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Send Your Question To:
questions@cap-az.com

Welcome To CAP's Annual Water Users Briefing

August 23, 2023

YOUR WATER. YOUR FUTURE.

Agenda (9 am – 11 am)

Welcome – Darrin Francom

2023 Water Conservation and Rate Reconciliation Impact – Doug Dunlap

2024 Colorado River Update – Vineetha Kartha

Outlook for the 2024 CAP Delivery Supply – Don Crandall

2024 CAP Shortage, Mitigation and Conservation – Ken Seasholes

System Use Agreement / Wheeling – Ken Seasholes

--- Break ---

Water Quality/Biology Report and Plans – Scott Bryan

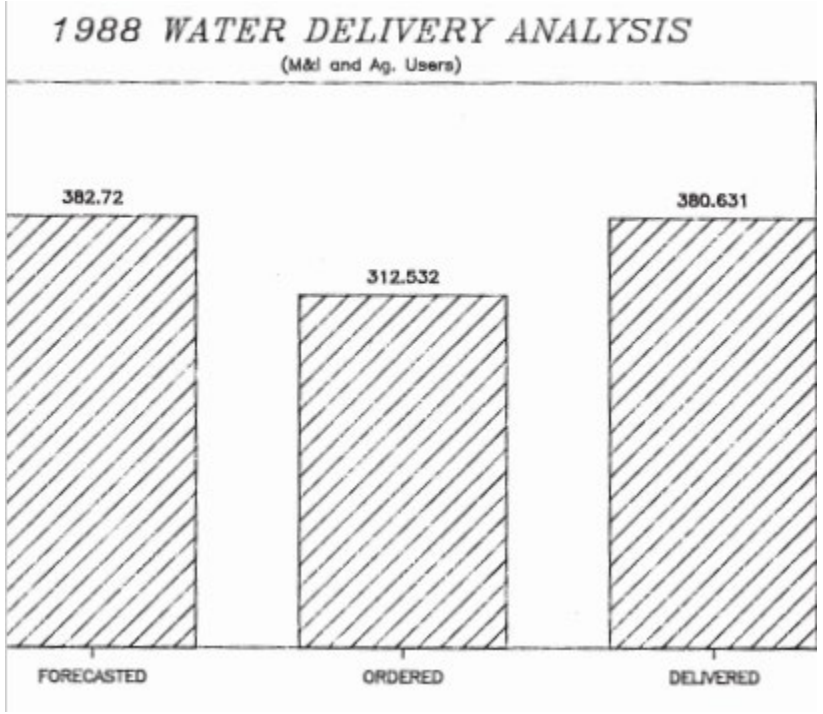
2024 Maintenance Operations – Robert Hitchcock

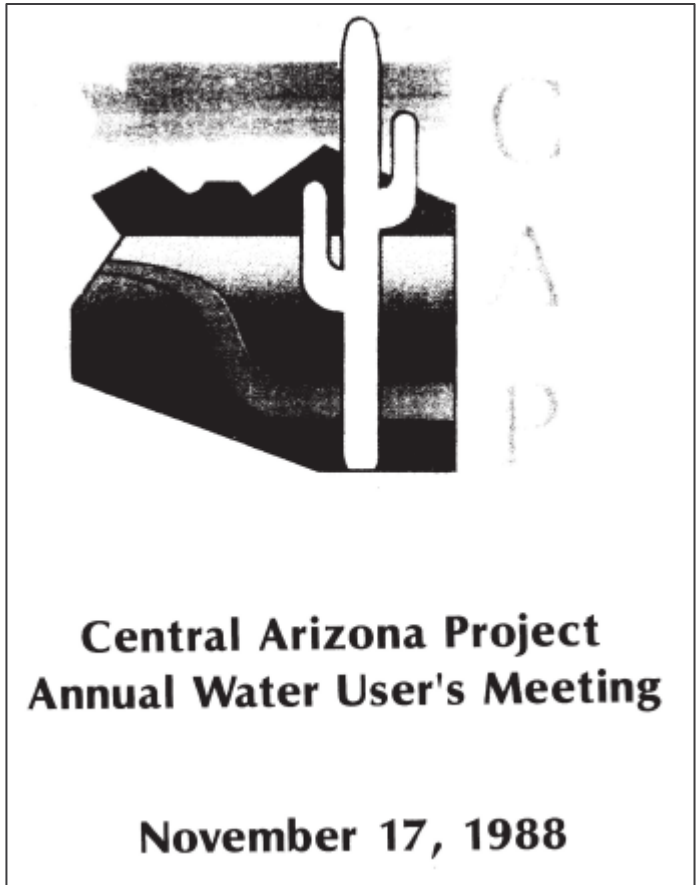
2024 Capital Improvement Program Update – Ryan Johnson

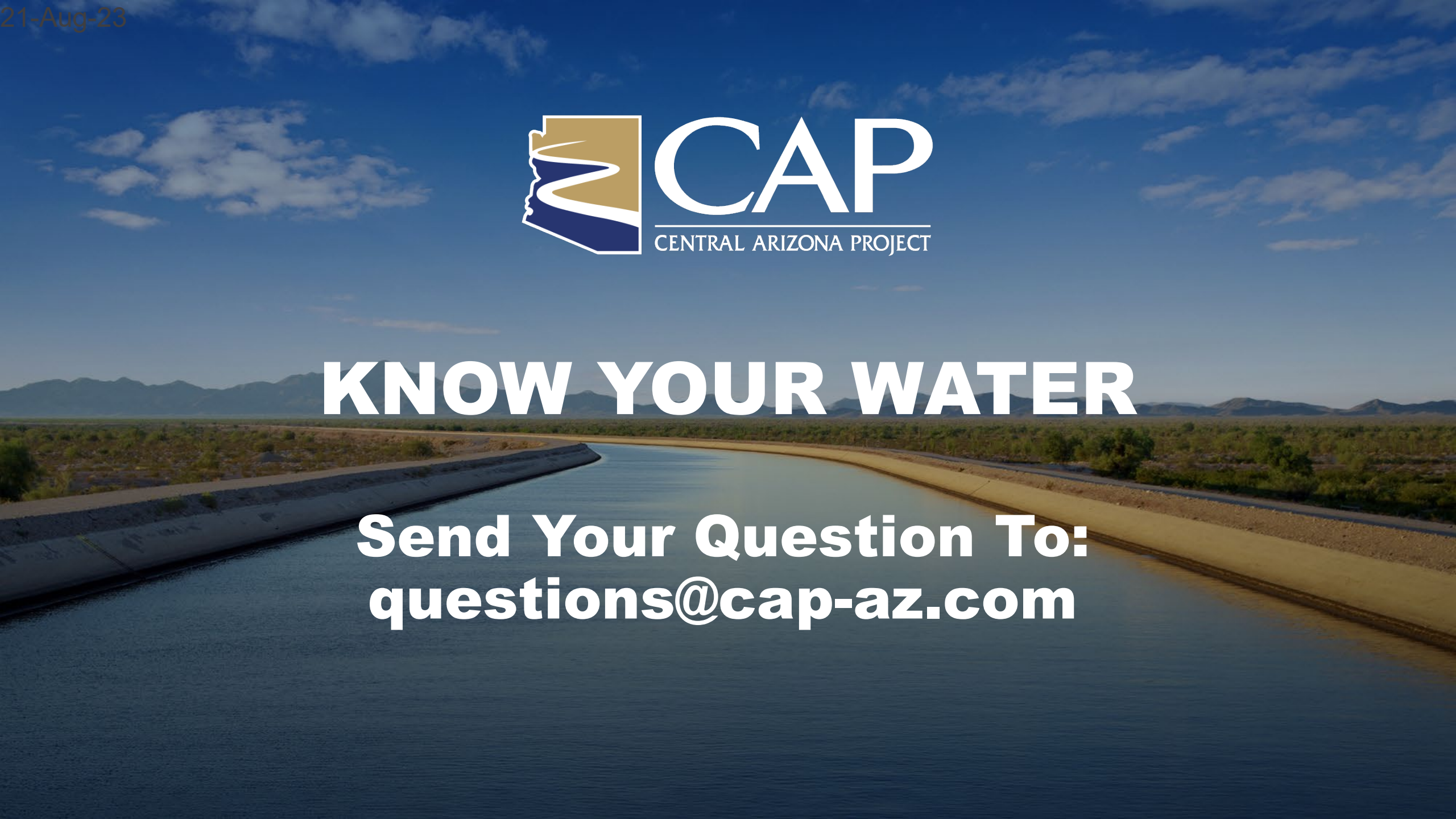
2024 CAP Energy Outlook – Jeff Ritter

History

- First Water Deliveries 1985
- First Water Users Meeting 1988
  - 382.72 AF Forecasted
  - 380.631 AF Delivered
- Intent Remains Constant
  - Communicate
  - Share
  - Inform



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2023 Water Conservation and Rate Reconciliation Impact

Doug Dunlap

ANNUAL WATERS USERS BRIEFING

August 23, 2023

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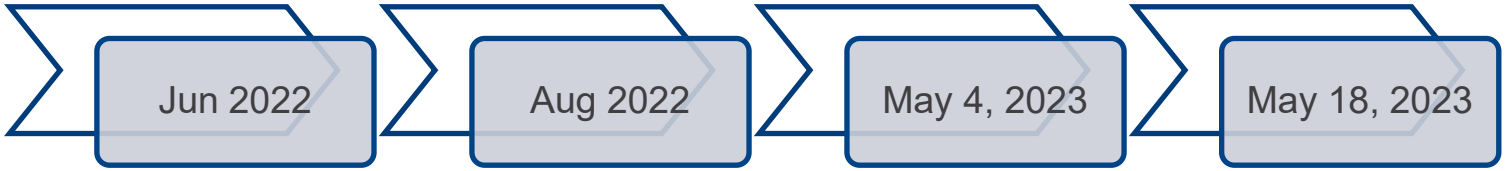
2023 Timeline



- CAWCD confirms Firm 2023 Water Delivery Rates at Tier 1
- 2023 Tier 2a Fixed OM&R rate provided as informational on rate sheets

- August 24-month study released and Tier 2a established for 2023
- CAWCD confirms 2023 billing at Tier 1 rate with notice that the $10 per acre-foot Fixed OM&R rate increase will be due at reconciliation in April 2024.

- CAWCD Board approved 183,000-186,000 acre-foot of ICS Preservation and M&I Subcontractor conservation programs
- Briefs identified a $14-$15 per acre-foot Fixed OM&R increase with both programs for the additional 90,000-93,000 acre-feet of conservation (93,000 acre-foot already incorporated into rates)

- Bureau of Reclamation issue ~100,000 acre-foot of federal contractor system conservation agreements
- Impact is approximately $16 per acre-foot to Fixed OM&R

Rate Reconciliation

Subcontract / Federal Rates

	Projection	Tier 1 Published	Variance Publ vs Proj
Water Delivery Costs (*Thousands*)			
Fixed O&M Expenses	$ 132,479	$ 127,045	$ (5,434)
Total Energy & Transmission Adjustment Expenses	55,018	76,276	21,258
Water Delivery (*Acre-Feet*)			
Total water deliveries with credits	808,664	1,003,703	195,039
Take or Pay adjustment	-	-	-
Billed Fixed OM&R Water Volume	808,664	1,003,703	195,039
Pumping Energy Rate 1 Water Volume	808,664	1,003,703	195,039
Water Delivery Rate (*$/AF*)			
Calculated Fixed O&M Rate	$ 163.83	$ 127.00	$ (36.83)
Apply 2.5 cents of 2022/23 Property taxes	(12.00)	(12.00)	-
Adjusted Fixed OM Rate	151.83	**115.00**	(36.83)
Capital Replacement Component ("Big R")	37.00	37.00	-
Total Fixed OM&R	**188.83**	**152.00**	**(36.83)**
Calculated Pumping Energy Rate	68.04	76.00	7.96
Apply 2 cents of 2022/23 Property taxes	(11.00)	(11.00)	-
Total Pumping Energy Rate 1	**57.04**	**65.00**	**7.96**
			-
Total Delivery Rate	**$ 245.87**	**$ 217.00**	**$ (28.87)**
Full Rate Stabilization	**$ (12.00)**	**$ (12.00)**	**$ -**
Net Delivery Rate	**$ 233.87**	**$ 205.00**	**$ (28.87)**

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Any Questions?
Thank You
ddunlap@cap-az.com
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Colorado River Update
August 2023

Vineetha Kartha
Colorado River Programs Manager

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Supplemental Environmental Impact Statement Update

- Draft SEIS anticipated Sep/Oct 2023
- Lower Basin States Proposal (CA- 1.6 MAF, AZ-1.15 MAF, NV – 285 KAF)

	2023	2024	2025	3-year total
Arizona*				
CAWCD-ADWR ICS Preservation Program	42K	-	-	42K
Federal Funded				
CAP Subcontractor Conservation	144K	130K	129K	400K
Tribal CAP Contractor	127k	159k	159k	444k
On-River	32k	32k	32k	83k
Total Additional Conservation	**366K**	**348K**	**345K**	**1 MAF**

* Volumes are approximate and subject to change

Post-2026 EIS Update

- Scoping letters were due August 15, 2023
- CAP's Scoping Letter emphasized certain concepts:
    - Balancing the Colorado River System
    - Compliance with Colorado River Compact
    - Implementing ICS or a similar storage mechanism
    - Review of Beneficial Use/Part 417
    - Augmentation and Exchanges
- Basin States anticipate working together to develop an alternative for Post-2026 EIS

Colorado River Basin Storage
(*as of Aug 16, 2023*)

Reservoir	Percent Full	Storage (maf)	Elevation (feet)
Lake Powell	39%	9.05	3,576.9
Lake Mead	33%	8.68	1,063
Total System Storage	44%	25.7	- - -

Total system storage was 34% of capacity, or 20 maf in storage, at this time last year.

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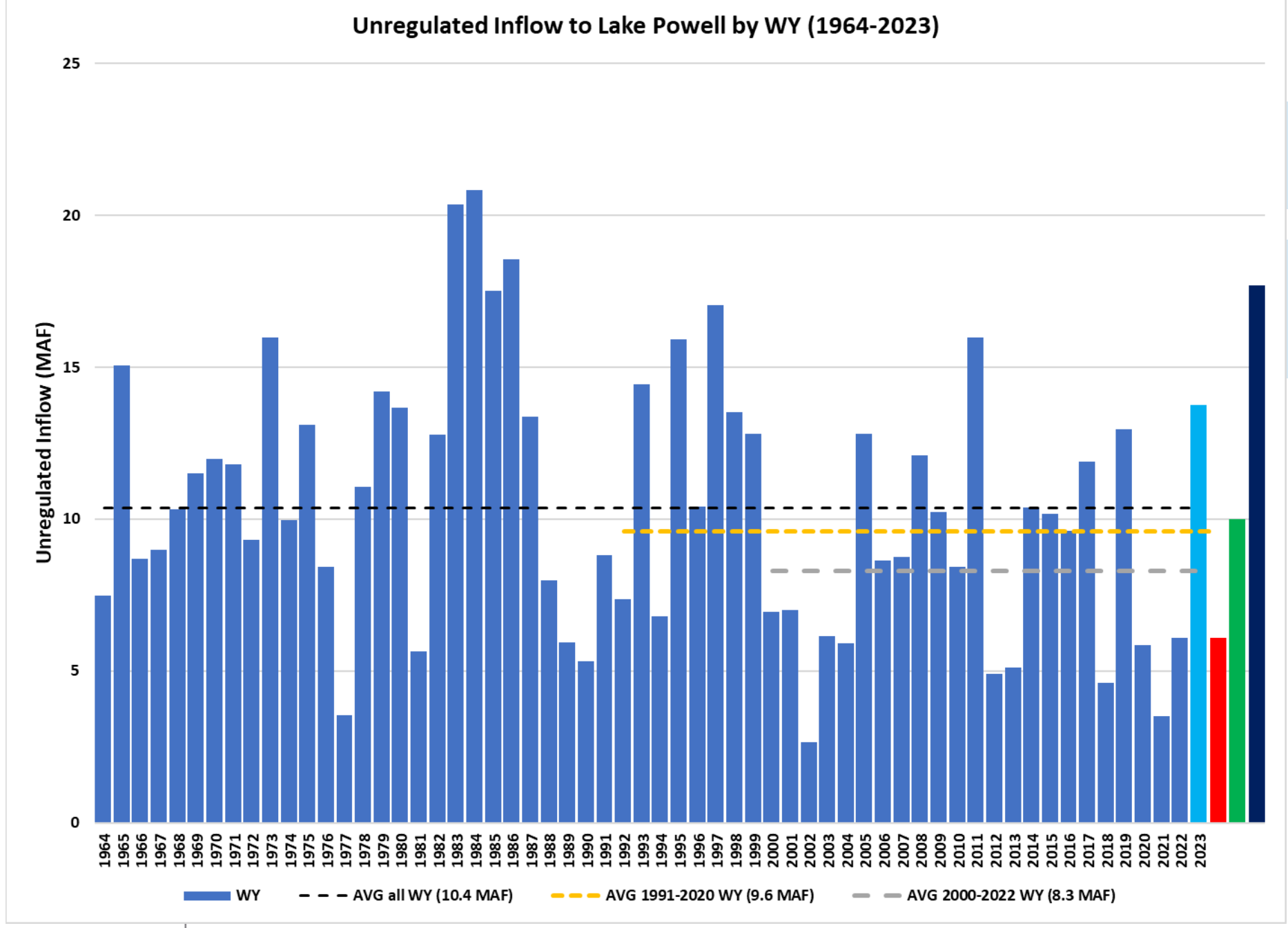

