New Mexico Aquifer Characterization and Mapping updates

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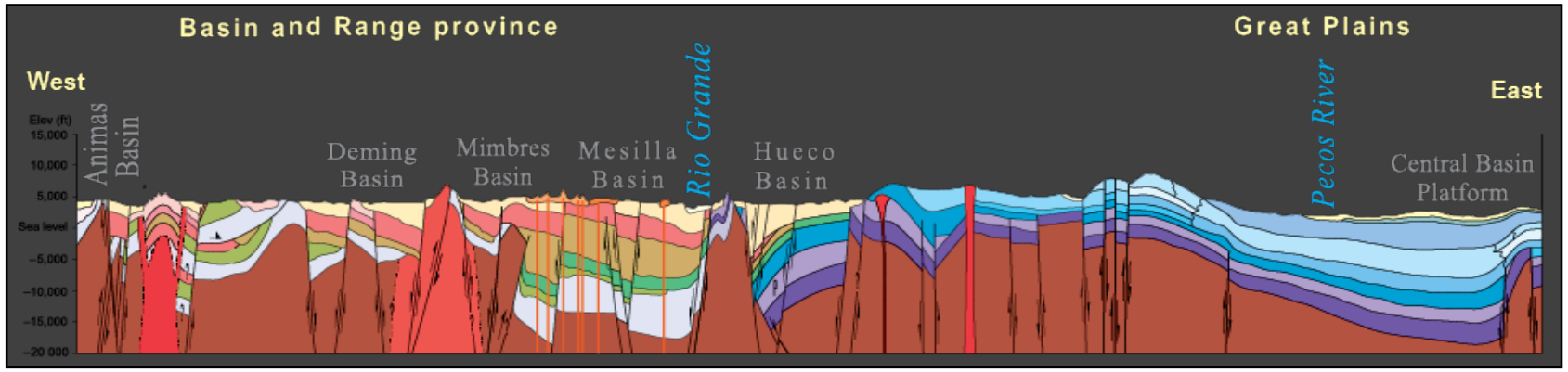
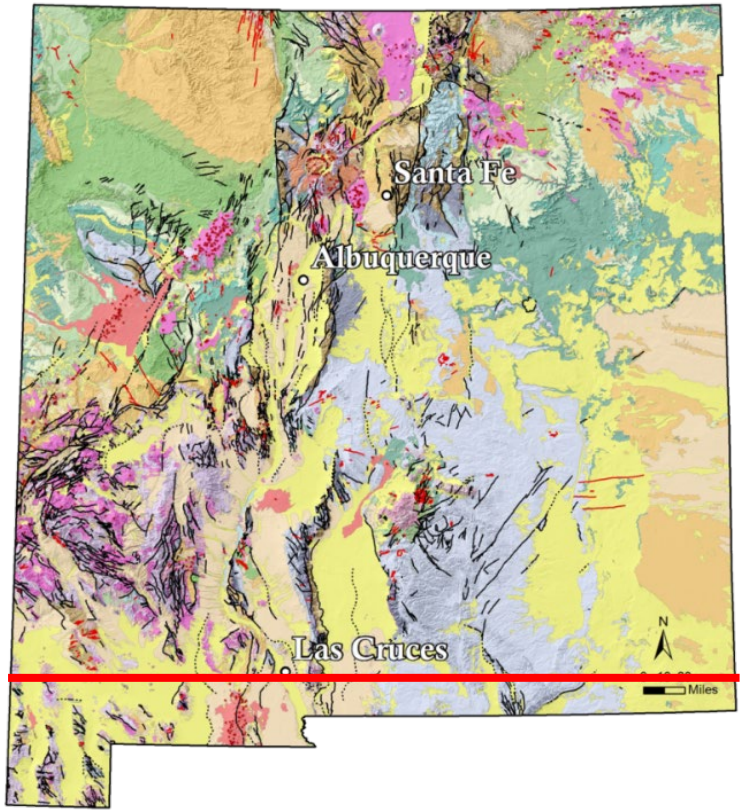
NEW MEXICO AQUIFER MAPPING

