

RECLAMATION

Managing Water in the West

Arizona Water Settlements Act New Mexico Activities

Water & Natural Resources Committee

Western New Mexico University

August 31, 2015



U.S. Department of the Interior
Bureau of Reclamation

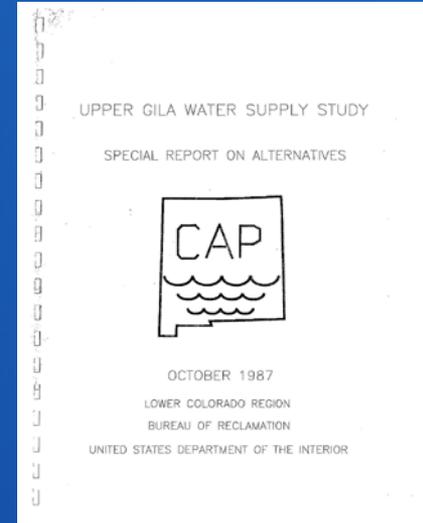
New Mexico AWSA Discussion Items for Today

- **Brief History of the Colorado River Basin Projects Act of 1968 and the Arizona Water Settlements Act (AWSA) of 2004**
- **Reclamation's Role in the AWSA Implementation**
- **Reclamation's Participation in NM's Planning Process to date**
- **Value Planning Study**
- **Next Steps**

History

- **The Colorado River Basin Project Act of 1968**
 - Authorized Upper Gila River Exchange
 - Hooker Dam or alternative

- **1987 Special Report**
 - Eliminated Hooker Dam site & other main stem dams
 - Recommended using existing groundwater supplies until est. 2010



Spikedace



Loach
Minnow



2004 AWSA Modified the 1968 Authorization

Among other changes -

- Reduced the amount of water available in NM to an annual average in any 10 consecutive year period of 14,000 AF – up to 64,000 AF in any year
- Provided indexed, non-reimbursable funding for the NM Unit or other water utilization alternatives in SW NM
- Ratified the Consumptive Use & Forbearance Agreement outlining conditions for NM diversion

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Area Map



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AWSA Requirements

- **NM notified Secretary of Interior (SOI) on 11/24/14 that they intended to construct the NM Unit**
- **SOI must sign NM Unit Agreement with NM CAP Entity w/in 1 year of notification – 11/23/15**
- **NM Entity responsible for**
 - **Capital costs in excess of funds provided by AWSA**
 - **Operation & Maintenance costs**
 - **CAP exchange water costs (currently \$157 AF)**
- **Implementation of the NM Unit requires full environmental compliance including NEPA**
- **Upon request by the Entity, the Secretary shall transfer to the Entity the responsibility to design, build, or operate and maintain the Unit, or any combination of those responsibilities**

Reclamation's Role

- **Provide oversight/support for the Secretary of Interior**
- **Manage the Lower Colorado River Basin Development Fund**
- **Environmental Compliance**
- **Fulfill Federal Trust Responsibility to the Tribes**

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Manage the Lower Colorado River Basin Development Fund (LCRBDF)

- **Deposit \$66 million (indexed) into the New Mexico Unit Fund, established by the State of NM fund and administered by the NM Interstate Stream Commission for the**
 - **NM Unit**
 - **other water utilization alternatives**
- **Provide \$34 million (indexed) on a construction schedule basis if a Unit is selected and constructed.**
- **Manage the LCRBDF for implementation activities of others based on priorities in the AWSA and other laws and policy**

Reclamation's Participation in State of New Mexico AWSA Planning

- **Worked with New Mexico Interstate Stream Commission (NMISC) at their request since 2005**
- **Reclamation provided technical assistance**
 - **Appraisal Level Report July 31, 2014**
 - Engineering Assessment of diversion alternatives
 - Economic Cost/Benefit of all NM Tier 2 alternatives
 - Environmental Review of all NM Tier 2 alternatives
 - **Value Engineering Planning Study**

Value Engineering Planning Study

June 15-19, 2015

- Requested by NM ISC
- Study team representatives consisted of private consultants, Reclamation, ISC, New Mexico CAP Entity, and Gila National Forest.
- Team member expertise included civil engineering, tunneling, hydrology, construction, farming/ranching, water conveyance, embankment dams, pumping plants, and reservoir lining
- Value Study report scheduled to be posted by early fall.

