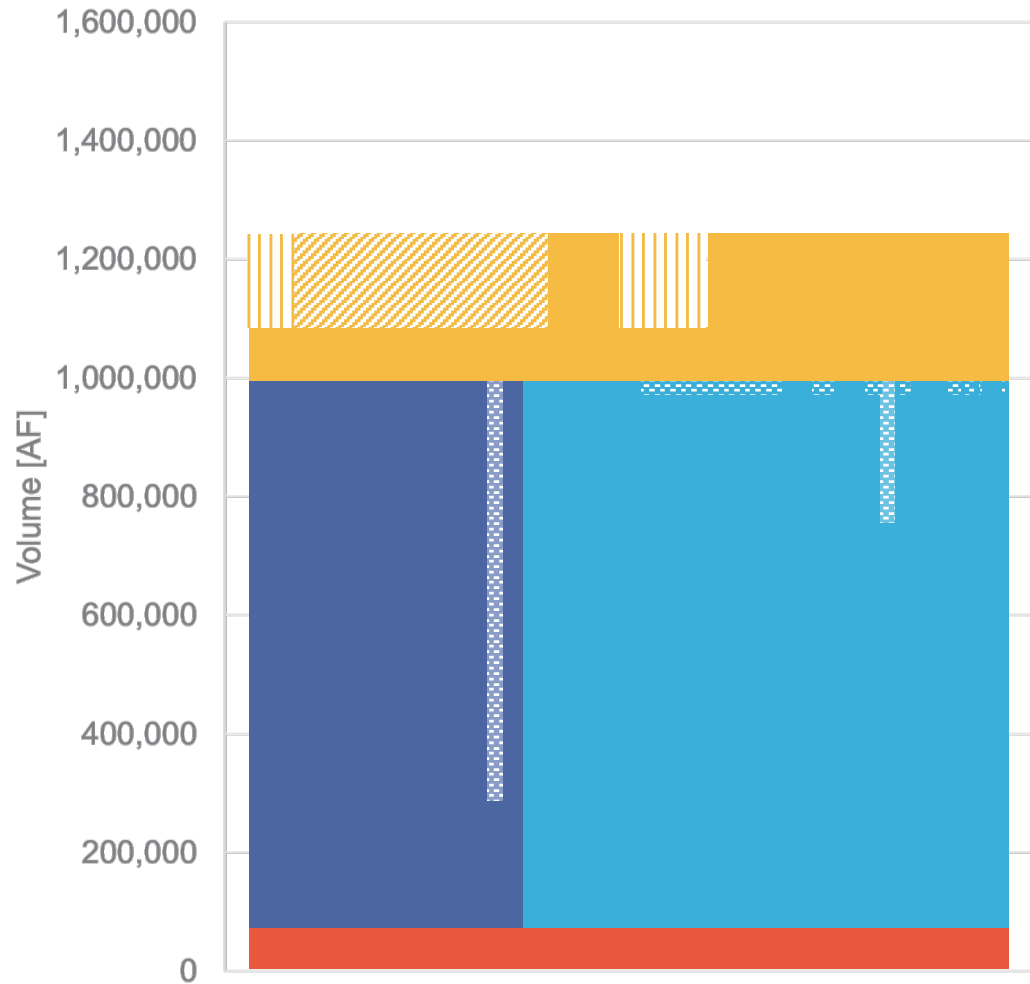
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| 2b | MDWID Compensated Mitigation | 3,500 |
| 3 | Lake Pleasant Water | 55,000 |
| 4 | SRP Exchange | 10,000 |
| 5 | CAWCD ICS | 6,600 |

