

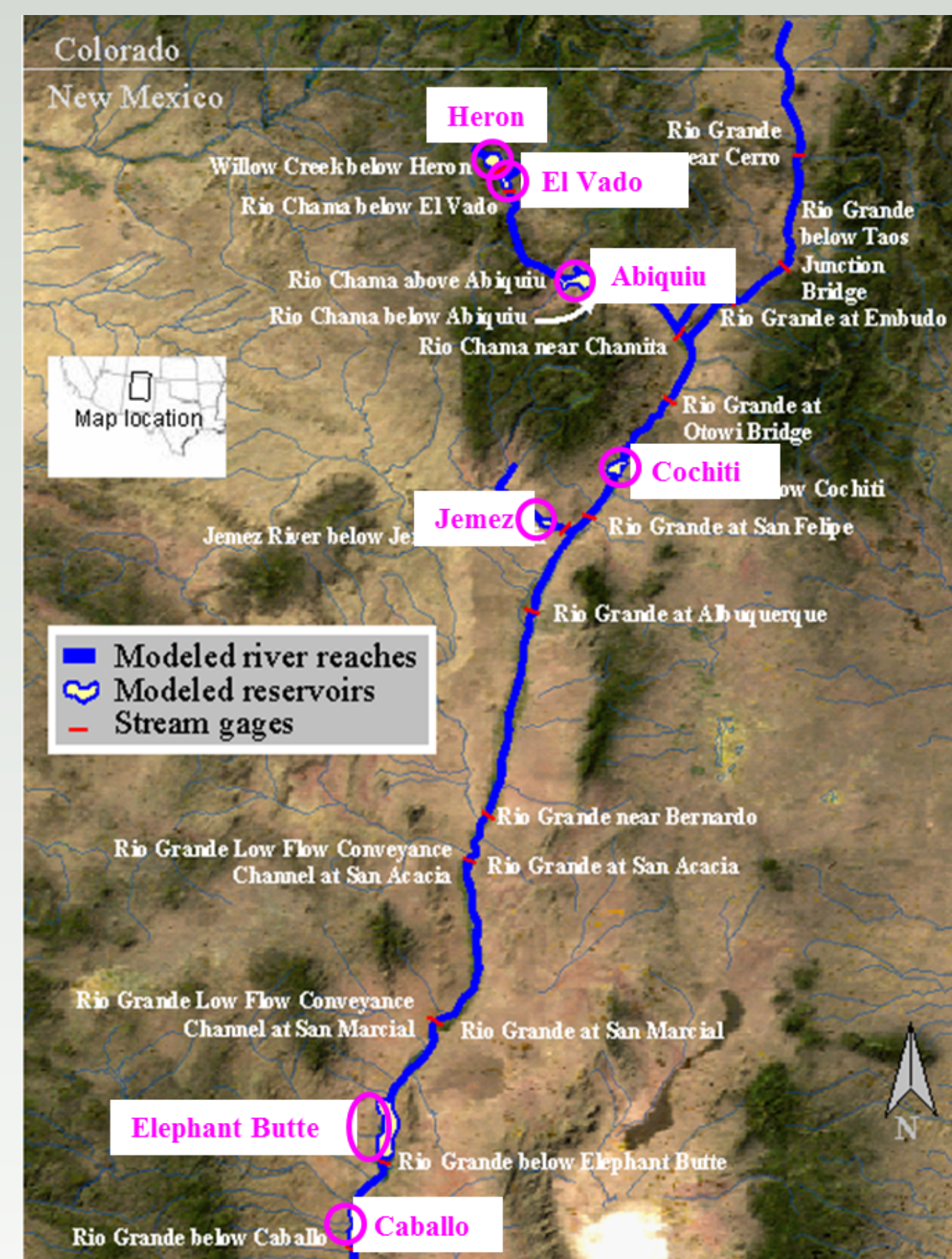
ENERGY & CLIMATE PROGRAM

