

Long-Term Water Augmentation Committee

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Governor's Council Long-Term Water Augmentation Committee

As Arizona continues to grow and use its water resources, it is important to plan ahead and find additional water supplies as well as more efficient ways to use current supplies.

The Long-Term Water Augmentation Committee is tasked with finding methods of augmenting Arizona water supplies.

Long-Term Water Augmentation Options for Arizona

Final

Prepared for the
Long-Term Water
Augmentation Committee
of the Governor's
Water Augmentation,
Innovation, and
Conservation Council





At the inaugural meeting of the Governor's Water Augmentation, Innovation and Conservation Council, the members decided that the Long-Term Water Augmentation Committee, originally established by the Governor's Water Augmentation Council, would continue. Here you will find information regarding the [Long-Term Water Augmentation Committee](#) activities prior to March 8, 2019.

➤ [Meetings](#)

▼ [Documents](#)

Potential Water Storage Study (2016)

[Potential Water Storage Study 2016.pdf](#)

Last comment: January 6, 2020 - 1:58pm

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Senate Bill 1399

[SB1399_Water_Storage_Study_Bill.pdf](#)

Last comment: January 6, 2020 - 1:58pm

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Long-Term Water Augmentation Options Full Report

[Long-Term Water Augmentation Options Full Report](#)

Last comment: September 6, 2019 - 12:51pm

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Long-Term Water Augmentation Options Report

[Executive Summary & Full Report](#)

Last comment: August 14, 2019 - 1:29pm

“One of the key conclusions from this study is that the **water augmentation options available to Arizonans to a large extent have already been identified, and some are in the process of being developed.** Our task as Arizonans is to work with the water resources that we have to provide the water needed for continued growth, prosperity, and environmental sustainability. Additional water supplies coming from outside of Arizona are not expected other than opportunities that come through Minute 323 (discussed in Section 3).”

The following are key outcomes from this project:

- Additional water supplies that have not yet been fully utilized are identified.
- Importing water supplies from other states is being removed from further consideration.
- Best Practices where Arizona currently provides leadership are being re-emphasized for the additional benefits that can come from implementing these practices more fully throughout the state.

- Projects that can improve the efficient utilization of water are identified.
- Water augmentation opportunities requiring additional research and investigation have been identified so that additional effort can be channeled toward these investigations.
- Arizona needs to make progress on resolving water rights issues, and in extending water management practices to portions of the state that would have more sustainable water supplies with effective groundwater management.

WATER AUGMENTATION OPTIONS

Water Augmentation Options	Best Practices that Improve Water Utilization	Projects and Practices Between Willing Parties that Improve Water Utilization	Water Augmentation Concepts Requiring Further Development
Ocean Desalination	Agricultural Water Conservation	Firm Water Supply for Lower Priority Colorado River Water Users	Cloud Seeding
Brackish Groundwater Desalination	Enhancing Aquifer Storage	Modify Operation of the Roosevelt Dam to use the Flood Control Space	Phreatophyte Management
Groundwater Extraction from the Harquahala and Butler Valleys	Reclaimed Water Utilization	SRP-CAP Interconnect Facility	Watershed Management
	Municipal Water Conservation		
Impediments to Water Augmentation			
Indian Water Right Settlements	Little Colorado River and Gila River Water Rights Adjudications	Groundwater Management Planning	

Water Augmentation Option 3

PUMP GROUNDWATER FROM THE HARQUAHALA AND BUTLER GROUNDWATER BASINS

The Harquahala and Butler Valley alluvial groundwater basins are located west of Tonopah, AZ. Arizona State Statute allows groundwater from the Harquahala and Butler Valleys to be recovered and delivered to the Basin and Range Active Management Area (AMAs) by wheeling this water through the Central Arizona Project (CAP) Canal. Planning and development to extract this groundwater is underway by the several parties that own land in Harquahala. The water supply potential of the Harquahala basin may be in excess of 80,000/AFY. Additional supplies may come from the Butler Valley and with legislative changes to allow this water to be used in the Basin and Range AMAs, the McMullen Valley could also have groundwater extracted for potable use.

Developing this groundwater supply requires wells, transmission lines, pump stations, storage, and delivery into the CAP canal. Then at the delivery point, a diversion from the CAP canal would be required along with surface water treatment, storage, and pumping facilities. The cost of water from the Harquahala basin would be approximately \$1,800 - \$2,000/AF.

Modifying the operating criteria for SRP's Roosevelt Dam could add up to 556,000 AF of storage.



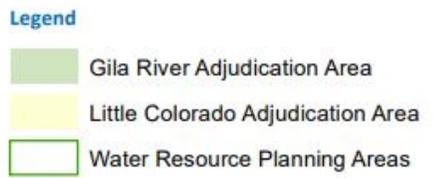
Figure 15 Roosevelt Dam and Reservoir (Photo courtesy of the Salt River Project)

The SRP-CAP Interconnect Facility:

1. Direct Delivery of Roosevelt Dam New Conservation Storage (NCS) water to Mesa, Chandler, and Gilbert's CAP treatment plants for use off-project where it is needed. Currently NCS water can only be delivered through SRP's delivery system.
2. Indirect Delivery of NCS to benefit Peoria, Glendale, Phoenix, and Scottsdale's CAP treatment plants for use off-project where it is needed.
3. Increase resiliency and flexibility of infrastructure.

We gotta' fix this:

The Little Colorado River and the Gila River Water Rights Adjudications must be completed



Possible Improvements

1. Agricultural Water Conservation
2. Reclaimed Water
3. Municipal Water Conservation

Current Committee Efforts

1. Increasing water storage.
2. Weather Modification
3. Phreatophyte Management
4. Forest Management

Increasing Water Storage

Potential Water Storage Sites on Arizona State Trust Land

POTENTIAL SITES IDENTIFIED BY THE ARIZONA DEPARTMENT OF WATER RESOURCES AND THE ARIZONA STATE LAND DEPARTMENT AS REQUIRED BY SB 1399 (2016)



Conference Engrossed

FILED
MICHELE REAGAN
SECRETARY OF STATE

State of Arizona
Senate
Fifty-second Legislature
Second Regular Session
2016

CHAPTER 164

SENATE BILL 1399

AN ACT

REQUIRING THE DEVELOPMENT OF A PLAN TO CREATE ADDITIONAL WATER STORAGE.

(TEXT OF BILL BEGINS ON NEXT PAGE)

Weather Modification



Figure 17 Cloud Seeding

SRP conducted some of the earliest cloud seeding operations in Arizona. During the 1950s, a time of drought in Arizona, SRP set up a series of ground-based seeders on its 13,000-square-mile watershed. The operations relied on air masses to lift propane-burned silver iodide for seeding. SRP also contracted for aerial seeding during the 1950s and 1960s. These early efforts were suspended when drought conditions eased.

Phreatophyte Management



Figure 18 Tamarisk along the Colorado River (Photo courtesy of the New York Times)

Forest Management



Figure 19 Arizona Forests to be Managed for Improved Water Quantity and Quality



Figure 20 Thinning Forests (Photo Courtesy of the Nature Conservancy)



Figure 21 Thinned Forests use Less Water, are Less Susceptible to Major Fires, and Help Maintain Good Surface Water Quality (Photo Courtesy of the Nature Conservancy)

Questions