

# Groundwater Status Update

Groundwater Management Level and Aquifer Response

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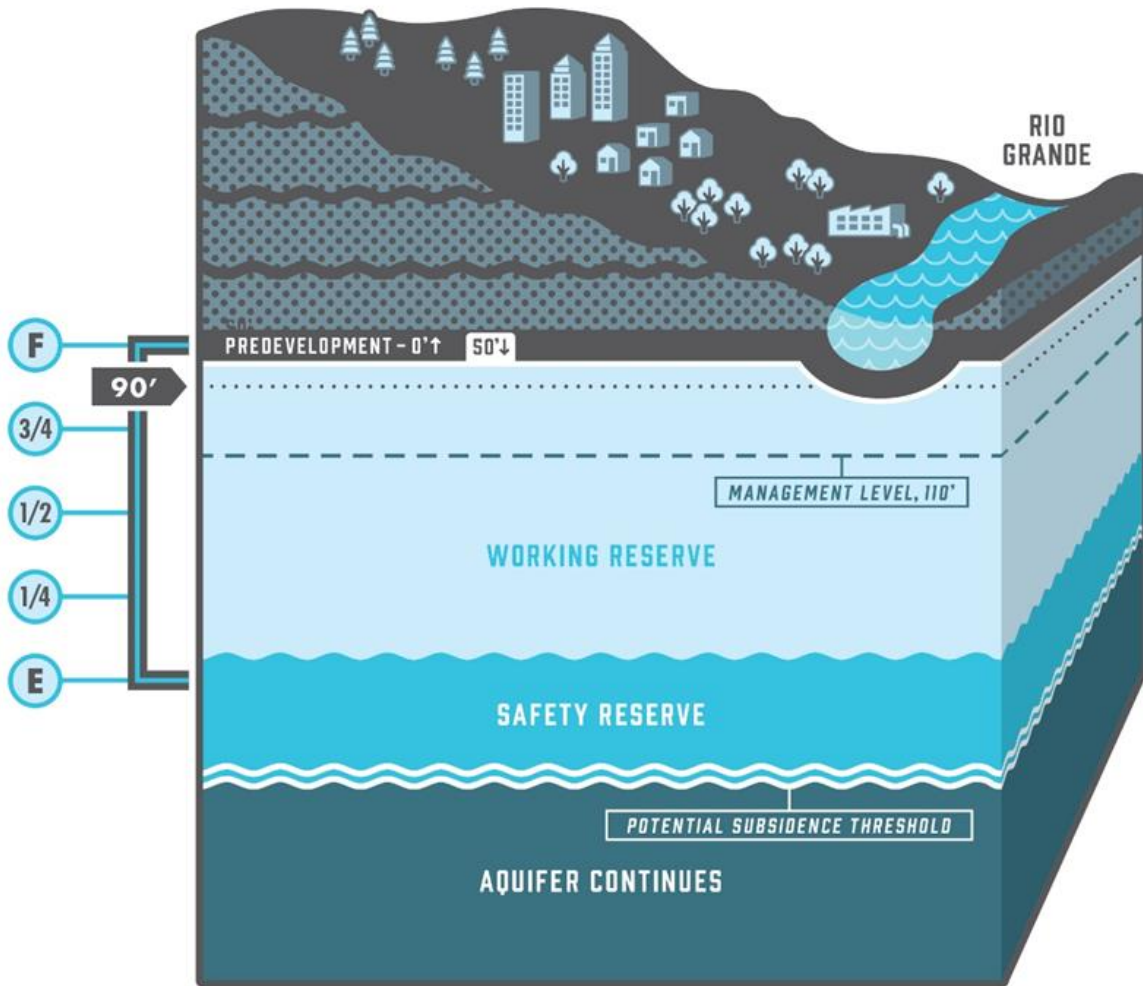
# Water 2120 and Groundwater Management

- *Groundwater Management Plan* is one of four implementation plans
- Collaboration with USGS for real-time and manual monitoring of aquifer levels
- Annual Open File reports with the New Mexico Bureau of Geology and Mineral Resources

## **Policy C: Establish and Maintain a Groundwater Reserve**

The Authority shall establish a groundwater reserve that maintains sufficient water in aquifer storage to provide water supply during catastrophic drought or other unforeseen, largely unquantifiable events. The groundwater reserve shall be accessible without causing adverse impacts to the aquifer and shall be partitioned into a safety reserve and a working reserve.

