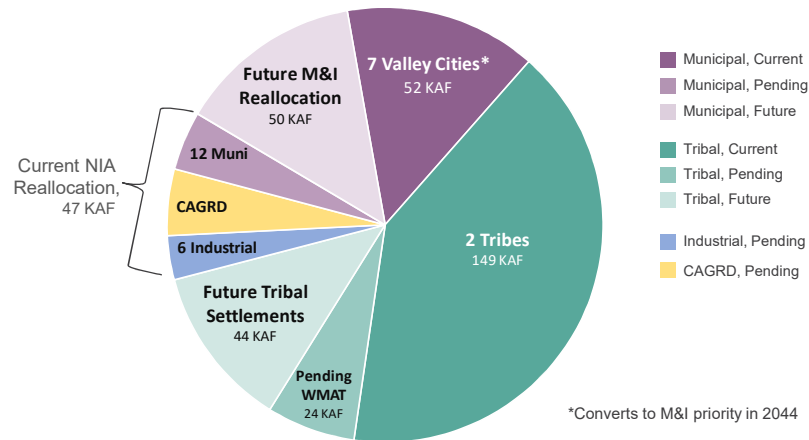


Agenda

1. Introduction & Background — *Dent*
2. Subcontracting — *Adams/Selig/Beadnell*
3. Financial Issues — *Dunlap*
4. Scheduling & Operations — *Shapiro*
5. Break
6. Future Supply Availability — *Seasholes*
7. Wrap Up — *Dent*

NIA Priority Supplies



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NIA REALLOCATION BRIEFING | MARCH 2, 2021



2. Subcontracting

Greg Adams, Sr. Attorney, CAWCD

Margot Selig, Dept. of Interior, Bureau of Reclamation, Boulder Canyon Operation Office, Supervisory Contract and Repayment Specialist

Jim Beadnell, Dept. of Interior, Bureau of Reclamation, Phoenix Area Office, Contracts and Repayment Specialist

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Subcontracting Overview

- Nature of CAP subcontracts
- Contracting Steps
- Key Provisions
- AZDCP Mitigation

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Nature of Subcontracts

- Why *sub*contracts?
 - In 1988, the United States and CAWCD entered into what is commonly referred to as the “Master Repayment Contract” which provides for the diversion and delivery of water through the Central Arizona Project (CAP) and for the repayment of the costs of construction of the CAP.
 - The Master Repayment Contract authorizes CAWCD and the United States to enter in to subcontracts with water users, whereby the water users receive Project Water and agree to pay water service charges, including capital charges and operation, maintenance and replacement (OM&R) costs.
 - Capital charges are one of the revenue sources CAWCD uses to fulfill its repayment obligation to the United States.

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Contracting Steps

- CAWCD & Reclamation are finalizing the standard subcontract template and plan to have drafts distributed to NIA Reallocation entities for review by May 2021
- Goal to have subcontracts fully executed in time for October 2021 water orders for 2022 water deliveries
- CAWCD Process
 - CAWCD Board approval
 - Two-step process (May and June CAWCD Board Meeting)

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NIA REALLOCATION BRIEFING | MARCH 2, 2021



Contracting Steps

- Reclamation Process
 - May 2021-Provide Subcontractors draft subcontracts
 - June-August 2021-Reclamation works with CAWCD and Subcontractors to finalize subcontracts
 - August-September 2021-Reclamation Review
 - Environmental Review
 - Policy Review
 - Legal Sufficiency Review
 - September 2021
 - Reclamation offers final subcontracts for signature by CAWCD and Subcontractors
 - CAWCD and Subcontractors return signed documents with resolution authorizing signatures
 - Regional Director executes final signed Subcontracts
 - Questions regarding Reclamation Process
 - Contact Jim Beadnell, Dept. of Interior, Bureau of Reclamation, Phoenix Area Office, Contracts and Repayment Specialist
 - 623-773-6242, jbeadnell@usbr.gov

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NIA REALLOCATION BRIEFING | MARCH 2, 2021



Contracting Steps

- Subcontractor Process
 - Approval by governing bodies (if required)
 - Judicial Validation
 - Pursuant to A.R.S. §§ 48-3731 through 48-3734
 1. File petition with Superior Court
 2. Summons must be published for 4 consecutive weeks in a newspaper published or of general circulation in the county where the petitioner is located
 3. Court to set hearing not less than 60 days following filing of petition
 - Subcontracts are not binding or enforceable until final decree of validation

Key Provisions

- *Term of Subcontract*
 - Effective upon: 1) judicial validation and 2) provision for payment of back capital charges and “9(d)” debt charges
 - Permanent service with an initial 100-year term
- *Conditions Relating to Delivery and Use*
 - General prohibition on lease, sale, transfer or exchange of Project Water entitlements
 - Exchanges permissible with appropriate agreements approved by United States and CAWCD
 - Provisions for “turn-back” water (scheduled water that subcontractor ultimately cannot use)
- *Water Ordering/Scheduling Procedures*
 - Water orders and proposed schedules due October 1 of each year

Key Provisions

- *Priority in Case of Shortage*
 - NIA Priority water is Project Water remaining after all requests for CAP Indian Priority and CAP M&I Priority water have been satisfied.
 - If there is insufficient Project Water to meet all contracts and subcontracts for NIA Priority Water, then the water in the NIA Priority Pool is distributed pro-rata based on the quantity of CAP NIA Priority Water used by each Contractor or Subcontractor in the last year in which the available CAP supply was sufficient to fill all orders for NIA Priority Water.
- *Water Quality*
 - Neither the United States nor CAWCD warrant the quality of water delivered pursuant to the subcontract