Addressing Energy-Water Challenges

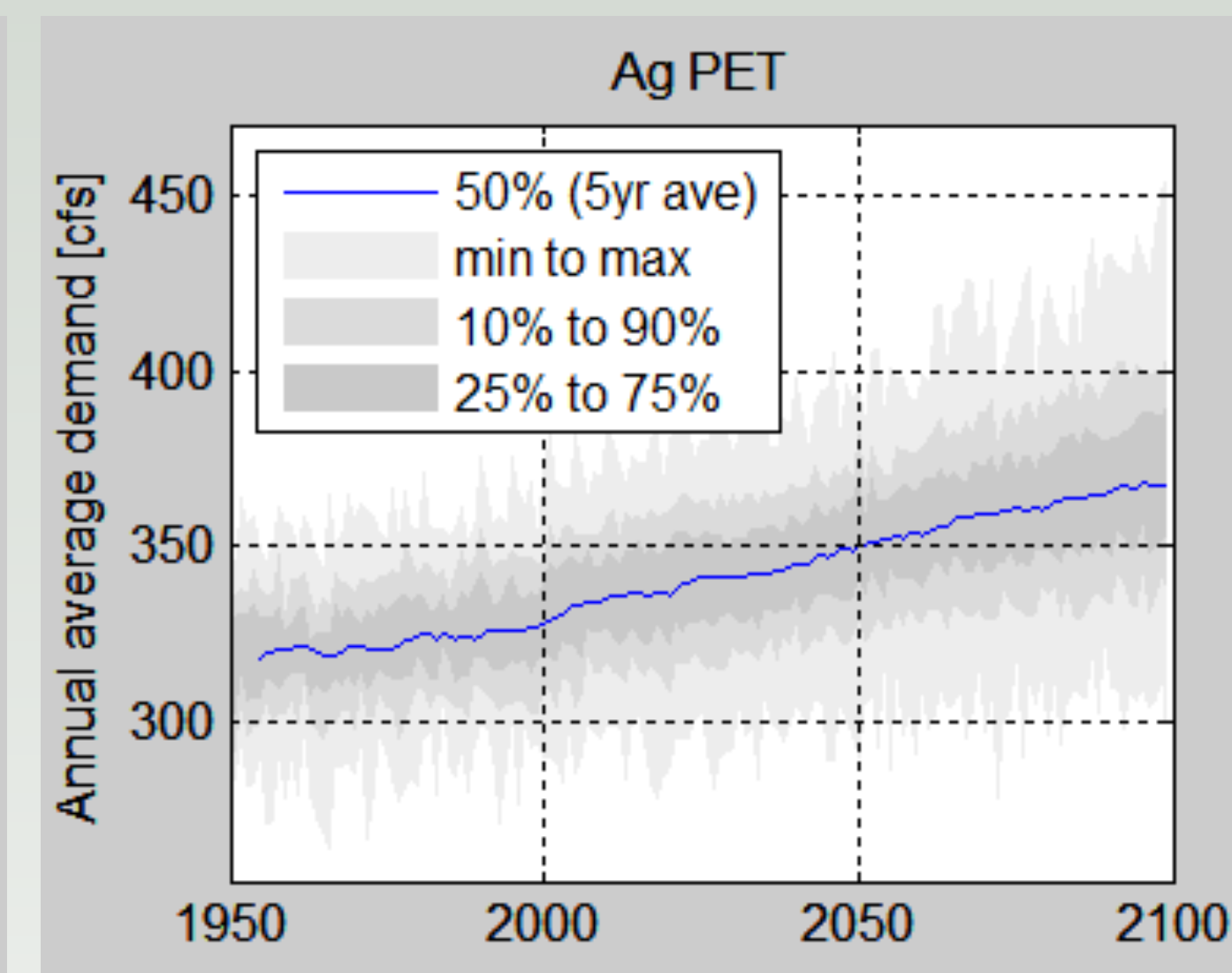