NEW MEXICO WATER DATA

NEW MEXICO WATER EDUCATION

New Mexico's aquifers are complex and most have insufficient data coverage



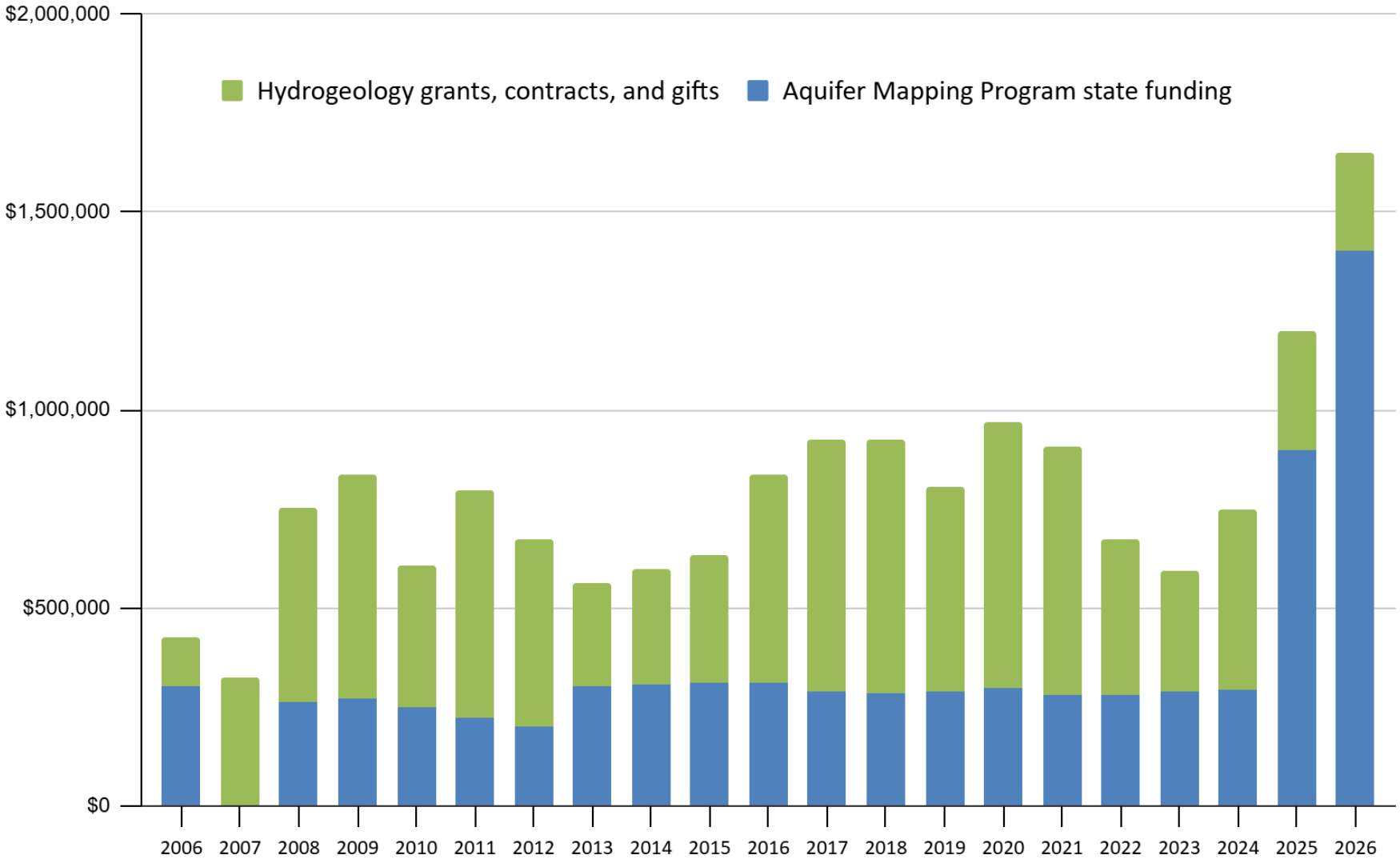


But with complete aquifer maps, we can do more.

- Estimate groundwater storage
- Examine groundwater flow directions
- Evaluate recharge processes and interaction with surface water
- Summarize known current water quality and future impacts
- Alternative water options and waste disposal

NEW MEXICO AQUIFER MAPPING

Thank you for your support this year!