Water Year 2023[1]
August Projection -13.75 MAF (143%)

Water Year 2024 Forecast[1]
Aug Min Prob = 6.10 MAF (64%)
Aug Most Prob = 10.00 MAF (104%)
Aug Max Prob = 17.70 MAF (184%)

2023 MIN
2023 MOST
2023 MAX

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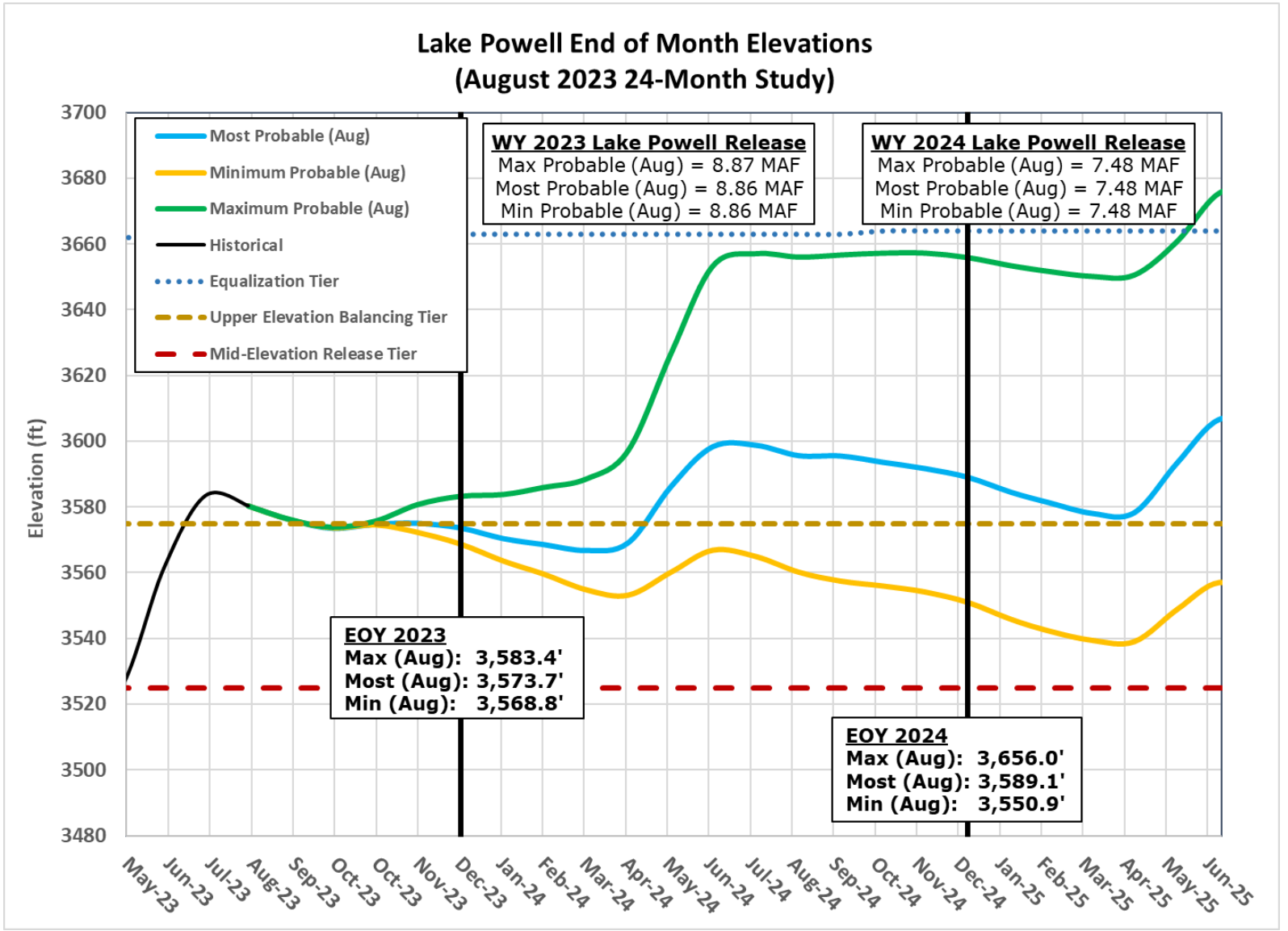
[1]*Water Year statistics are based on the 30-year period of record from 1991-2020, Average 1991-2020 – 9.60 maf*

Lake Powell August 2023 24-Month Study

- Lake Powell releases decreased to less than 9.0 MAF in WY2023, with balancing releases evaluated each remaining month of the water year
- Inflow forecast decreased by 70kaf between July and August Studies



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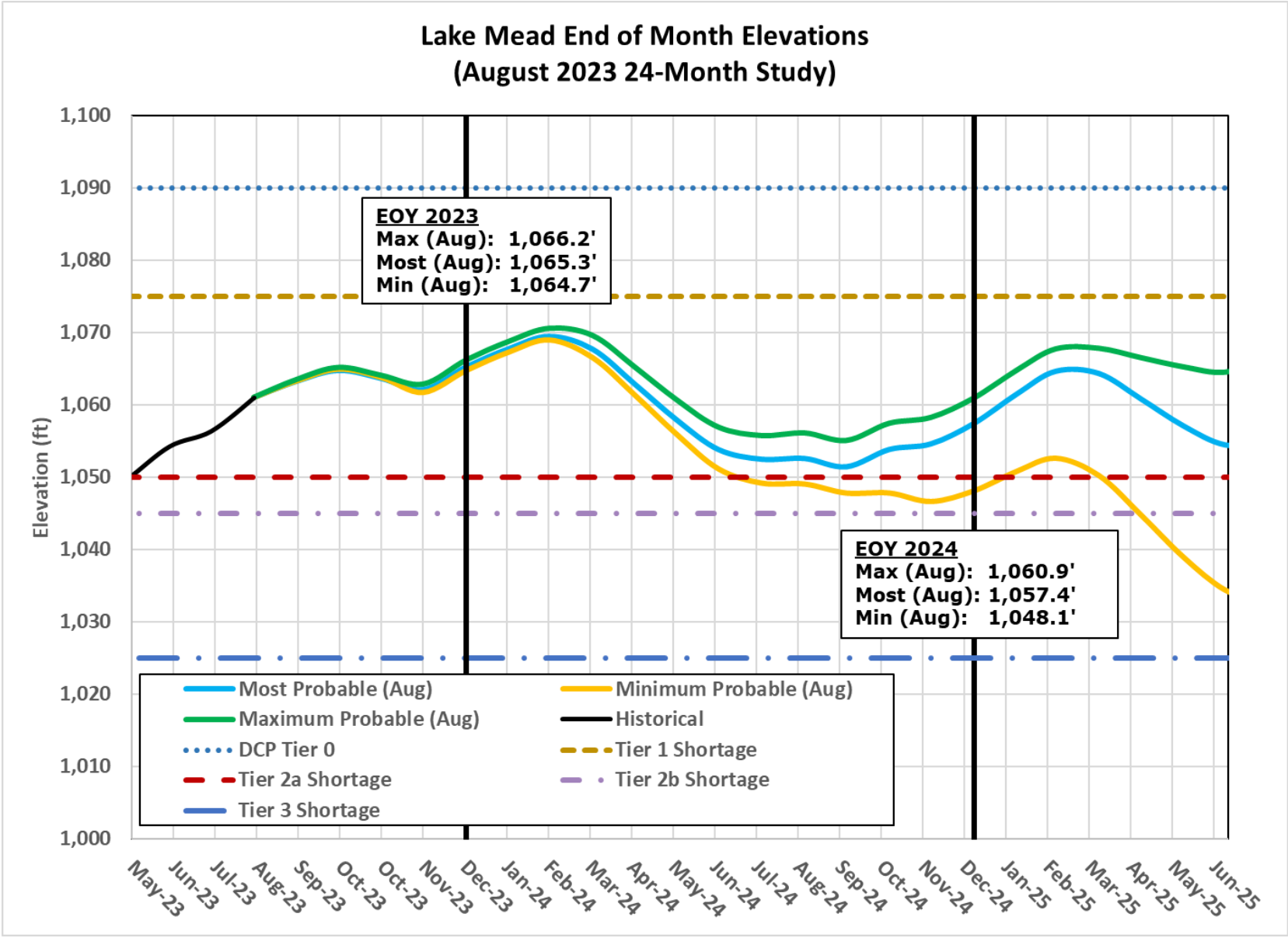
Lake Mead August 2023 24-Month Study

- Lake Mead is operating in Tier 2a shortage condition in 2023
- Lake Mead will be in Tier 1 for 2024



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2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan, and Binational Water Scarcity Contingency Plan

Total Volumes (kaf)

Lake Mead Elevation (feet msl)	2007 Interim Guidelines Shortages		Minute 323 Delivery Reductions	Total Combined Reductions	DCP Water Savings Contributions			Binational Water Scarcity Contingency Plan Savings	Combined Volumes by Country *US: (2007 Interim Guidelines Shortages + DCP Contributions)* *Mexico: (Minute 323 Delivery Reductions + Binational Water Scarcity Contingency Plan Savings)*					Total Combined Volumes
	AZ	NV	Mexico	***Lower Basin States + Mexico***	AZ	NV	CA	Mexico	*AZ Total*	*NV Total*	*CA Total*	*Lower Basin States Total*	*Mexico Total*	***Lower Basin States + Mexico***
1,090 - 1,075	0	0	0	***0***	192	8	0	41	192	8	0	*200*	*41*	***241***
1,075 - 1050	320	13	50	***383***	192	8	0	30	512	21	0	*533*	*80*	***613***
1,050 - 1,045	400	17	70	***487***	192	8	0	34	592	25	0	*617*	*104*	***721***
1,045 - 1,040	400	17	70	***487***	240	10	200	76	640	27	200	*867*	*146*	***1,013***
1,040 - 1,035	400	17	70	***487***	240	10	250	84	640	27	250	*917*	*154*	***1,071***
1,035 - 1,030	400	17	70	***487***	240	10	300	92	640	27	300	*967*	*162*	***1,129***
1,030 - 1,025	400	17	70	***487***	240	10	350	101	640	27	350	*1,017*	*171*	***1,188***
<1,025	480	20	125	***625***	240	10	350	150	720	30	350	*1,100*	*275*	***1,375***

Tier 1 → 1,075 - 1050
2024 Reductions+ Contributions

Tier 2a → 1,050 - 1,045

Tier 2b → 1,045 - 1,040

Tier 2c → 1,040 - 1,035

Tier 2d → 1,035 - 1,030

Tier 2e → 1,030 - 1,025

Tier 3 → <1,025

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Executed System Conservation Agreements

As anticipated to be modeled in the August 2023 Most Probable 24-Month Study[1]

Conservation Activity *(volumes in AF)*	2023	2024	2025	Total
CAP System Conservation Agreements	141,400	127,400	126,400	**395,200**
Fort McDowell Yavapai Nation System Conservation	13,933	13,933	13,933	**41,799**
San Carlos Apache Tribe System Conservation	23,275	0	0	**23,275**
Coachella Groundwater System Conservation	35,000	35,000	35,000	**105,000**
GRIC System Conservation	91,950	125,000	125,000	**341,950**
Cibola Valley IDD System Conservation	2,700	0	0	**2,700**
Gabrych System Conservation	3,240	3,240	3,240	**9,720**
YMIDD System Conservation (500+ Plan)[2]	13,670	0	0	**13,670**
MVIDD System Conservation (500+ Plan)[2]	12,819	0	0	**12,819**
PVID System Conservation (500+ Plan)[2]	58,400	39,800	0	**98,200**
Pilot System Conservation Program	645	545	545	**1,735**
242 Wellfield (Lower Basin DCP activity)	2,000	25,000	25,000	**52,000**
Annual Total *(Non-Shortage/DCP)*	**399,032**	**369,918**	**329,118**	**1,098,068**
Cumulative Total	**399,032**	**768,950**	**1,098,068**	

[1] Volumes reflect executed agreements and/or current operational projections and are subject to change. Additional conservation activities are being considered. After new agreements are finalized and executed, these additional activities will be included in Reclamation's operational modeling.
[2] New agreements under the LC Conservation Program are being developed.


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Outlook for the 2024
CAP Delivery Supply
Don Crandall, P.E.
Water Control Manager
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CAP Annual Operating Plan Timeline

CAP Rate Letter Schedule Request	Jul 14, 2023
August 24 Month Study	Aug, 15 2023
Annual Water Users Briefing	**Aug 23, 2023**
Water Delivery Requests	Oct 1, 2023
Final Water Schedules	Nov 15, 2023

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CAP Delivery Supply Outlook Current Assumptions

2024 Tier 1 Shortage Condition

1,664,675 AF Colorado River Supply Normal Year (TBD)

- "Available CAP Supply" determination by Reclamation

50,000 Lake Pleasant Base Supply (TBD)

Mitigation per DCP Agreements

10,000 AF SRP DCP Exchange

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Outlook for the 2024 CAP Delivery Supply

Preliminary

[2]Includes wheeled water

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Outlook for the 2024 CAP Delivery Supply

Preliminary

[1]Lake Pleasant, CAWCD ICS, and SRP Exchange

[2]Includes wheeled water

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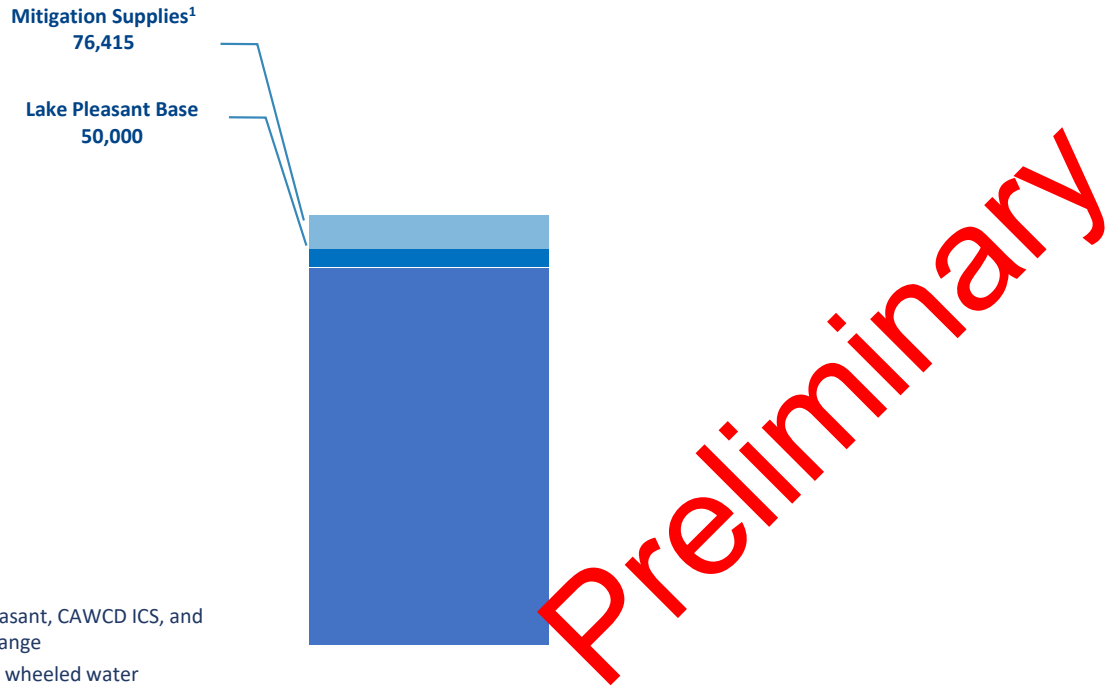
Outlook for the 2024 CAP Delivery Supply