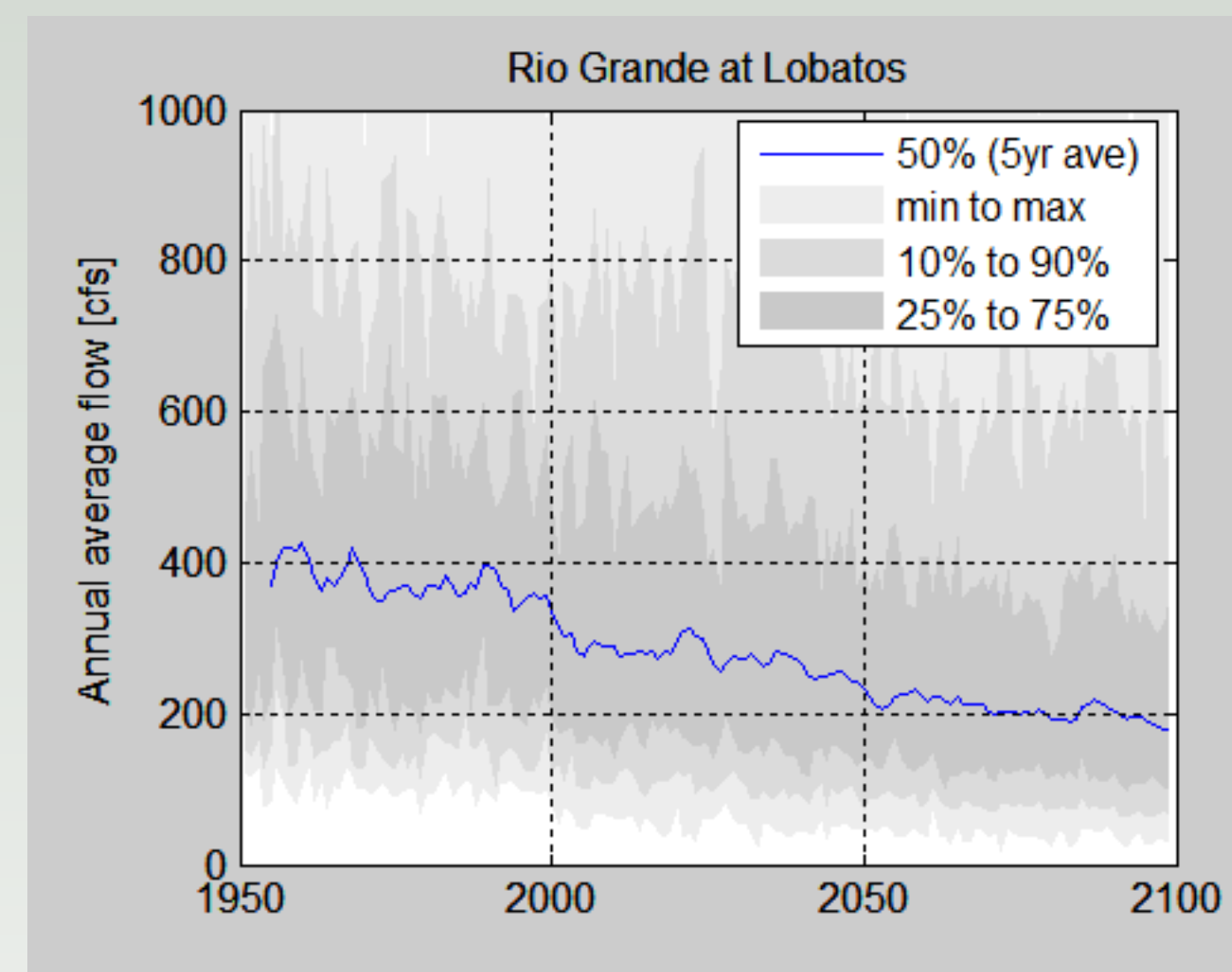
SAND2015-0349C



