



PROTECTING ARIZONA'S
WATER SUPPLIES
for ITS NEXT CENTURY

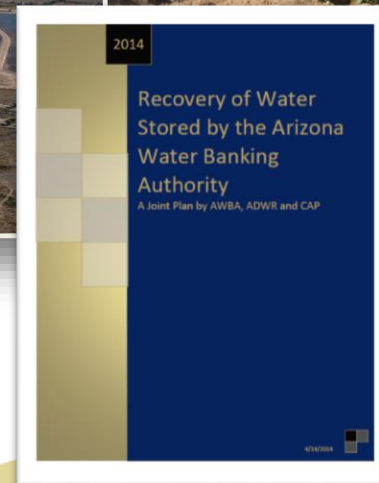


Banking Water Now
for Arizona's Future

Recovery Planning Advisory Group (RPAG)



YOUR WATER. YOUR FUTURE.



Kick-off Meeting, January 17, 2018

Agenda – Kick-off Meeting 1/17/2018

- Intro & Welcome
- Objectives of RPAG
- Process Overview
- Key Questions
- Anticipated Topics – Schedule
- Shortage Strategies
- Joint Plan Review
- Next Meeting (March)

Objectives of RPAG

- Provide greater planning clarity
- Ensure stakeholders' perspectives have been fully considered as AWBA, ADWR and CAP update & refine implementation concepts
- Incorporate covered topics in an Addendum to the 2014 Joint Recovery Plan by the end 2018

Process Overview

- Meet every other month
 - With breakout groups possible between meetings
- Anticipate year-long process
- Address key questions

Key Questions

- When will recovery occur?
- How much recovery capacity is needed?
- How much will recovery cost?
- How will recovery work?