Key Provisions

- *Water Service Charges*
 - Capital charges due on full entitlement regardless of amount scheduled or available (semi-annual payments)
 - OM&R charged due on full quantity scheduled for delivery regardless of amount actually delivered (monthly payments), unless water can be remarketed

AZDCP Mitigation

- A key component of Arizona's implementation of the Drought Contingency Plan was adherence to the CAP priority system.
- CAP NIA Priority Pool experiences reductions during Tier 1 and lower shortage conditions.
- NIA Mitigation Agreement
 - 2020-2022: 100% mitigation in Tier 1 or Tier 2; 0% mitigation in Tier 3
 - 2023-2025: 75% mitigation in Tier 1; 50% mitigation in Tier 2; 0% mitigation in Tier 3
 - Wet mitigation resources available to all NIA Priority CAP water users, not just the parties to the NIA Mitigation Agreement.

Questions?

3. Financial Issues

Doug Dunlap, Finance & Accounting Manager

Financial Impacts

What are payments for the NIA allocations?

- There are 3 types of payments for the NIA allocation – each are discussed in further detail in the following sections
 - **Up-front:** There are back capital charges and a 9(d) debt payment, which may be paid upon contract execution or spread over 5 years
 - **Annual:** Current year capital charges due in Nov and May - 1st half due prior to start of year
 - **Monthly:** Water delivery charges based on scheduled deliveries

CAP Repayment Obligation

What is the relationship of capital charges and the CAP Repayment Obligation?

- The Central Arizona Water Conservation District (CAWCD) was created to contract with the United States for repayment of the “non-federal” share of CAP construction costs
- The costs related to non-federal water supply and commercial power, plus interest is the CAP Repayment Obligation, which was over \$1.6 billion
- The capital charge is one of the methods to make the federal debt payment for the costs allocated for M&I use

Up-Front: Cost Components & Methodology

What is 9(d) Debt?

- Ag subcontractors were relieved of 9(d) debt obligations to the United States.
- CAP is responsible for \$88.7 million in 9(d) debt in exchange for the 96,295 acre-feet of NIA water to be allocated for M&I use
- CAWCD is funding its 9(d) debt obligation by attaching a 9(d) debt service price component to each acre-foot of reallocated NIA water.
- 9(d) debt payments begin in 2026 and go through 2047

How much is the 9(d) Debt payment?

- \$665/acre-foot for this allocation
- Based on timing of reallocation, amount increases
- Deposited into a sinking fund and accrues interest

Up-Front: Cost Components & Methodology

What are Back Capital charges?

- All long-term contracts are responsible for the portion of the repayment that the settlement allocated for M&I use
- The back capital charge is the sum of capital charges with interest that have been assessed since CAP began collecting capital charges in 1993
- When contracts are initially allocated for M&I use, the back capital charge is assessed
- The back capital charge is \$1,335/acre-foot

Annual: Capital Charges

Who pays capital charges?

- Subcontracts for M&I use
- The capital charge is paid on full entitlement regardless of amount available, ordered or delivered
- 2022 capital charge is currently \$50/acre-foot per year

How are capital charges calculated?

- Apply credits available from the Basin Development Fund
- Apply taxes the CAWCD Board has authorized for repayment
- Divide balance by the estimated allocation base to calculate a per acre-foot cost

Monthly: Water Delivery Charges

3 components: Fixed Operations & Maintenance (O&M), “Big R” and Energy

What is the Fixed O&M charge?

- Fixed O&M are the annual costs to operate and maintain the CAP
- Most are fixed in nature and do not vary based on delivery volume
- Rate is collected on all ordered water whether delivered or not

What is the “Big R” charge?

- Funds capital improvement programs, capital equipment, extraordinary maintenance projects and debt service on CAP’s transmission bonds
- Model is designed to smooth the rate to recover costs over several years rather than 100% each year to prevent year-to-year ‘swings’
- Rate is collected on all ordered water whether delivered or not

Monthly: Water Delivery Charges

What is the energy charge?

- Energy is the cost of the energy to deliver CAP water
- It is variable, meaning if deliveries reduce, the total energy cost decreases, but the per unit cost does not change
- Energy is only charged on actual deliveries

What if there are differences between my schedules and actual deliveries, or between the billed and actual rates?

- Annual reconciliations are done after the end of the year and differences are invoiced or refunded, as appropriate

Rate Planning Schedule

| | |
|-------|--|
| April | Preliminary rates are posted and Finance, Audit and Power Committee discuss and recommend preliminary rates to the CAWCD Board |
| May | Board approves Preliminary Rates and, if necessary, may request the Finance, Audit and Power Committee to further review and/or revise the Preliminary Rates |
| June | CAWCD Board approves Final Rates |

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Water Rate Schedule

RATE COMPONENTS

Units = \$/acre-foot

| | 2020 | Firm 2021 | Provi - sional 2022 | Advisory | | | |
|---|-------|--------------|---------------------------|----------|--------|--------|--------|
| | | | | 2023 | 2024 | 2025 | 2026 |
| <u>Capital Charges</u> | | | | | | | |
| (A) Municipal and Industrial - Long Term Subcontract ³ | \$ 56 | \$ 53 | \$ 50 | \$ 69 | \$ 70 | \$ 68 | \$ 66 |
| <u>Delivery Charges</u> | | | | | | | |
| Fixed O&M ⁴ | 75 | 78 | 80 | 82 | 89 | 95 | 96 |
| Big "R" ⁴ | 24 | 26 | 29 | 32 | 32 | 32 | 32 |
| (B) Fixed OM&R ⁴ | \$ 99 | \$ 104 | \$ 109 | \$ 114 | \$ 121 | \$ 127 | \$ 128 |
| (C) Pumping Energy Rate ⁵ | \$ 56 | \$ 56 | \$ 56 | \$ 57 | \$ 61 | \$ 61 | \$ 63 |

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Questions?