Climate Risk in the Upper Rio Grande

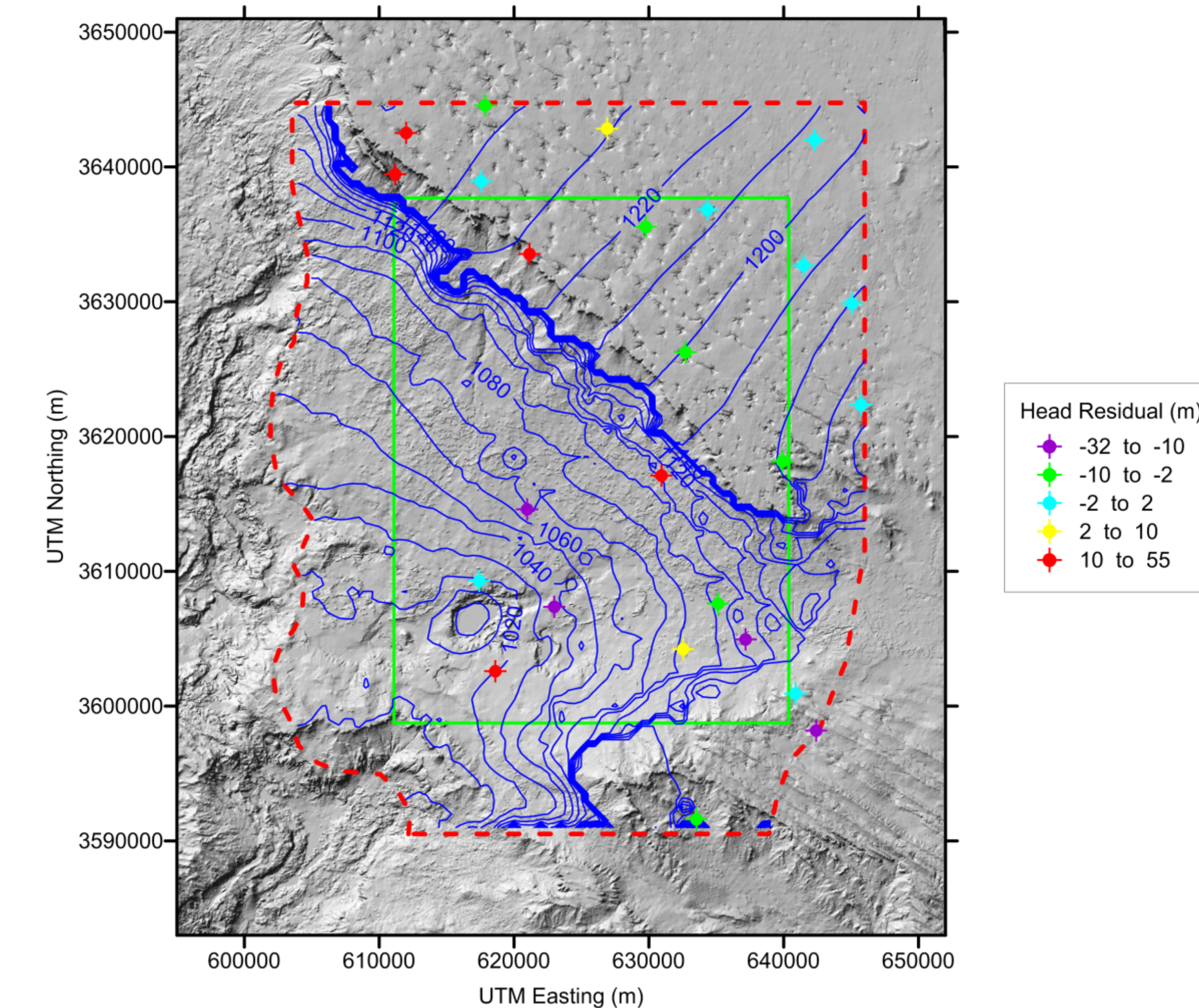