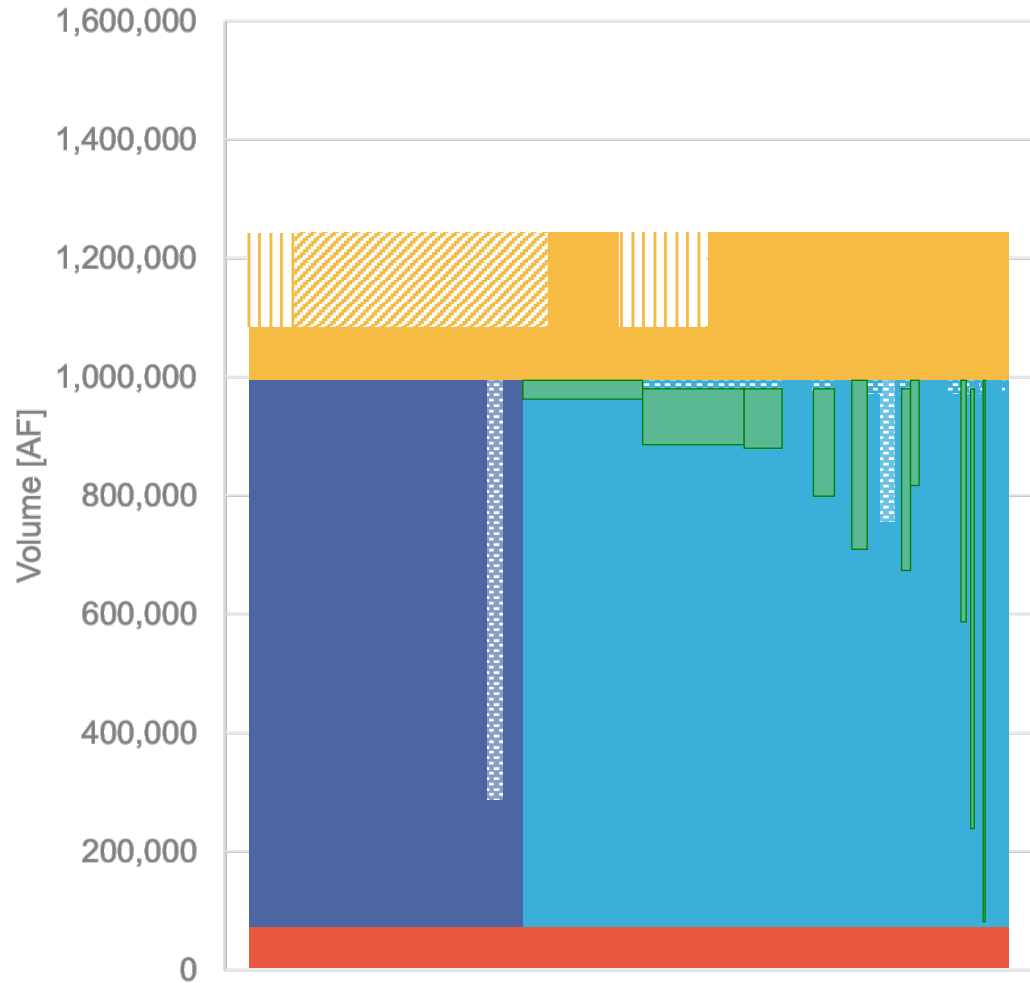
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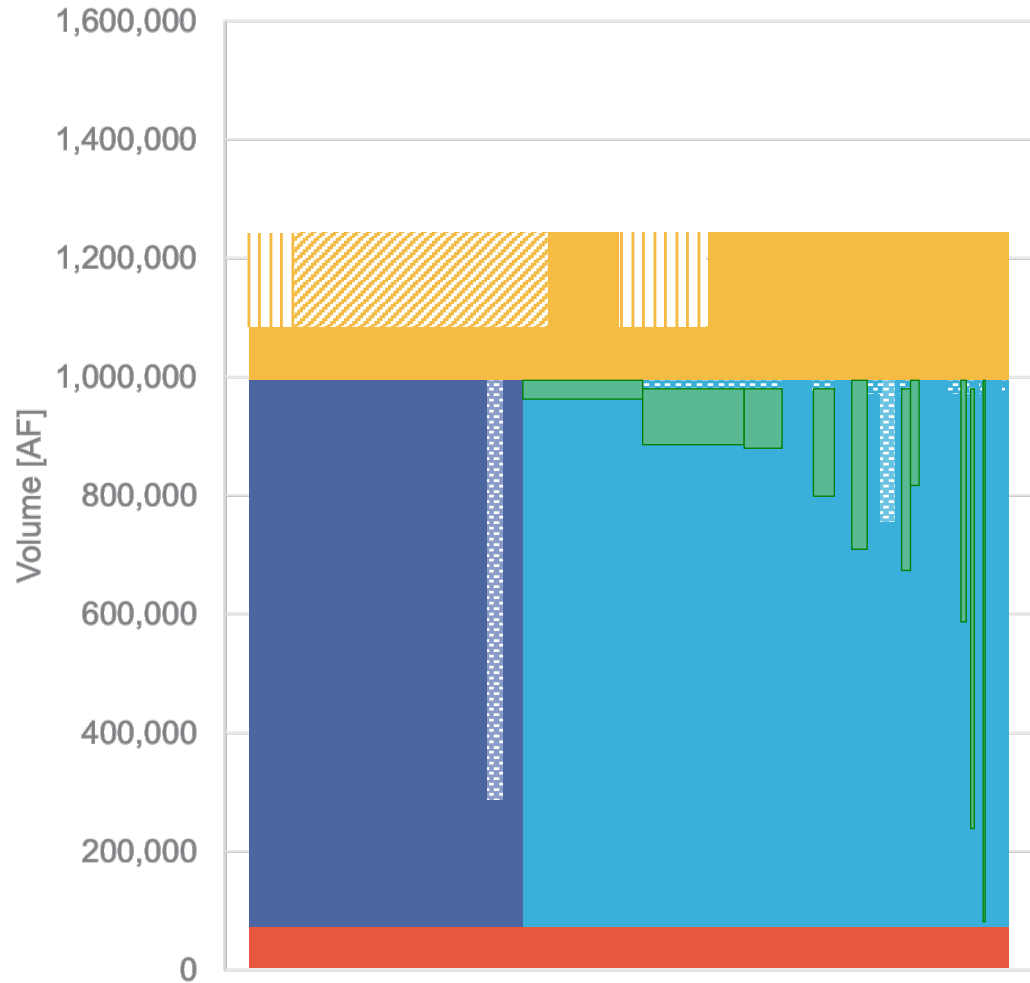
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| 2b | MDWID Compensated Mitigation | 3,500 |
| 3 | Lake Pleasant Water | 55,000 |
| 4 | SRP Exchange | 10,000 |
| 5 | CAWCD ICS | 6,600 |
| Total: | | 155,100 |

