



# Applying NASA Remote Sensing Capabilities to Improve Water Resources Management in the Rio Grande Basin Through a Better Understanding of Supply and Demand

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# The Rio Grande Basin

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- The Rio Grande Basin is the most populated basin in New Mexico.
- Climate change is altering water supply and increasing demands on both surface and groundwater resources.



# The Importance of Snow

## Rio Grande Headwaters

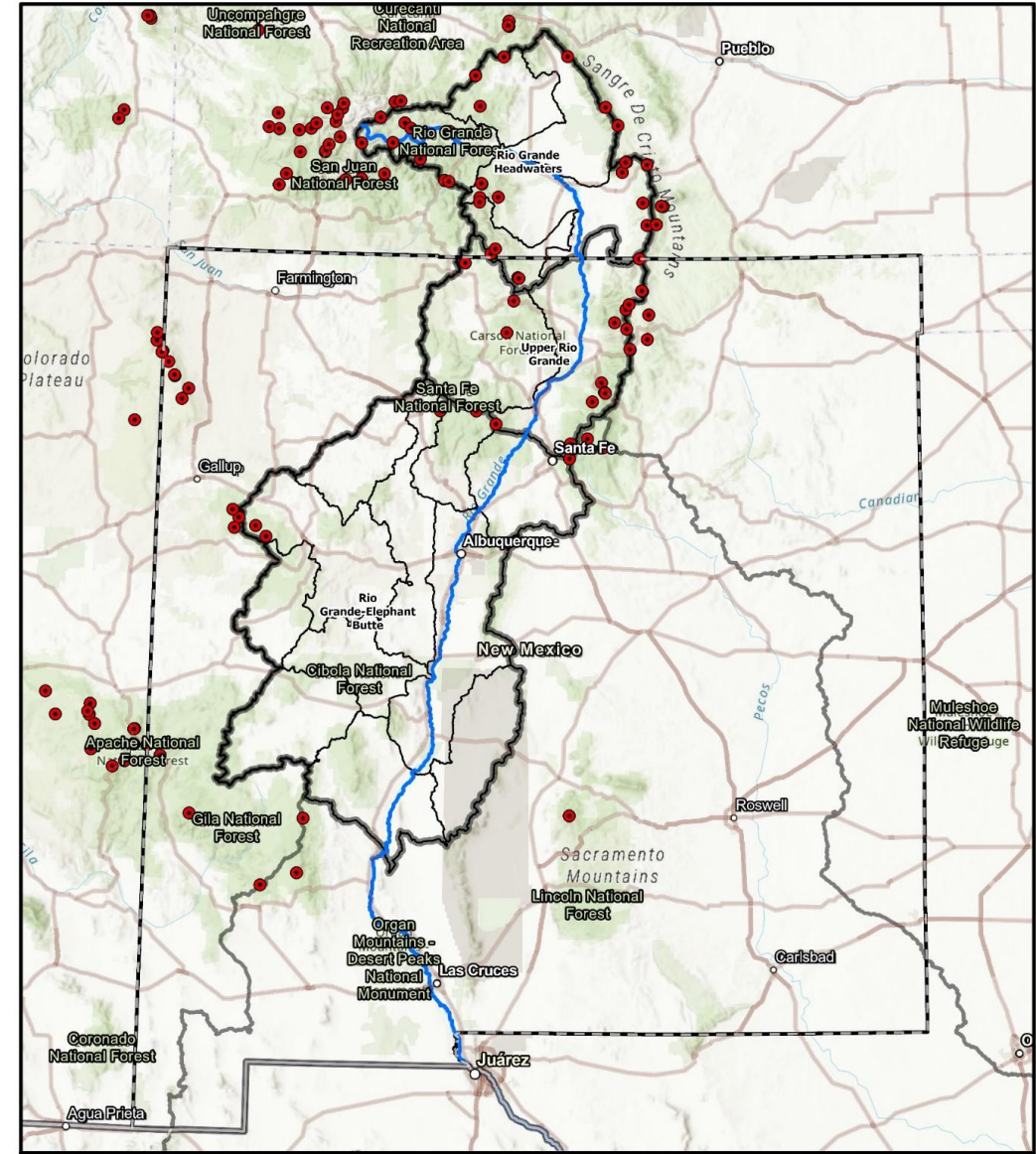
- 5 subbasins
- 19 SNOTEL stations

## Upper Rio Grande

- 2 subbasins
