

“Potential Water Storage Sites on Arizona State Trust Land” study (2017)

Hydrology methodology used and results



Potential Water Storage Criteria Development Sub-
Committee Meeting
January 24, 2020

Background

SB1399

- * **Directed State Land Commissioner and ADWR Director to develop report that identifies potential water storage sites on State Trust land**
- * **“a preliminary investigation of acceptable sites to construct new water storage facilities on State Trust land and the identification of the six most potentially acceptable sites”**
- * **“may be water storage facilities on the earth's surface or underground storage facilities as defined in section 45-802.01, Arizona Revised Statutes.”**



Process

1. Initial identification of potential storage sites by ADWR in nearly every groundwater basin and watershed in the state
 - **RESULTS:**
 - 21 surface sites
 - 331 underground storage sites
2. Selected and prioritized by ASLD
 - **RESULTS:**
 - 4 potential surface water dam/reservoir sites
 - 2 potential underground storage facility (USF) sites



Potential USF Sites

ADWR Methodology

1. Search Criteria

- *Located along stream/watercourse*
- *ASLD ownership*
- *Overlie basin-fill or local alluvial stream deposits*
- *NO consideration if site was within AMAs & INAs*

2. Elimination criteria (isolated or redundant sites)

- Proximity of potential sites to potential places of recovery/use
- Multiplicity of potential sites on same stream
- Sites along canals
- Near the Colorado River
- Areas with many existing USF sites

3. Results: 331 potential Underground Storage sites were identified



Potential USF Sites ASLD Methodology

1. Prioritization Criteria

- *Eliminate potentials in general stream adjudications watersheds*
- *Consider only areas where water management overlays will protect stored water or;*
- *Will directly benefit State Trust land, such as AMAs, INAs or permissible “transportation basins” (ARS Title 45, Article 8.1)*
- *Hydrologic properties of basin-fill or stream alluvium at potential sites*
- *Depth to water*
- *Locations of existing recharge facilities*
- *Preferred sites within AMAs & INAs for reasons shown above*

2. Results: 2 potential Underground Storage sites were identified



Identification of 2 Potentially Acceptable USF Sites ASLD Methodology

1. Cunningham Wash

- *LaPaz County: Butler Valley Basin*
- *Basin authorized for groundwater transportation under A.R.S. 45-553*
- *Potential storage estimate = >20,000-acre feet*

2. Whitewater Wash

- *Cochise County, Douglas INA, San Bernardino Groundwater Basin*
- *Potential storage estimate = unknown at time of study*