2022 – Tier 1 Shortage



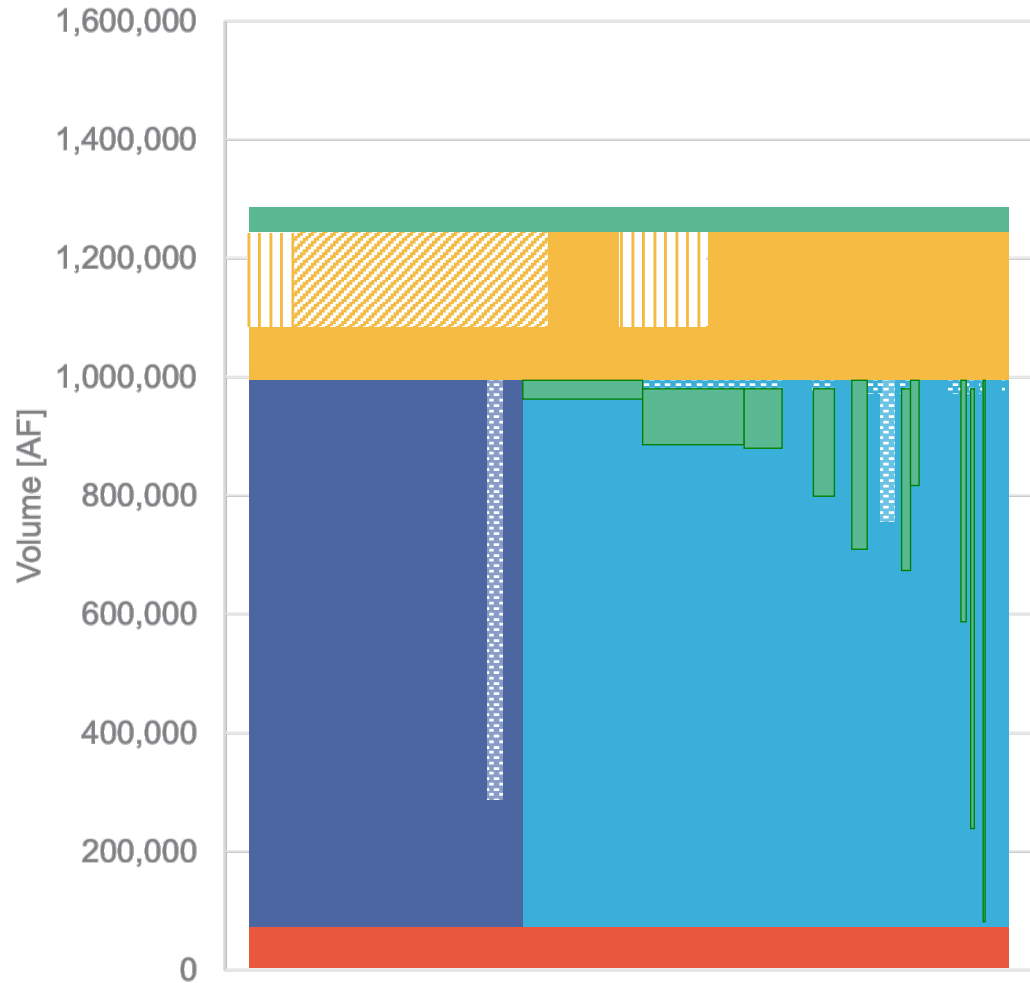
| Ag Mitigation | | |
|---------------|--|-------------|
| Order | Resource | Volume [AF] |
| 1 | Urban-to-Ag Storage & Exchange (a.k.a., USF to GSF) | 46,500 |