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4. Scheduling & Operations

Marcus Shapiro, Water Systems Supervisor

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Scheduling & Operations

- Annual Orders/Schedule Requests
- Yearly Invoicing Schedule
- Daily Scheduling & Operations
- Water Accounting
- Schedule Change Requests
- Contact Us

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Annual Orders/Schedule Requests

| | |
|-----------|---|
| June | CAWCD Board approves water rates |
| October 1 | Water schedule delivery requests for following year due with preliminary estimates for succeeding 2 years |
| November | CAP confirms water delivery schedule and sends invoice for January deliveries with copy of the annual schedule for customer records |

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Yearly Invoicing Schedule

Most invoices have 30-day term.

| Month | Water Delivery Invoice Sent | Water Delivery Payment Due | Notes |
|-------|-----------------------------|----------------------------|---|
| Jan | Nov | Dec | |
| Feb | Dec | Jan | Prior year delivery reconciliation provided and applied |
| Mar | Jan | Feb | |
| Apr | Feb | Mar | Capital charges invoiced Rate reconciliation |
| May | Mar | Apr | Capital charges due |
| Jun | Apr | May | Late fees for capital charges on Jun 1 |
| Jul | May | Jun | |
| Aug | Jun | Jul | |
| Sep | Jul | Aug | |
| Oct | Aug | Sep | Capital charges invoiced |
| Nov | Sep | Oct | Capital charges due |
| Dec | Oct | Nov | Late fees for capital charges on Dec 1 |

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Daily Scheduling & Operations

- **Before 9 am** – delivery point operators call CAP Control Center with flow changes for the next day
 - 623-869-2562 (Senior water control dispatcher)
 - Request should include flow in CFS with date/time that change will take effect
 - Limit of two changes in 24 hour period
- **Emergencies**
 - Give CAP two hours notice (when possible) for flow reductions due to weather conditions
 - Provide notice ASAP for immediate gate closure due to damage or threat of damage to a user's system

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Water Accounting

- Monthly process



- Reports

<https://www.cap-az.com/departments/water-operations/deliveries>

Schedule Change Requests

- 1) **Redirect** – move water from one delivery point to another delivery point

- Any partners must also submit corresponding schedule change requests

- 2) **Remarket** – transfers financial responsibility

- Hand-in-hand
- Request to CAWCD

Administrative Contacts



Candi Cox
Water Control
623-869-2573
wateradmin@cap-az.com

- Annual water order/schedule request
- Monthly water accounting and reports
- Questions



Tina Brown
Finance
623-869-2149
tbrown@cap-az.com

- Invoices/payments

Operations Contacts

623-869-2562
Senior Water Control
Dispatchers



623-869-2530
Water Control Dispatchers

24-hr Toll Free
800-847-2303



Questions?

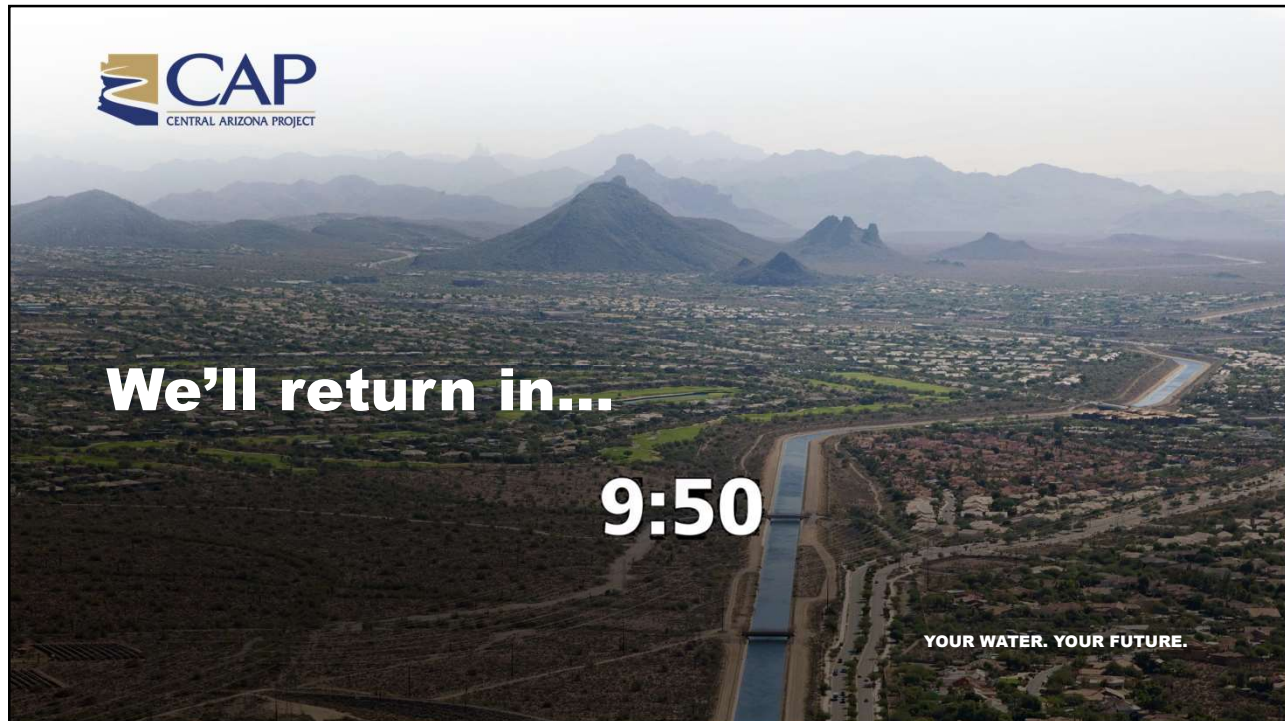
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5. Break

