



Aquifer Storage and Recovery Update

Austin Water Oversight Committee | August 20, 2020



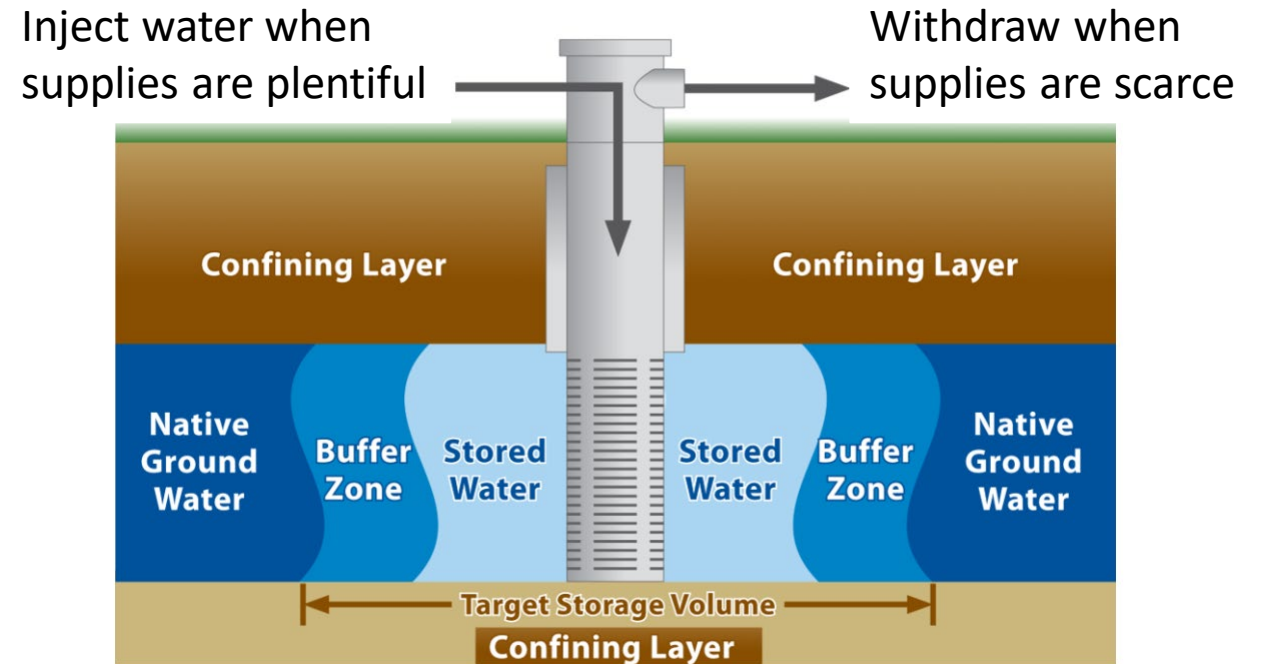
Overview

- What is ASR
- ASR in Water Forward
- ASR Pilot and Program Management Scope
- Summary



What is Aquifer Storage and Recovery (ASR)?

- 💧 Store water underground in a natural aquifer and recover it later
- 💧 Acts like a “savings account” for water supplies
- 💧 Allows storage of larger volumes of water than conventional storage



<https://www.trwd.com/aquifer-storage-may-become-the-next-big-player/>

Examples of ASR Projects

- ASR in Texas:
 - San Antonio Water System H2Oaks facility
 - City of Kerrville ASR
 - El Paso Water Utilities ASR
- ASR Studies (TWDB):
 - Corpus Christi ASR Feasibility Project
 - New Braunfels Utilities: ASR Demonstration Project
 - Victoria ASR Demonstration Project
 - Statewide Aquifer Suitability Study - underway