2022 – Tier 1 Shortage



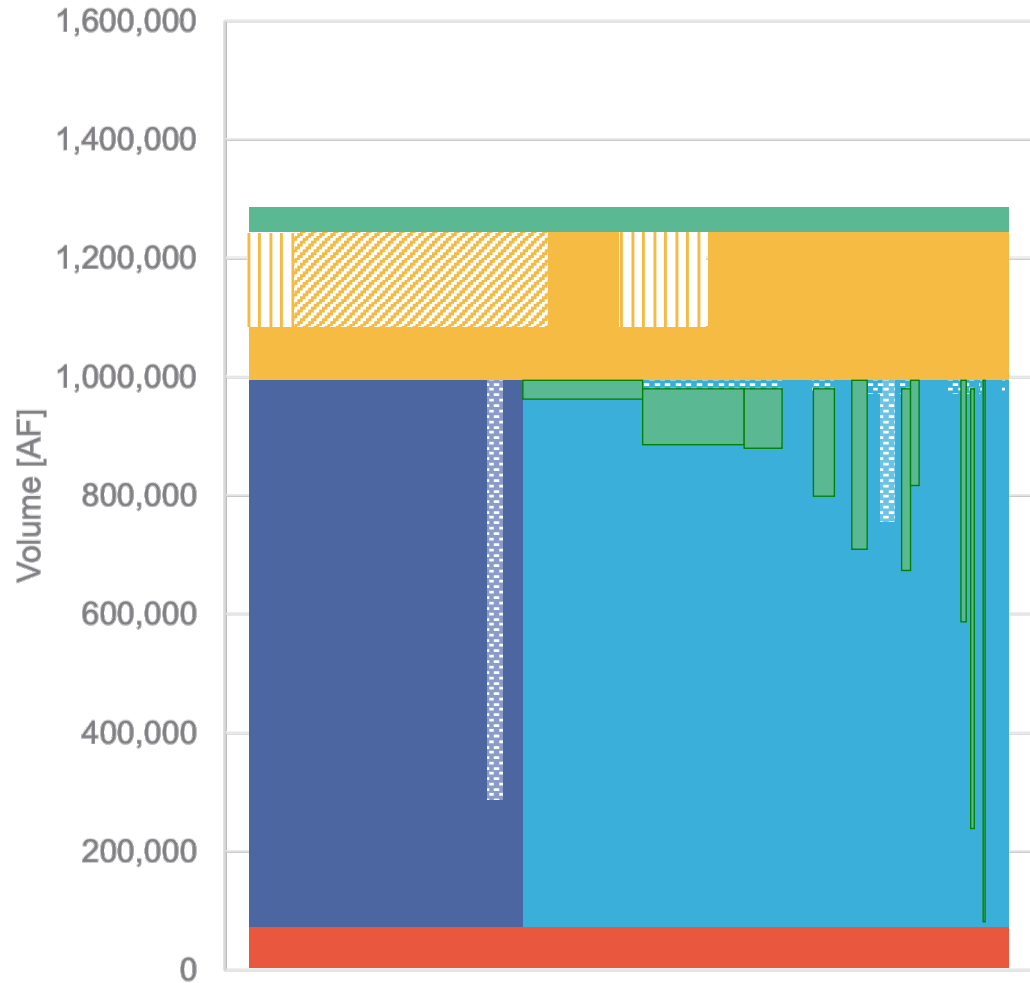
| Ag Mitigation | | |
|---------------|--|-------------|
| Order | Resource | Volume [AF] |
| 1 | Urban-to-Ag Storage & Exchange (a.k.a., USF to GSF) | 46,500 |
| 2 | Groundwater Infrastructure | 16,500 |