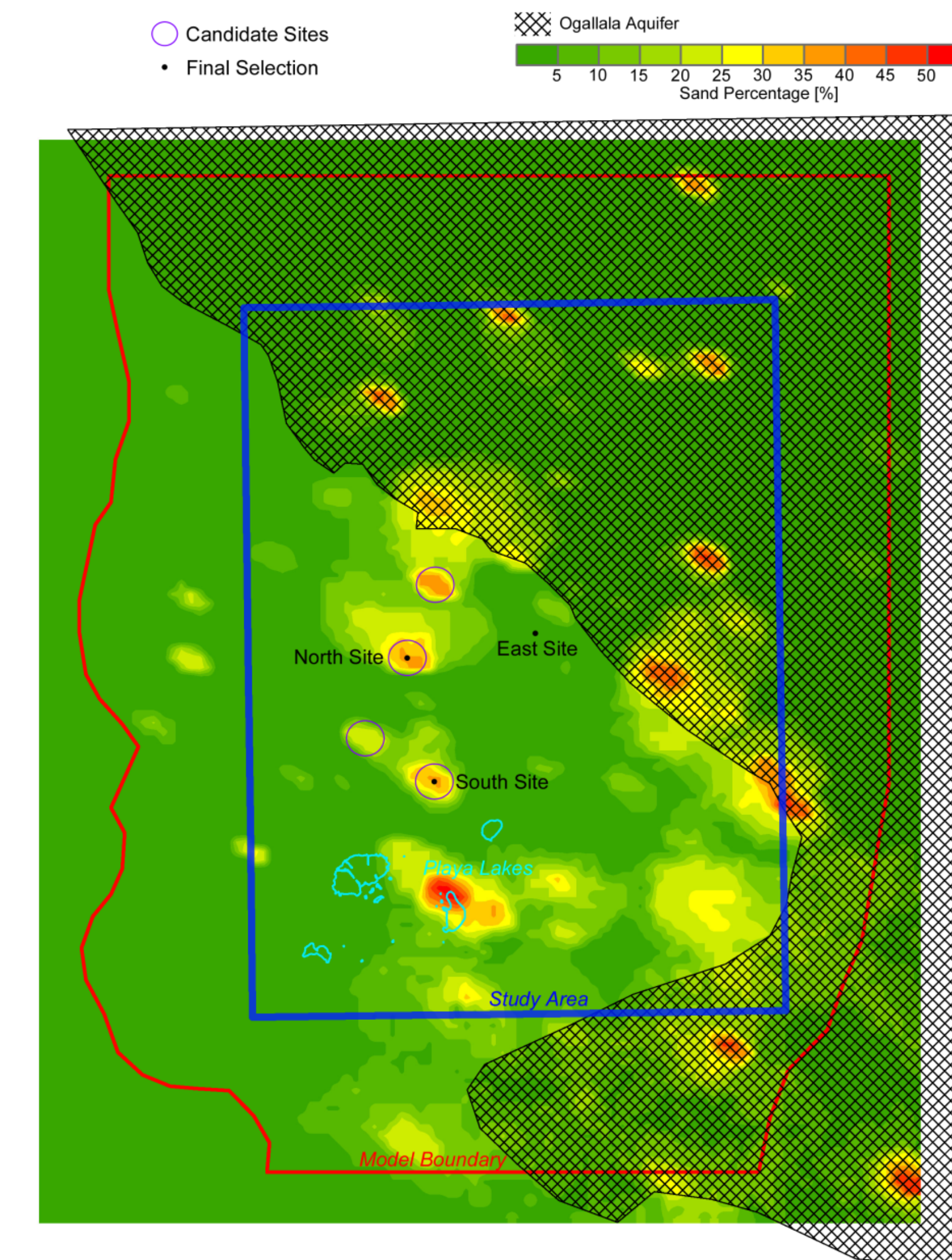
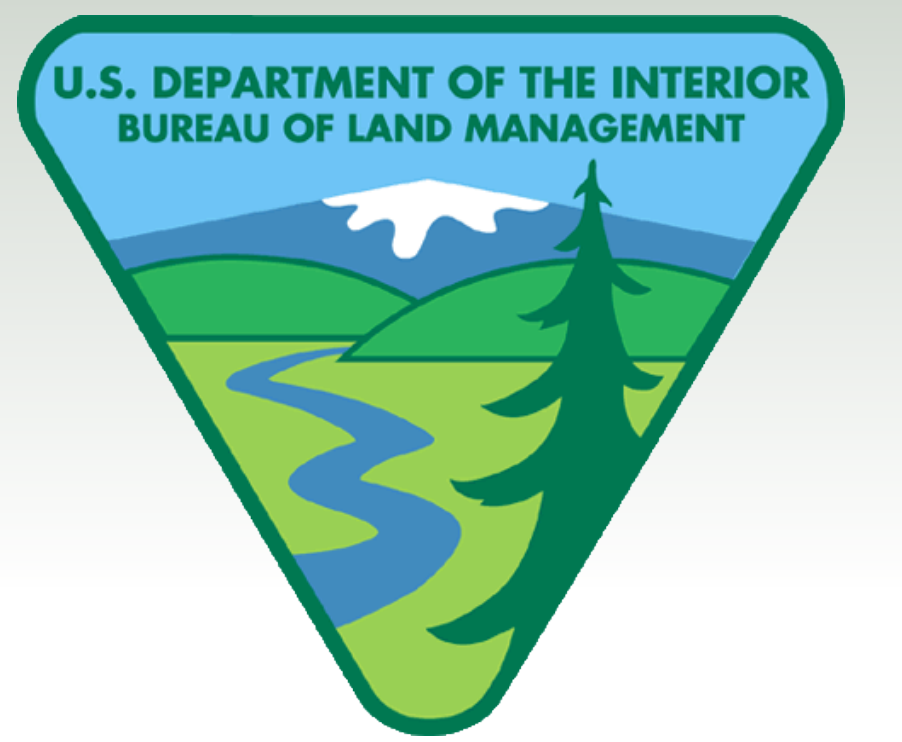


