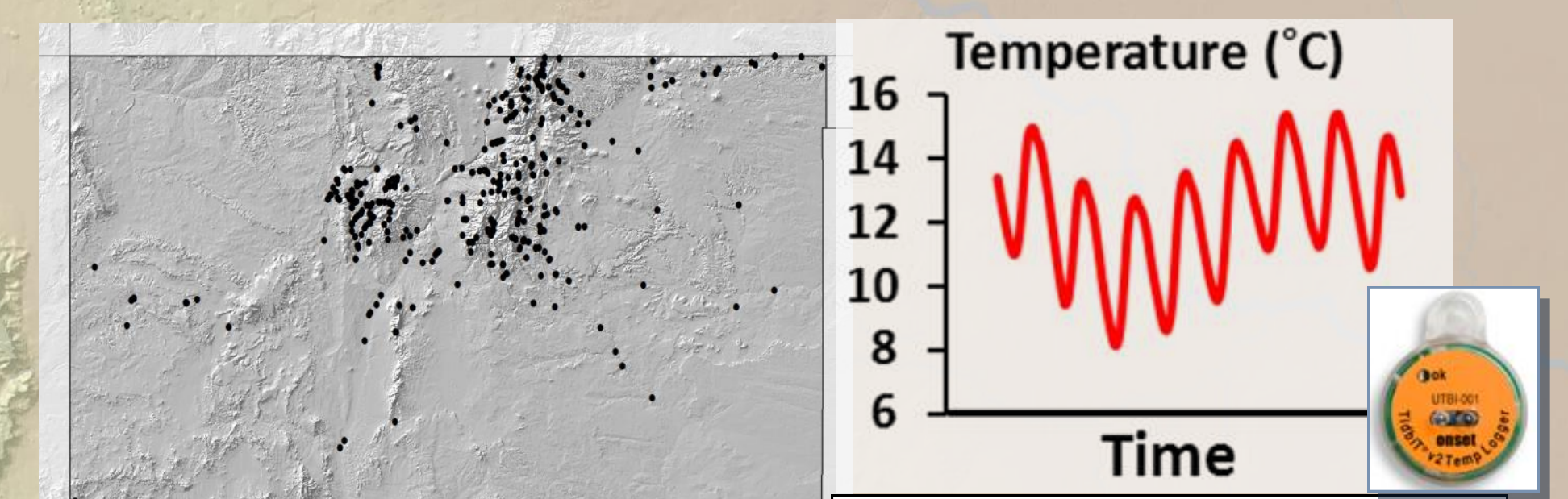
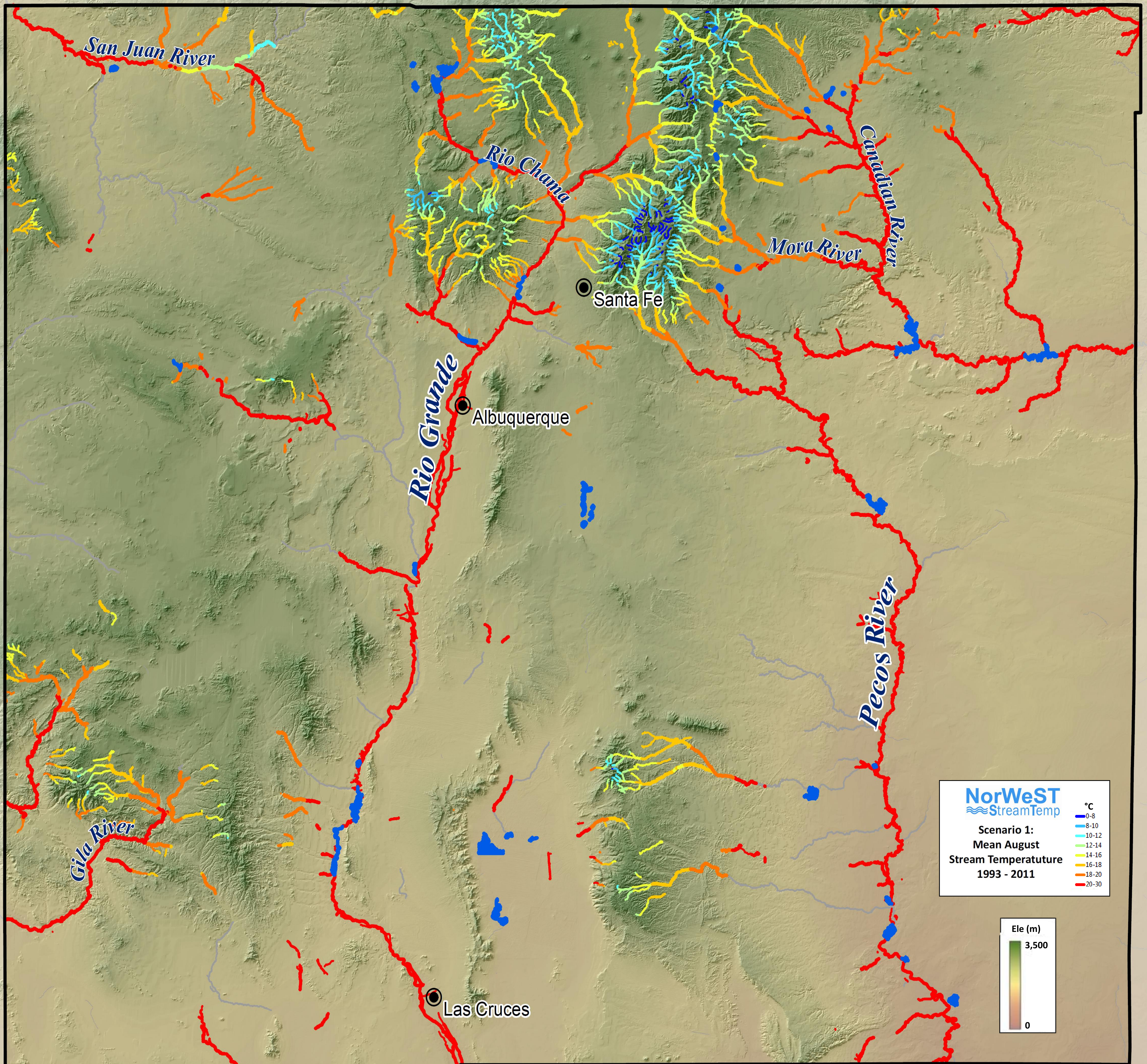