2022 – Tier 1 Shortage



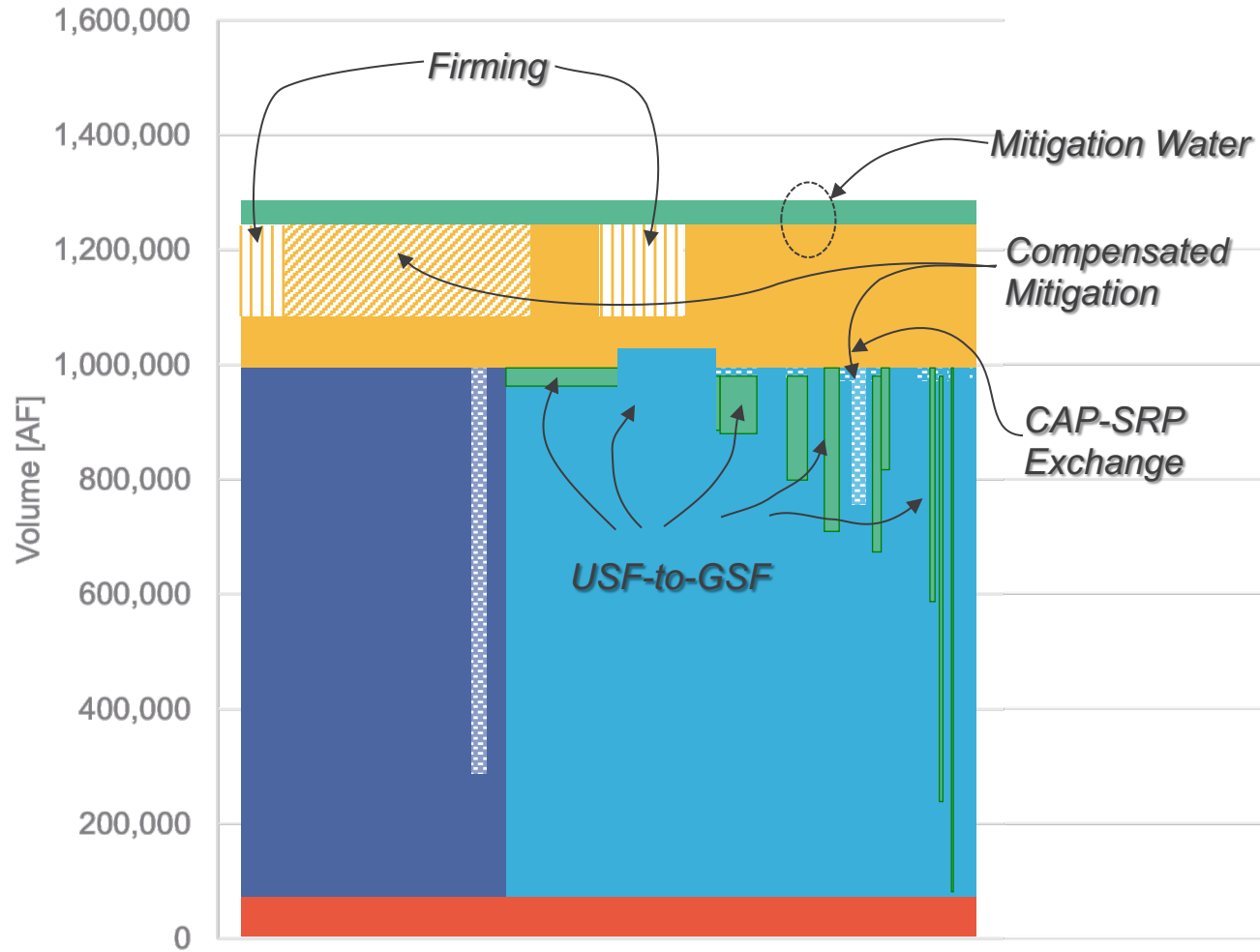
| Ag Mitigation | | |
|---------------|--|-------------|
| Order | Resource | Volume [AF] |
| 1 | Urban-to-Ag Storage & Exchange (a.k.a., USF to GSF) | 46,500 |
| 2 | Groundwater Infrastructure | 16,500 |
| 3 | CAWCD ICS | 42,000 |