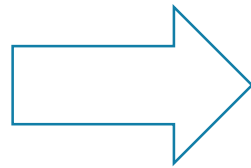


ASR, Key Drivers, and Guiding Principles of Water Forward

Population Growth

Climate Resiliency

Historic Drought



Protect

Focus On

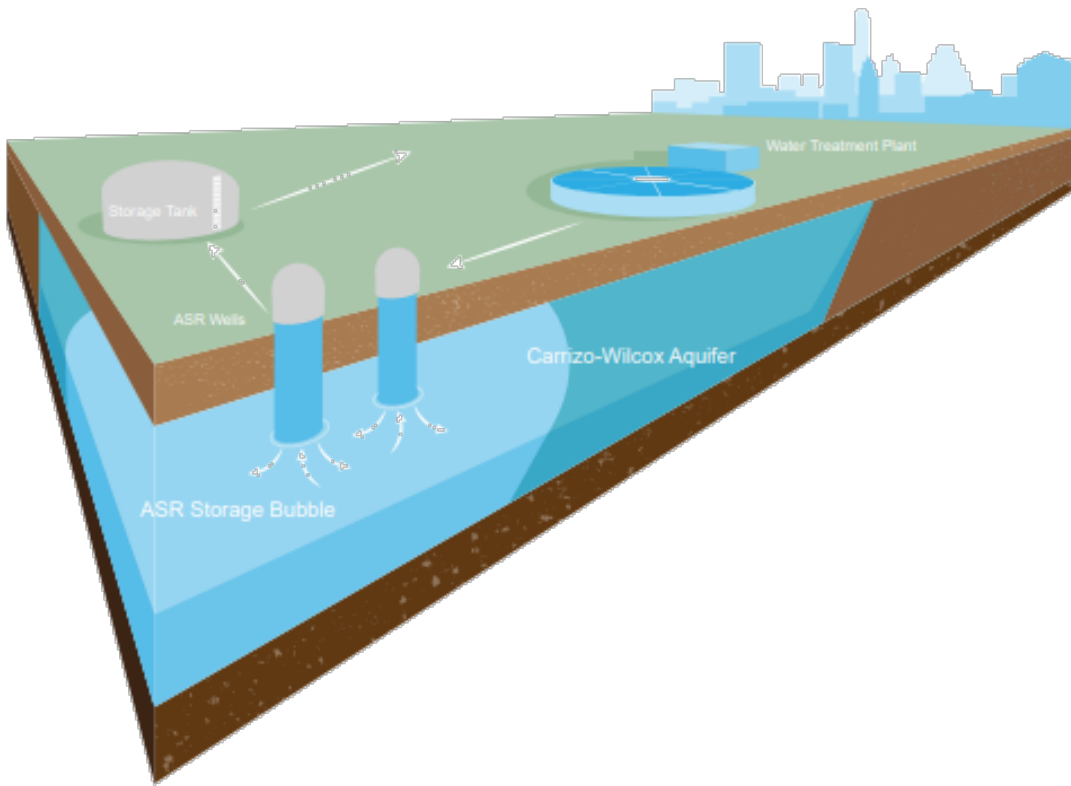
Align With

- Core Colorado River Supplies
- Public Health
- Environment

- Reliability
- Conservation
- Local Resources
- Feasibility

- Community Values
- Imagine Austin
- Regional Coordination

Overview of Austin's ASR Project



- Major tasks will include:
 - Research and pilot site selection, design, construction, and testing of pilot ASR
 - Full scale facility design, construction, and testing
- Plan to store treated, potable water from the Austin Water distribution system
- Recommended in Water Forward as a Carrizo-Wilcox ASR but plan to study additional potential locations
- Target is to have 60,000 acre-feet of water stored by 2040
- Water Forward estimated cost is \$367M

Key ASR Elements

Environmental Stewardship

- Using a natural aquifer to store water allows large volumes of water to be stored with minimal disturbance to land above the aquifer
- ASR is not intended to be a strategy to develop native groundwater