Study domain is the Rio Grande from the headwaters to Elephant Butte.



Projected flow in the Rio Grande (left) and demand from Agriculture ET (right).

Groundwater Availability of South East New Mexico



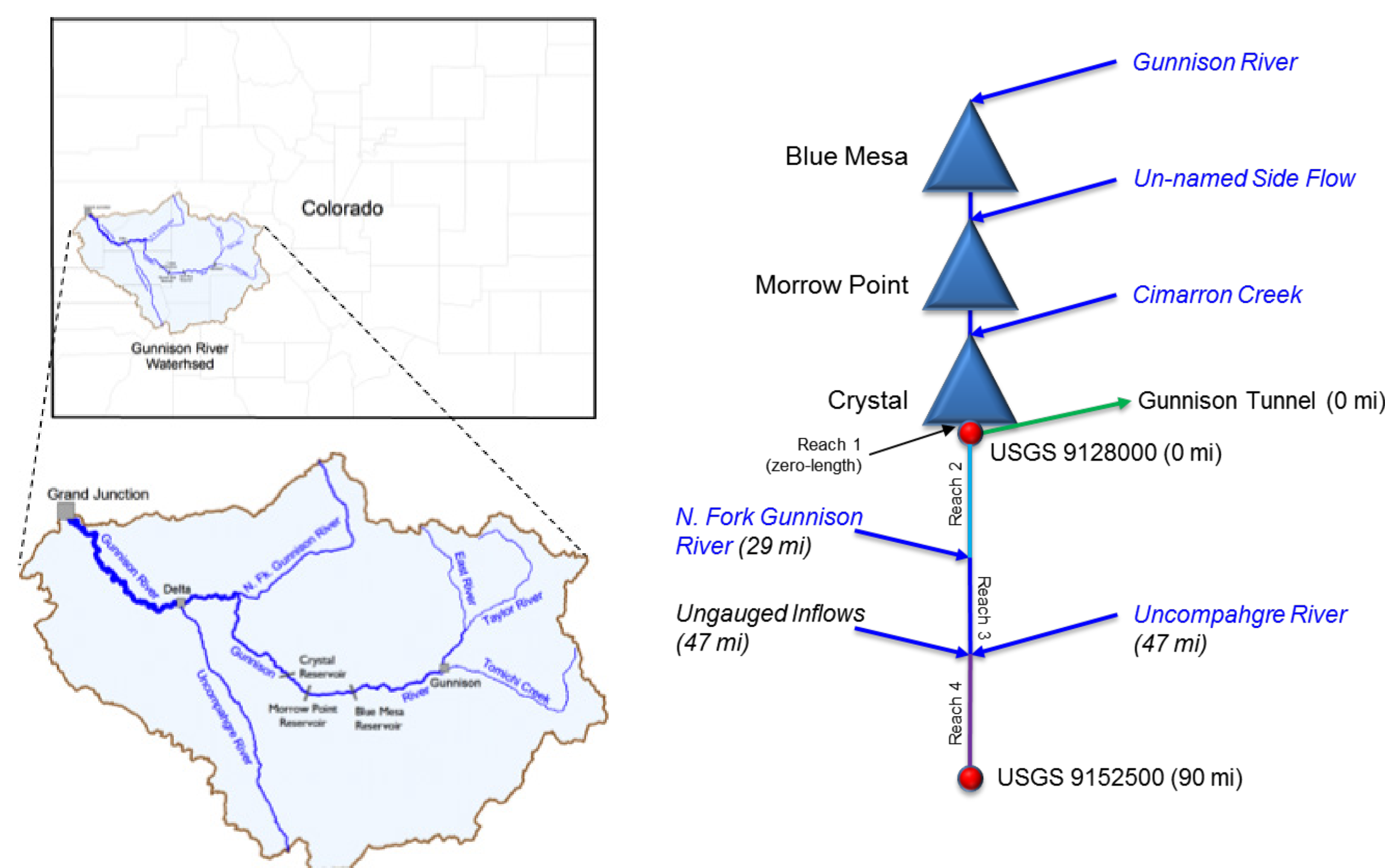
Geostatistical analysis was applied to identify potential water bearing areas within each Formation. Drilling was conducted at the North and South sites.