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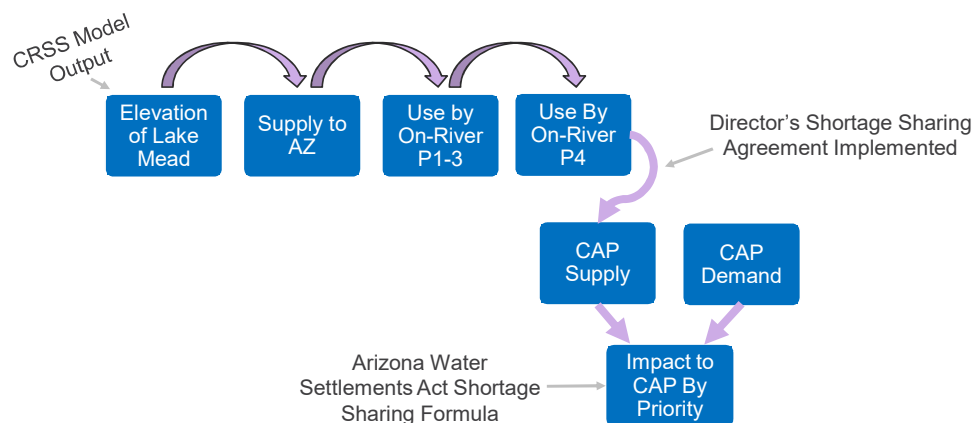
6. Future Supply Availability

Ken Seasholes, Resource Planning & Analysis Manager

Disclaimers

- The future availability of CAP NIA priority supplies is affected by a number of factors, each of which has considerable uncertainty
 - There is no single metric that can capture that full range of uncertainty
 - Scenarios can provide some insight, but they are not forecasts
 - *Caveat Emptor!*
- Data presented here are for **NON-REGULATORY** purposes
 - ADWR has sole authority to make determinations in the context of the Assured Water Supply program

Steps for Determining the NIA Supply



Modeling Assumptions

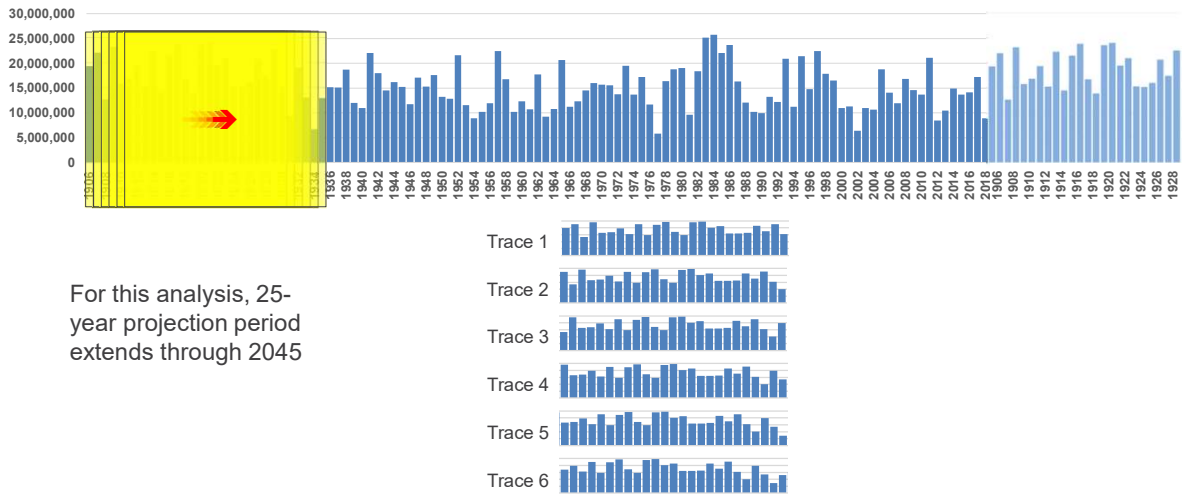
| Assumption | Initial Scenario | Alternatives | Comment |
|--------------------------|---|---|---|
| CRSS Model | August 2020 model, initialized to projected Jan 1 st 2021 | | |
| Input Hydrology | Observed Record | Stress Test | 1906-2018; 1988-2018 |
| Operating Rules | 2007 Guidelines w/DCP and Minute 323 extended | | |
| Upper Basin | "As-Is" Depletions | 15% reduction from As-Is | 2007 UCRC |
| P1-3 Demands | 0.1% annual growth | 0.5% annual growth | Starting w/10-year average |
| P4 On-River Demands | 1% growth in municipal; flat Ag use | | Starting w/5-year average |
| P4 Shortage Sharing | ADWR Director's Recommendation | | Reductions at pool level |
| CAP Buildup Schedule | Full use by 2040; Current reallocation in 2022; additional reallocations in phases (2022 to 2035) with ramp-ups | | Hohokam NIA converts to M&I in 2044 |
| Shortage Demand Response | None | Water ordered for LTSCs and Muni reduced based on Tiers | 0% at Tier 0; -25% LTSC and -10% Muni at Tier 3 |