# Groundwater Management Levels



Graph not to scale

**Target: 110 feet for average drawdown**

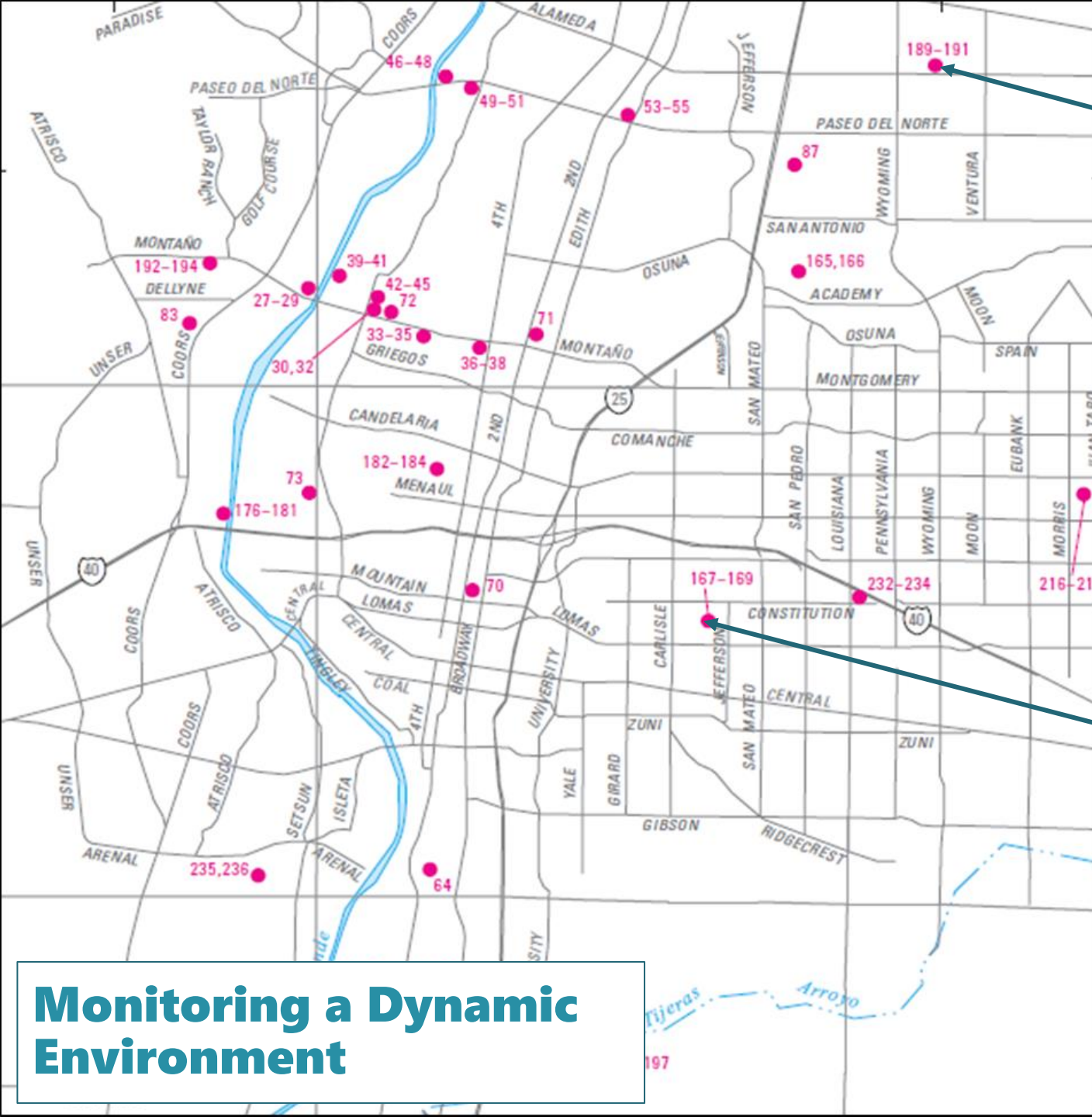
*Working Reserve:* between 50 and 250 feet of drawdown

*Safety Reserve:* 250 – 300 feet of drawdown

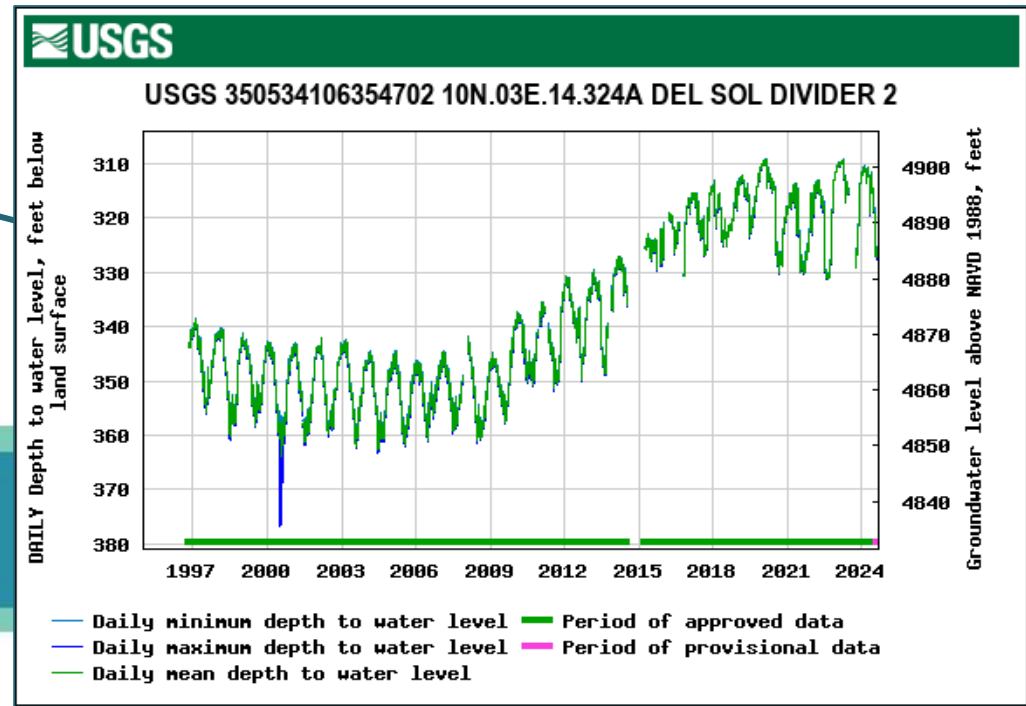
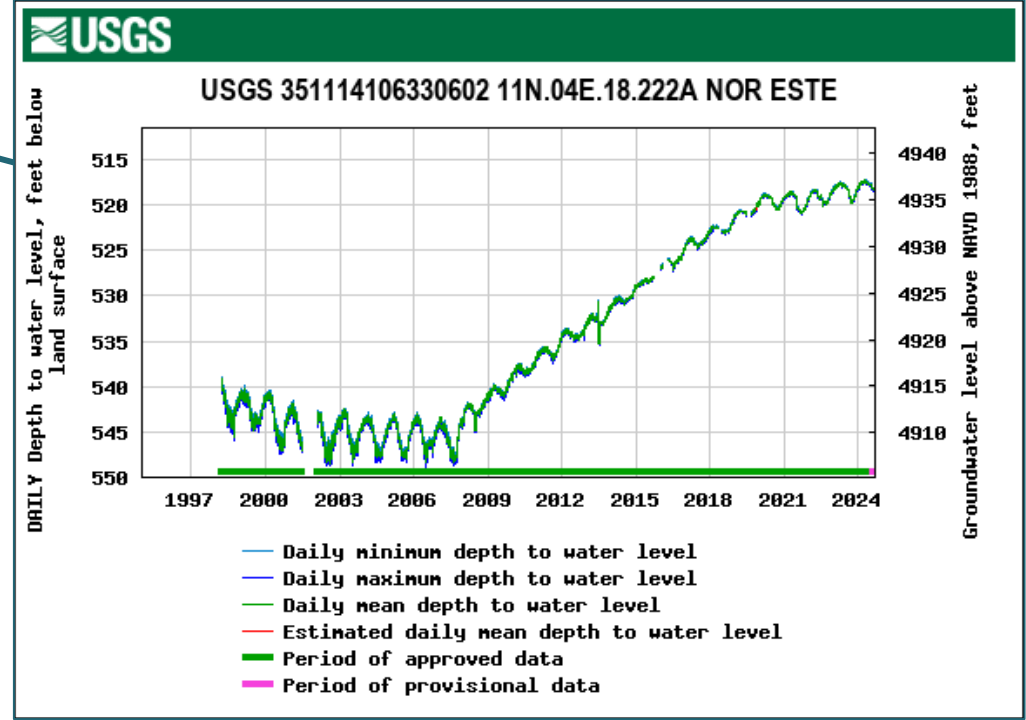
"Fuel gage" approach tracks average drawdown relative to the top of the safety reserve.