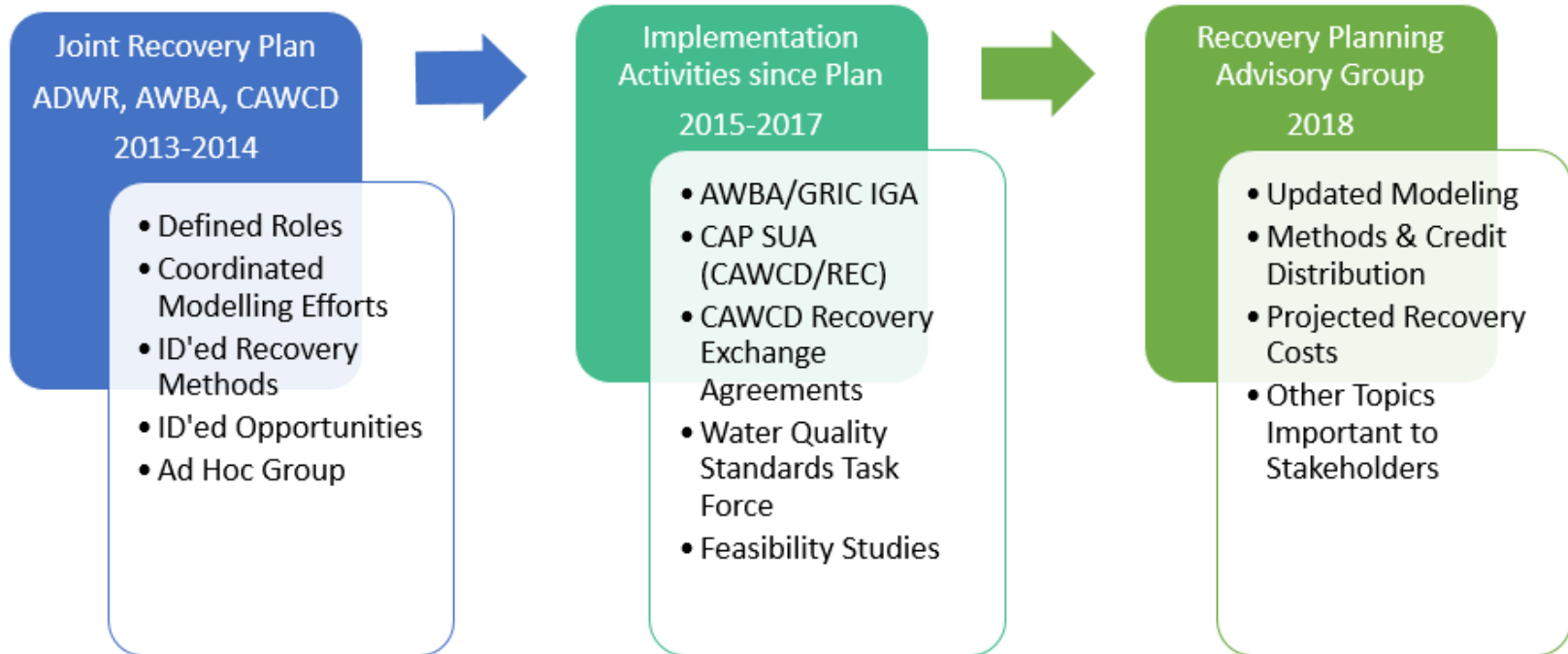
Anticipated Topics - Schedule

- Background & Overview of 2014 Joint Recovery Plan to Present (Today's Meeting)
- Updated Modeling (Meeting 2)
 - Risk tolerance
- Methods & Credit Distribution (Meeting 3)
 - Joint Recovery Plan and SUA
 - Stakeholder proposals
- Projected Recovery Costs (Meeting 4)
- Other Topics Important to Stakeholders

AZ Strategies for Mitigating Effects of Shortage

- Conservation/Demand Management
- CAP Tiered Priorities
- Shortage Sharing Agreement
- Drought Plans and Provisions
- Non AWBA Storage/Recovery (>6MAF)
- AWBA Storage/Recovery (>3.6MAF)

Recovery Planning & Implementation



Review of the 2014 Joint Recovery Plan

- Background, Purpose & Scope
- Roles & Responsibilities
- Funding, Purpose & Location
- Methods & Cost
- Likelihood, Timing & Magnitude
- Credit Request, Distribution & Opportunities
- Implementation
- Future Activities & Commitments

Background, Purpose and Scope

- AZ relies on a multi-faceted approach to mitigating shortages
- Plan focuses on one of these strategies
- AWBA has stored over 4MAF in 3 AMAs (including storage for Nevada)
- The need to recover these credits will be triggered by shortages and/or interstate requests:
 - CAP M&I subcontractors, on-river M&I users, Indian water settlement obligations and Interstate banking obligations
- Road Map for recovering AWBA credits out to 2045 – commitment to future activities

Roles & Responsibilities

- AWBA
- CAWCD
- ADWR
- BOR
- Recovery Partners
- Beneficiaries
- Other Interested Parties

Funding, Purpose & Location of Credits

Table 1. AWBA Credits through 2016, by AMA and Funding Source (AF)

Funding Source	Phoenix AMA	Pinal AMA	Tucson AMA	Total
4-Cent Ad Valorem Tax	1,419,558	215,882	459,842	2,095,282
Withdrawal Fees	332,063	421,560	105,734	859,357
General Fund	42,316	306,968	54,546	403,830
Other Intrastate:				
Indian Firming Appropriation	-	-	28,481	28,481
Shortage Reparation	20,642	60,507	28,340	109,489
GSF Operator Full Cost Share	-	14,125	-	14,125
Intrastate TOTAL	1,814,579	1,019,042	676,943	3,510,564
Interstate - Nevada	51,009	440,241	109,791	601,041
TOTAL	1,865,588	1,459,283	786,734	4,111,605