Modeling Assumptions

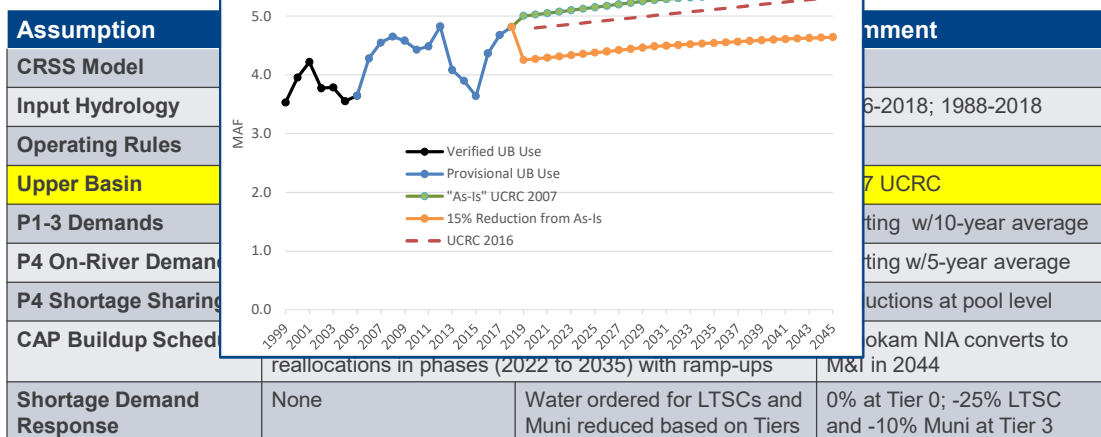
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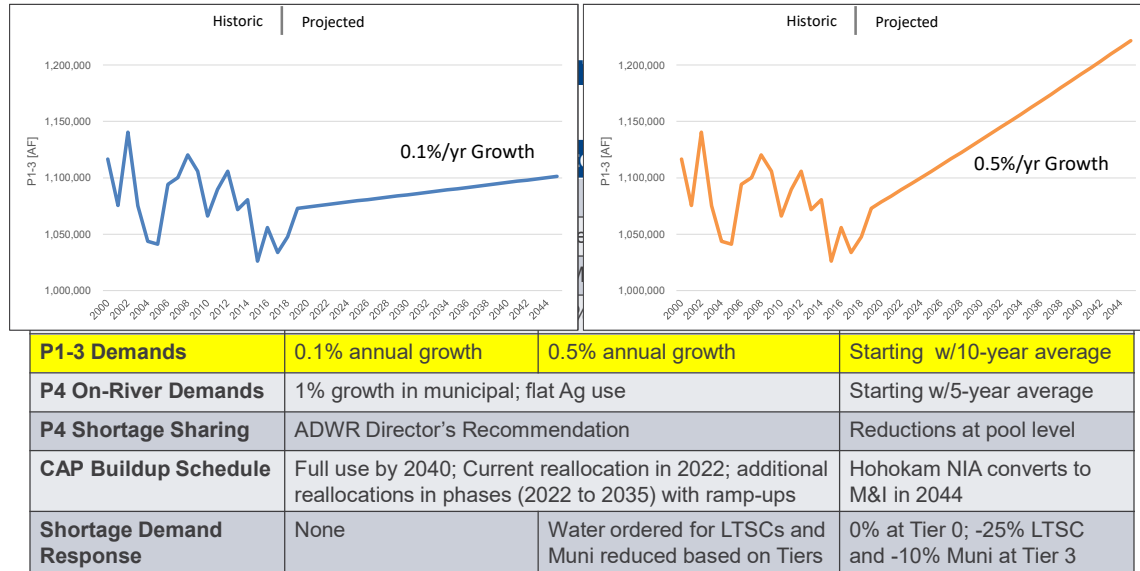
Modeling Assumptions