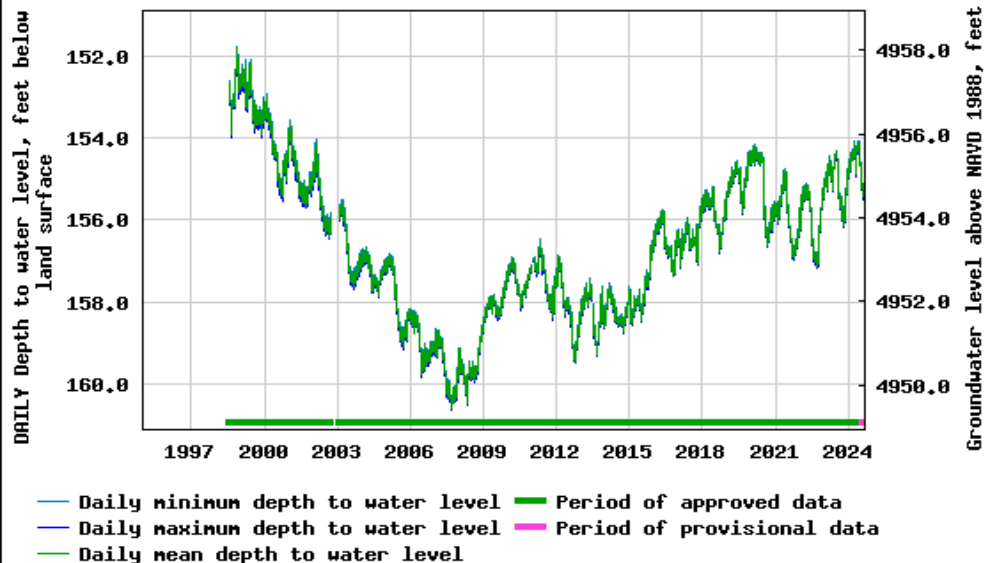
Albuquerque Bernalillo County  
Water Utility Authority