Preliminary

[1]Lake Pleasant, CAWCD ICS, and SRP Exchange

[2]Includes wheeled water

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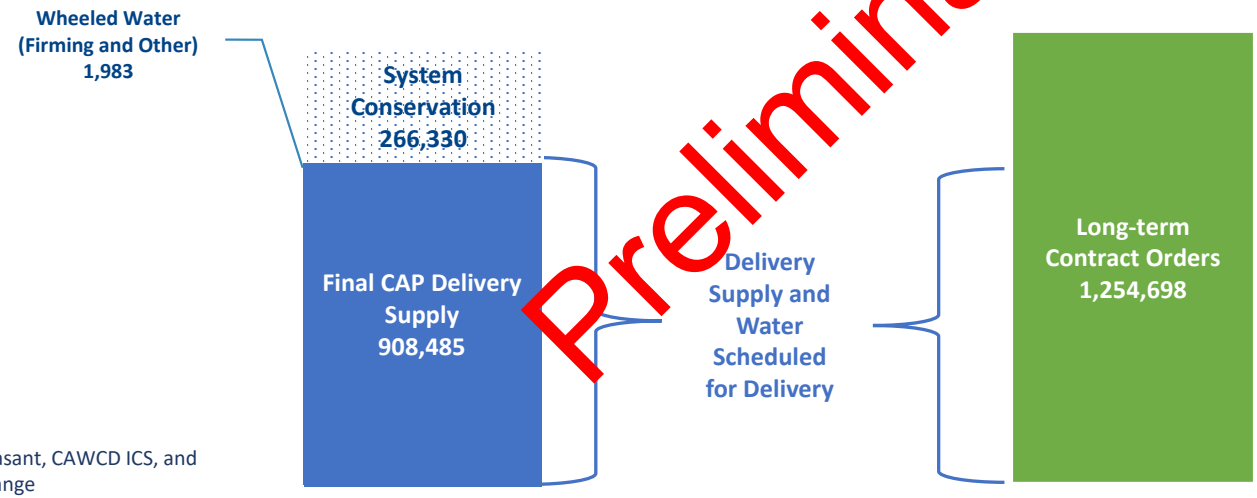
Outlook for the 2024 CAP Delivery Supply



[1]Lake Pleasant, CAWCD ICS, and SRP Exchange

[2]Includes wheeled water

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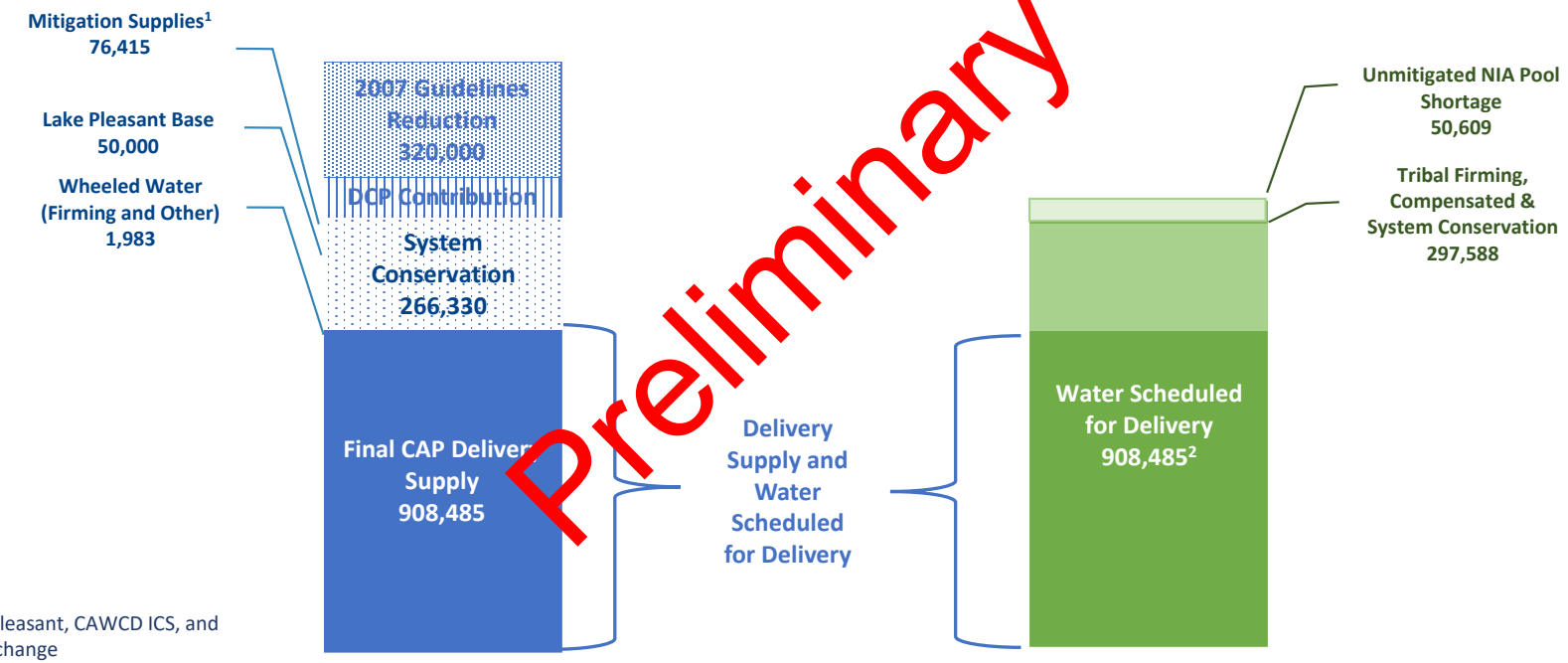
Outlook for the 2024 CAP Delivery Supply



[1]Lake Pleasant, CAWCD ICS, and SRP Exchange

[2]Includes wheeled water

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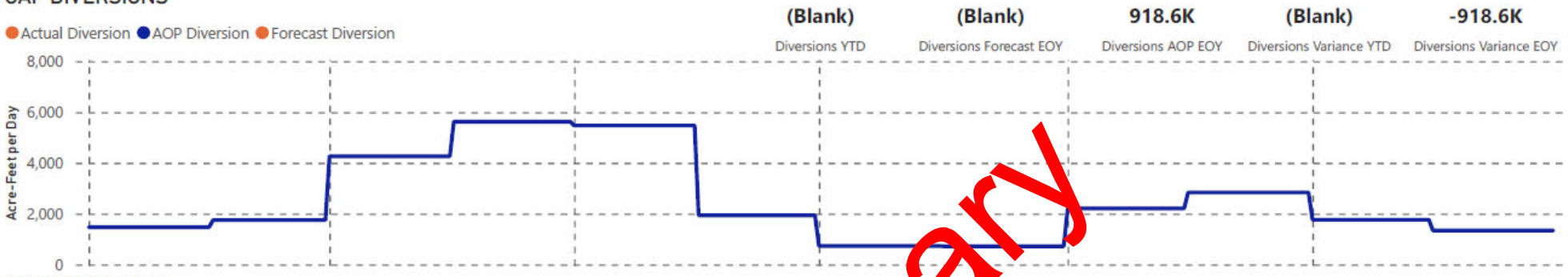
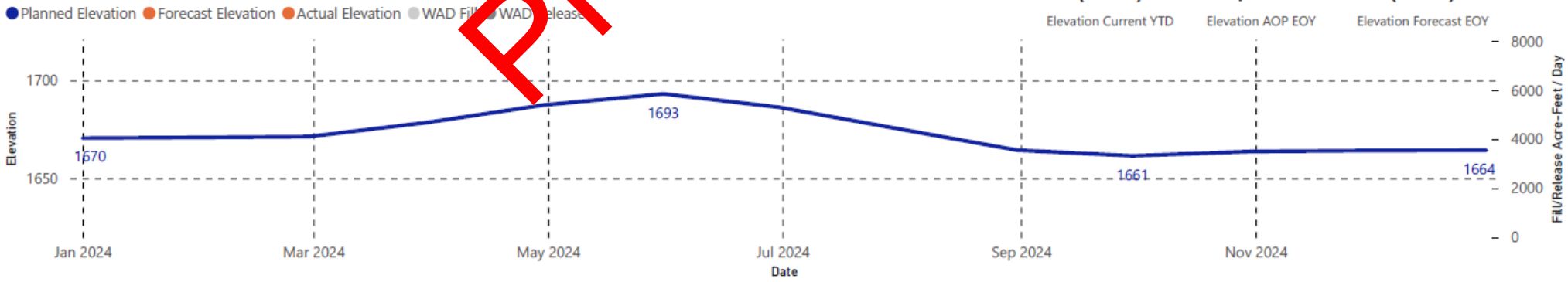
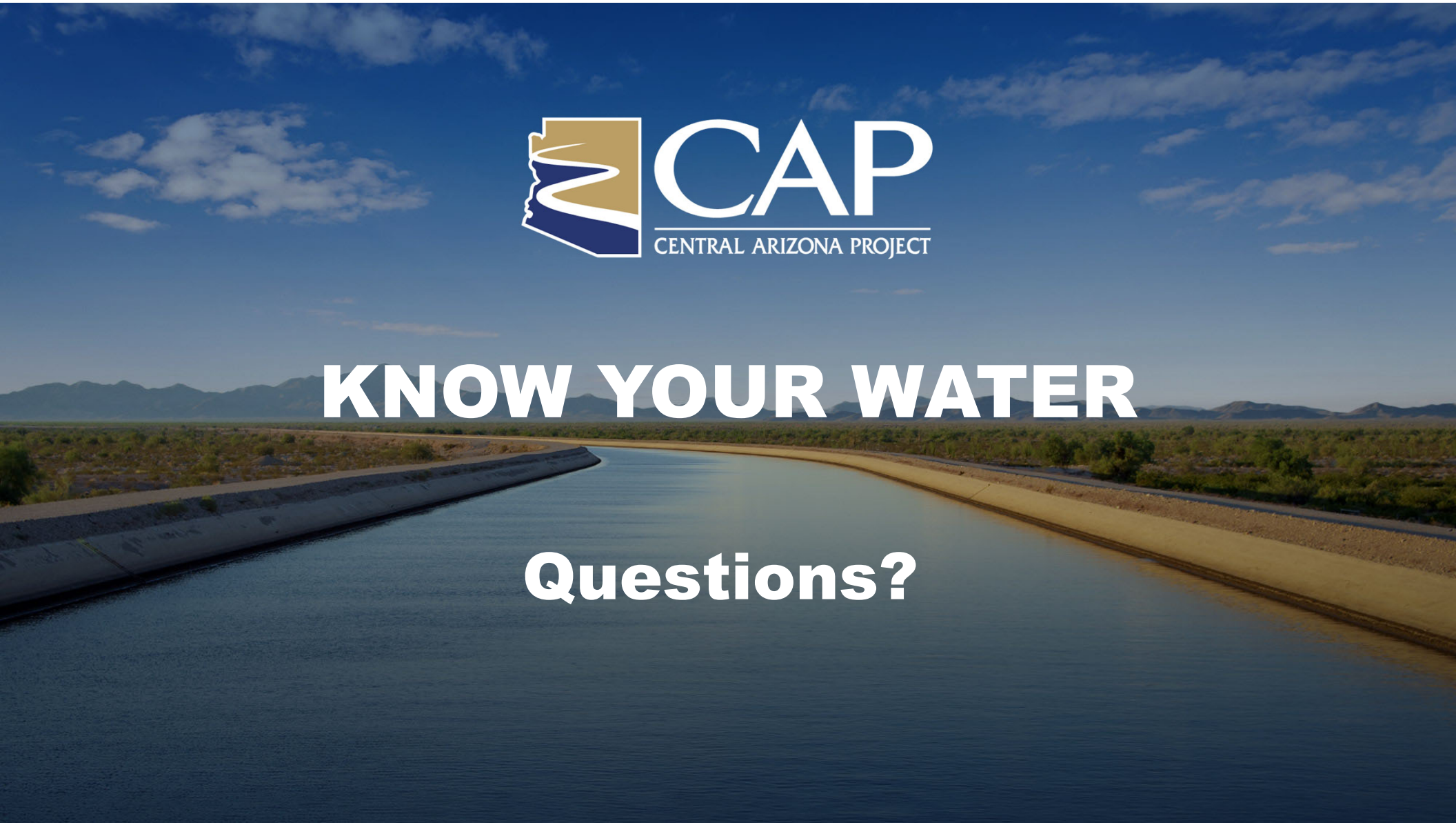
CAP DIVERSIONS



CAP DELIVERIES

LAKE PLEASANT OPERATIONS

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2024 Shortage, Mitigation and Conservation

Ken Seasholes

Manager, Resource Planning & Analysis

Annual Water Users Briefing, August 23, 2023

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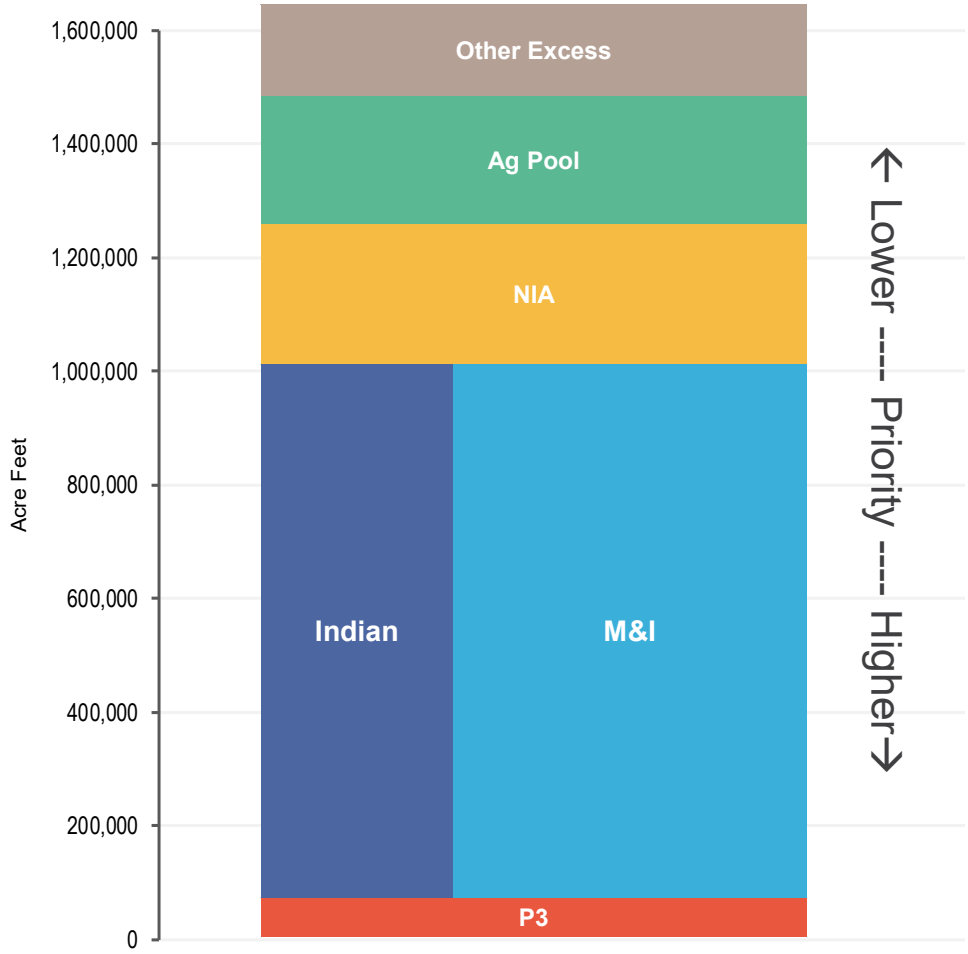
CAP Priorities – Full Supply



- "Block Chart" illustrates CAP priority
  - Higher priority entitlements are towards the bottom of the chart
- The names of the "pools" do not neatly align with uses
- Assumptions for 2024:
  - 1.64 MAF delivery supply prior to reductions
    - Includes +50 KAF Lake Pleasant release
  - Water orders similar to 2023