Input Hydrology



Modeling

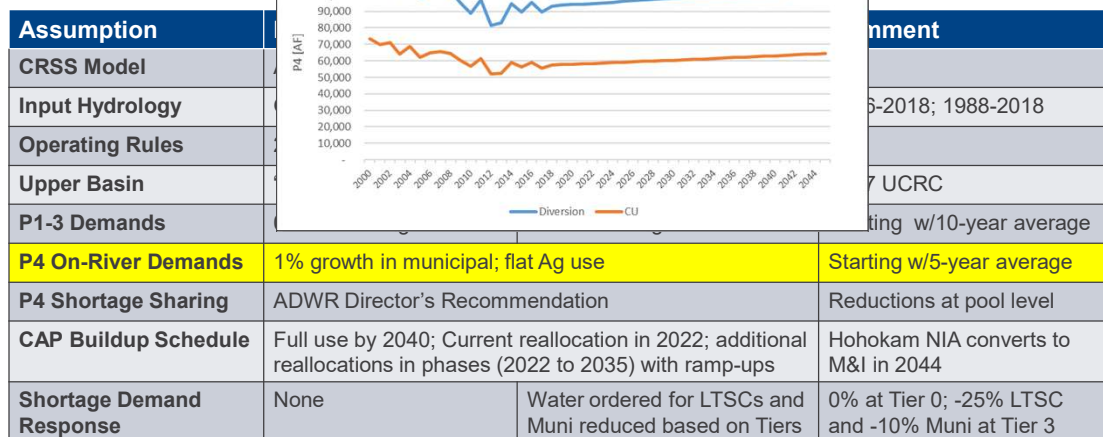




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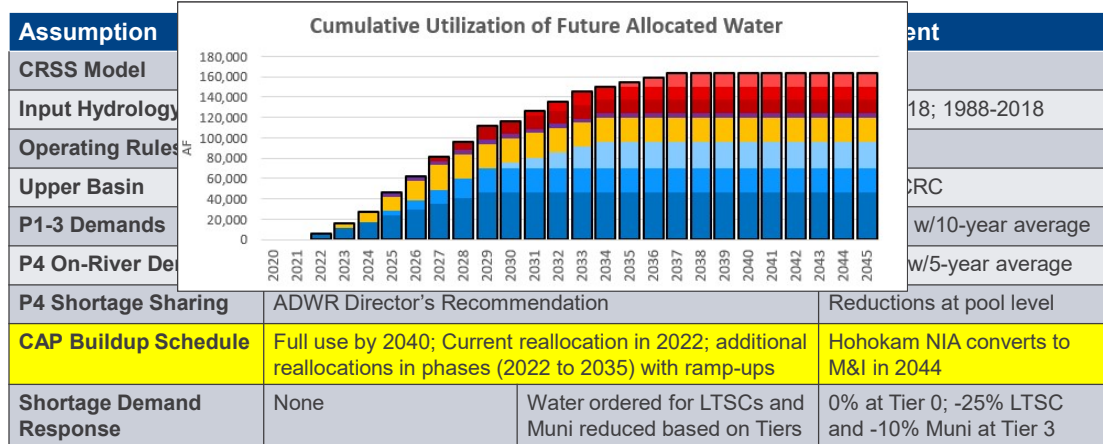
Modeling



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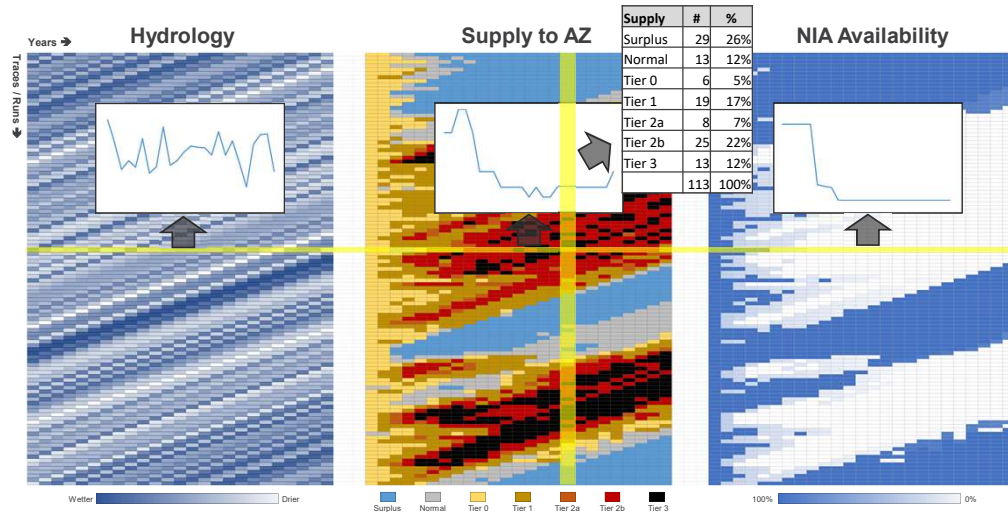


Modeling Assumptions



Analysis Results

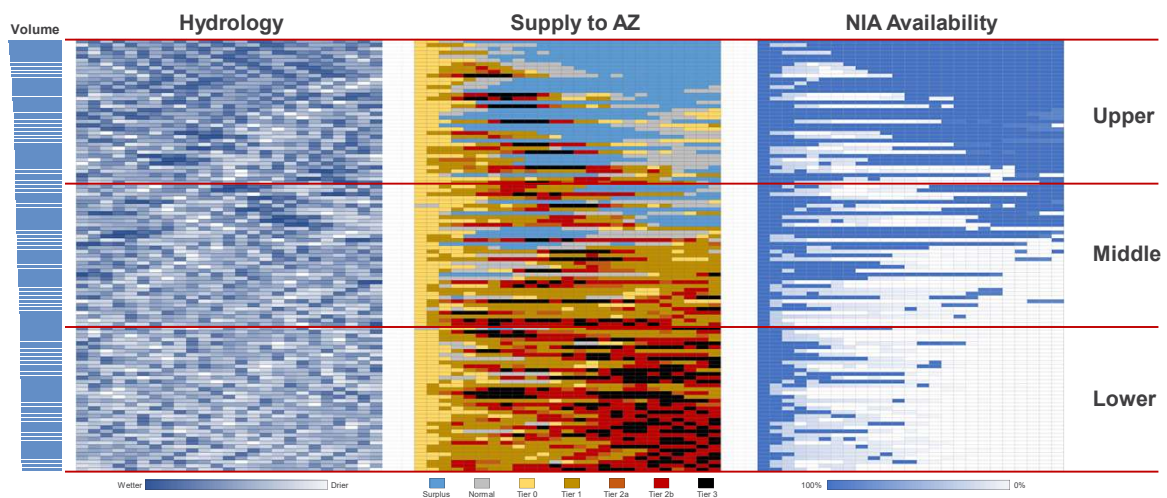
Initial Scenario Results



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Initial Scenario Results Sorted by Net Runoff*



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*Calendar Year Natural Flows At Gage Below Hoover Dam (09421500); Includes Intervening Flows