# A Thermal Map for New Mexico Streams

Data providers:

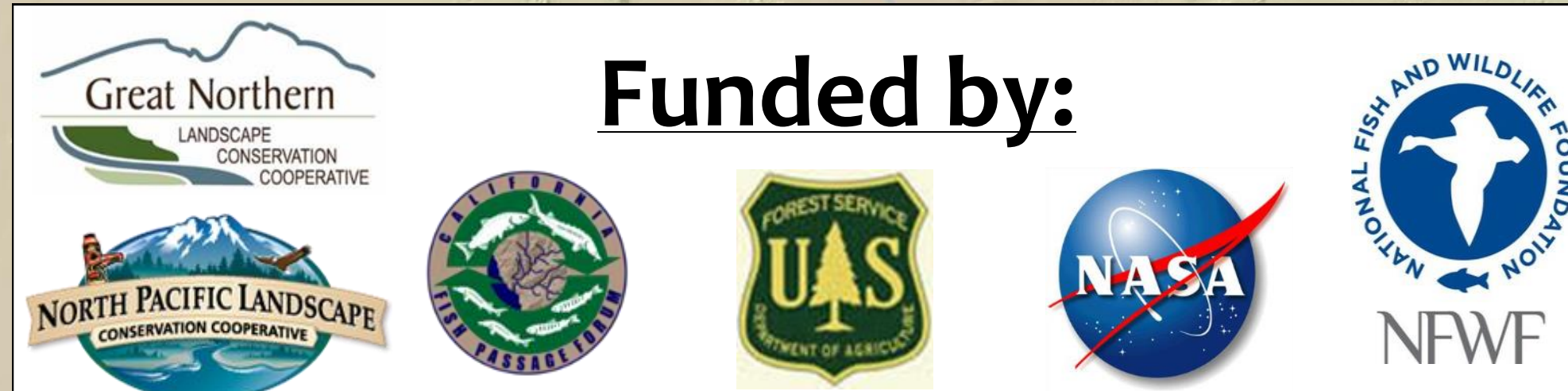


The aquatic community within New Mexico has amassed significant amounts of stream temperature data through their collective monitoring efforts in previous decades. As part of a broader effort across the American West, the NorWeST project has developed a comprehensive interagency stream temperature database for the state that consists of 755 summers of monitoring effort at 543 unique sites (map inset lower right). Those data were used with spatial-stream-network models (details at the SSN/STARS website: [www.fs.fed.us/rm/boise/AWAE/projects/SpatialStreamNetworks.shtml](http://www.fs.fed.us/rm/boise/AWAE/projects/SpatialStreamNetworks.shtml)) to develop an accurate stream temperature model ( $r^2 = 94\%$ ; RMSPE =  $1.0^\circ\text{C}$ ; MAE =  $0.75^\circ\text{C}$ ), which was then used to predict 30 high-resolution (1 kilometer) historical and future climate scenarios for streams in New Mexico. This poster depicts a historical scenario of the mean August temperature for 1993-2011 in 12,972 kilometers of stream mapped to the 1:100,000-scale NHDPlus hydrography layer trimmed to exclude intermittent reaches and those  $>15\%$  slope. NorWeST stream temperature scenarios and state temperature maps are available in user-friendly digital formats (e.g., ArcGIS shapefiles and .pdf files) from the project website ([www.fs.fed.us/rm/boise/AWAE/projects/NorWeST.html](http://www.fs.fed.us/rm/boise/AWAE/projects/NorWeST.html)) and can also be viewed dynamically online using this webtool ([www.sciencebase.gov/gisviewer/NorWeST/](http://www.sciencebase.gov/gisviewer/NorWeST/)). Daily summaries (min/max/mean) of the temperature data used to develop the temperature model are also available through the website if permission was given for their distribution. All data are attributed to the original source agency and contributing biologists or hydrologists in metadata files. By providing open access to stream temperature information in user-friendly formats, the NorWeST project is facilitating coordination of monitoring activities among organizations, better conservation planning, and new research on temperature dynamics and thermal ecology.



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Funded by:



Stream sites with temperature data used to develop the thermal map for New Mexico. Data consist of 755 summers of monitoring effort from 543 sites.