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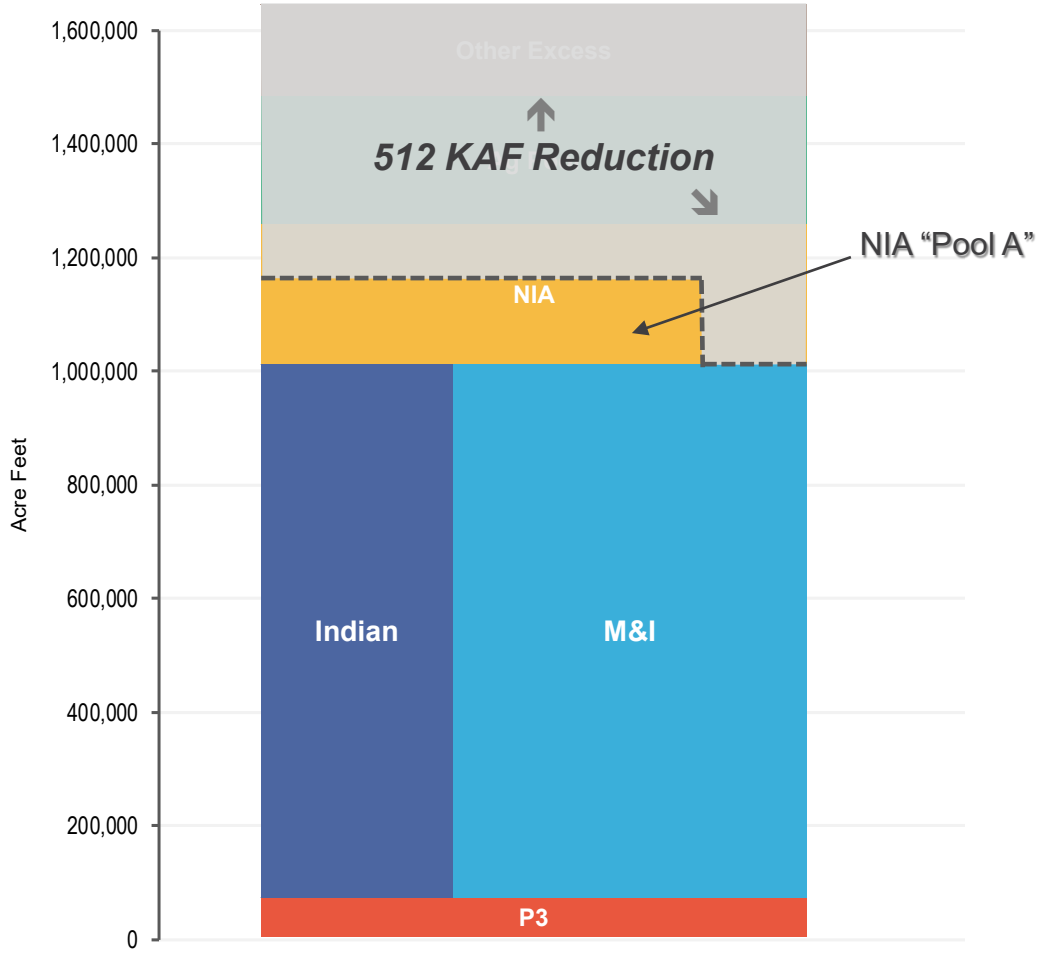
2024 Pre-Mitigation Shortage Impact



- Tier 1 reduction eliminates Excess, Including Agricultural Settlement Pool
- NIA "Pool A" is reduced by 41%
- NIA "Pool B" is reduced 100%
  - Parties that received NIA entitlements in 2021 reallocation

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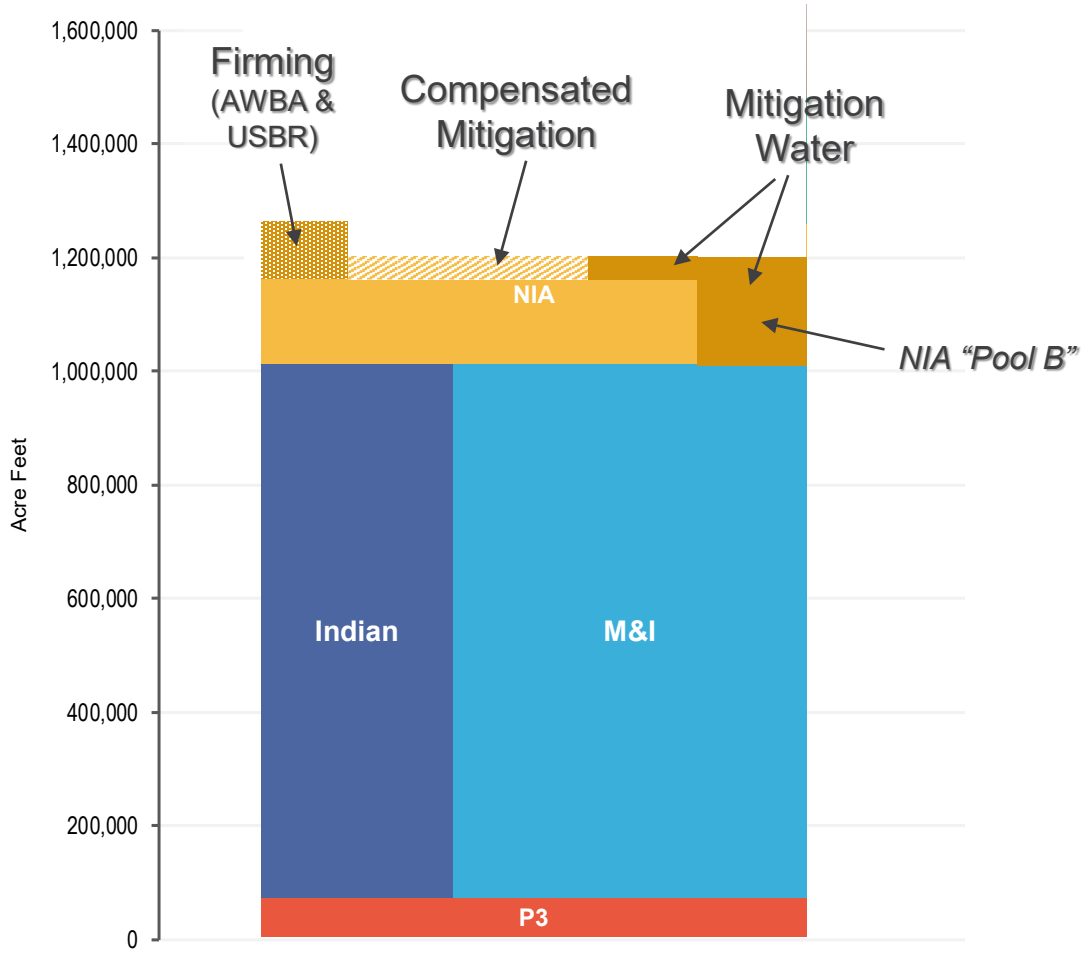
2024 Mitigation



- Under terms of AZDCP, the NIA Pool is Mitigated to 75%
- Includes a combination of credits, money and wet water
  - Release of ~30 KAF of CAWCD ICS is required

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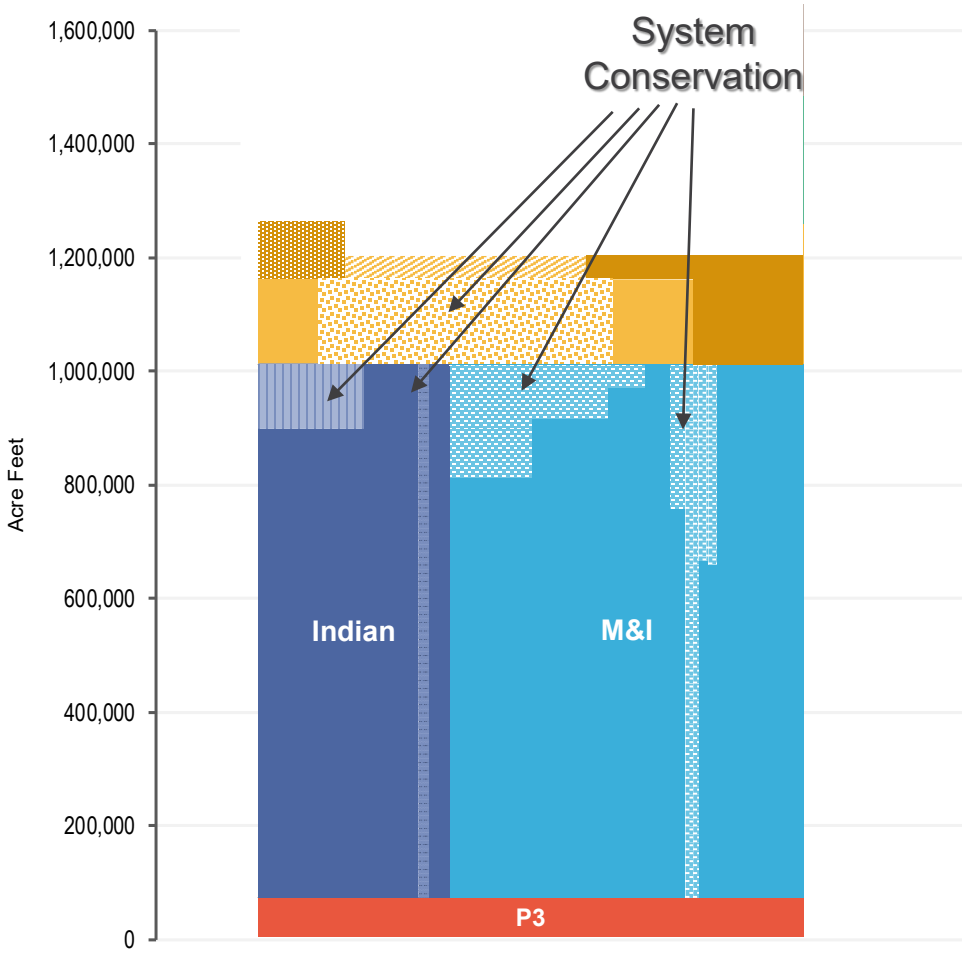
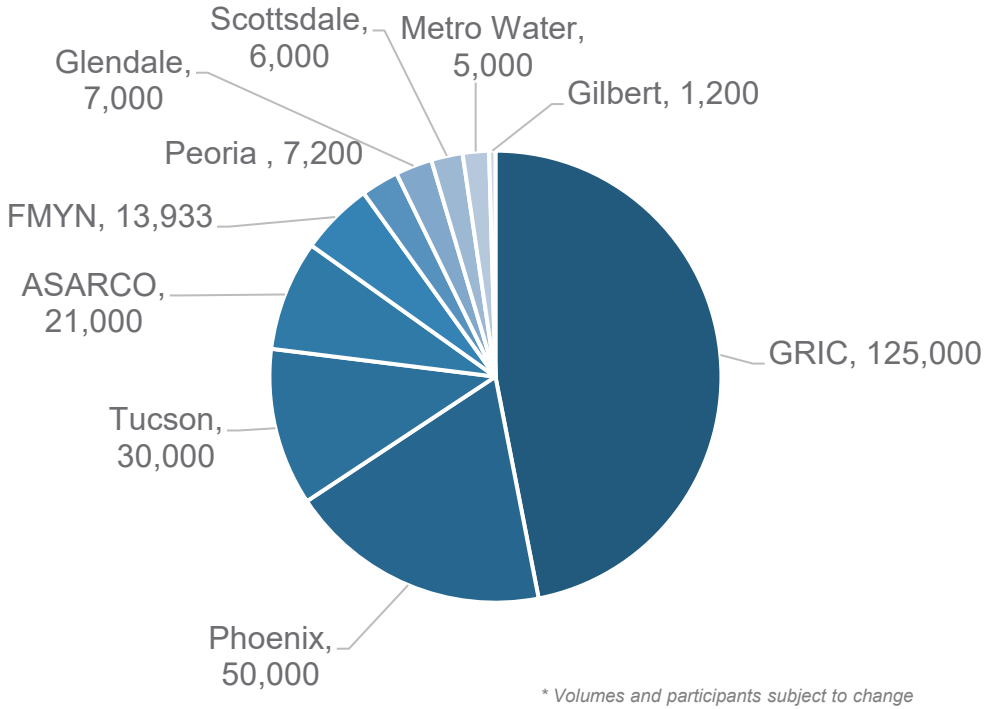
2024 Mitigation & System Conservation



Federal "Bucket 1A" System Conservation by CAP Contractors and Subcontractors*



** Volumes and participants subject to change*

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System Use Agreement / Wheeling Activities

Ken Seasholes

Manager, Resource Planning & Analysis

Annual Water Users Briefing, August 23, 2023

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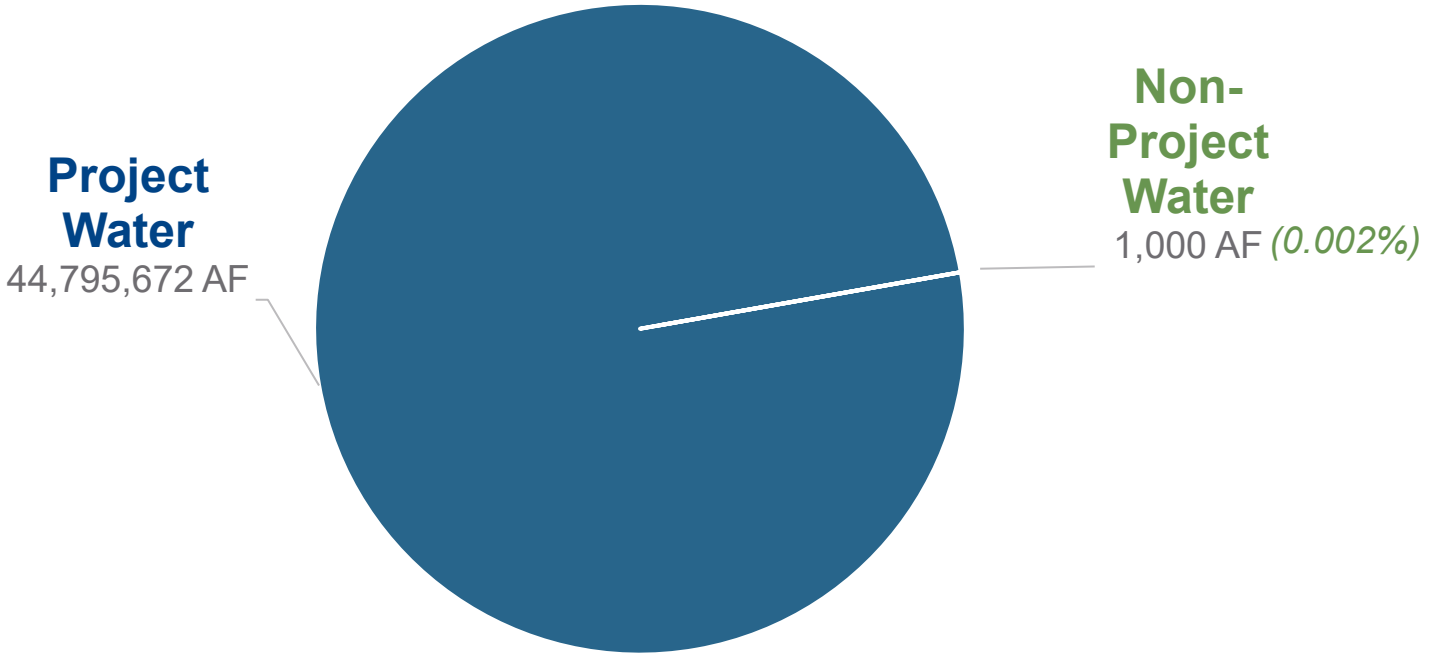
CAP Water Deliveries To Date



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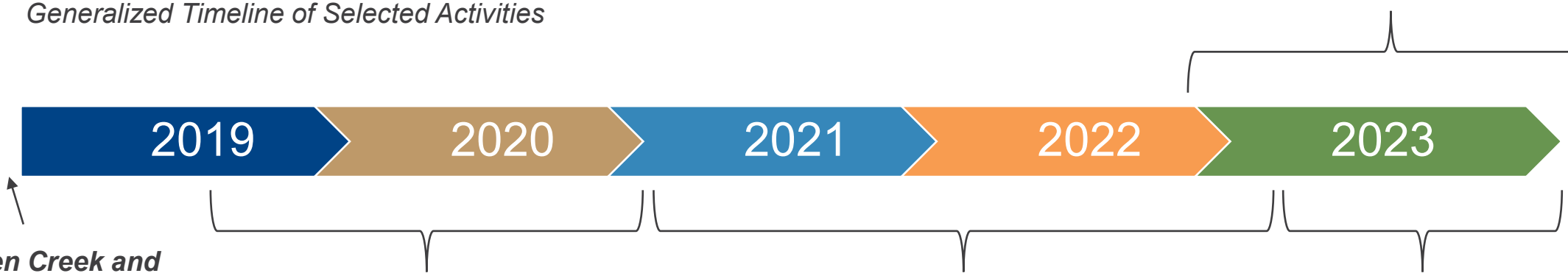
Queen Creek Wheeling