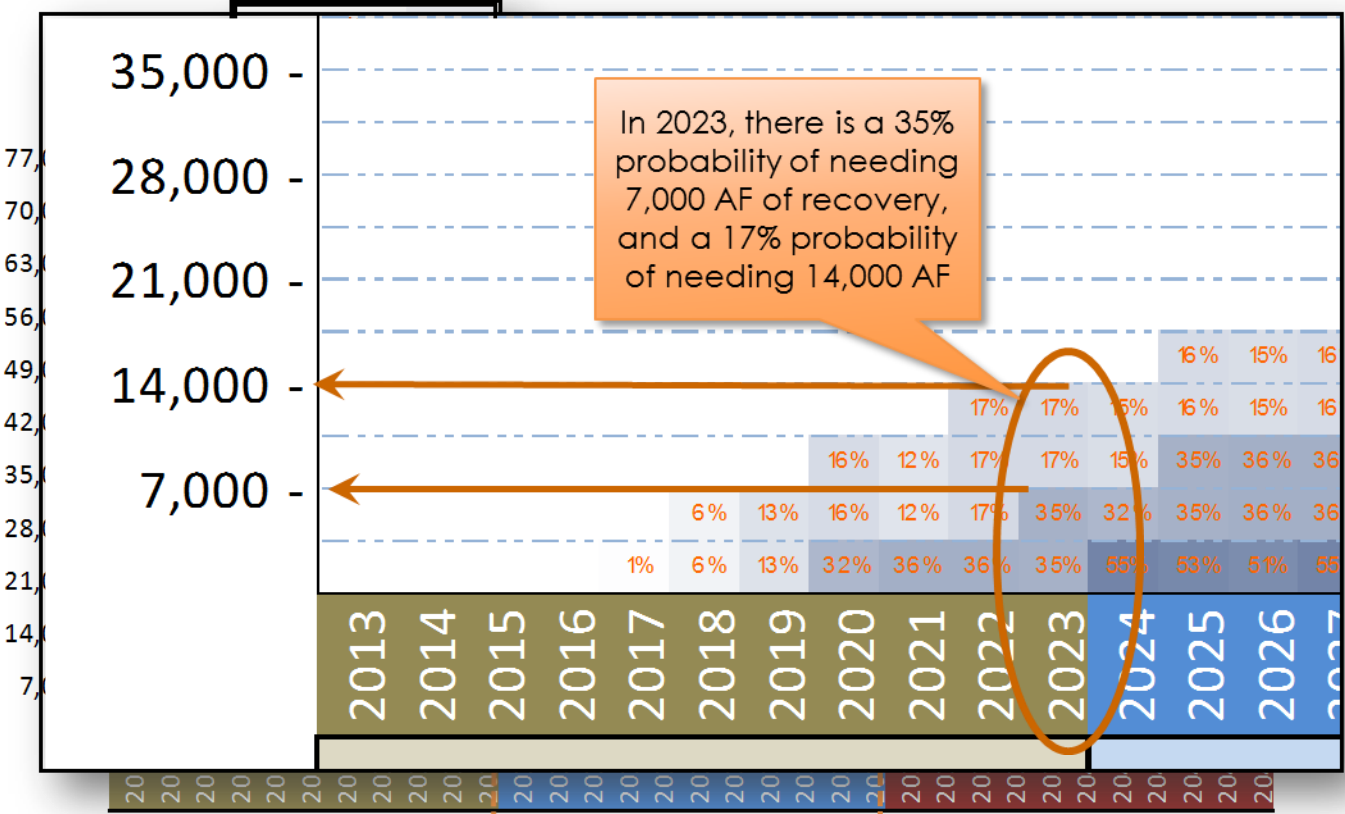
Methods & Cost

- Recovery Methods
 - **Direct** (ex. TDRP, new wells pump directly into canal)
 - **Indirect** (ex. Muni provider with extra well capacity pumps credits for self/others)
 - **Credit Exchange** (ex. Muni provider who does annual storage and recovery agrees to receive less water to USF and recovers credits for self/others)
- Costs
 - Will depend on the combination of methods used to recover

Likelihood, Timing & Magnitude

- Factors Affecting Recovery
 - Magnitude of shortage to AZ
 - AZ demands (On-River and CAP)
 - Interstate requests for ICUA
- Modeling Approach
 - CRSS (07 Guidelines, Historic Record 107 years)
 - Projects available water to AZ out till 2045
 - 107 traces or “futures”
 - Post processing (AZ Demands)
 - Probabilistic results
 - Shaded graphs
 - Probabilities of needing to recovery a certain volume in a given year

Likelihood, Timing & Magnitude



Modeling Results

- Earliest projected instate recovery is 2017 (1% probability; Indian NIA and On-River)
- Less than 35% probability of needing any recovery before the Mid-Term planning period (2024-2034)
- No M&I recovery projected until Long-Term planning period (2035-2045)
- Bulk of instate credits remain past 2045
- Timing and magnitude of Nevada's request plays significant role in Mid-Term and Long-Term planning periods

Credit Request, Distribution & Opportunities

- During shortages the amount of credits needed for recovery will be based on:
 - Requests for firming from on-river P4 users
 - Differences between available supplies and orders for CAP M&I and firmed NIA users (up to 20% of the shortage to the CAP M&I pool)
 - ICUA requests from SNWA (Shortage & Non-Shortage)
- CAWCD, in cooperation with the AWBA, will develop a Recovery Schedule based on these recovery needs
- AWBA and ADWR will review CAWCD's proposed Recovery Schedule
- AWBA distributes credits to CAWCD (IGA)
- CAWCD recovers credits directly or through recovery partners to meet demand needs in each AMA

Implementation

- Operational Timeline
 - Key actions taken before, during and after Recovery Year
- Collection of Costs
 - Beneficiaries of recovery pay the associated costs of recovery
 - Instate recovery costs are borne by the class of users (or pool) benefiting from recovery
 - Interstate recovery costs are borne by SNWA

Future Activities & Commitments

- Recovery Agreements
- Technical Studies & Project Feasibility
- Monitoring and Updating Modeling
- AWBA Activities

Next Meeting – Updated Modeling

- Updated Hydrology
 - Historic record (now 110 years)
- Operational Guidelines
 - DCP vs 2007 Guidelines
 - Absolute protect
- Acceptable Risk Tolerance
 - Planning target

Wrap Up

- Questions/Comments
- Next possible meeting dates:
 - March 7, 22 or 27
 - May 8, 9, 22, 23
- Will send a Doodle Poll to confirm best availability
- Contact Jeff Inwood with questions or comments jinwood@azwater.gov