

GROUND WATER STORAGE AND RECOVERY ACT (ASR)

ANY LONG-TERM WATER PLAN FOR NEW MEXICO MUST INCLUDE GROUND WATER MANAGEMENT STRATEGIES TO PROVIDE A SUSTAINABLE SUPPLY.

Climate change has already left an indelible mark on water supplies in New Mexico. In the next 50 years, increased temperatures, reduced snowpack, and changes in the timing of precipitation and runoff will significantly impact New Mexico's surface water and groundwater supplies. Groundwater availability is likely to be further reduced as less surface water supplies increase demand for groundwater and put more stress on aquifers in the state.

Aquifer Storage and Recovery (ASR) is a critical component of groundwater management. The concept of ASR is relatively simple—store surface water supplies in the aquifer for future beneficial use. In 1999, the New Mexico State Legislature authorized the storage of surface water supplies in aquifers under the Ground Water Storage and Recovery Act (the “Act”). Unfortunately, there have been less than five ASR projects permitted in New Mexico since the passage of the Act.

The Problem

The major obstacle to implementing ASR in New Mexico is the time and cost of permitting. To initiate an ASR project under current regulations, a governmental entity must obtain a permit from the Office of the State Engineer (OSE). The applicant must also obtain a Ground Water Discharge Plan approved by the New Mexico Environment Department (NMED).

The OSE and NMED permitting requirements are duplicative and require significant investment to demonstrate project feasibility. The pre-permitting investment is a barrier to entry, as potential applicants are uncertain whether the project will be permitted and how much it will cost to operate the project. As a result of the uncertainty around the initial permitting and investment period, ASR projects remain extremely rare in New Mexico despite their remarkable utility.

The Future

When the Act was developed and authorized, the primary focus was on smaller, local projects. These projects include Bear Canyon Infiltration Project (3,000 acre-feet per year) and the Large-Scale Injection Project (5,000 acre-feet per year), both of which are owned and operated by the Albuquerque Bernalillo County Water Utility Authority. However, there are many potential larger-scale projects which could be implemented to meet specific policy objectives, regionally. These regional groundwater replenishment plans would store runoff from large precipitation events and could be used to help meet compact delivery requirements, agricultural supply needs, and environmental flows.

We envision large-scale projects that divert water onto available agricultural land, where it would infiltrate into the ground water and would later be pumped out using wells. The stored ground water could be pumped to meet compact delivery requirements or for other needs like environmental flows. The reduction in evaporative losses stemming from storing water underground rather than aboveground in aquifers would likely lead to significant water savings. Furthermore, diversion and return of water to the river would utilize existing infrastructure and thus reduce project cost. These types of large-scale projects could be implemented across New Mexico, including in the Middle and Lower Rio Grande and in the Pecos River with great success.



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Figure 1
Faro Caudill Pouring Water from his Well into
Watering Trough Made of Hollowed-Out Log,
Pie Town, New Mexico,

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Maximizing the use of available water resources is critical to providing sustainable water supply for the future. ASR could be a very important water management tool to meet that need. However, the current statutory and regulatory requirements are difficult and expensive to navigate to get projects implemented. The Utton Center proposes statutory and regulatory changes to maximize the potential benefit of ASR.

Finally, the Utton Center strongly urges the development of conceptual Large-Scale Regional projects focused on Interstate Compact Compliance and other needs.

The Solution

Proposed Legislative and Regulatory Changes

Legislative Changes

- Include definitions for managed recharge projects
- Expand definition for stored water to include ASR
- Expand entities authorized to perform ASR projects
- Eliminate the need for a separate pilot project permit
- Reduce the cost of the permit filing fee
- Include water quality and monitoring plans
- Eliminate some limits on ASR storage amounts

Regulatory Changes

- Create exemption from discharge permitting requirements for managed recharge projects without injection wells
- Differentiate between ASR projects and managed recharge projects
- Eliminate the two-step permitting process
- Eliminate pilot demonstration requirement
- Include water quality assessments in annual report to State Engineer



Read the proposed changes

Please visit
<https://uttoncenter.unm.edu/> to
review the Utton Center's full
proposed statutory and
regulatory changes.