- In June, CAP began deliveries of the Town of Queen Creek's 2,033 AF 4th Priority Colorado River supply, formerly held by GSC Farms
    - Transported pursuant to a Reclamation Wheeling Contract
- The source is Colorado River water, so the water quality standards do not apply
- The Town pays CAP Fixed OM&R and Energy rates, and a Capital Equivalency Charge, and is assessed a 5% wet-water contribution to system losses
    - A portion is characterized as Firming Water, which is exempt from losses and Capital Equivalency Charge

Queen Creek Wheeling

Generalized Timeline of Selected Activities



Queen Creek and GSC Farms Enter Into a Purchase and Transfer Agreement

ADWR Process

- Request for Consultation
- Public Meetings
- Submitted Claims of Negative Impacts
- Response to Claims
- Rebuttals to Response
- ADWR Recommendation
- ADWR Revised Recommendation

Reclamation Process

- NEPA Review of Transfer and Wheeling
- Finding of No Significant Impact (FONSI)
- Drafting and Issuance of Section 5 and Reclamation Wheeling Contract

CAP Process

- Coordination with USBR and Town on Diversion Modification, Scheduling and Payment
- Delivery of non-Project Water to QCID GSF

Mohave CO, *et al* Litigation

- Challenge to NEPA Sufficiency and Admin. Procedures Act
- Preliminary Injunction Denied

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Additional SUA Activities

- Staff have developed a “System Improvement Project” proposal based on upgrading the pump impellers at the Little Harquahala and Hassayampa pumping plants
  - This will increase the “Operational Capability” of CAP System by allowing greater flow during half-plant operations in western maintenance outage
- Staff have drafted a standard form “CAWCD Firming Water Delivery Agreement” for Board consideration in September
  - Defines same basic terms & conditions for the delivery of “Firming Water” as applies to M&I subcontract water


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Water Quality and Biology Update

Scott Bryan
Water Quality and Biology Administrator

Water Users Annual Meeting
August 23, 2003

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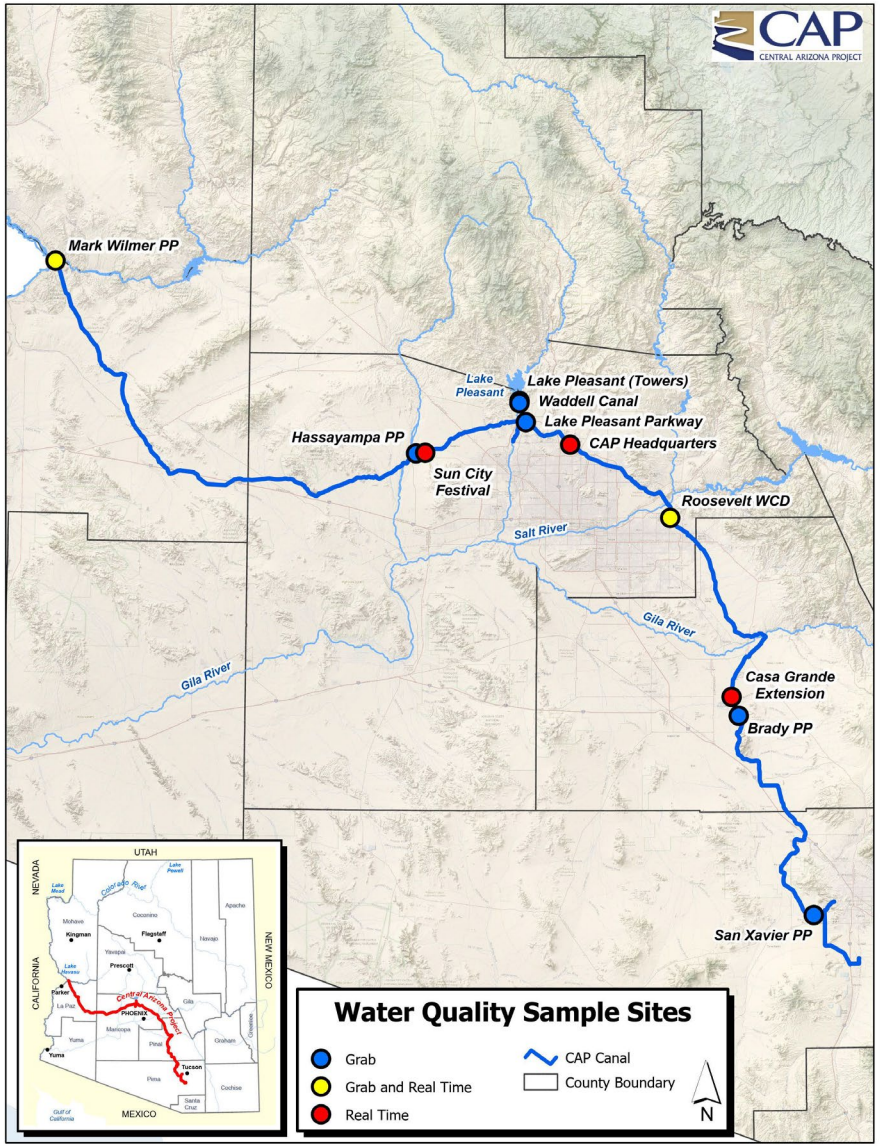

Water Quality Sampling

Canal

- Monthly grab samples at 7 locations (Table A-1)
- Semi-annual grab samples at 4 locations (Table A-2)
- Continuous Monitoring (Real-Time) at 2 locations
- Continuous Turbidity (Real-Time) at 5 locations

Lake Pleasant

- Monthly Grab Samples at 3 locations
- Semi-annual Grab Samples at 1 location
- Bi-weekly vertical profiles at 5 locations

Algae and Chlorophyll-a

- Monthly grab samples at all canal and lake sites
- Monthly periphyton samples at all canal and lake sites

MIB/Geosmin

- Weekly MIB/Geosmin sampling at 3 locations

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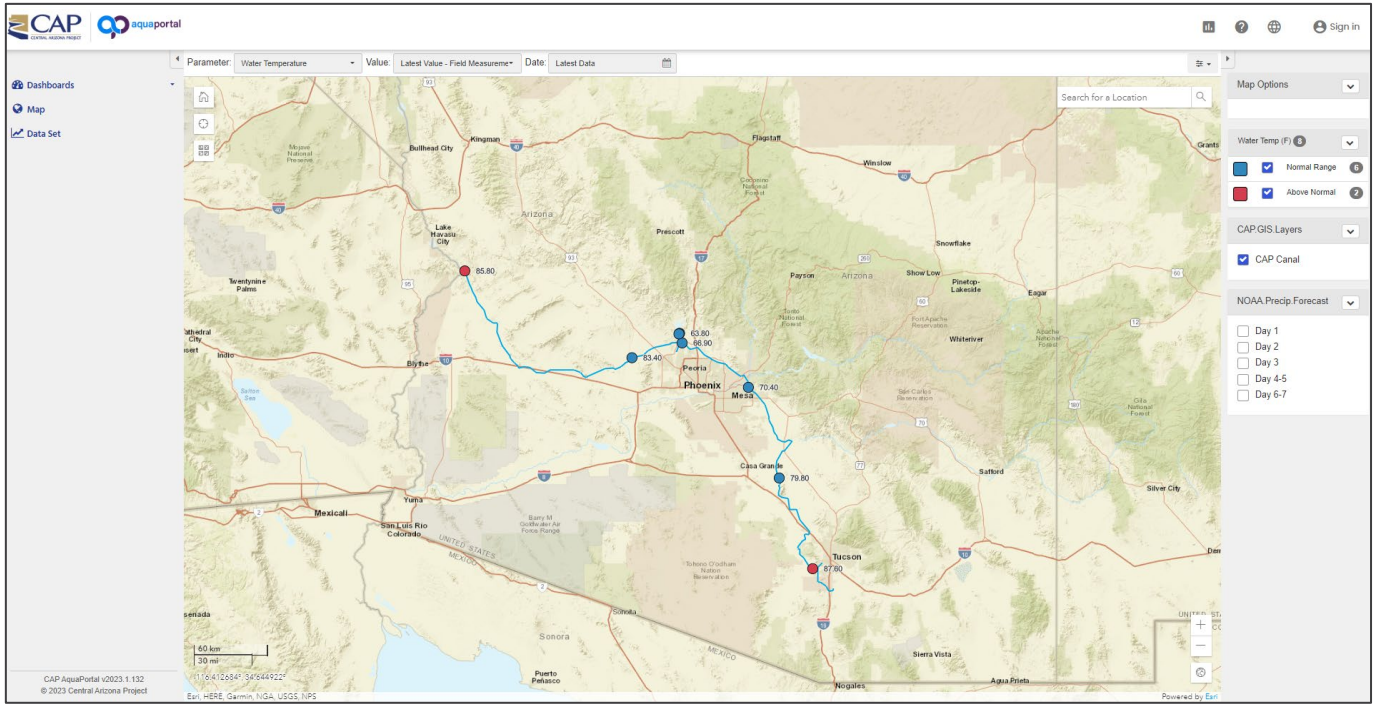
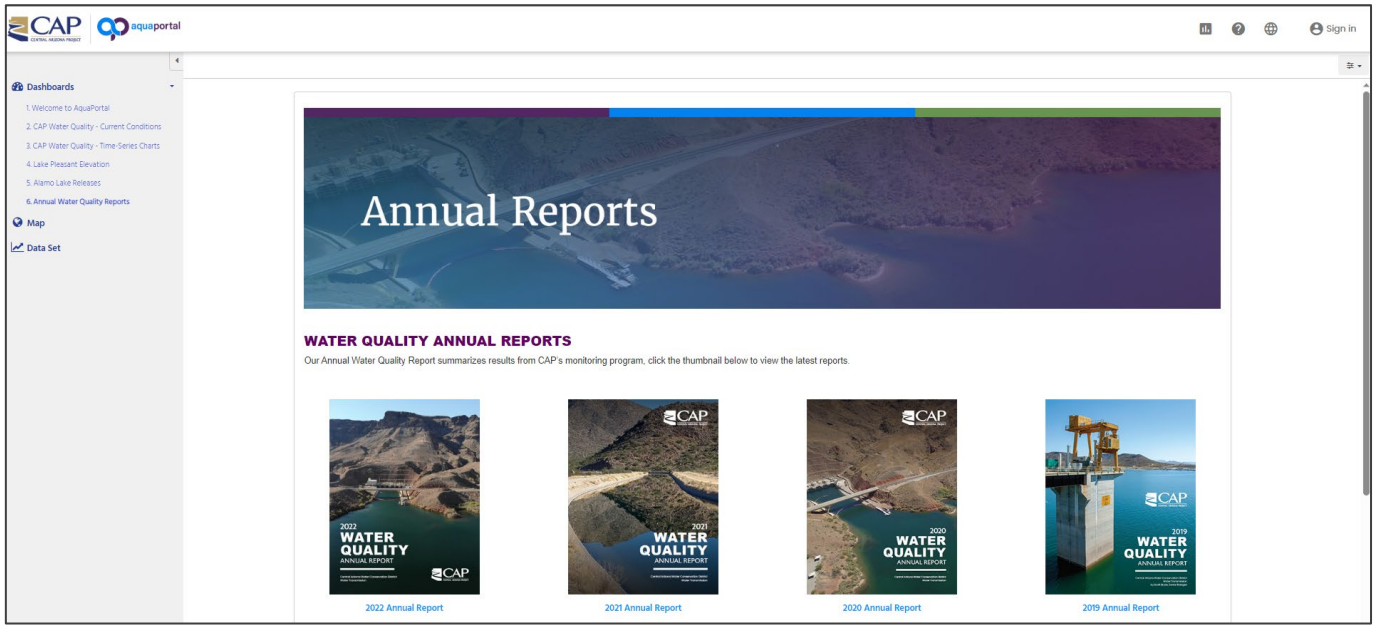
AquaPortal

aquaportal

web: aquaportal.cap-az.com
email: aquaportal@cap-az.com





Water Quality Model

- Selected and customized by Black & Veatch

- CE-QUAL-W2
  - Peer-reviewed and determined to adequately simulate canal water quality
  - CAP staff received training at Portland State
  - Developed for a shortage water supply of 1M acre-feet, but allows us to model baseline conditions in the canal at any specified supply amount
  - Allows us to determine impacts of non-project supplies and compare to baseline conditions
  - Allows us to model various scenarios to determine water quality impacts

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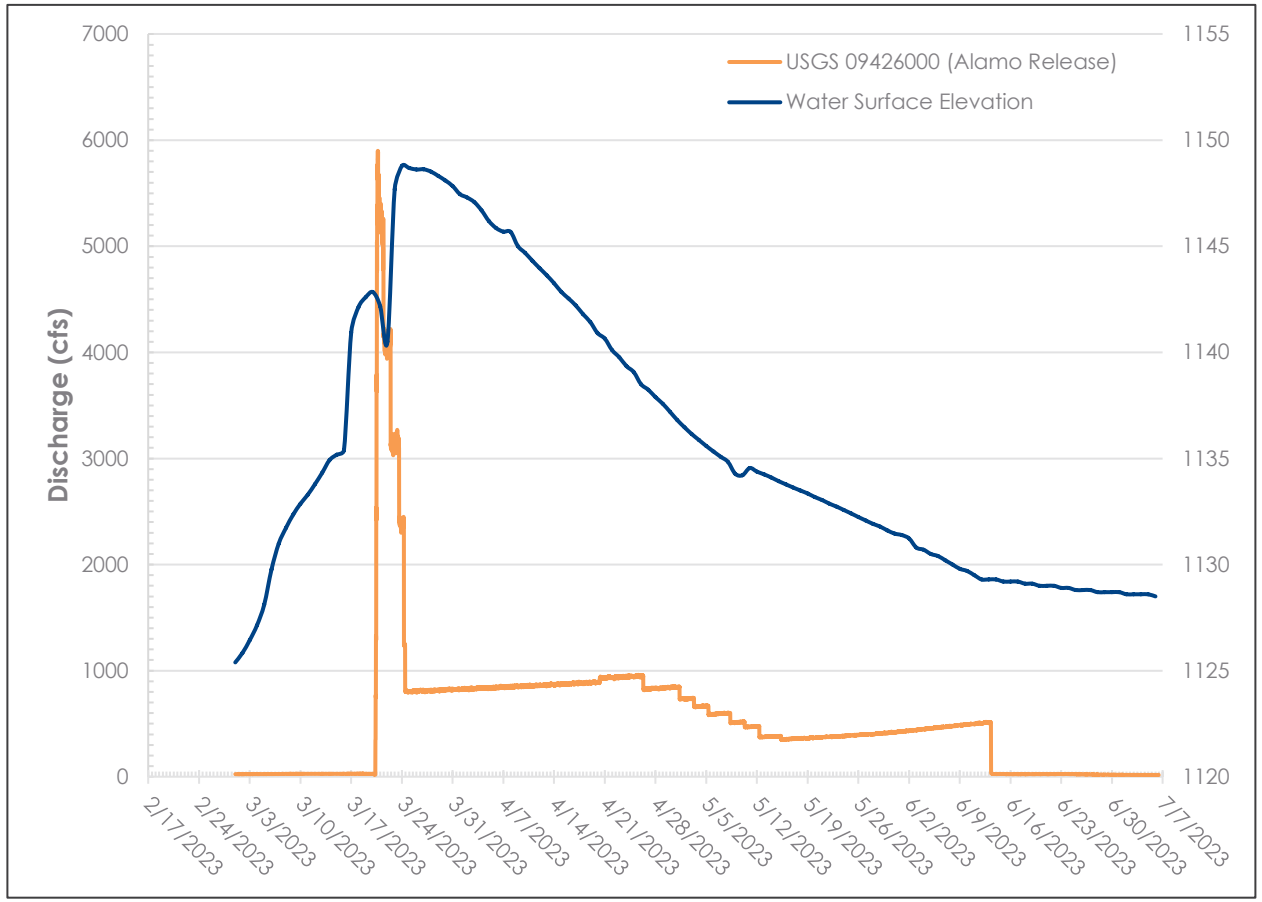
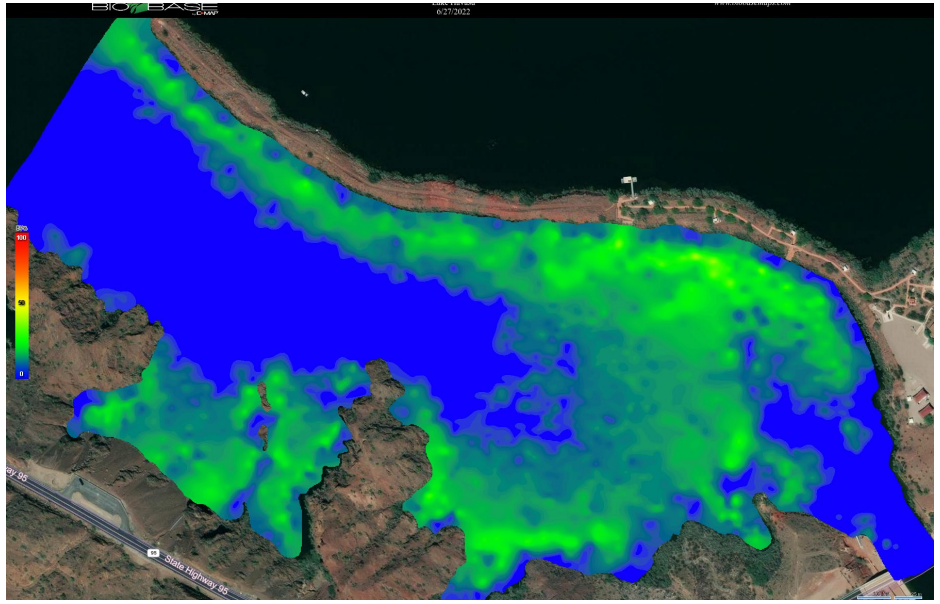
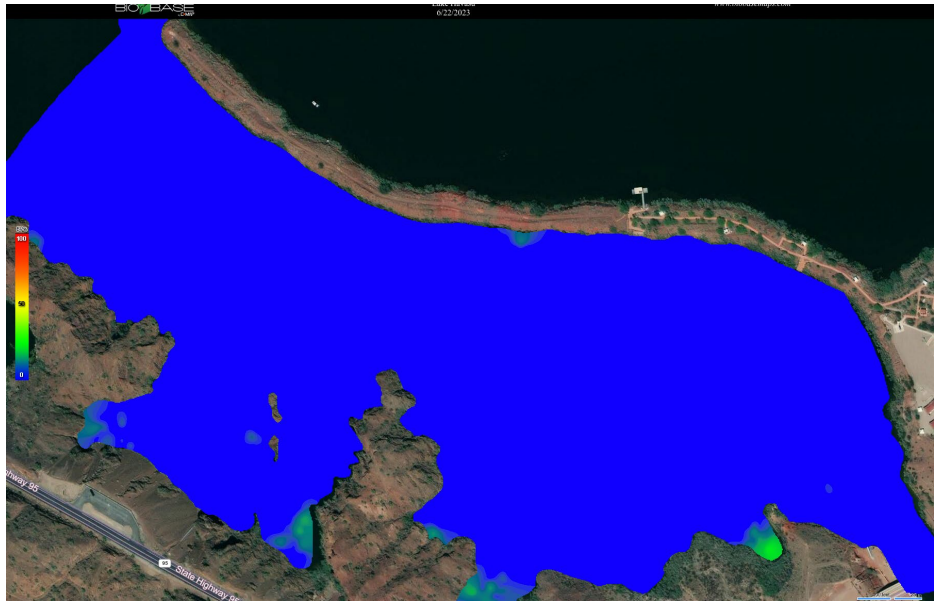
Alamo Lake Releases