Being a good neighbor

- ASR helps Austin maximize its locally available water resources
- Community engagement is an important part of the project

Affordability

- Long-term planning, including low-interest loans, can help avoid more costly projects in the future
- ASR pilot will help refine costs and affordability considerations

Equity

- AW is committed to implementing ASR with an equity focus in collaboration with our community
- Pilot ASR will help inform how to implement this project with equitable outcomes



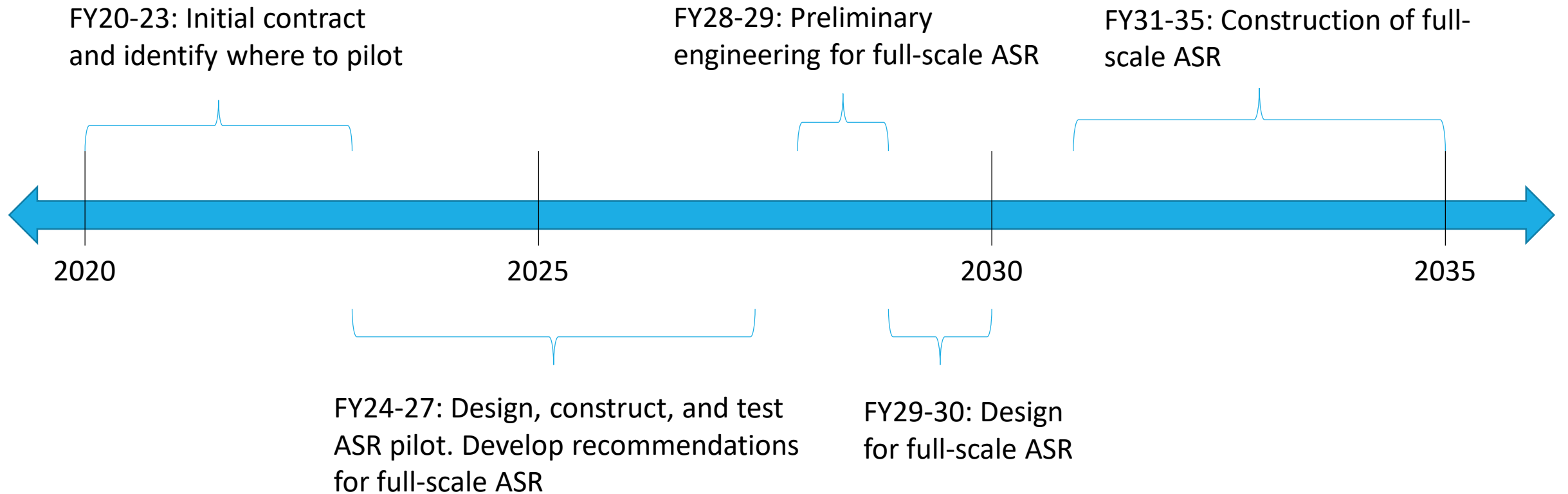
Climate and Community Resilience

A photograph of the Austin skyline, featuring several tall skyscrapers and a bridge over a body of water. The buildings and bridge are reflected in the calm water in the foreground. The sky is a pale, hazy blue.

- ASR improves Austin's climate resiliency
- ASR will be used to store water in times of plenty, so we are prepared for drought and other emergencies
- Aligns with the Safety and Health & Environment strategic outcomes from SD23