- 17 SNOTEL stations

## Middle Rio Grande

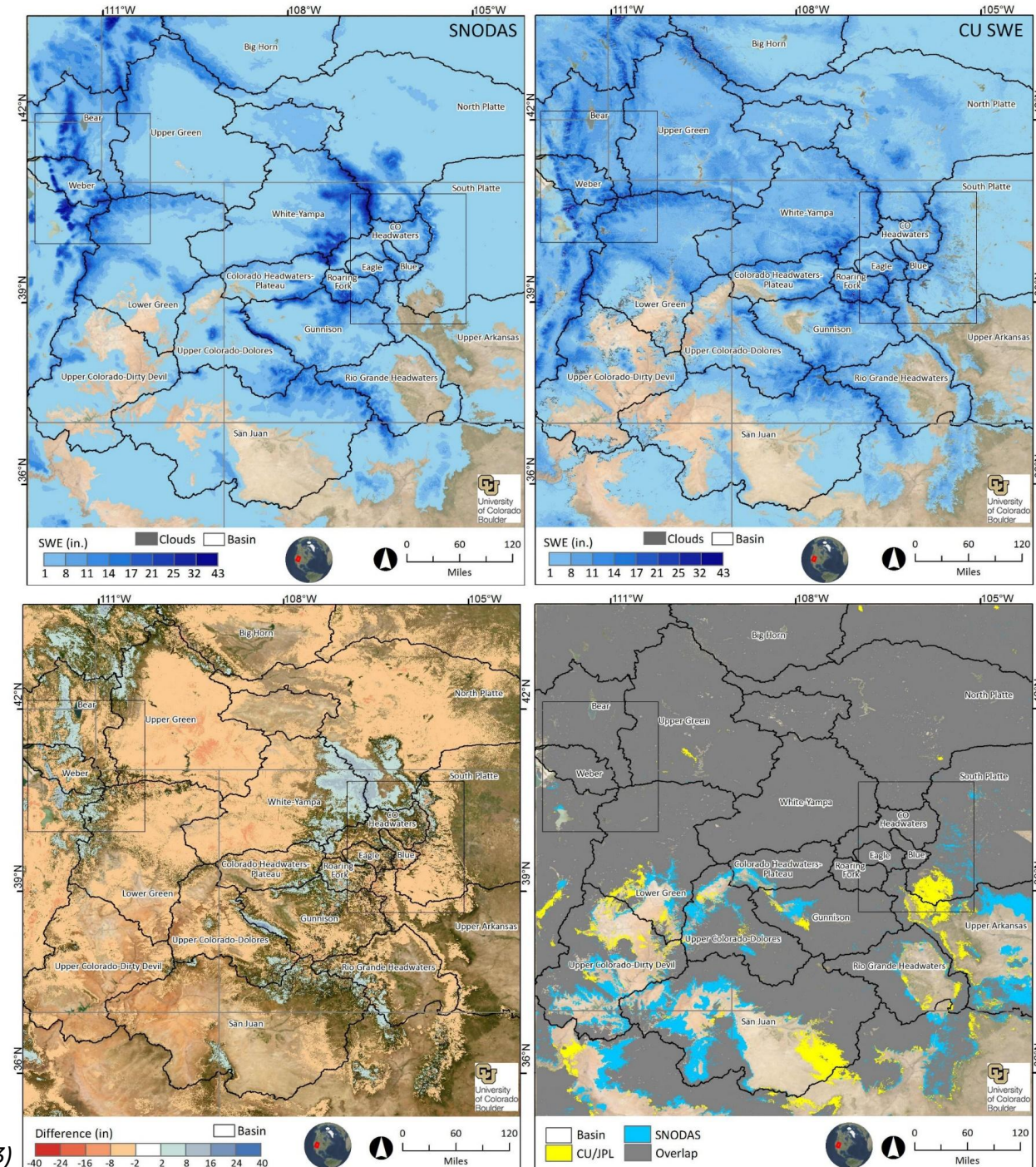
- 11 subbasins
- 7 SNOTEL stations





# Operational SWE Analysis Tool

- Analyze existing Snow-Water Equivalent (SWE) products to produce an ensemble of near-real-time spatial estimates of SWE.
- Three Products:
  1. CU-SWE
  2. SWANN SWE
  3. SNODAS SWE





# Thinking Ahead

- Supply and demand imbalances are expected to increase.
- Near-real-time spatial SWE estimations are critical for decision-makers.
- An operational SWE analysis tool will provide insight on the seasonal variability of snow-water timing, availability, and supply.





Questions