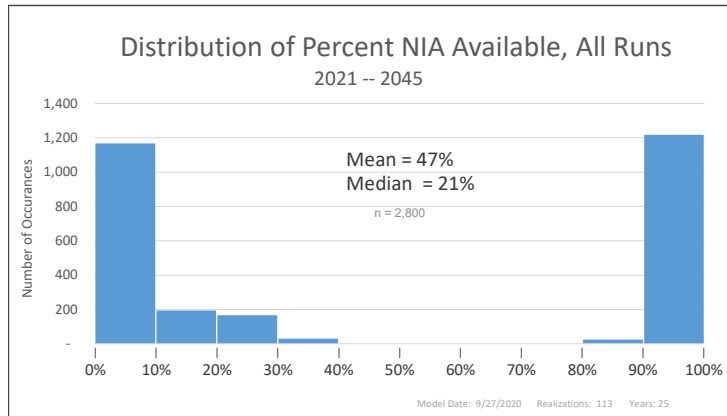
Initial Scenario Results

- The priority of NIA, and the reductions relative to pool size, result in a bimodal distribution

- Available | Not Available

- Assumptions:

- DNF, 113 traces
- "As-Is" UB demands
- 0.1% P1-3 growth
- 1% P4 muni growth
- Full CAP L-T contract use by 2045



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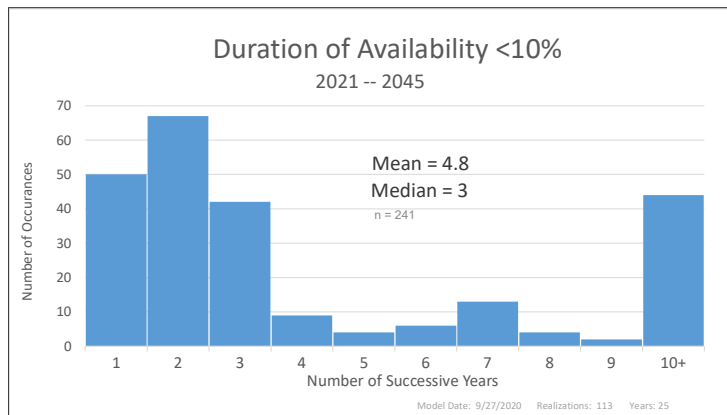


Initial Scenario Results

- Periods of little or no NIA supply generally last a few years, but sometimes much longer

- Assumptions:

- DNF, 113 traces
- "As-Is" UB demands
- 0.1% P1-3 growth
- 1% P4 muni growth
- Full CAP L-T contract use by 2045

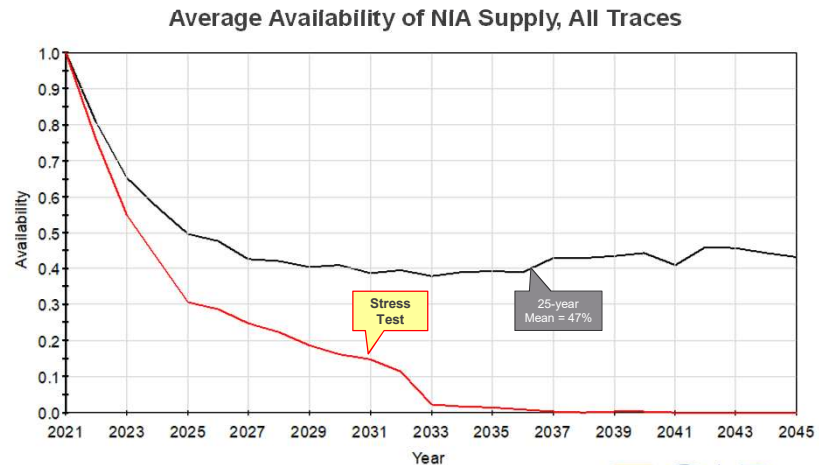


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Initial Scenario Results

- NIA availability generally decreases through time, in part due to reallocations
 - Larger pool = larger percent impact
- Assumptions:
 - DNF, 113 traces
 - "As-Is" UB demands
 - 0.1% P1-3 growth
 - 1% P4 muni growth
 - Full CAP L-T contract use by 2045

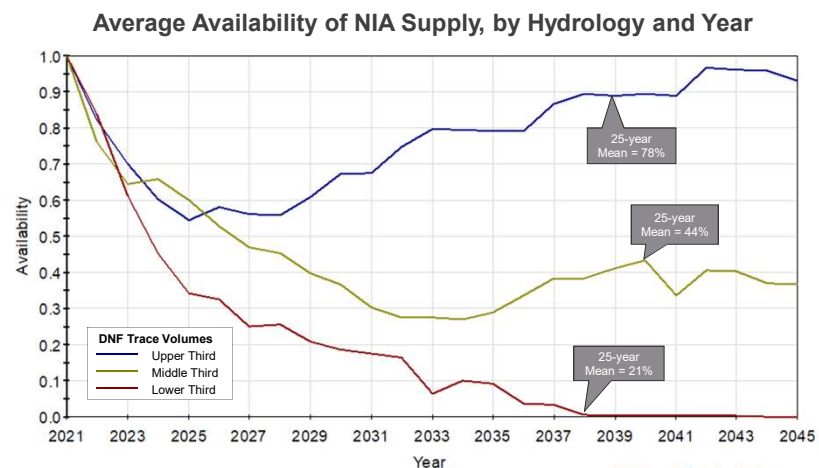


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Initial Scenario Results

- NIA availability is highly affected by the hydrologic conditions in the Colorado River Basin
- Assumptions:
 - DNF, 113 traces
 - "As-Is" UB demands
 - 0.1% P1-3 growth
 - 1% P4 muni growth
 - Full CAP L-T contract use by 2045