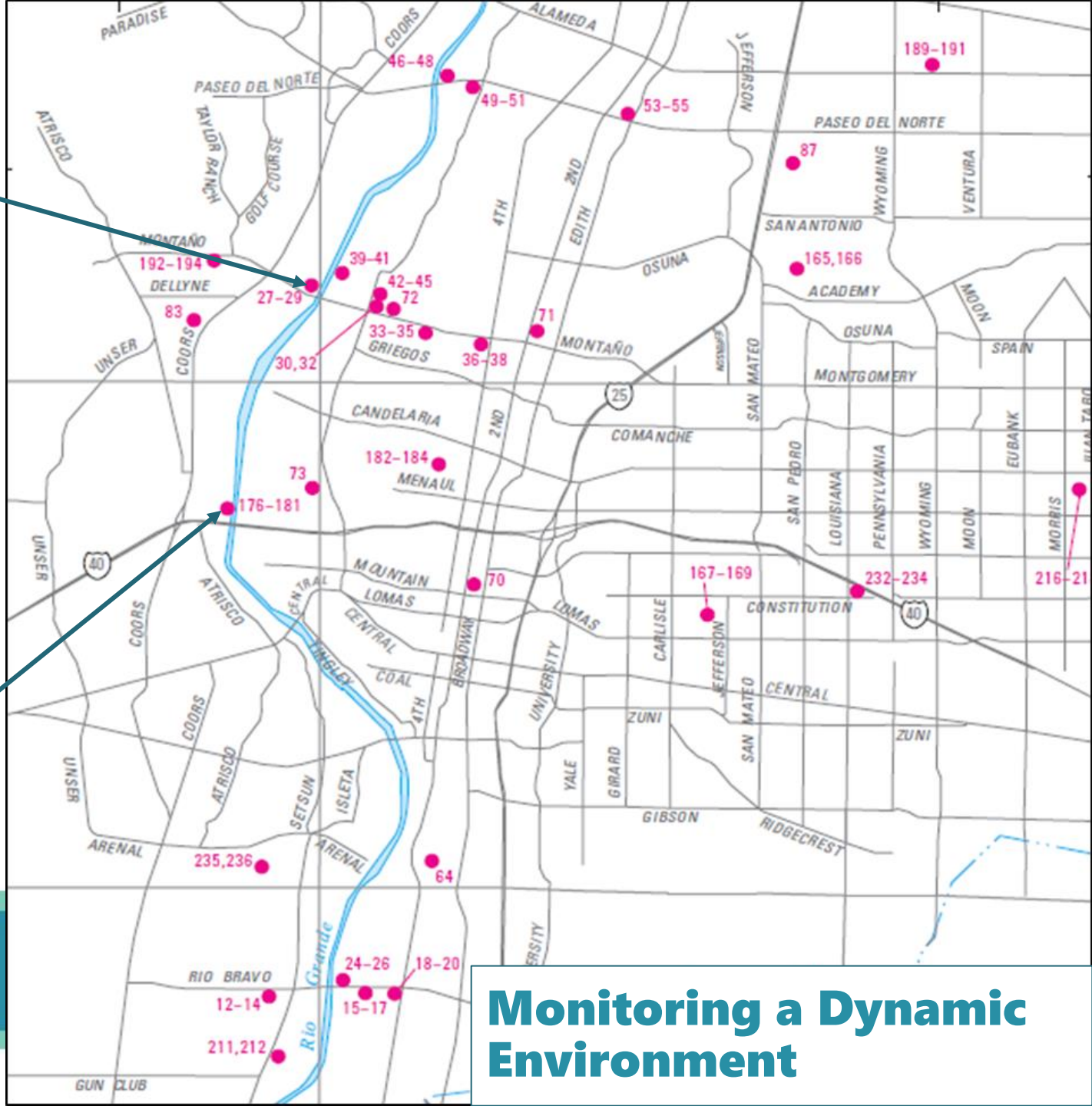
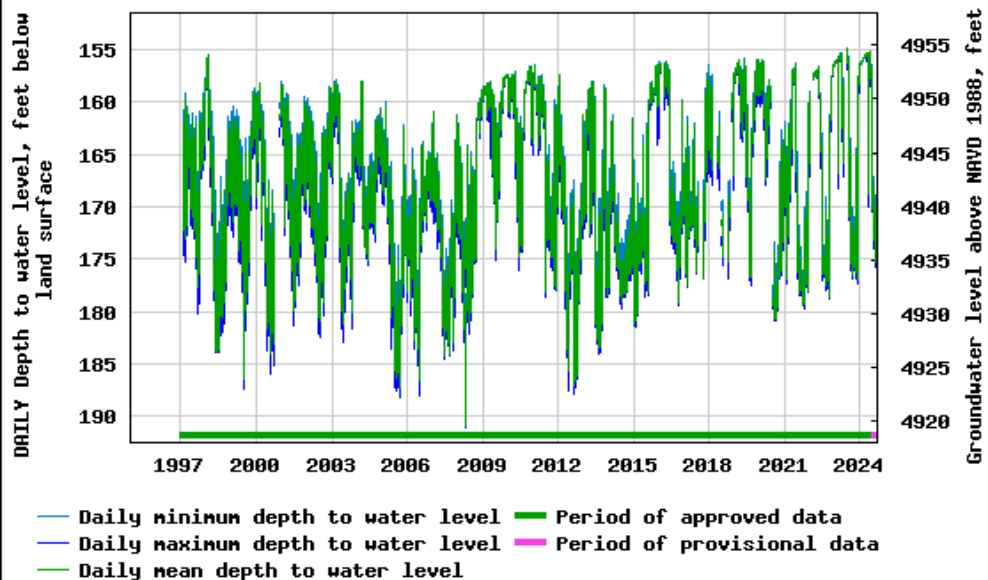
# Monitoring a Dynamic Environment