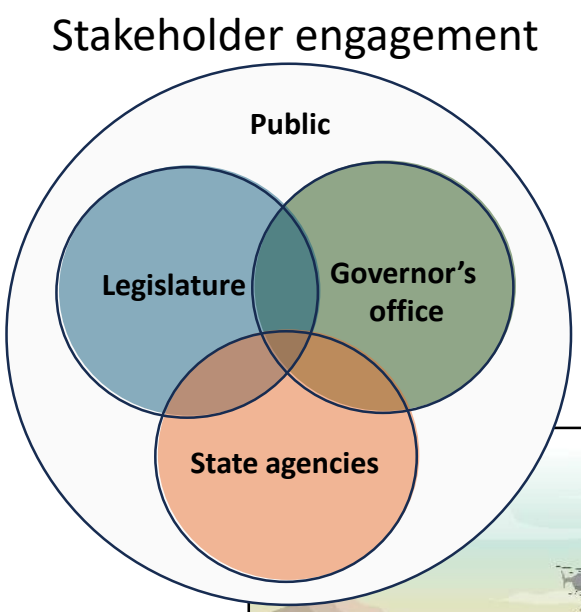
And!
$7.5M
non-
recurring
for FY2026

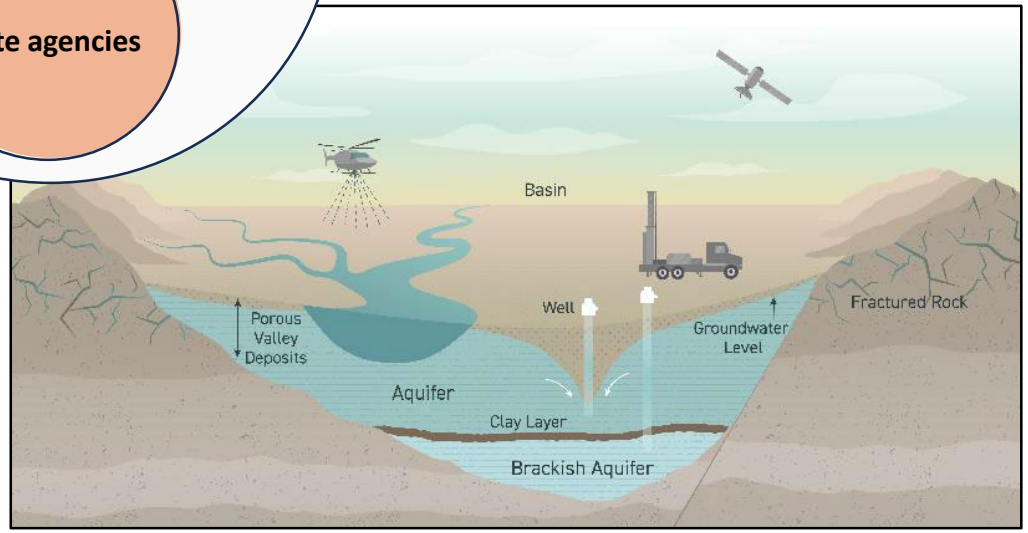
NEW MEXICO
AQUIFER MAPPING

Full characterization of aquifers requires substantial new subsurface information

