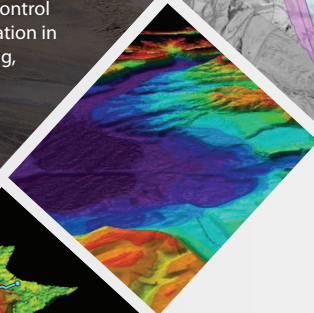
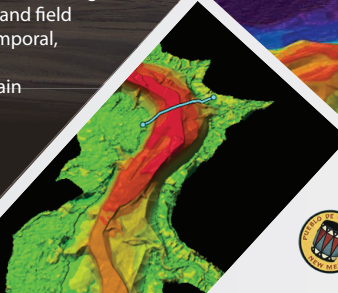




From its headwaters in Colorado, the Rio Grande bisects New Mexico on its way south to the Gulf of Mexico. To control floods and store water, the U.S. Army Corps of Engineers (USACE) constructed Cochiti Dam 50 miles upstream of Albuquerque within the lands of Pueblo de Cochiti. Cochiti Dam also serves to control sediment and is critical to region-wide sediment management efforts. Monitoring sedimentation in the Rio Grande requires accurate, empirical 3D geospatial information. Professional surveying, photogrammetry, and GIS services are uniquely suited for this task.

The USACE was interested in both quantity and spatial distribution of sediment deposition over time. To address this need, Wilson & Company engaged collected and formatted multiple geospatial datasets acquired over a 50-year time span which included ground control, photogrammetric mapping, sonar bathymetry, aerial LiDAR, and field surveyed river cross sections. The challenge was to fuse this multi-temporal, multi-sensor, multi-platform, and multi-resolution primary data into sequential, composite multi-temporal geodatabases and digital terrain models (DTM). The resulting datasets yield a wealth of geospatial information pertinent to the needs of USACE. This includes analysis and quantification of sediment volume and distribution, river baseline elevation change, cross section profiles, reservoir storage capacity, forecasting of sediment inflow, area capacity tables, and life expectancy of Cochiti Reservoir.



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U.S. Army Corps
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Albuquerque district