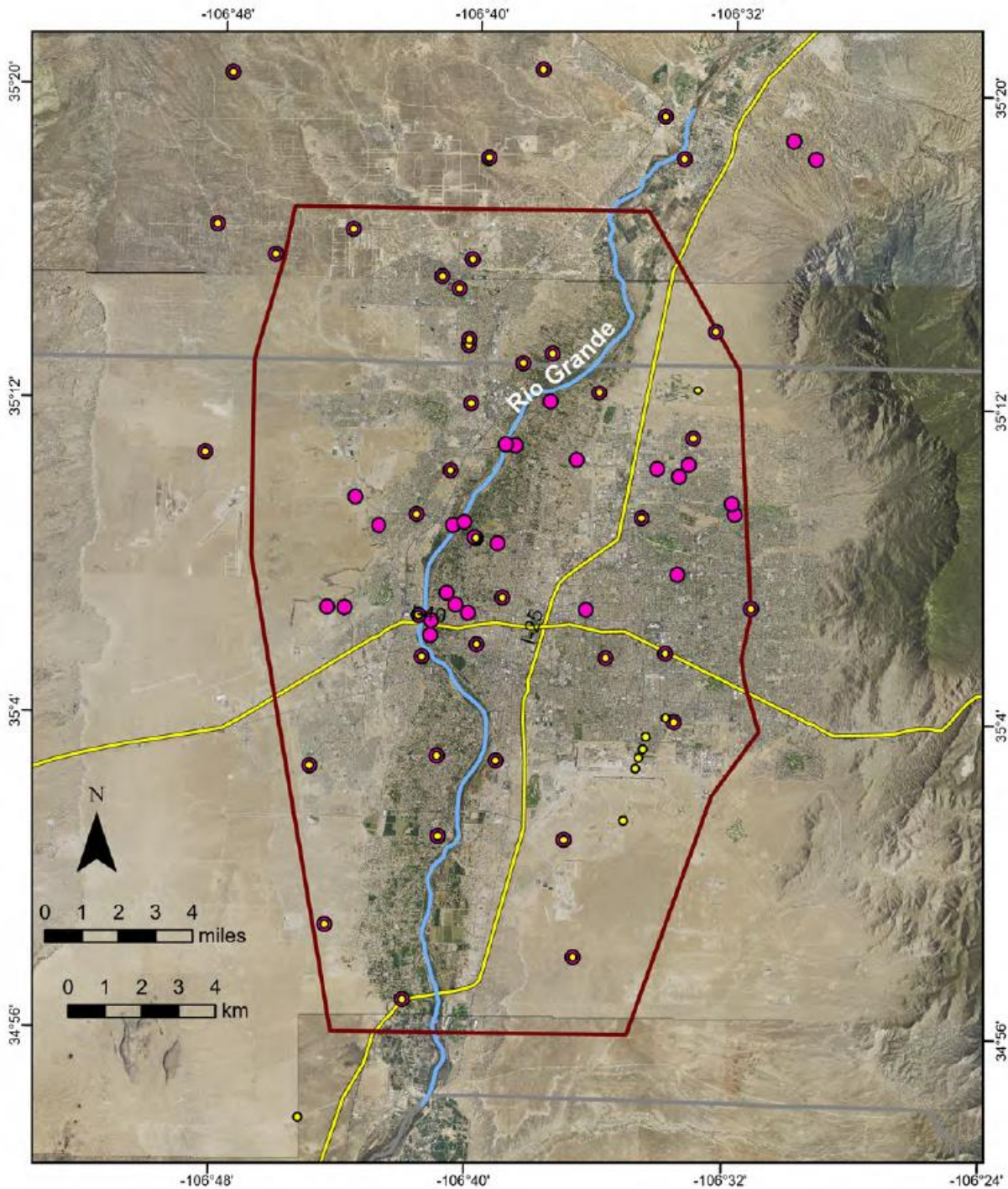
USGS 350910106414802 11N.03E.26.243A SIERRA VISTA



USGS 350638106413702 10N.02E.11.244A WEST BLUFF NO. 1



**Monitoring a Dynamic Environment**



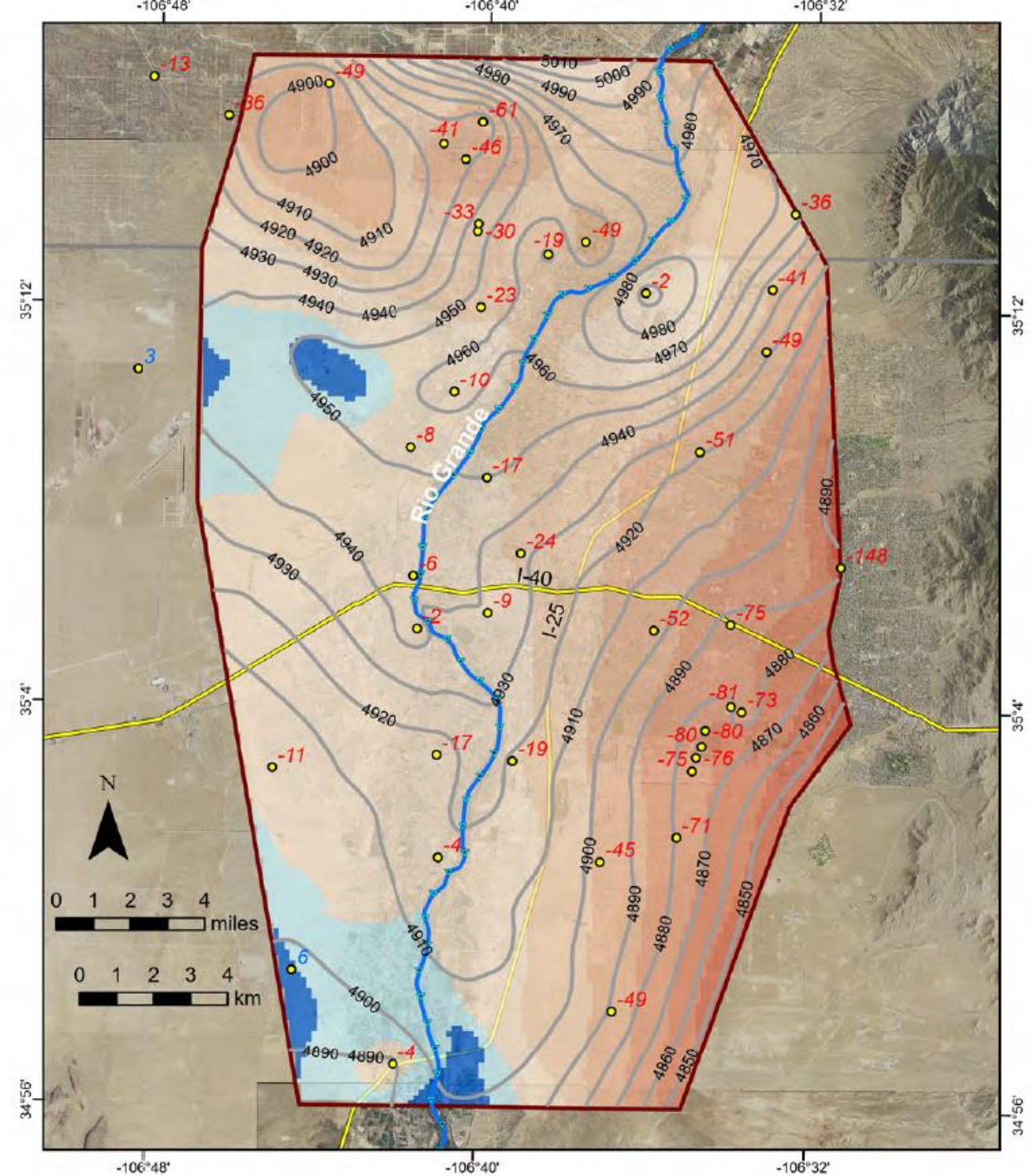
# Groundwater Mapping

- Groundwater level monitoring across service area
- Data from:
  - USGS monitoring well network
  - Bernalillo County monitoring wells
  - KAFB Bulk Fuels Facility wells
  - City of Albuquerque monitoring wells
- Continuous and manual data collection