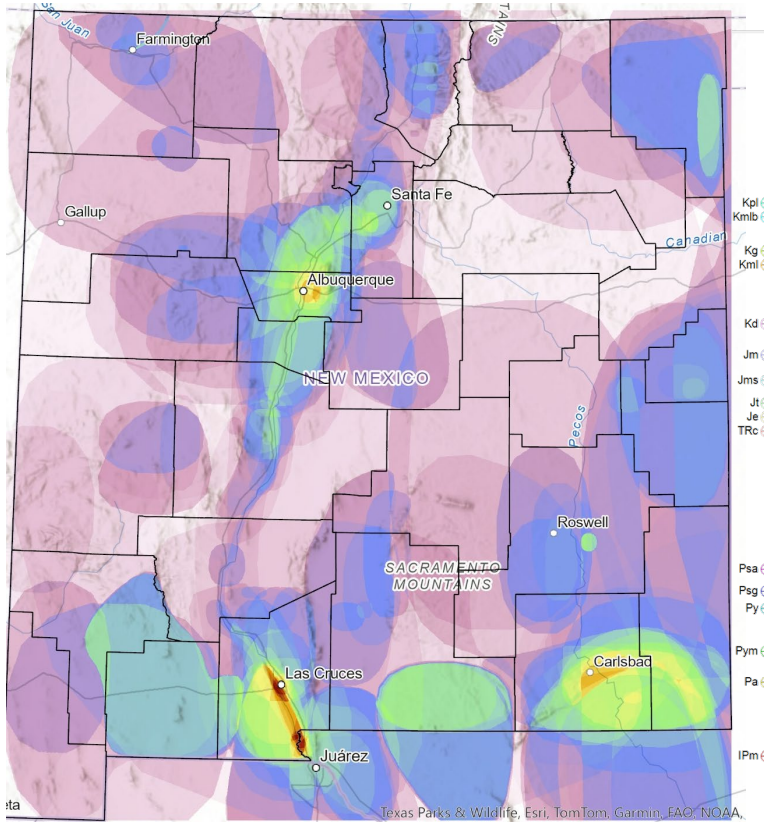
GENERAL WORKFLOW (Approximately 2-3 years per region)

1. Compile existing data
   a. Information from existing wells
   b. Geologic mapping, hydrologic mapping/testing results
   c. Geophysical and other survey data
   d. Geochemical sampling results
2. Build initial draft maps/model
   a. Evaluate data gaps
3. Fill data gaps
   a. Drill wells
   b. Collect geophysics
   c. Geologic mapping
   d. Measure groundwater depths / changes
   e. Geochemical sampling
4. Update maps/model
5. Long term monitoring for change

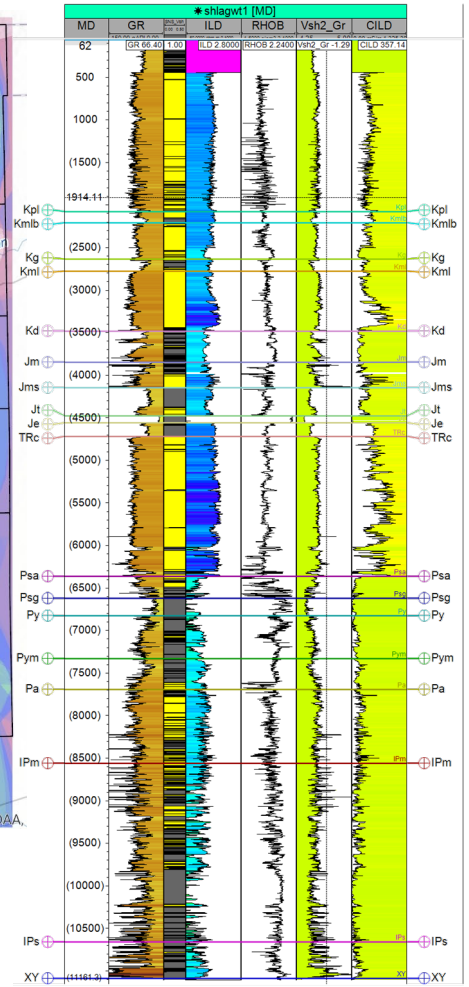




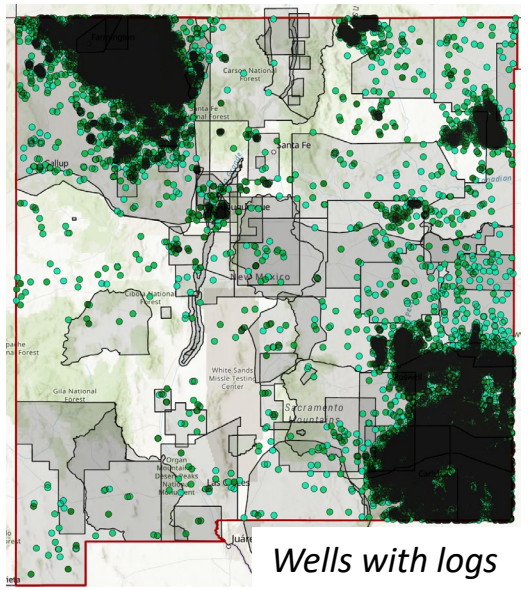
Getting a jump start – Data compilation underway now!