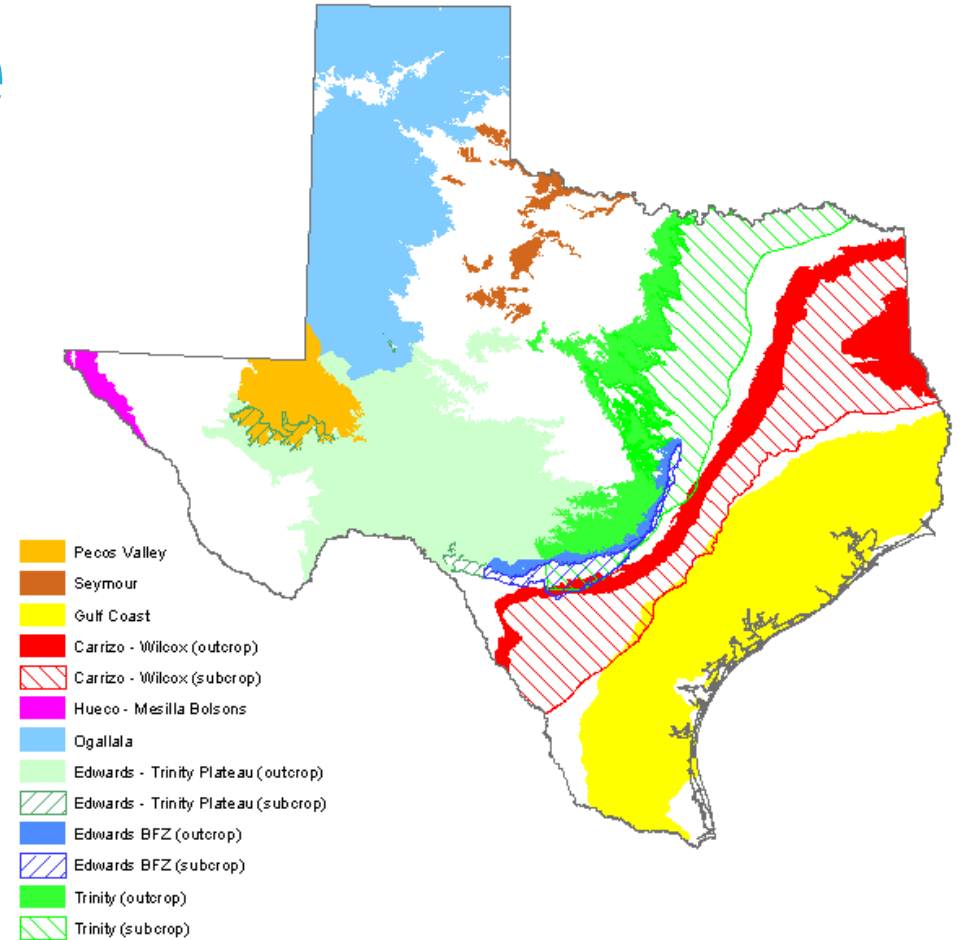


Austin ASR Project Timeline



ASR Pilot and Program Management Scope

- ♦ **Phase 1** - Develop an ASR program and perform desktop modeling and field testing to evaluate potential sites for piloting.
- ♦ **Phase 2** - Design, construct, and test an ASR pilot project.
- ♦ **Phase 3** - Act as owner's representative through any potential full-scale ASR project.
- ♦ **All Phases** - Community engagement and public outreach throughout the project.



Pilot ASR and Program Management Consultant Procurement Timeline

- Recommendation for Council Action (RCA) to go to Water/Wastewater Commission on August 21st
- RCA to go to Council on August 27th
 - RCA seeks approval for \$6 million for Phase 1 services and contingency
 - RCA is the first in a series of Council actions needed for a full-scale ASR strategy



ASR Information Sharing

- ASR updates provided to Water Forward Task Force
- Formed an ASR Technical Advisory Group to share information and get feedback on ASR project
 - academia, state agencies, other utilities, and representatives from Water Forward Task Force
- AW is committed to ongoing community engagement



ASR Summary

- Important water supply strategy in Water Forward Plan
- Improve Austin's climate resiliency
- Store treated drinking water and maximize local resources
- Upcoming Phase 1 ASR services
 - Desktop modeling and field testing to identify site(s) for piloting
 - Will come back to Council in the future to request additional authorization to proceed with project
- ASR project scope includes significant community engagement



Questions?