MARCH – JUNE 2023



Aquatic Vegetation





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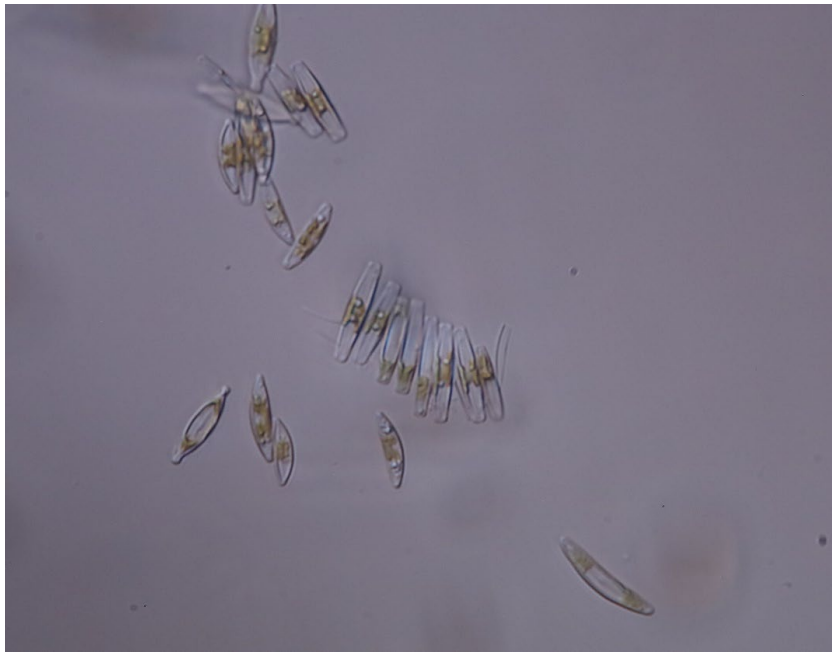
Algae and Cymbella (Rock Snot)

May/June 2023 (LHQ)

June 2023 (WAD Canal)



June 2023 (WAD Canal)

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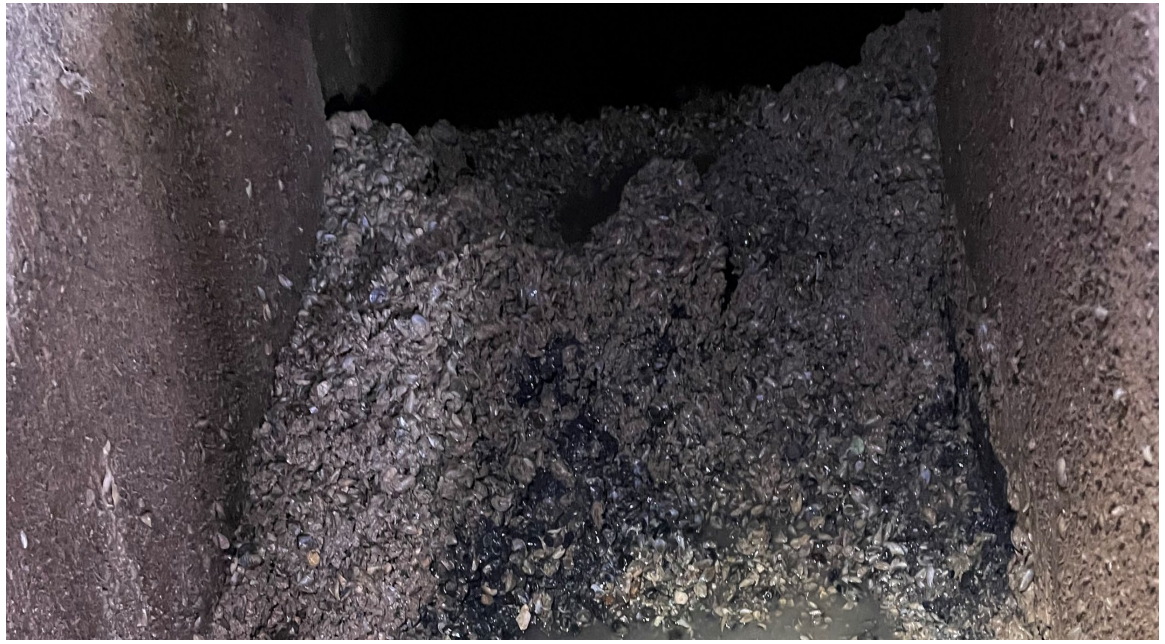
Quagga Mussels



Wildlife

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Thank you
sbryan@cap-az.com

Maintenance Update

Robert Hitchcock

Maintenance Control Manager

Annual Water User Meeting

August 23, 2023

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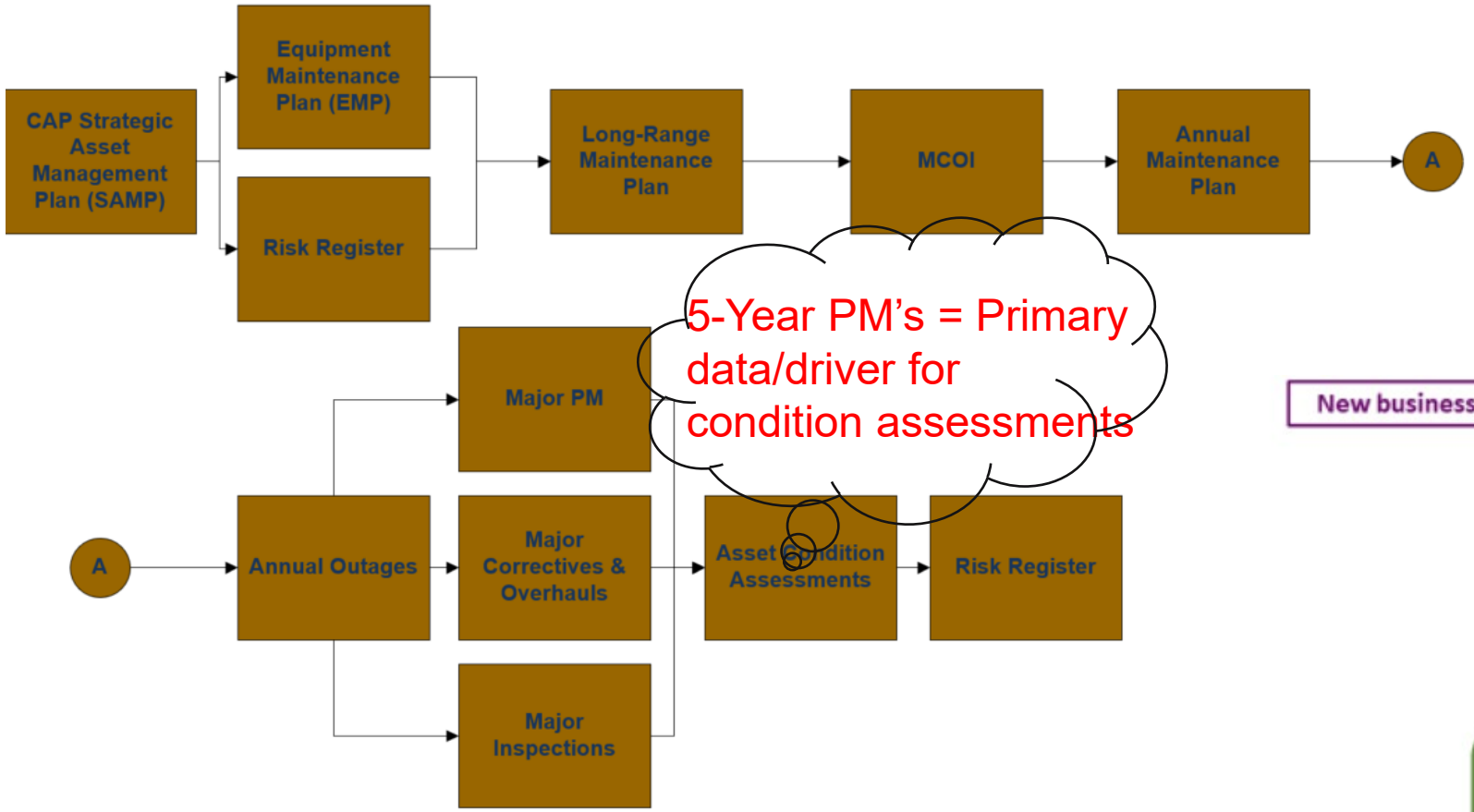
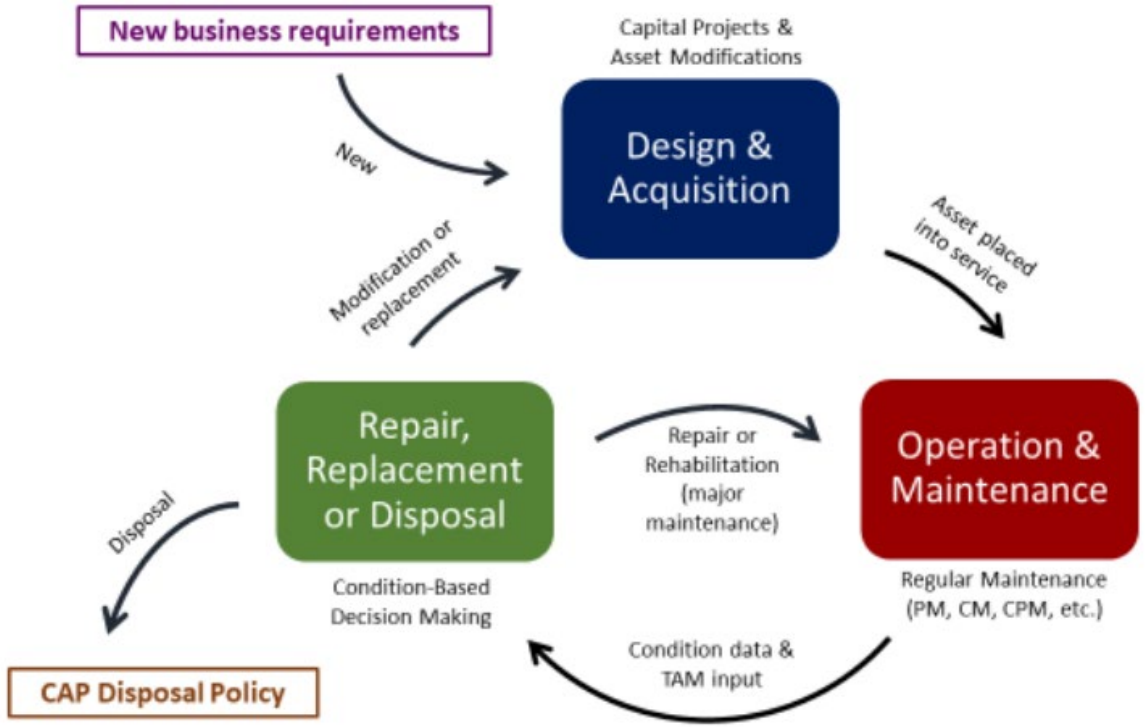
Long-Range Planning at CAP



SAMP Prescribes that CAP Maintenance Will have an Annual Maintenance Plan (AMP) baselined and published before the end of the year for the following year.

CAP SAMP



2023 - Annual Maintenance Plan (AMP)

One Plan - Two Areas of Focus

1 All Activities - All Maintenance MRCs

- 640 Work Orders - 52,500 planned labor hours
- Reporting to Maintenance Control Manager

2 Centralized maintenance Activities and MRCs Only

- Tied to the Director's Goal
- 232 Work Orders with 33,500 planned labor hours
- Reporting to Centralized Maintenance and Reliability Director

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2023 - Annual Maintenance Outages Planned

West Summer Outage

June 19th – Aug. 31st

- Mark Wilmer Pumping Plant (MWP)
- Bouse Hills Pumping Plant (BSH)
- Little Harquahala Pumping Plant (LHQ)
- Hassayampa Pumping Plant (HSY)

South Fall Outage

Oct. 16th – Nov. 18th

Salt Gila Pumping Plant (SGL)

Brady Pumping Plant (BRD)

Picacho Pumping Plant (PIC)

Red Rock Plant (RED)

Twin Peaks Pumping Plant (TWP)

Sandario Pumping Plant (SAN)

Brawley Pumping Plant (BRW)

San Xavier Pumping Plant (SXV)

Snyder Hills Pumping Plant (SNH)

Black Mountain Pumping Plant (BLK)

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2023 – Critical Equipment PM's

Pump/Motor Unit 5 Year PM's

- 24 Units at 14 Pumping Plants

HV Transformer 5 Year PM's

- 17 Transformers at 10 Pumping Plants

HV BUS 5 Year PM's

- 6 Total - BSH, HSY(2), WAD, SGL, BLK

Station Service XFMR & Switchgear 5 Yr. PM

- WAD, PIC, RED, BRW

Discharge Manifold & Pipeline 5 Yr. PM

- HSY, SGL, SAN, RED

Tucson Reach 6 Pipeline EM Insp.– 8 Yr. PM

P31 – Gila River Siphon Insp. – 15 Yr. PM

Turnout Gates 5 Yr. PM's

- 13 gates at 8 sites

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2023 – Major Corrective Maintenance

MWP – Reline Suction Tubes & Stilling Wells

MWP – Units 1 & 3 Mechanical Seal Replacement

LHQ – Units 1 & 10 Rotor Repair

BSH – Units 1 & 2 Rotor Repair

HSY – Units 1-5 Discharge Valve Replacement

WAD – Right Discharge Line Fill Valve Repl.

WAD – P/G Units Stress Cone Repairs

WAD – Cooling Water Strainer Repl.

A-Plant – Backup Service Water Pump Repl.

RED – Unit 2 Discharge Valve Cylinder Repl.

TWP-SAN-BRW-SXV – CW Control Valve Repl.