# Drawdown 2022 - 2023

- Map represents change in water-level surface from pre-development
- Map accuracy highly dependent on spatial distribution of data

Increase drawdown = red  
Decrease drawdown = blue

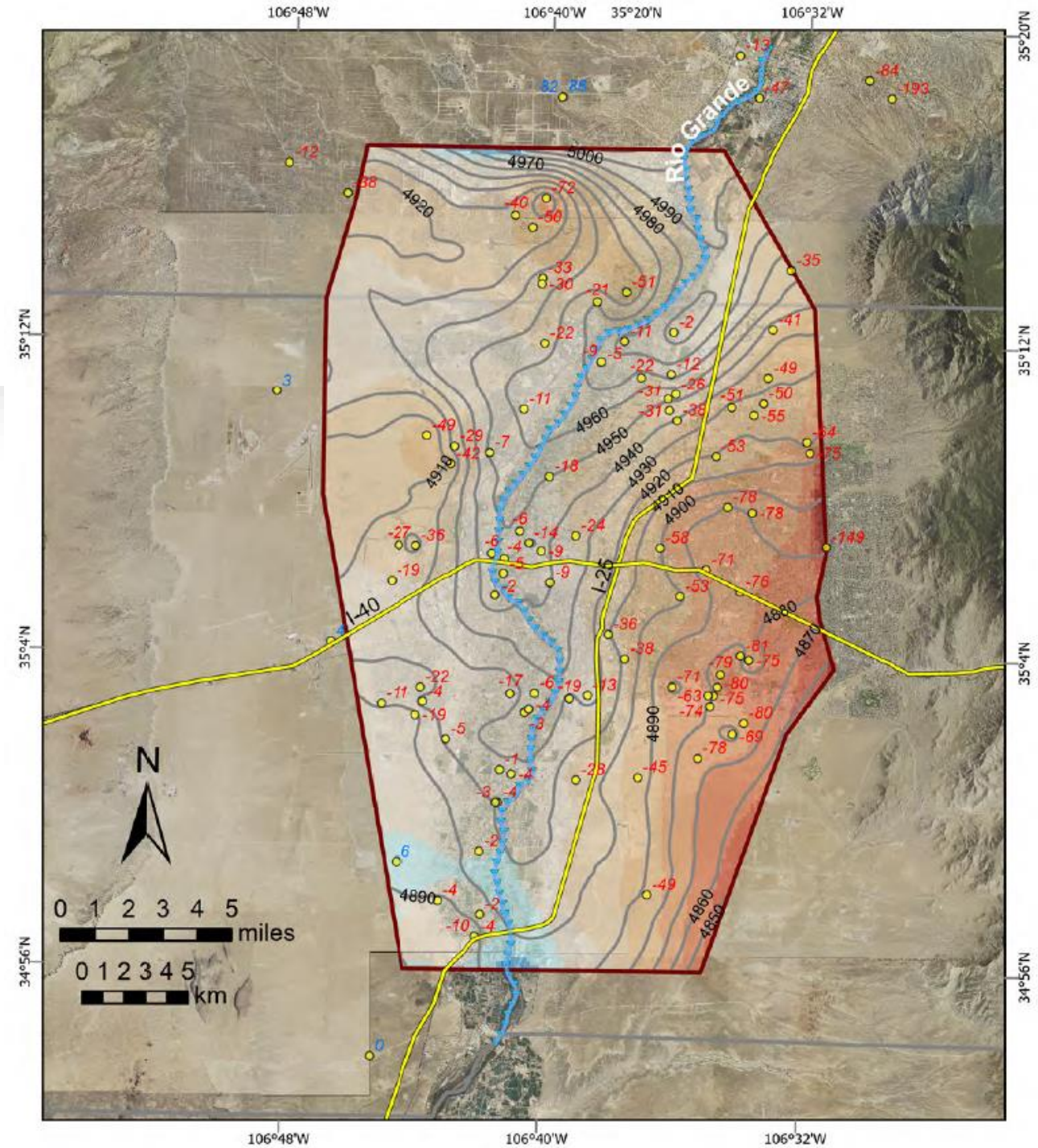


# Drawdown 2023 - 2024

- Increased number of data points, better understanding of changes in drawdown
- Generally, no change in drawdown in study area

Increase drawdown = red

Decrease drawdown = blue





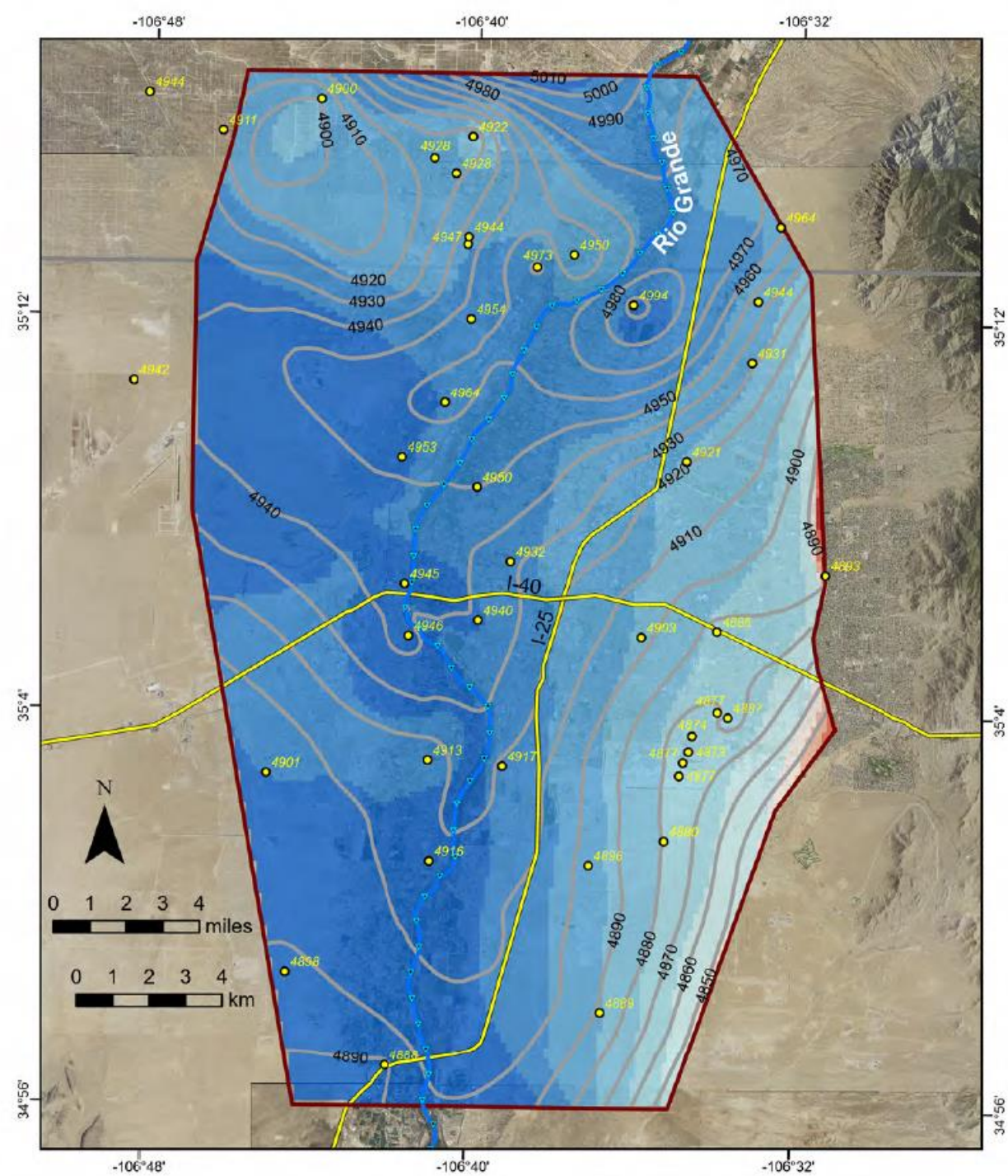
# Groundwater Management Level

2022-2023 water levels relative to groundwater management level

Above 100 ft = blue

Below 110 ft = red

**Groundwater Management Level**  
**Target:** 110 feet of drawdown



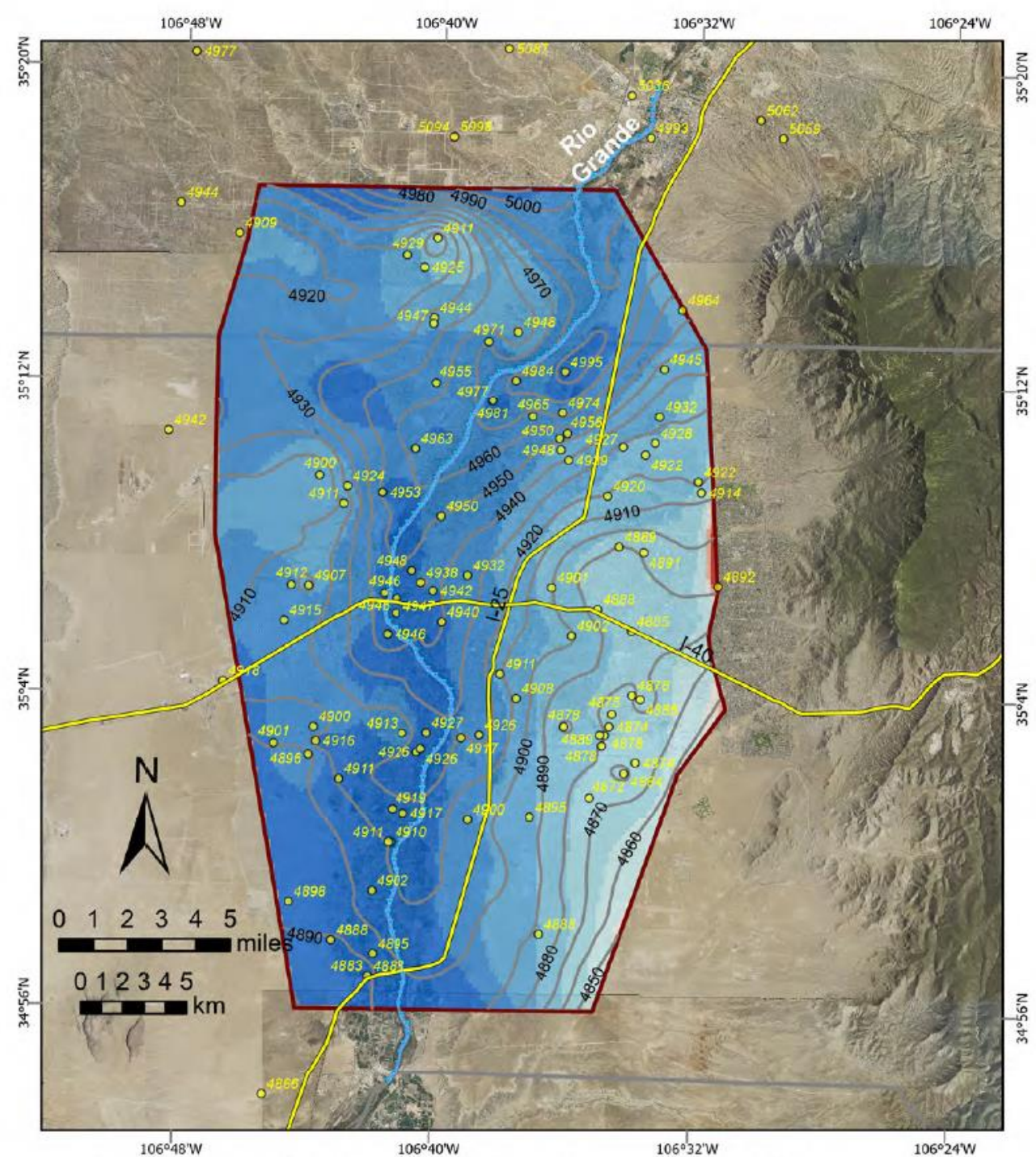
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2023-2024 water levels relative to groundwater management level

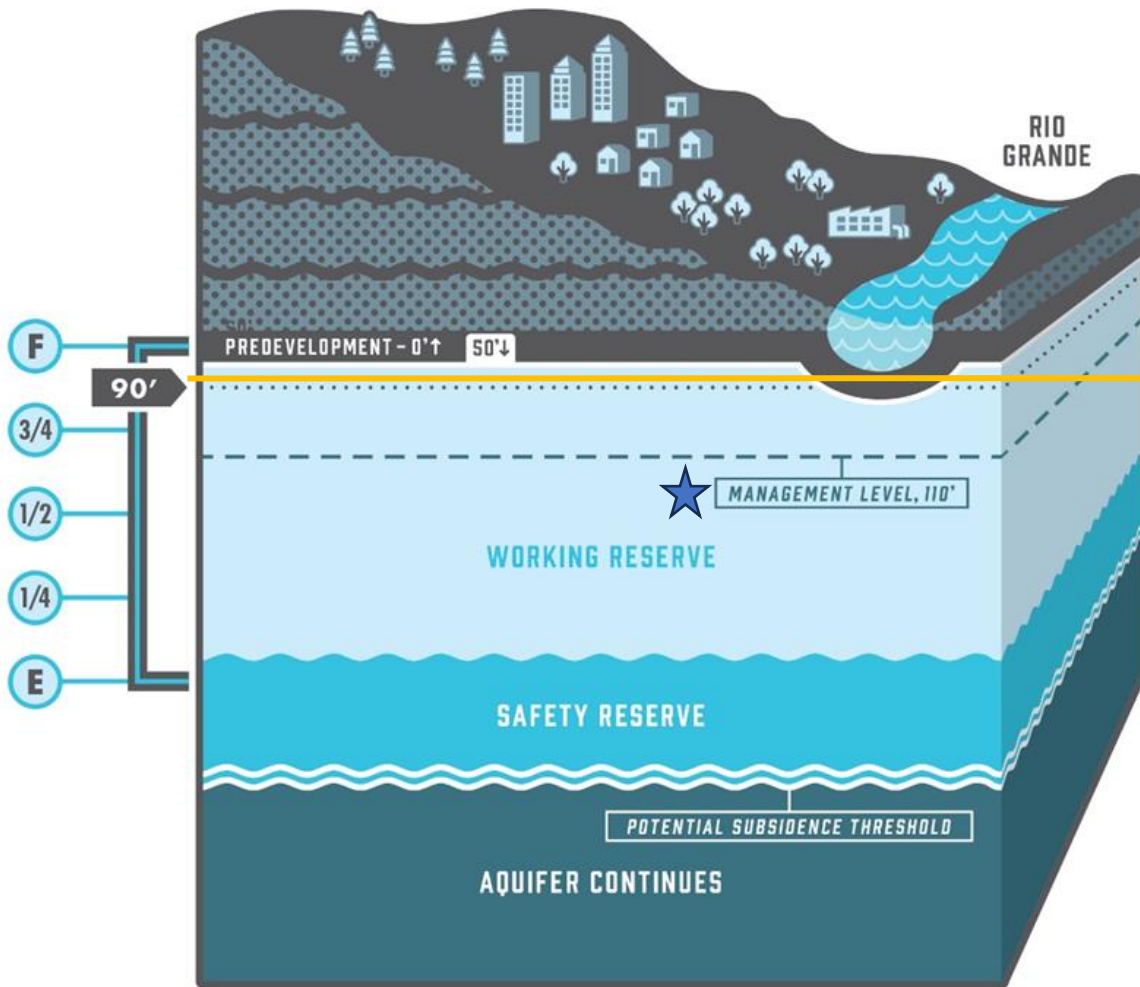
Above 100 ft = blue

Below 110 ft = red

**Groundwater Management Level Target:** 110 feet of drawdown



# Fuel Gage Status



## 2021 Level:

88 feet of drawdown below predevelopment

## 2022 Level:

78 feet of drawdown below predevelopment

## 2023 Level:

80 feet of drawdown below predevelopment

Graph not to scale



Albuquerque Bernalillo County  
Water Utility Authority

# Summary

- An estimated 139,200 acre-feet of water was added to storage in the aquifer during 2022
- Between 2022 and 2023, there was an estimated 63,806 acre-feet lost from storage in the aquifer
- Water levels in aquifer remain above groundwater management level of 110 feet below predevelopment
- Groundwater levels appear to be stabilizing
- Additional groundwater monitoring data points will increase certainty in estimations of changes in storage and aquifer levels



# Questions?