

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Wetland Mapping and Impacts of Irrigation on Wetlands of the Elk Ranch within Grand Teton National Park, WY

Discipline: Natural

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Montana State University

Effective Dates: 7/1/2006 - 7/1/2008

Funding Amount: \$4,080

Investigators and Agency Representative:

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Project Abstract: Agricultural practices including hay production, grazing, and irrigation have taken place over thousands of acres in Grand Teton National Park. These activities have affected soil structure, soil organic matter, extent of wetlands, fertility, and nutrient status. Several thousand acres in the southern portion of the park have ceased production in the past twenty years. Conversion of these acres from exotic agronomic grasslands to native grasses and shrub-steppe vegetation has not occurred since their abandonment. Management action will be necessary to move these acres into the desired condition of native vegetation providing natural habitat and forage values. To develop appropriate restoration plans both the history of these fields and their current condition is required. Knowledge of current extent of wetlands and the maintenance of these systems through artificial irrigation is needed to provide input to revegetation planning. Once baseline information on current wetlands is obtained we can proceed to develop restoration plans for the area using state-transition models, and can select management activities and the sequencing of treatments.

Grand Teton NP (GRTE) staff and Montana State University researchers will work cooperatively during summer 2006 to: (1) map existing wetlands on the Elk Ranch based on soil and vegetation surveys, (2) describe wetlands including age and degree to which wetland is influenced by irrigation practices, (3) assess the impact of decreased/eliminated irrigation on existing wetlands at the Elk Ranch. The wetlands data and site history for each of the land units will be incorporated into a GIS layer providing a record of land use history and its impacts, and to be used in restoration planning efforts.

Products and Completion dates: Due by July 1, 2008:

1. Map of existing wetlands on the Elk Ranch based on soil and vegetation surveys.
2. Description of wetlands including age and degree to which wetland is influenced by irrigation practices.
3. Assessment of the impact of decreased/eliminated irrigation on existing wetlands at the Elk Ranch.

Keywords: wetlands, irrigation, Elk Ranch, soils, restoration, Grand Teton National Park, Montana State University,

For Administrative Use Only:

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: