

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Conduct Aerial LiDAR Survey for Documentation of Fort Union National Monument

Discipline: Interdisciplinary
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Utah State University
Effective Dates: 6/15/2013 - 12/31/2015
Funding Amount: \$24,580

Investigators and Agency Representative:

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Abstract: The Second Fort Union was an earthen fortification built in the shape of an 8-sided star in 1861 to address the imminent threat of the Confederate Army moving to take Fort Union and thus control of the Santa Fe Trail and the gold fields of Colorado. It was from here that the 1st Colorado Volunteers deployed to meet and defeat the Confederate army at the pivotal Battle of Glorieta Pass, thus ending Confederate actions in the west. The fort was occupied by the army from only 1861 to 1863 and then abandoned. Thereafter, garrison troops occupied the adjacent Fort Union Third Fort.

Immediacy of need: March 2012 marked the 150th anniversary of the Battle of Glorieta Pass, the most significant and decisive Civil War conflict in the American West and thus important to the NPS Civil War Sesquicentennial. The Second Fort Union is integrally tied to that battle. This project will enable the NPS to acquire more accurate elevation information on the park and particularly on the star fort to highlight and more fully interpret the Civil War in the American West. Also, head cutting in one of the Santa Fe Trail segments is within 100 feet of the east redan or demilune that held officer's quarters and within 150 feet of a demilune that contained company quarters and a storeroom. Additionally, erosion of east bank of Wolf Creek to the west of the star fort is threatening the area of the encampment of the Colorado Volunteers. Information from this project will help park management assess these threats and determine countermeasures for them.

This project will complement work performed by other archeologists, geologists, GIS specialists, and geophysicists for all phases of the remote sensing fieldwork. Archeologists, historians and architectural historians will be involved during the report preparation phases and all work will be conducted in concert with the park interpreters and Facility Management staff, both during and after the fieldwork to insure the necessary information for research and preservation issues is obtained.

Multiple Units: Fort Union NM manages excellent and well preserved ruts of the Santa Fe Trail. The Santa Fe NHT office and the park staff work collaboratively on interpretive and community projects. Results of this project will provide useful knowledge to the National Trails Office about a significant time and place in history along the Santa Fe Trail. Additionally the results will be provided to Pecos NHP which administers the Glorieta Battlefield (NM Civil War site). The Second Fort Union is identified in the park's enabling legislation as important to the establishment of the Monument and is included as a contributing element of the National Register district for the Monument. It is a primary interpreted resource. It is the sole surviving earthen star fort erected west of the Mississippi River and is the most intact, least-disturbed Civil War-era bastioned earthen fort surviving anywhere within the United States today. It played a crucial role in the pivotal Civil War battle of Glorieta Pass.

The Second Fort Union is believed to be the only complete, archeologically intact Civil War-era earthen star fort in the national park system (and perhaps the country) and the existing base map is derived from gross surface indications, limited records information, and conjecture. This one year project will use a combination of non-destructive remote sensing techniques to determine surface and subsurface features within the c. 33-acre fort, and will aid park management in determining future research and preservation needs for this unique fort.

Outcomes with Completion Dates: December 31, 2015

Keywords: Utah State University, Fort Union National Monument, LiDAR Survey