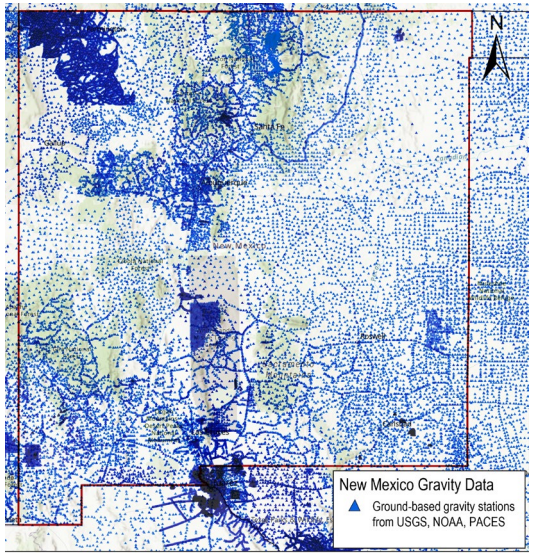
Regions with hydrogeologic studies (darker red – more studies to faint pink – few studies)



Example well log with geology



Wells with logs



NEW MEXICO WATER DATA

Water Data Act (2019)

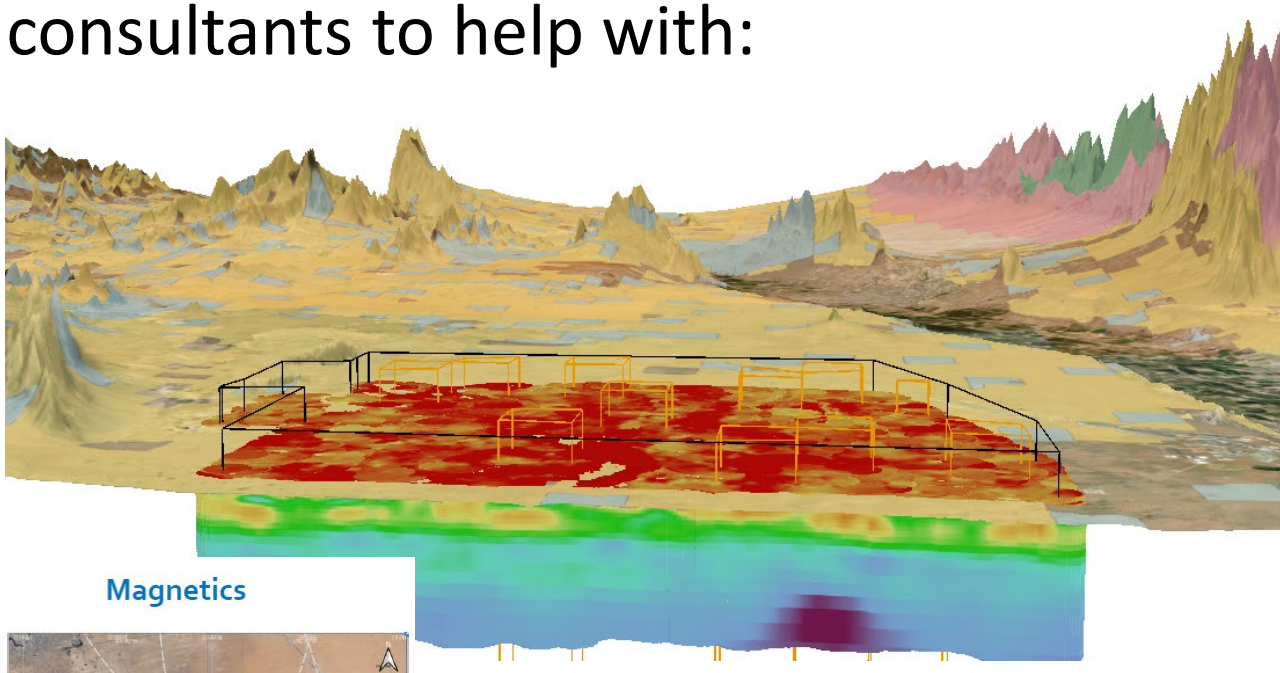
- Coordinating effort of NMBGMR, OSE, ISC, NMED and EMNRD
- Multiple agencies data now available and integrated together for efficient use on aquifer studies.