Groundwater modeling established hydrogeologic parameters and potential water flow through each Formation.



Hydropower Optimization

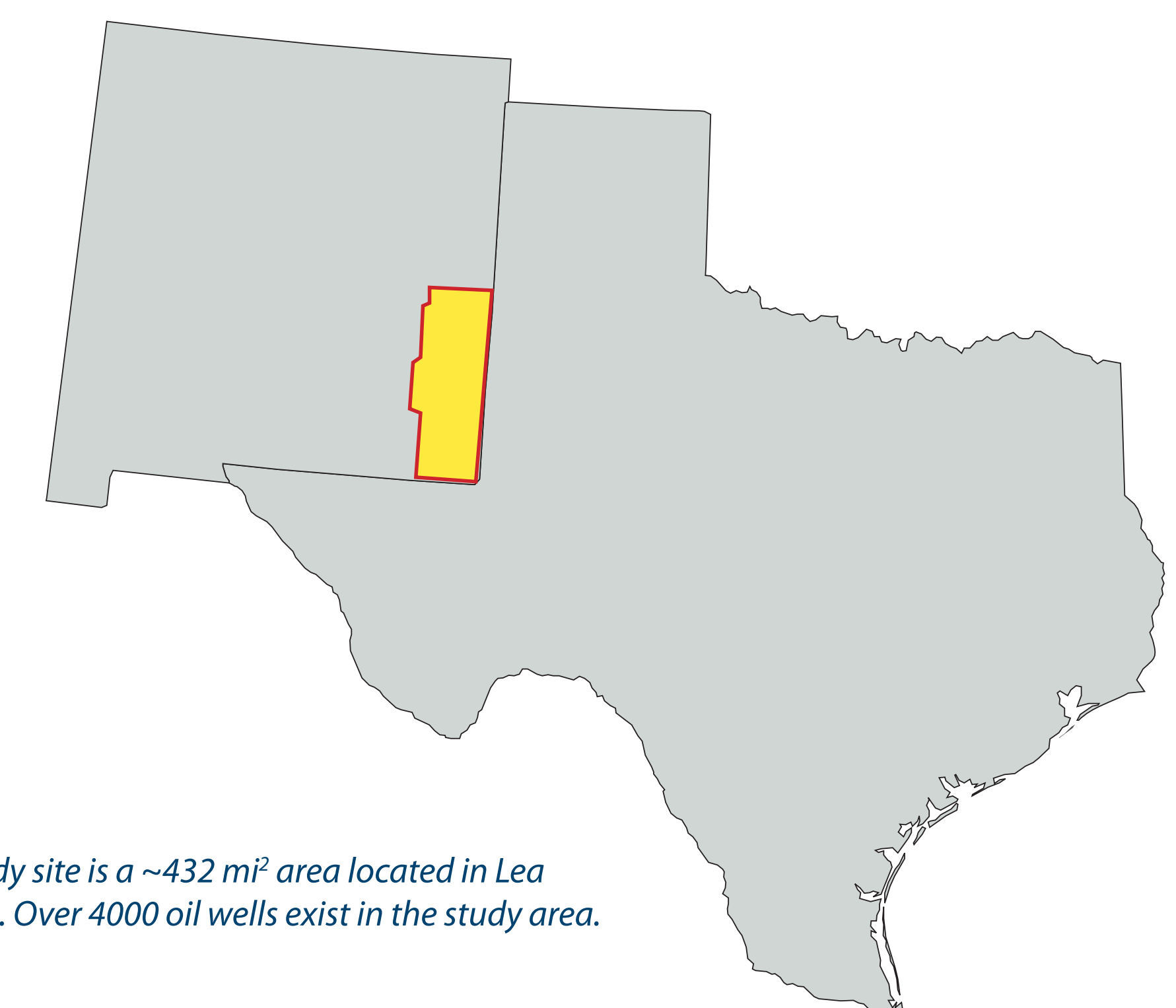
Key Partners



The BoR demonstration site was the 3 reservoir Aspinall Cascade on the Gunnison River in SW Colorado. The three reservoirs and 96 miles of river were modeled.



The North site was drilled and cored to 1045' below ground surface (BGS). The South site was drilled to 840' BGS.



The study site is a ~432 mi² area located in Lea County, NM. Over 4000 oil wells exist in the study area.