



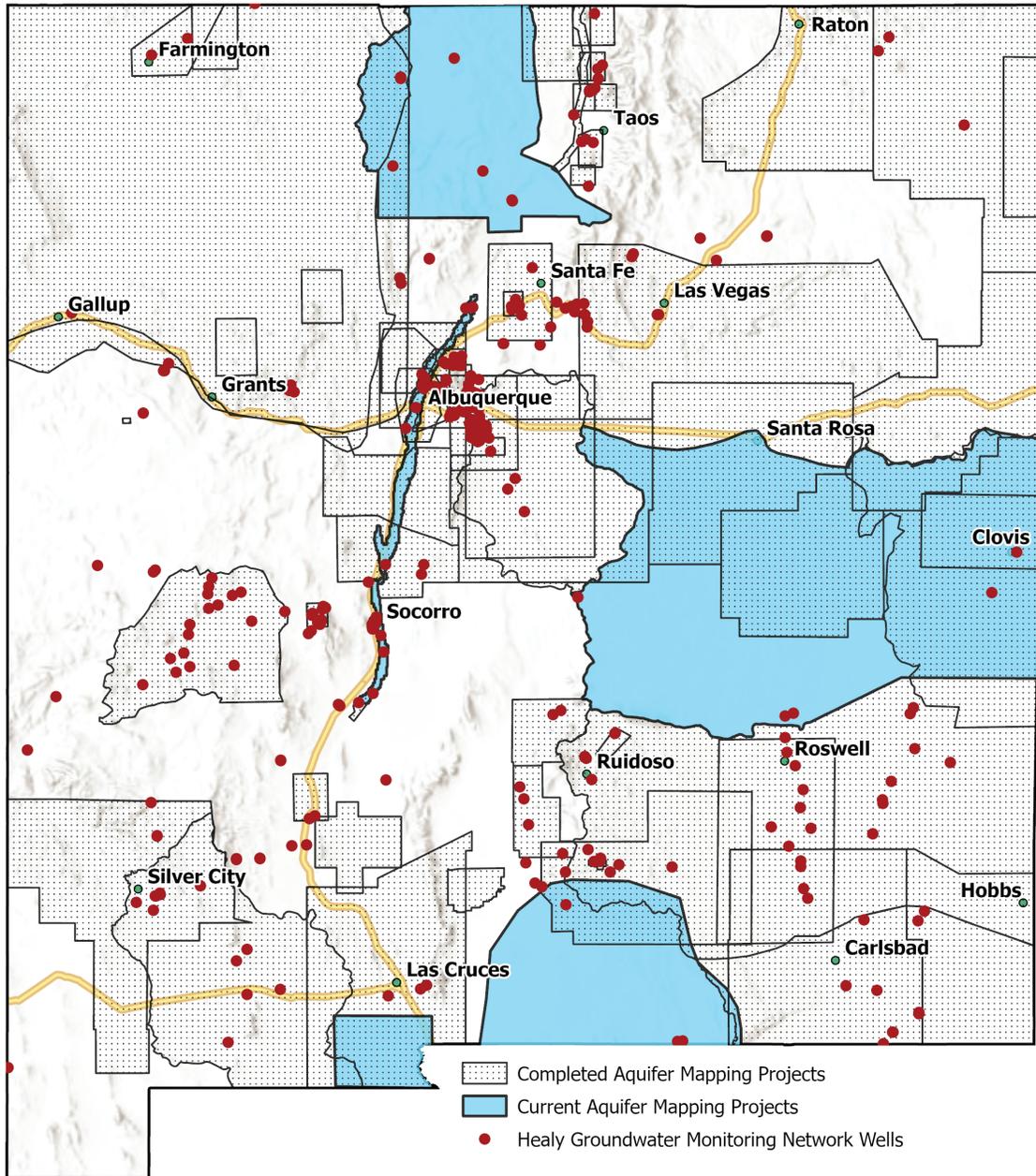
Aquifer Mapping Program 2024 Overview

New Mexico Bureau of Geology and Mineral Resources
A Research Division of New Mexico Tech



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The Healy Collaborative Groundwater Monitoring Network has made a big impact in the monitoring and understanding of water resources across New Mexico since 2016. The goal of this network is to supplement existing groundwater level monitoring throughout the state by working with local well owners or water systems in regions with little to no current monitoring. Through funding from the Healy Foundation, the USGS National Groundwater Monitoring Network, and the Aquifer Mapping Program, Bureau staff visit more than 200 wells annually to measure depth-to-water, and to install and maintain monitoring equipment.



Rio Arriba County - Communities such as Chama, Dixon, Abiquiu, Medanales, and El Rito are the focus of a multi-year study to evaluate groundwater in regional aquifers across Rio Arriba County. In the fall of 2023, our team collected water chemistry and water level data from approximately 100 wells to better characterize these groundwater aquifers. Results will include updated maps of water quality and extent, and public meetings in the region will help share this information with community members. Project funded by appropriation from NM Legislature.



High Plains Aquifer Monitoring - In response to groundwater declines for the past several decades in the region near Clovis, NM, several groundwater irrigation wells have been shut off to save groundwater and reduce further decline. In order to evaluate how reduction in groundwater use will impact the aquifer, our team collected numerous new water level measurements in the winter of 2022-23. We then compared the results to previous measurements to provide estimates of change in stored groundwater. Project funded by Ogallala Land & Water Conservancy.



Albuquerque Water Table Mapping - The residents of the Albuquerque metropolitan area rely in part on groundwater for domestic, municipal, and industrial use. An understanding of changes in groundwater levels and groundwater storage in the aquifer is necessary to achieve groundwater management goals set by the Albuquerque Bernalillo County Water Utility Authority (ABCWUA). Our team works annually to prepare maps and a report describing the current conditions of the water-table for the Albuquerque area. Project funded by ABCWUA.



Aquifer Storage and Recovery - The Middle Rio Grande Conservancy District (MRGCD) is exploring options for aquifer storage and recovery (ASR) to allow them greater ability to provide water to their customers, especially in dry years. NMBGMR is evaluating seven locations for ASR feasibility by compiling site specific data and applying a rating system modified from a UC-Davis Soil Agricultural Banking Index code. This project is funded by the Thornburg Foundation and the MRGCD.



Review of New Mexico's Groundwater Level Monitoring - The NMBGMR provided background information to guide the development of a modern and dedicated statewide groundwater-level monitoring network that can reliably support effective water resource management and planning. The project focused on 10 critical regions, where we reviewed the current monitoring networks, and proposed locations where dedicated monitoring wells are recommended. Additionally, a web map visualization was developed to help end-users explore the outcomes of this work. Project funded by the Thornburg Foundation.



Three Dimensional Hydrogeologic Models - The NMBGMR is working towards 3D geologic and hydrologic subsurface models across the entire state. These models serve several purposes such as providing easily accessible depth to water information, guiding groundwater flow or administration models, and aiding permitting and decision-making processes. This important work, which has been underway for 7 years, has been supported by a variety of partners such as the Healy Foundation, the NM EMNRD Oil Conservation District, and the USGS.



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We are a non-regulatory government agency (the state's geological survey) that conducts scientific investigations leading to responsible development of the state's mineral, water, and energy resources.