Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Small Mammal Inventory and Species Assessment Project for the Weippe Prairie Site, Nez Perce National Historical Park

Discipline: Natural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: University of Idaho
Effective Dates: 6/1/2013 – 3/31/2016
Funding Amount: $63,458 [FY14: $11,580; FY13: $51,878]

Investigators and Agency Representative:
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Project Abstract:
The Weippe Prairie is of great historical significance and was used for thousands of years by the Nez Perce people as a place to harvest camas (*Camassia quamash*). It was during the late summer/fall camas harvest in 1805 that members of the Lewis and Clark expedition first encountered the Nez Perce at Weippe Prairie. The Nez Perce people provided the expedition party with food (including camas) at a time when game was very scarce and food had become a serious problem for the expedition. It is because of this "first contact" between northwest native peoples and representatives of the US Government that the Weippe Prairie site was included as part of NEPE.

The Weippe Prairie has a long association with the camas plant and today it is one of the key resource values driving park management. To the Nez Perce camas was a vital winter food. Camas stores constituted nearly 80 to 90% of the historic winter diet for the Nez Perce people and it remains an important cultural resource to the Tribe today. The Weippe Prairie is also noted as the "type site" for *Camassia quamash,* as the first specimen recorded to science was gathered here and described by Meriwether Lewis on June 23, 1806 during their return to the East Coast.

The wet meadow environment of the Weippe Prairie was also coveted by early ranchers and settlers to the region. Over the past 100+ years the larger prairie has been used for hay production and livestock grazing made possible by the construction of ditches and drains to dry the seasonally wet meadows. European pasture grasses, which provide homogenous and highly productive cover, have also been introduced. Thus the hydrologic regime and vegetation of the prairie has changed dramatically from the condition experienced by the Nez Perce and members of the Lewis and Clark expedition. These impacts have been drastic across the prairie and their evidence greatly influences NPS management of the Weippe site.

NPS site managers are extremely concerned about the effects of artificial drainage, loss of habitat for camas lily, and the associated rapid pace of non-native plant invasion on native plant communities at Weippe Prairie. In order to address these concerns, the park is currently implementing a pilot wetland restoration project on a small portion of the Weippe Prairie site. The results of this pilot study will guide subsequent wetland restoration efforts across the larger 274-acre site in the future.

Prior to implementation of any of the restoration projects, the NPS must fully understand and address all potential impacts from these actions. One key aspect will be to understand how these efforts may impact small mammal populations across the Weippe property. While restoring wetland systems can be very beneficial to native plant communities, these efforts can adversely impact small mammal populations that now rely on the dryer soil and plant communities present in portions of the meadow with altered hydrological regimes.

The NPS currently has no information regarding the distribution and abundance of the small mammal population present at the Weippe Prairie unit of NEPE. In addition, the park has no knowledge of how the current populations relate to those historically found in the prairie prior to hydrological alteration.

The focus of this study will be to design, develop, and implement an inventory project to gain an understanding of the diversity, distribution and abundance of small mammal species at the NPS managed Weippe Prairie site. The study will involve three field seasons of data collection using a spatially balanced inventory method to allow for a more complete understanding of the distribution

of small mammal species across the park site. Sampling will occur across a wide spectrum of site influencing factors such as elevation, distance to water, vegetative cover, and vegetation type.

Information produced from this small mammal study will allow the park to better understand the diversity and composition of small mammal populations across the Weippe site. This knowledge will be used to design, guide, and site future wetland restoration efforts for the NPS managed property.

Outcomes with Completion Dates:
Final Report – January 31, 2016
Final Database and Maps provided to the NPS ATR or Technical Expert – January 31, 2016

Keywords: University of Idaho, Weippe Prairie Site, Nez Perce National Historical Park, small mammal, inventory