NEW MEXICO AQUIFER MAPPING

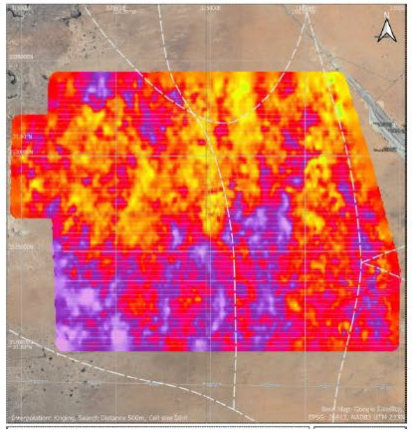
New data collection and work ahead

Working on RFPs to procure vendors / consultants to help with:

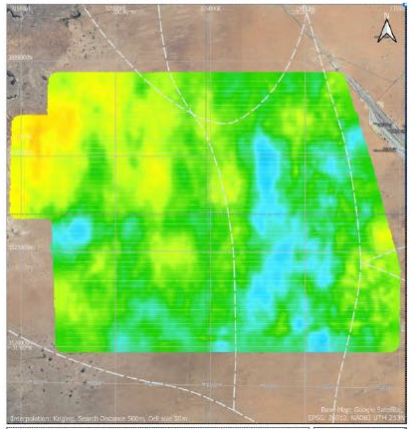
- Geophysical data collection
- Hydrogeologic characterization
- Data development
- Model development
- Well drilling



