

OLAWC, NM Water Ambassadors, and NM Water Advocates – WNRC Panel
Presentation to the Water and Natural Resources Committee
November 7, 2023 – Santa Fe, NM

What happens when one city, faced with compelling research based on sound scientific data born out of an aquifer mapping program presented at a Water Summit in 2016, is motivated to initiate a water planning process that results in five distinct action plans to address what the mapping results indicates will await them if they don't heed the call to action? While, a neighboring city, only 19 miles away has access to the same information and a much more urgent call to action, but stays the course on its current path?

**A Tale of Two Cities and a Two-Pronged Approach
Leveraging the Power of the Aquifer Mapping Program
and Regional Water Planning**

Two similar cities, only 19 miles apart, faced with the following challenges:

- **Severe or extreme drought**
- **A sole source of potable water derived from an aquifer being rapidly depleted**
- **A key pipeline bringing surface water from the Ute Reservoir, but not expected to deliver water until 2030**
- **Aquifer mapping research and results based on sound science and data, published in 2018 (conducted by NM Tech, New Mexico Bureau of Geology & Mineral Resources) projecting the dewatering of the Ogallala Aquifer in a few decades or less**

A two-pronged approach, implemented by one city, in partnership with a county and a military installation, yielded desired results using the NM Tech Aquifer Mapping Program as a launching point to engage people representing a cross-section of the community and committed to collective action in effective regional planning. The result . . . a set of well-designed, executable action plans that are getting results.

The other city did not use the NM Tech Aquifer Mapping data or engage in local or regional water security planning. This city continues to rely on one source of water and has been navigating Stage 3 emergency water restrictions since June 2023. Each passing day presents the challenge of being 500 gpm short of meeting water supply demand.

Clovis, Curry County, and Cannon AFB are developing their water portfolio; diversifying water sources; reducing reliance on a single, finite source of water; and enhancing resilience in times of scarcity. These entities continue to work jointly to implement an aggressive Master Water Assurance Plan to create water resilience. Actions include playa restoration, creating a land and water conservancy, banking groundwater in a paleochannel northwest of Cannon AFB,

capitalizing upon an effluent reuse water system, and completing the construction of the Ute Reservoir pipeline to acquire surface water.

Both aquifer mapping and water security planning are essential to the future and water resilience of Clovis, Curry County, and Cannon AFB. Knowing what we cannot see below the earth's surface, trusting the science, and then planning strategically based on those results has made all the difference.

2016 and 2023 Aquifer Mapping. Our latest results of the NM Tech/NMBGMR Aquifer Mapping Research have continued to inform our practice and to equip us with essential scientific data to address the critical issues regarding the rapid depletion of our groundwater supply in the High Plains Aquifer, which currently provides Clovis, Portales, Texico, and Roosevelt and Curry counties with a sole source of potable water.

Example: The City of Clovis purchased the water rights to all 10 Wall wells, 6 of which reside in the same paleochannel as our project and where aquifer mapping research was conducted in 2023. Recent measurements (October 27, 2023) taken of the wells indicate that for the first time in three consecutive years, the Wall wells, specifically #1-6, only declined 8.8", instead of the standard average annual decline of approximately 2 feet. This is a significant difference and appears to indicate that the static water levels were positively impacted since the last annual measurement taken in October 2022. Farmers voluntarily ceased pumping 51 irrigation wells in April 2022, and it appears that this may have diminished the decline in the six wells. Note that wells #7-10, which reside outside of our paleochannel project, did not experience the same improvement in static water levels that our six wells did.

Aquifer mapping results based on sound science and data provide vital projections to inform our decision making. We cannot positively plan for what we cannot see. Each region and even communities across the state need to determine their hydrologic reality. Arming each region and community with this vital knowledge provides an important foundation for creating and executing a regional water plan.

Funding and implementing an aquifer mapping program in key regions across the state of New Mexico for groundwater management is vital.

Building capacity is vital to mitigating the water crisis we face in New Mexico. State agencies undergird our regions and communities. Their support and expertise are vital to our success! The Office of the State Engineer and the Interstate Stream Commission need to restore at least 20 of the positions they lost in the past or they will not be equipped to address the urgent challenges we are facing.

Water Governance plays a more critical role than ever when faced with a water crisis. The current, long-standing model of appropriated and adjudicated water rights, permits for drilling replacement, and supplemental wells, and enforcement strategies must be reconsidered in the context of 21st Century water scarcity.