2022 – Tier 1 Shortage

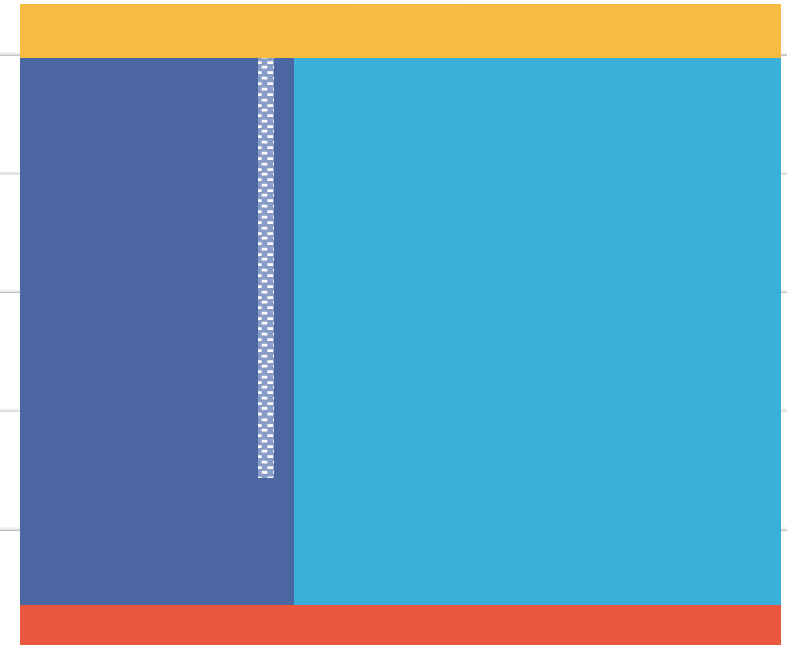


| Ag Mitigation | | |
|---------------|--|----------------|
| Order | Resource | Volume [AF] |
| 1 | Urban-to-Ag Storage & Exchange (a.k.a., USF to GSF) | 46,500 |
| 2 | Groundwater Infrastructure | 16,500 |
| 3 | CAWCD ICS | 42,000 |
| | Total: | 105,000 |

2022 – Tier 1 Shortage



2022 – Tier 1 Prior to Mitigation



Updates from Mitigation Parties

Ag Mitigation: Dan Jones

Urban-to-Ag Storage & Exchange: Cynthia Campbell

AWBA Firming & Credit Exchange: Virginia O'Connell

Reclamation Firming: Lawrence Marquez

Update: Ag Mitigation



Dan Jones
Attorney
Salmon, Lewis & Weldon, P.L.C.

Update: Ag Mitigation

| | Ag Pool Volume (300K) | % Mitigation | Total Mitigation Water | USF-> GSF | GW Infrastructure | Wet Water Mitigation Resources |
|---------------------------|--------------------------|--------------|------------------------------|---------------|----------------------|--------------------------------------|
| <u>Pinal AMA</u> | | | | | | |
| Central Arizona IDD | 83,302 | 34% | 35,700 | 19,800 | 6,105 | 9,795 |
| Hohokam IDD | 26,924 | 11% | 11,550 | 6,400 | 1,980 | 3,170 |
| Maricopa Stanfield IDD | 81,886 | 33% | 34,650 | 19,300 | 5,940 | 9,410 |
| San Carlos IDD | 25,237 | 10% | 10,500 | 0 | 1,815 | 8,685 |
| Subtotal | 217,349 | 88% | 92,400 | 45,500 | 15,840 | 31,060 |
| <u>Phoenix AMA</u> | | | | | | |
| Chandler Heights CID | 407 | 2% | 2,100 | 0 | 660 | 1,440 |
| MWD | 3,000 | | | | | |
| New Magma IDD | 20,494 | | | | | |
| Queen Creek ID | 9,000 | | | | | |
| Roosevelt WCD | 3,750 | | | | | |
| SRP | 2,850 | | | | | |
| San Tan ID | 1,050 | | | | | |
| Tonopah ID | 2,595 | | | | | |
| Subtotal | 43,146 | 2% | 2,100 | 0 | 660 | 1,440 |
| <u>Tucson AMA</u> | | | | | | |
| BKW Farms | 1,226 | | | | | |
| Cortaro-Marana ID | 4,313 | | | | | |
| FICO | 2,323 | | | | | |
| Kai Farms/Marana | 1,575 | | | | | |
| Kai Farms/Red Rock | 750 | | | | | |
| Subtotal | 10,187 | 0% | 0 | 0 | 0 | 0 |
| <u>Outside AMA</u> | | | | | | |
| Harquahala Valley ID | 24,403 | 10% | 10,500 | 1,000 | | 9,500 |
| Subtotal | 24,403 | 10% | 10,500 | 1,000 | | 9,500 |
| TOTAL | 295,085 | 100% | 105,000 | 46,500 | 16,500 | 42,000 |