Purpose of Value Study

**Assess information
to develop &
compare a range of
Unit alternatives**

**Investigate lower
cost Unit options**

**Ensure alternatives
are technically sound**



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Value Study Parameters

- **Utilizes existing appraisal level data**
 - Reclamation
 - Consultants
 - RJH and Bohannon-Huston reports
- **Complies with Diversion Requirements**
 - Consumptive Use & Forbearance Agreement (CUFA)
 - New Mexico diversion requirements

Value Study Results

- **Developed a phased project approach**
 - Phase 1 - Divert, convey, store, and deliver water for agricultural and environmental purposes in the Cliff-Gila valley
 - Phase 2 - Develop additional storage and other features as necessary
 - Phase 3 - Convey water to Mimbres Basin
- **Defined “Functional Project” alternatives**
 - Divert, convey, store, and deliver water, Phase 1
- **Developed storage target volumes for phases**
 - Phase 1 - 13,000 acre-feet
 - Phases 2 and 3 - 46,000 acre-feet
- **Developed cost estimates for reservoir lining**

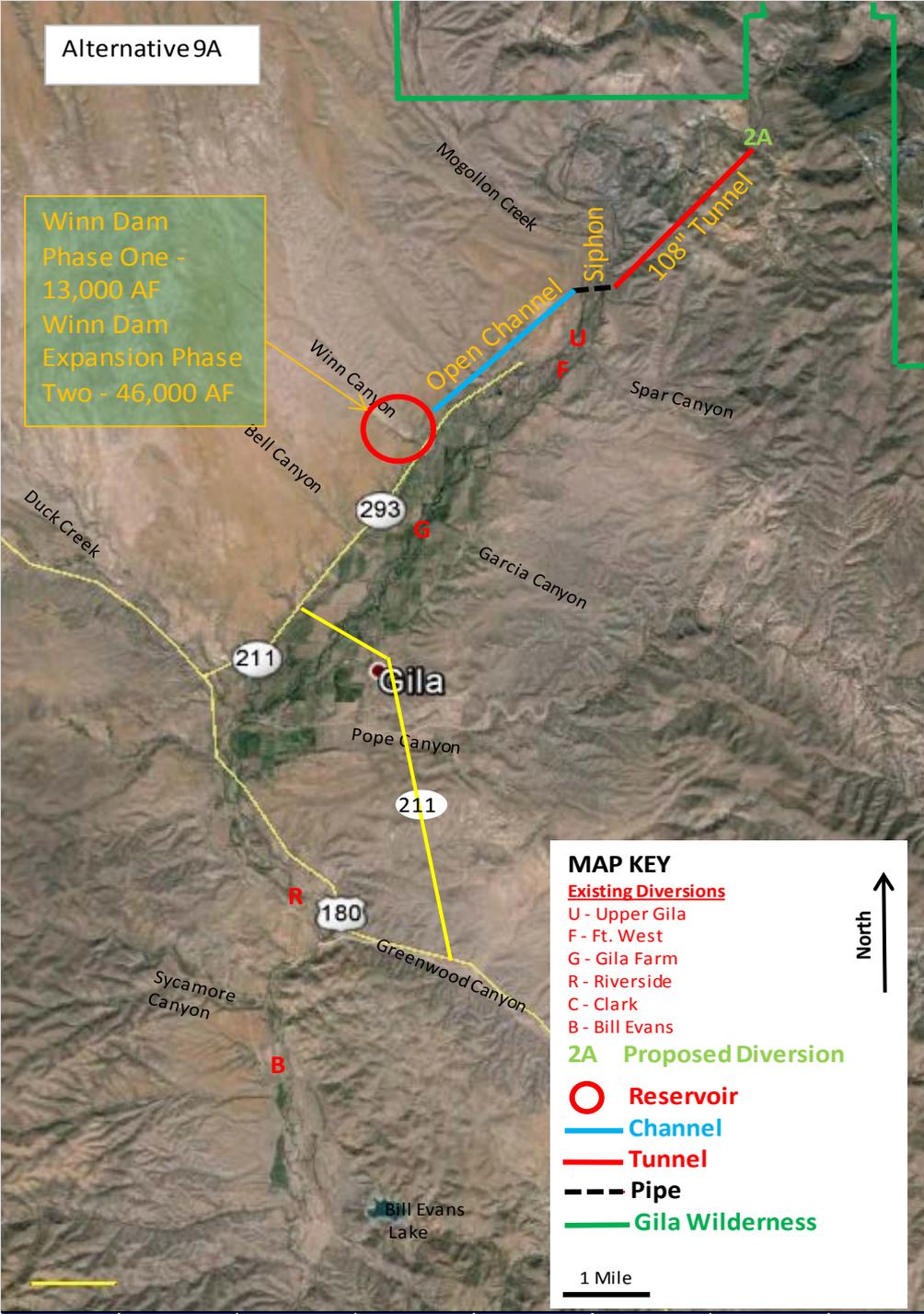
Alternative	Weighted Score	Ranking	Phase One				All Three Phases			Preferred Supply Conveyance Type	Requires Pumping to Deliver Water to Upper Reaches of Cliff-Gila Valley
			Meets Phase One Target 13,000 ac-ft	Phase One Costs	Ac-Ft Storage for Phase One	\$/Ac-Ft for Phase One	Costs for All Three Phases	Ac-Ft Storage for All Three Phases	\$/Ac-Ft for All Three Phases		
Alt 9A - Small Winn / Large Winn	333	1	Yes	\$350M	13,000	\$27,000	\$800M	46,000	\$17,000	Canal	No
Alt 9B - Small Bell / Large Bell	333	1	Yes	\$380M	13,000	\$29,000	\$830M	46,000	\$18,000	Canal	No
Alt 1 - Small Spar / Upper Spar	293	2	No	\$240M	1,642	\$146,000	\$830M	47,642	\$17,000	Tunnel	No
Alt 8 - Small Greenwood / Greenwood	284	3	Yes	\$450M	15,000	\$30,000	\$790M	46,000	\$17,000	Canal	Yes