BLK – Units 1 & 2 Discharge Valve Seal Repair

QCR & CGE TO – Gate 1 Replacement

Check 37 – Gate 2 Replacement

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2023 - Main Pump Unit Overhaul Progress

SGL UNIT 4 – COMPLETE

Started – September 2022

Scheduled End – April 2023

Pump overhaul

Motor Reconditioning

WAD UNIT 1– COMPLETE

Started - February 2023

Scheduled to Complete – July 2023

Pump Casing Major Repair – External Contract

Motor Reconditioning

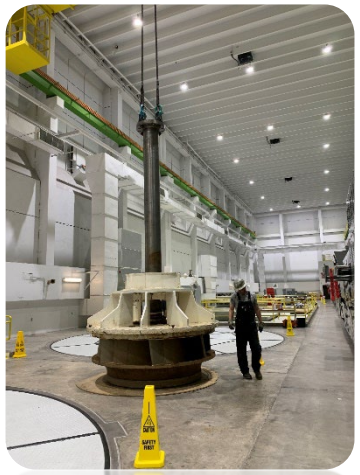
HSY UNIT 4 – IN-PROGRESS

Scheduled Start – June 2023

Scheduled End – October 2023

Degraded Coatings

Initiating Corrosion and Metal Loss



RED UNIT 5 - PLANNED

Scheduled Start – September 2023

Scheduled End – February 2024

Pump overhaul / Motor Reconditioning

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2024 – Critical Equipment PM's

Pump/Motor Main Unit 5 Year PM

- 21 Units at 13 Pumping Plants

High Voltage Transformer 5 Year PM

- MWP(2), BSH, WAD(2), BRD

High Voltage BUS 5 Year PM

- MWP, BSH, PIC, TWP

High Voltage Switchgear 5 Year PM

- LHQ, PIC(2), TWP, BRW

Discharge Manifold & Pipeline 5 Year PM

- MWP, LHQ(EM), WAD, TWP(EM)

New River Siphon ROV Insp. – 15 Year PM

Turnout Gates 5 Year PM

- 14 gates at 9 sites

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2024 – Major Corrective Maintenance

CAP University: Deeper Dive on Infrastructure and Asset Management (granicus.com)

MWP – U3 Rotor Pole Replacement

MWP – Unit 5 Service Seal Repair

BSH – Unit 8 Discharge Valve Replacement

BSH – Unit 10 Rotor Pole Crack Repair

LHQ – Units 9 Rotor Pole Crack Repair

LHQ – Unit 7,8,9,10 Discharge Valve Repl.

HSY – 7 through10 Discharge Valve Repl.

WAD – Cooling Water Strainer Replacement

WAD – Circuit Breaker Air Compressor Repl.

SAN – U5 Discharge Valve Replacement

BRW – U3 Discharge Valve Replacement

Check 14 – Check Gate Refurbishment

*2024 will complete DV replacements for BSH, LHQ, & HSY

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2024 - Main Pump Unit Overhaul (Planned)

SALT GILA U3

Pump overhaul & Motor Stator Rewind

- UST PF and Tip-Up above third alarms.
- End-winding insulation likely has voids.

HASSAYAMPA U2

Pump overhaul & Motor Cleaning

- Wear ring clearances are over 2x design and vibration magnitudes are over 60% of trip settings.

BLACK MOUNTAIN U1

Pump overhaul & Motor Repair

- GST PF above first alarm GST PF Tip-Up above third alarm.
- PD all above third alarm.
- Insulation has void content that is actively discharging.

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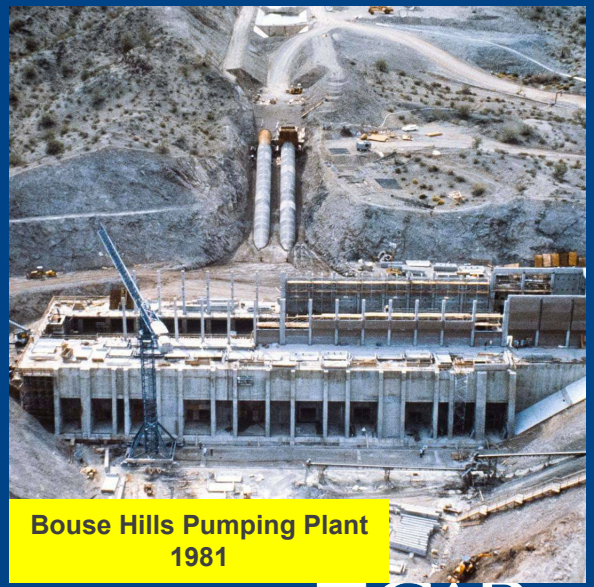
Engineering Capital Projects

Ryan Johnson, Engineering Services Manager
Annual Water User Briefing
August 23, 2023

Capital Improvement Projects

- Address risk of aging infrastructure
- Central Arizona Project – a “forever” asset

Mark Wilmer Pumping Plant
1979



Bouse Hills Pumping Plant
1981

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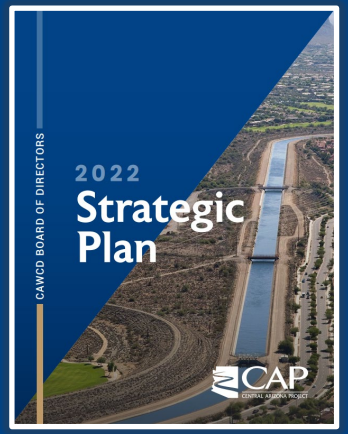
2024-2025 CIP Budget – Project Budgets

CAP Biennial Budget

(Millions)	2021 Actual	2022 Actual	2023 Projection	2024 Budget	2025 Budget
Salaries and related costs	$ 3.4	$ 4.8	$ 4.5	$ 3.9	$ 3.1
Equipment, buildings, and structures	17.9	22.2	32.1	18.6	47.6
Other expenses					
Outside services	3.0	2.5	2.0	4.4	5.4
Materials, supplies & other expenses	0.4	0.4	0.5	0.3	0.1
Overhead expenses	3.6	5.1	4.9	4.1	3.2
Subtotal - Other Expenses	7.0	8.0	7.4	8.8	8.7
Total Capital	$ 28.3	$ 35.0	$ 44.0	$ 31.3	$ 59.4

2022 CAWCD Board Strategic Plan



KRA: Project Reliability

Providing reliable and cost-effective operations, maintenance, and replacement of CAP infrastructure and technology assets

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Long Range Work ID Timeline

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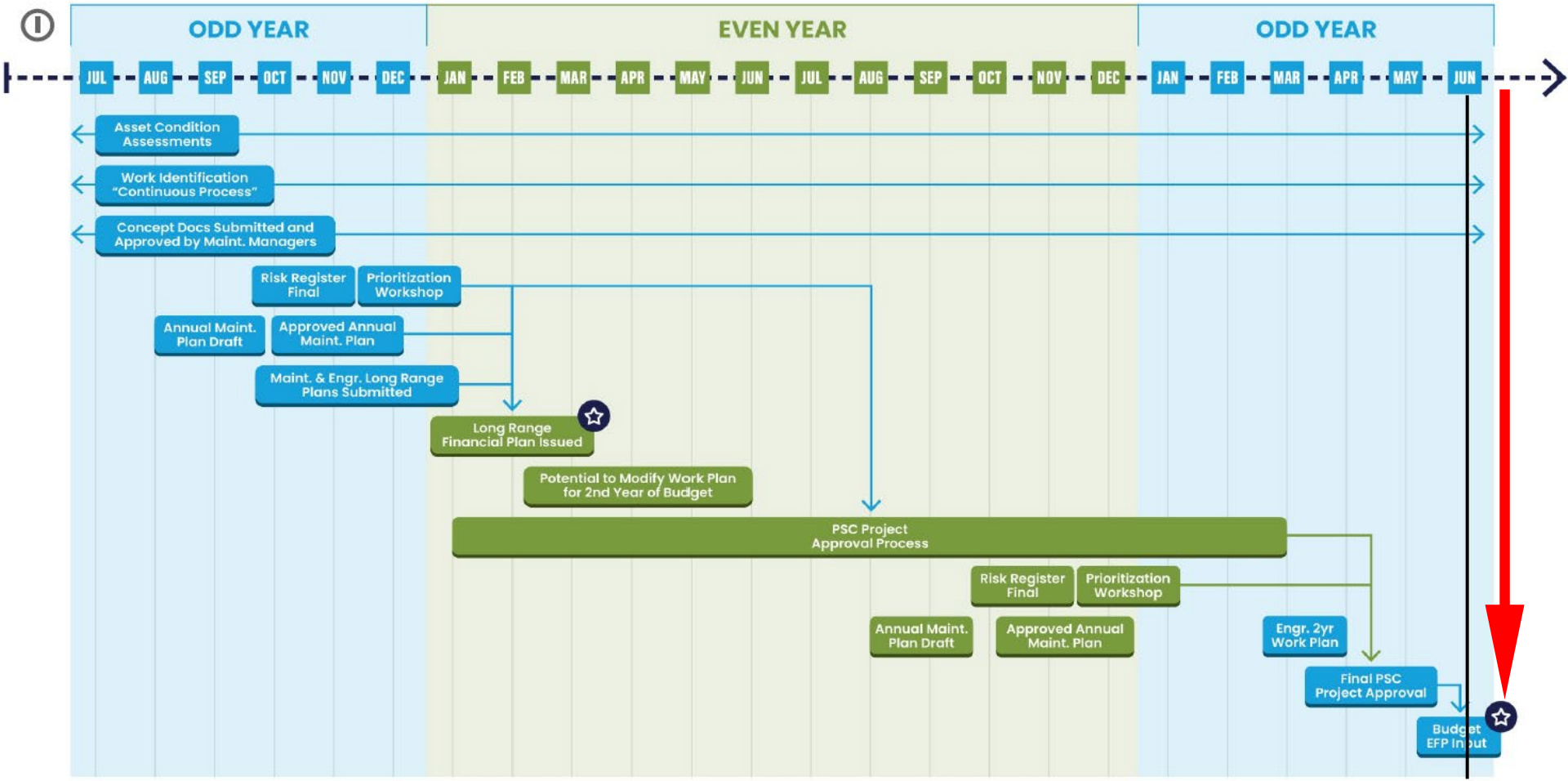

Risk Based Project Prioritization

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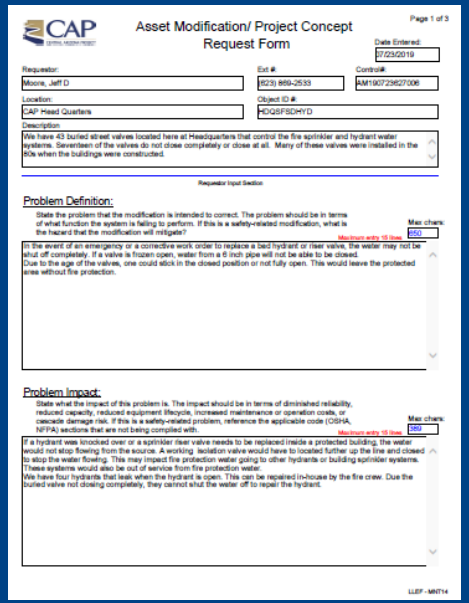
Infor EAM – Concept Request Form

Consequence of Failure				Score	Risk Priority Number Matrix Risk Priority Number = Consequence Score + Failure Rate Score					
Loss of Available Capacity (MTTR)	Business Impact / Cost	Environmental, Health and Safety Impacts								
Capacity loss for over 30 days.	Economic loss exceeding $10M	Loss of life	Catastrophic	8	9	10	11	12	13	14
Capacity loss for 10 to 30 days.	Economic loss of $1M to $10M or business impact exceeding 5000 employee hours	Severe injury or major environmental impact.	Critical	6	7	8	9	10	11	12
Capacity loss of 1 to 10 days.	Economic loss of $100K to $1M; business impact of 500 to 5000 employee hours	Minor injury or environmental impact.	Severe	4	5	6	7	8	9	10
Capacity loss of 6 hours to 1 day.	Economic loss of $10K to $100K or business impact of 50 to 500 employee hours	Non-immediate safety issue or minor environmental impact.	Serious	2	3	4	5	6	7	8
Capacity loss of 1 to 6 hours.	Economic loss of $1K to $10K or business impact of 10 to 50 employee hours	Potential safety or environmental impacts if not corrected.	Moderate	1	2	3	4	5	6	7
Capacity loss of less than 1 hour.	Economic loss less than $1K or business impact of less than 10 employee hours	No safety or environmental impacts.	Negligible	0	1	2	3	4	5	6
				Score	1	2	3	4	5	6
				Failure Rate	<50 Years	30-50 Years	10 - 30 Years	1-10 Years	6mo - 1 Year	> 6mo
				EOL/Obsolescence Estimate	> 12 yrs	> 10 ≤ 12 yrs	> 8 ≤ 10 yrs	> 5 ≤ 8 yrs	> 2 ≤ 5 yrs	≤ 2 yrs
							Likelihood of Failure			

Project Approval Process

(1) Concept Document



CAP

Asset Modification/ Project Concept Request Form

Page 1 of 3

Date Entered: 07/25/2019

Requestor: Moore, Jeff D

Ext #: (623) 869-2533

Control#: AM19072362700 6

Location: CAP Head Quarters

Object ID #: HDQSFSCHYD

Description:
We have 43 buried street valves located here at Headquarters that control the fire sprinkler and hydrant water systems. Seventeen of the valves do not close completely or close at all. Many of these valves were installed in the 60s when the buildings were constructed.

Requestor Input Section

Problem Definition:

State the problem that the modification is intended to correct. The problem should be in terms of what function the system is failing to perform. If this is a safety-related modification, what is the hazard that the modification will mitigate?

Max chars: 350

Maximum entry 10 lines

In the event of an emergency or a corrective work order to replace a bad hydrant or riser valve, the water may not be shut off completely. If a valve is frozen open, water from a 6 inch pipe will not be able to be closed. Due to the age of the valves, one could stick in the closed position or not fully open. This would leave the protected area without fire protection.

Problem Impact:

State what the impact of this problem is. The impact should be in terms of diminished reliability, reduced capacity, reduced equipment lifecycle, increased maintenance or operation costs, or cascade damage risk. If this is a safety-related problem, reference the applicable code (OSHA, NFPA) sections that are not being complied with.

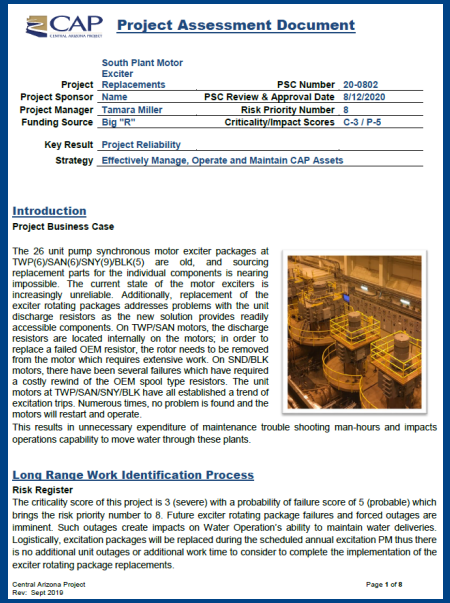
Max chars: 350

Maximum entry 10 lines

If a hydrant was knocked over or a sprinkler riser valve needs to be replaced inside a protected building, the water would not stop flowing from the source. A working isolation valve would have to located further up the line and closed to stop the water flowing. This may impact fire protection water going to other hydrants or building sprinkler systems. These systems would also be out of service from fire protection water.
We have four hydrants that leak when the hydrant is open. This can be repaired in-house by the fire crew. Due the buried valve not closing completely, they cannot shut the water off to repair the hydrant.

LLEF - MNT14

(2) Assessment Document



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Project Assessment Document

Project	South Plant Motor Exciter Replacements	PSC Number	20-0802
Project Sponsor	Name	PSC Review & Approval Date	8/12/2020
Project Manager	Tamara Miller	Risk Priority Number	8
Funding Source	Big "R"	Criticality/Impact Scores	C-3 / P-5
Key Result	Project Reliability		
Strategy	Effectively Manage, Operate and Maintain CAP Assets		

Introduction

Project Business Case

The 26 unit pump synchronous motor exciter packages at TWP(6)/SAN(6)/SNY(9)/BLK(5) are old, and sourcing replacement parts for the individual components is nearing impossible. The current state of the motor exciters is increasingly unreliable. Additionally, replacement of the exciter rotating packages addresses problems with the unit discharge resistors as the new solution provides readily accessible components. On TWP/SAN motors, the discharge resistors are located internally on the motors; in order to replace a failed OEM resistor, the rotor needs to be removed from the motor which requires extensive work. On SND/BLK motors, there have been several failures which have required a costly rewind of the OEM spool type resistors. The unit motors at TWP/SAN/SNY/BLK have all established a trend of excitation trips. Numerous times, no problem is found and the motors will restart and operate.