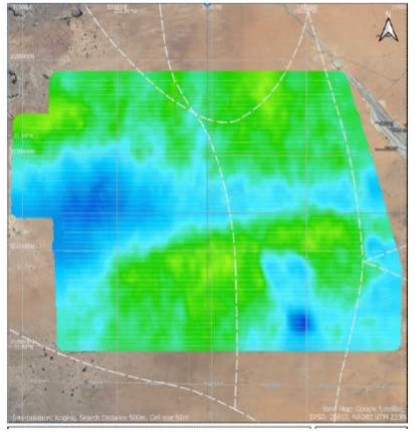
Shallow EM



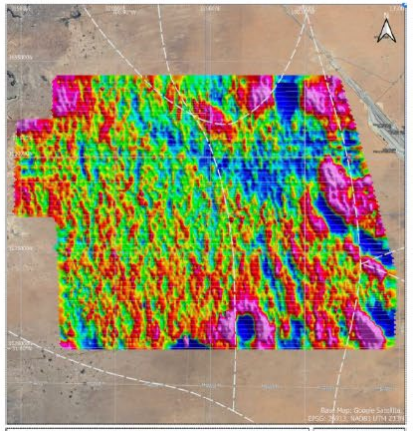
Medium EM



Deep EM



Magnetics

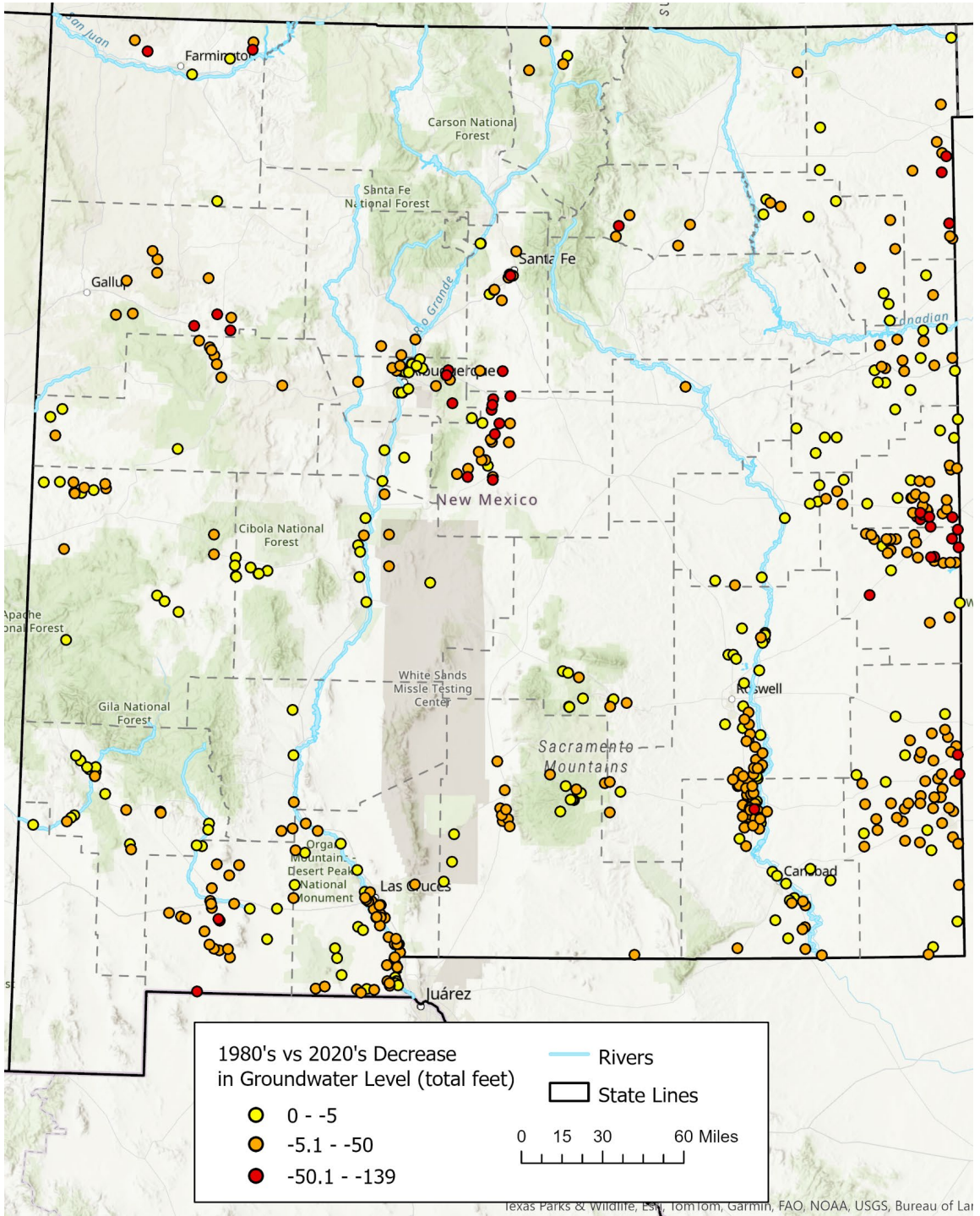


Santa Teresa NM Project –
Preliminary, example data acquired by the NM ISC, not for redistribution

Regional approach to statewide challenge

Steering Committee helping to prioritize regions. Considerations include:

1. Highly studied areas with many reports / data vs. less studied areas with few previous reports / data
2. Regions most dependent on groundwater
3. Cooperation, interest, and capacity to participate
4. Declining groundwater levels
5. Areas of current research or recent projects with Aquifer Mapping Program



We'll be back for additional funding requests

Goal: Map all aquifers by 2037 with 100+ new monitoring wells for tracking change

(Example budget below)

Year	FY	Wells	Surveys	Contracts/ Collaborators	Sample analyses	Annual estimate	Major costs
1	2026	$4,020,000	$2,500,000	$600,000	$150,000	$7,270,000	2-4 wells; 2 surveys
2	2027	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
3	2028	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
4	2029	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
5	2030	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
6	2031	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
7	2032	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
8	2033	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
9	2034	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
10	2035	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
11	2036	$10,050,000	$5,300,000	$800,000	$210,000	$16,360,000	10-12 wells; 6-8 surveys
12	2037	$2,000,000	$2,100,000			$4,100,000	1-2 wells; 2 surveys
		$106,520,000	$57,600,000	$8,600,000	$2,250,000	**$174,970,000**	100+ wells tracking fresh and brackish water; major and minor aquifers mapped