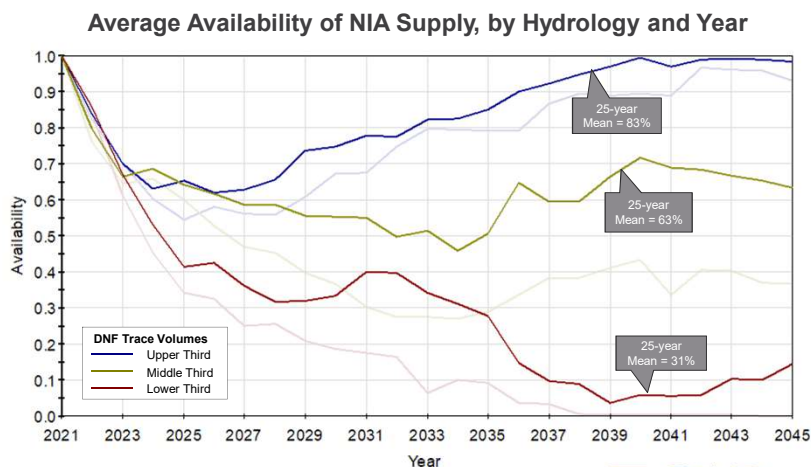


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Initial w/Lower Upper Basin Demands

- Lower projected Upper Basin depletions improve NIA reliability, particularly for the "Middle" hydrology
- Assumptions:
 - The initial scenario assumptions, but with 15% reduction in Upper Basin depletions

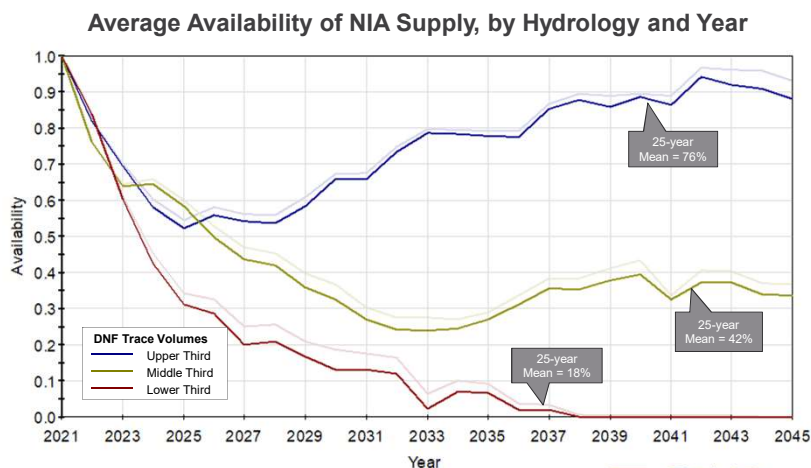


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Initial w/Higher On-River Demands

- Changes in On-River demand have a modest effect on the NIA supply
 - Higher priority CAP supplies are more affected
- Assumptions:
 - The initial scenario assumptions, but with 0.5% P1-3 growth rate

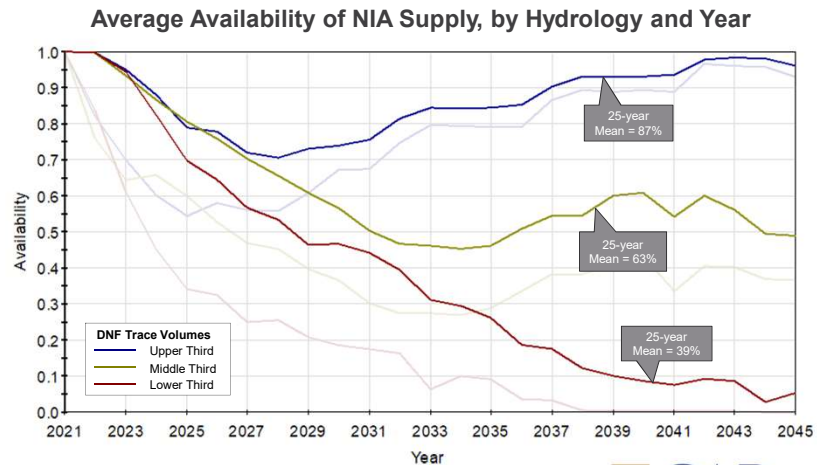


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Initial w/Shortage Demand Response

- Changes in CAP demands in response to shortage have a significant effect on NIA supply
- Assumptions:
 - The initial scenario assumptions, with progressive reduction in LTSC accrual and muni demand
 - -25% LTSC "request" and -10% Muni demand reduction at Tier 3



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Analysis Summary

| 25-Year Average Availability and Trend, Direct Natural Flows | | | | |
|--|------------|---------------------|----------------------|---------------------|
| Scenario | All Traces | Upper 1/3 Of Traces | Middle 1/3 of Traces | Lower 1/3 of Traces |
| Initial | 47% | 78% | 44% | 21% |
| Lower UB Demands | 59% | 83% | 63% | 31% |
| Higher On-River Demands | 45% | 76% | 42% | 18% |
| Demand Response | 63% | 87% | 63% | 39% |

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Questions?

Wrap-Up

- Presenters
 - Patrick Dent pdent@cap-az.com
 - Greg Adams gadams@cap-az.com
 - Doug Dunlap ddunlap@cap-az.com
 - Marcus Shapiro mshapiro@cap-az.com
- Additional point of contact:
 - Tony Staffaroni, *Stakeholder and Community Relations Manager* astaffaroni@cap-az.com