Update: Urban-to-Ag Storage & Exchange



Cynthia Campbell
Water Resources Management Advisor
City of Phoenix

Update: Urban-to-Ag Storage & Exchange

| LTSC Storage for AWBA Exchange | | | | | |
|--|---------------|---------------|---------------|----------------|--------------------------------|
| City/Entity ¹ | 2022 | CAIDD GSF | MSIDD GSF | Hohokam GSF | Harquahala INA ² |
| City of Phoenix | 12,600 | 8,800 | 2,400 | 1,400 | |
| City of Scottsdale | 5,000 | 4,000 | | | 1,000 |
| City of Avondale | 3,500 | | 3,500 | | |
| City of Chandler | 2,800 | | 2,800 | | |
| City of Peoria | 5,000 | | 5,000 | | |
| City of Goodyear | 2,000 | | 2,000 | | |
| City of Tucson | 5,000 | | | 5,000 | |
| EPCOR | 3,600 | | 3,600 | | |
| Freeport-Minerals | 7,000 | 7,000 | | | |
| TOTAL | 46,500 | 19,800 | 19,300 | 6,400 | 1,000 |
| ¹ City of Tucson will receive Tucson AMA LTSCs; all others except Freeport will receive Phoenix AMA LTSCs; Freeport may elect to receive either Phoenix AMA LTSCs or Tucson LTSCs stored at Pima Mine Road USF. | | | | | |
| ² The AWBA will not exchange for credits in the Harquahala INA. | | | | | |

Update: AWBA Firming & Credit Exchange

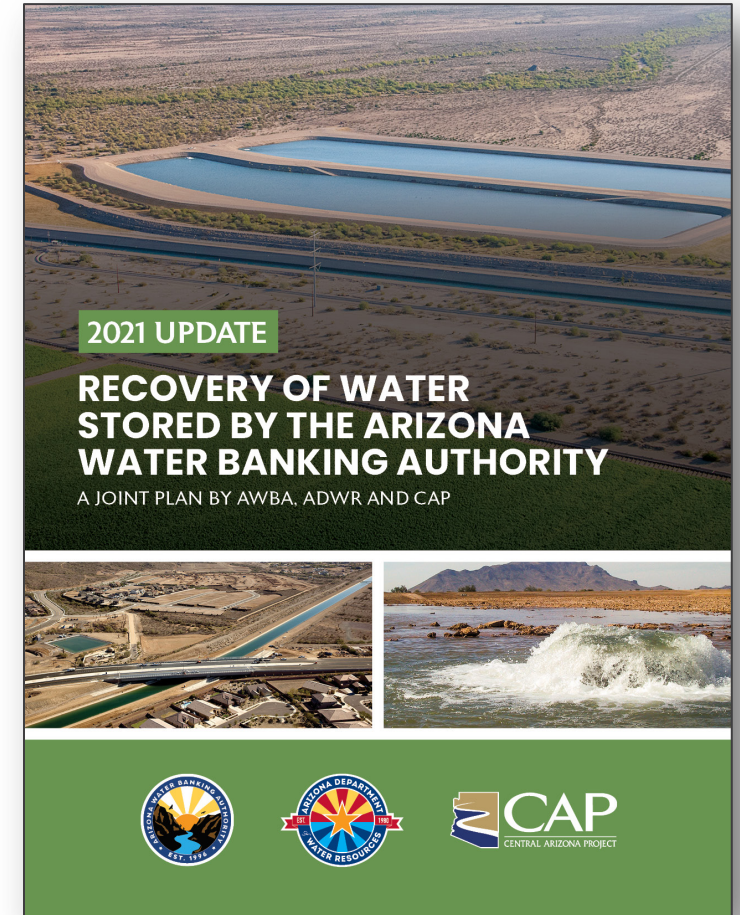


Virginia O'Connell
Director
Arizona Water Banking Authority

Update: AWBA Firming & Credit Exchange

2021 Joint Recovery Update

- Released on May 6th
- Collaborative effort among ADWR, AWBA and CAP, in coordination with the Recovery Planning Advisory Group and stakeholders
- Provides clarity on timing and procedures for recovering water stored by the AWBA
- Discusses recovery concepts intended to increase flexibility and fully utilize existing infrastructure
- Estimates recovery capacity requirements focused on impacts to direct uses
- Identifies future activities and commitments by the three agencies
- Located on all three agencies websites



Update: Reclamation Firming



Lawrence Marquez

Manager, Native American Affairs Office

Phoenix Area Office

U.S. Bureau of Reclamation

Water Ordering Process

Don Crandall

Water Control Manager

Water Ordering Process

- **Long-Term Contracts**

- Place full water order
- Coordinate USF-to-GSF Mitigation with Ag districts
- Close coordination with Water Operations for those with firming and/or compensated mitigation
- NIA Compensated Mitigation requests
 - October 1st - Submit request for Compensated Mitigation
 - Footnote Water Order for compensated mitigation requests
 - By October 20th CAP will notify any users that will be provided compensated mitigation
 - By October 23rd - Submit final schedule for physical water deliveries