This results in unnecessary expenditure of maintenance trouble shooting man-hours and impacts operations capability to move water through these plants.

Long Range Work Identification Process

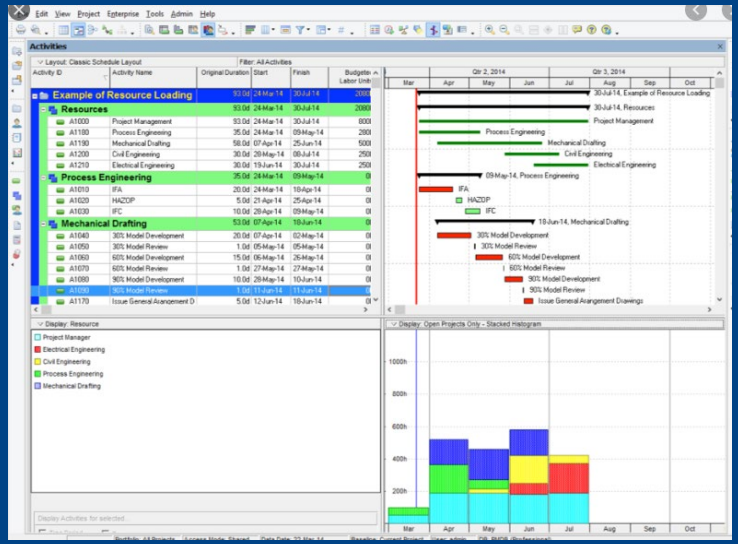
Risk Register

The criticality score of this project is 3 (severe) with a probability of failure score of 5 (probable) which brings the risk priority number to 8. Future exciter rotating package failures and forced outages are imminent. Such outages create impacts on Water Operation's ability to maintain water deliveries. Logistically, excitation packages will be replaced during the scheduled annual excitation PM thus there is no additional unit outages or additional work time to consider to complete the implementation of the exciter rotating package replacements.

Central Arizona Project
Rev: Sept 2019

Page 1 of 8

(3) Planning Document



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2024 – 2025 CIP Highlights

2024-2025 Budget – Capital Projects

Discharge Valve Replacement Program

Total Program Budget: $3,400,000

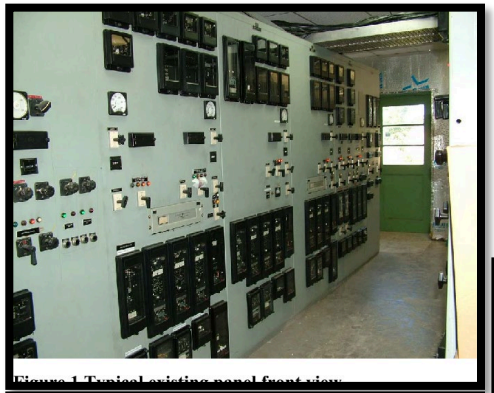
2024-2025 Project Budget: $700,000

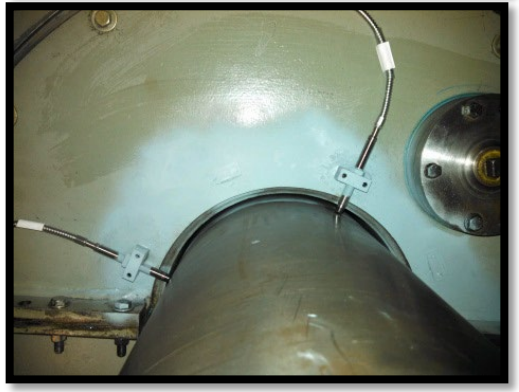
PLC-5 Replacement Project at WAD

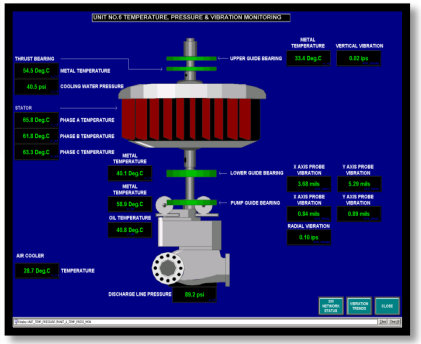
Total Program Budget: $6,500,000

2024-2025 Project Budget: $1,600,000

2024-2025 Budget – Capital Projects







Electromechanical Relay Replacements

Total Program Budget: $21,500,000

2024-2025 Project Budget: $4,500,000

Condition Based Monitoring Project

Total Program Budget: $12,000,000

2024-2025 Project Budget: $3,500,000

2024-2025 Budget – Capital Projects

Pumping Plant Generator Replacements

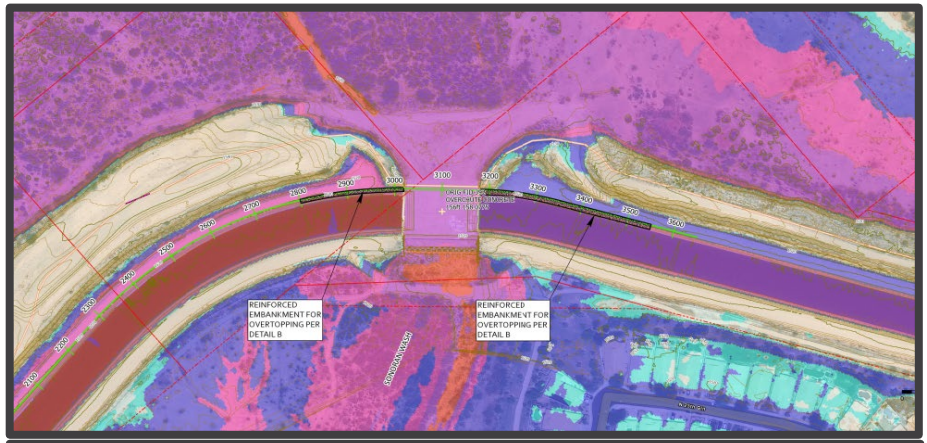
Total Program Budget: $12,400,000

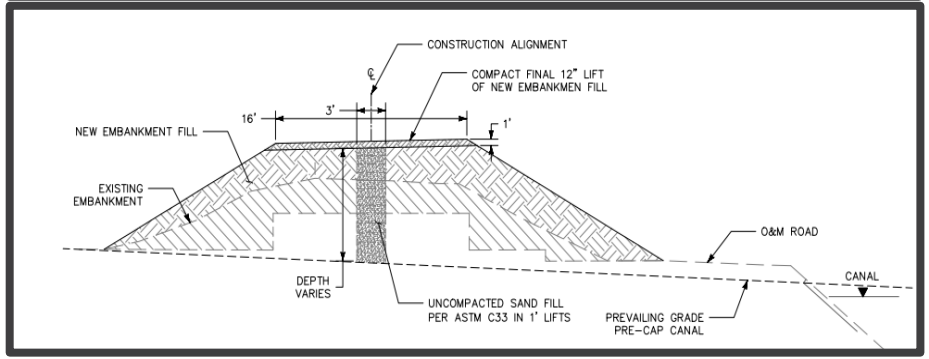
2024-2025 Project Budget = $5,100,000

CAP HDQ Parking Lot Improvements

2024-2025 Project Budget = $2,300,000

2024-2025 Budget – Capital Projects

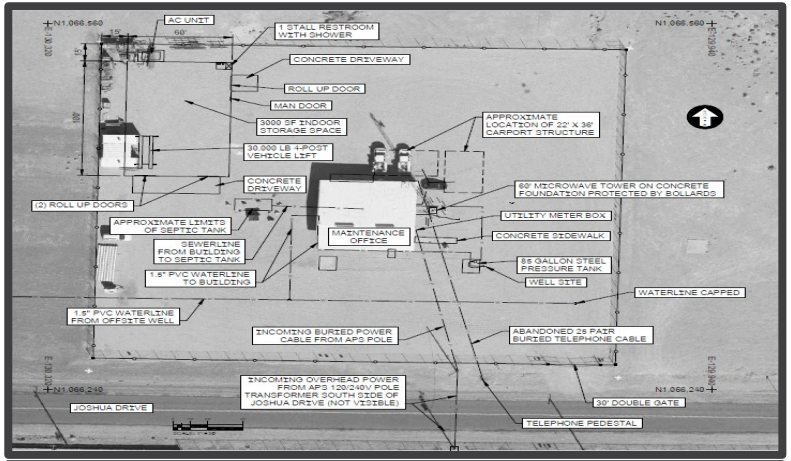




Aqueduct Hydrology Improvement Program

Total Program Budget: $153,500,000

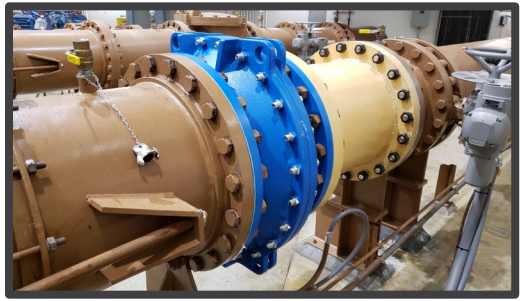
2024-2025 Project Budget = $10,400,000

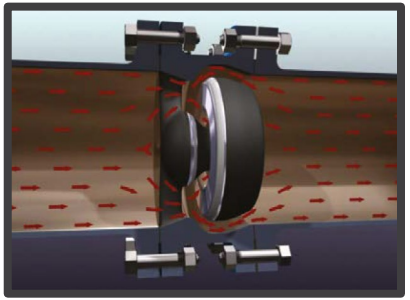


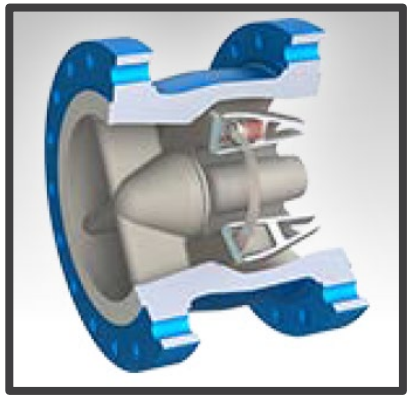
BMY & HDQ Multi Use Buildings

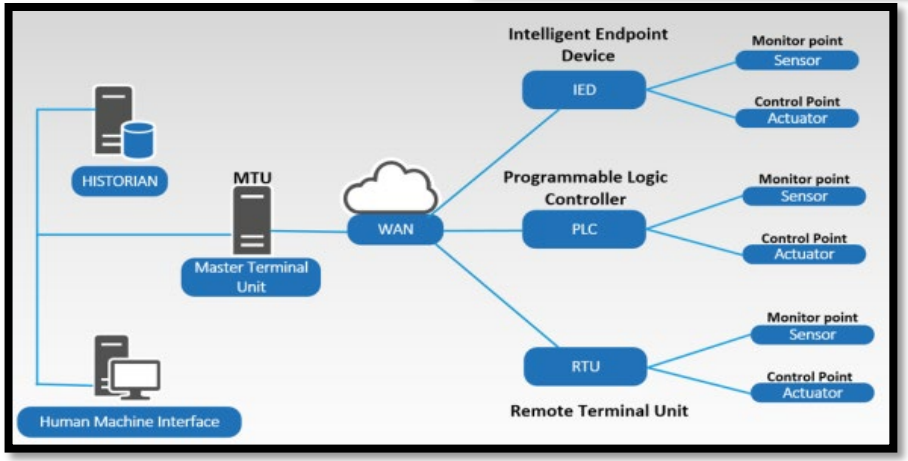
2024-2025 Project Budget = $2,300,000

2024-2025 Budget – Capital Projects









Check Valve Replacement (BLK, SND)

Total Program Budget: $3,300,000

2024-2025 Project Budget = $1,400,000

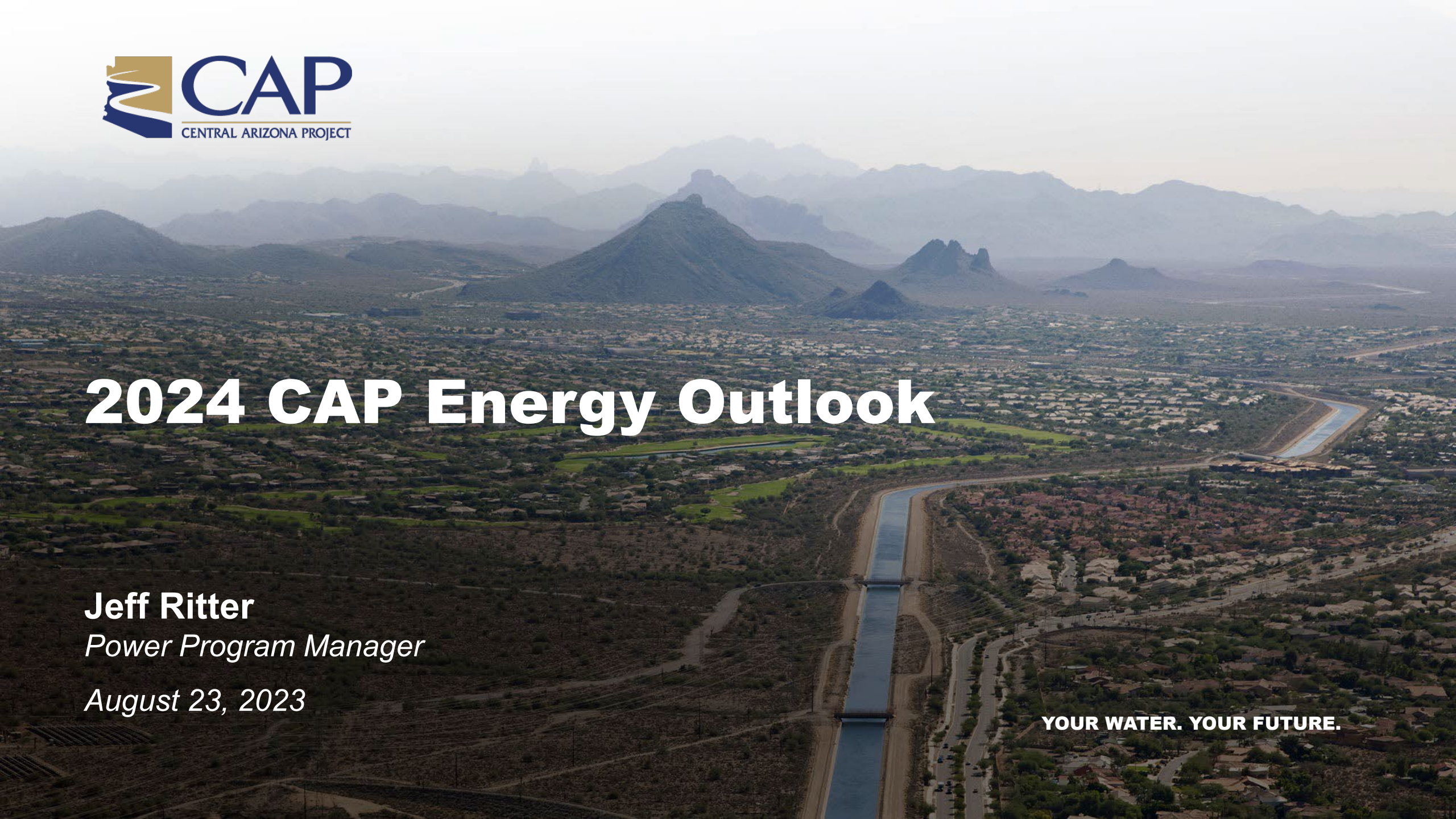
SCADA Replacement

Total Program Budget: $19,900,000

2024-2025 Project Budget = $4,761,000

Thank You

Ryan Johnson
rjohnson@cap-az.com



2024 CAP Energy Outlook

Jeff Ritter
Power Program Manager

August 23, 2023

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2024 Energy Rate

- $78/AF, based on:
  - Tier 1 Shortage.
  - Conservation Agreements.
- $11/AF reduction from 2023 **no longer in effect**.

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Market Pricing

- Natural gas price estimates lower than this time last year:
  - ~$4.70/MMBtu (2024) vs. ~$5.50/MMBtu (2023).
- Electric energy price estimates similar:
  - $66/MWh (2024 off-peak) vs. $68/MWh (2023 off-peak).

2024 Risk Analysis

- Acquired ~50% of estimated energy needed.
- Remaining Energy Needs:
  - 50% in Duck-Curve Hours: stable pricing, low risk of cost escalation.
  - 50% in Off-Peak Hours: more susceptible to price movement, some risk.
- Overall: In good position to meet 2024 Energy Rate.


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Questions?