Alt 7 - Original Winn / Small Greenwood	282	4	No	\$115M	2,750	\$42,000	\$660M	28,750	\$23,000	Canal	Yes
Alt 5 - Large Garcia / Greenwood	280	5	Yes	\$440M	13,000	\$34,000	\$1,000M	59,000	\$17,000	Canal	Yes
Alt 4 - Large Pope / Greenwood	271.67	6	Yes	\$440M	13,000	\$34,000	\$990M	59,000	\$17,000	Canal	Yes
Alt 2 - Small Pope / Greenwood	261.94	7	No	\$360M	8,732	\$41,000	\$910M	54,732	\$17,000	Canal	Yes
Alt 9C - Small Winn / Greenwood	255	8	Yes	\$350M	13,000	\$27,000	\$980M	59,000	\$17,000	Canal	Yes
Alt 9D - Small Bell / Greenwood	255	8	Yes	\$380M	13,000	\$29,000	\$1,000M	59,000	\$0	Canal	Yes
Alt 3 - Small Garcia & Small Pope / Green	243	9	Yes	\$430M	12,832	\$34,000	\$990M	58,832	\$17,000	Canal	Yes
Alt 6 - Small Spar / Greenwood	241	10	No	\$240M	1,642	\$146,000	\$1,000M	47,642	\$21,000	Pipe	Yes

	Score 300-500	Total Possible Score = 500
	Score 275-300	
	Score 250-275	
	Score 225-250	

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Alternative 9A

Winn Dam
Phase One -
13,000 AF
Winn Dam
Expansion Phase
Two - 46,000 AF



Example Project Alternative 9A Winn Canyon

Phase 1 Winn Canyon

- Divert at Diversion 2A
- 1.9-mile tunnel
- 1.5-mile siphon under Gila R.
- 3.8-mile open channel canal
- 13,000 ac-ft lined reservoir
- Gravity flow released to upper end Cliff-Gila Valley
- \$350M

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Next Steps

- **Value Study Report completed by early fall**
- **New Mexico Unit Agreement**
 - Secretary and New Mexico CAP Entity must sign within one year of notification (November 23, 2015)
- **Perform Environmental Compliance**
 - Reclamation is the Lead agency for NEPA & New Mexico is joint lead
 - MOU – outline roles, responsibilities, funding, use of Principles Requirements & Guidelines, etc.
- **Issue Record of Decision by December 2019**
 - Unless no fault of NM, then by 12/31/30

Questions?



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