Water Ordering Process: Ag Pool

- **Ag Pool**
 - Submit schedule for physical “wet water” deliveries
 - Coordinate USF to GSF Mitigation deliveries with partners
 - Prior to Sept 1st meet and confer among districts
 - Coordination of orders by Oct 1st
 - Include notations on schedule
 - Indicate that you would take full order if supply was available
 - Indicate participation in the Forbearance 3 Program, if applicable

Example Schedule: Ag Pool

| 2022 | Ag Settlement Pool | USF-GSF Partner | ... |
|--------------|--------------------|-----------------|-----|
| January | | 50 | |
| February | | 100 | |
| March | 500 | | |
| April | 1,000 | | |
| May | 2,000 | | |
| June | 1,500 | | |
| July | 1,250 | | |
| August | 750 | | |
| September | | | |
| October | | | |
| November | | 100 | |
| December | | 50 | |
| Total | 7,000 | 300 | |
| Footnotes | | | |

Example footnotes:

- Under a normal water supply year, [Ag District] would order [xx,xxx AF] of Agricultural Settlement Pool water
- [Ag District] is participating in the Agricultural Forbearance 3.

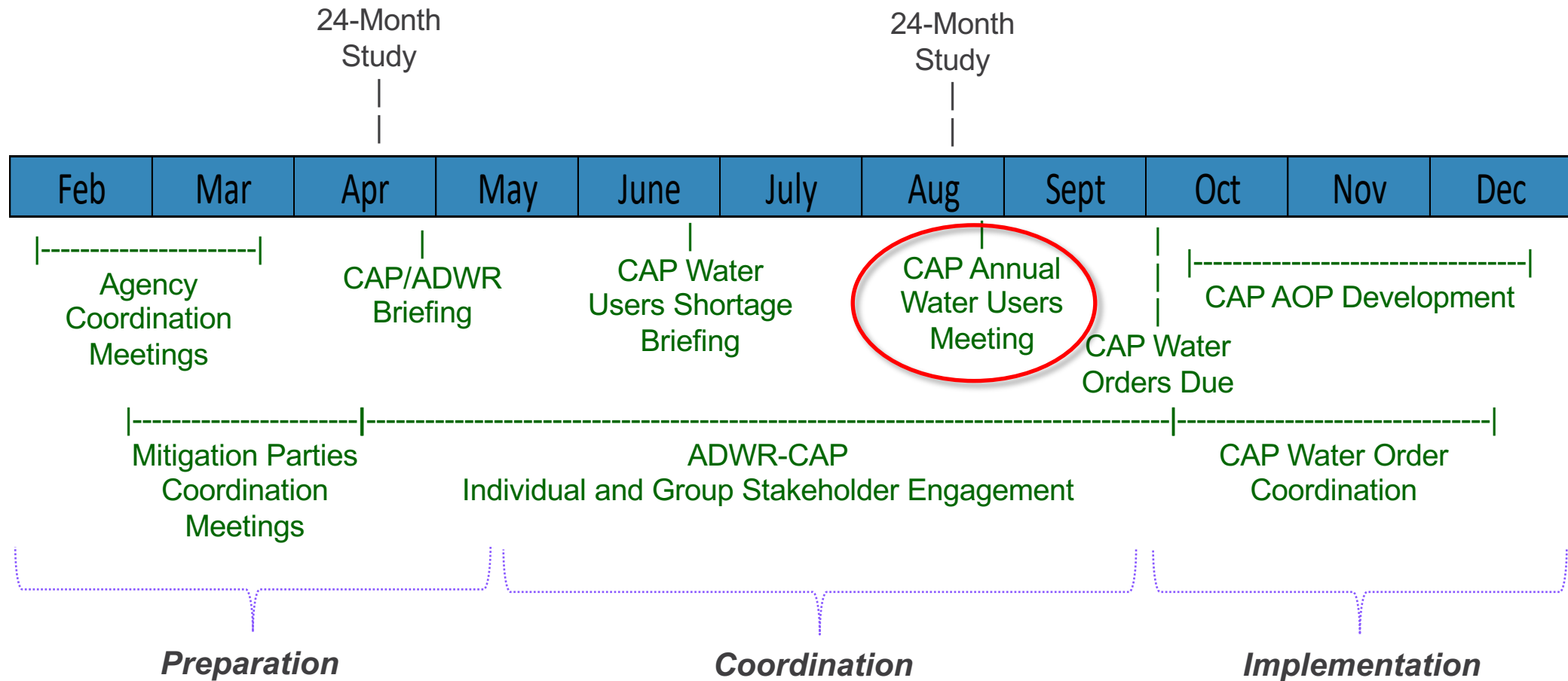
Next Steps

Darrin Francom

Assistant General Manager

Operations, Maintenance and Engineering

Next Steps



Questions & Closing Remarks