Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: BLM- MT, West Nile Virus Threats Surveillance in the Sagebrush Focal Area of North Central Montana, Hi-Line/Central Districts

Discipline: Natural
Type of Project: Research
Funding Agency: Bureau of Land Management
Other Partners/Cooperators: Montana State University
Student Participation:
Effective Dates: 08/17/2016 - 08/16/2021
Funding Amount: $74,953.00

Investigators and Agency Representative:
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Project Abstract: To develop a WNv surveillance and research project. This study will provide annual assessments of prevalence for this virus in the newly designated SFA in Montana. The WNv, carried by the Ct mosquito, has been recognized as a serious threat to GSG populations and is one threat that is not currently being monitored by the BLM or any other agency in the SFA.

This research could lead to the identification of management actions that wi11 benefit GSG by minimizing Ct breeding conditions. In addition to surveillance, the research component of this work will evaluate the breeding potential of Ct in relation to various water developments that the BLM currently builds or has built on the landscape for livestock. These water developments include large reservoirs, waterfowl breeding pond s and livestock watering pits. This research will seek to determine which developments are more or less likely to produce the conditions that increase or decrease Ct breeding. This research will enable land managers and the public to evaluate and construct water developments that minimize habitat for Ct.

This project will provide the knowledge, through the model, to identify areas in the SFA that are at the highest risk of a WNv outbreak due to elevated product ion of Ct. In addition, this project will identify which livestock water developments and other water bodies are most likely to produce Ct, the species of mosquito that carries WNv. This will provide the scientific guidance to help outline Best Management Practices pertaining to water development projects that will benefit GSG.

Keywords: West Nile Virus, surveillance, north central Montana, Hi-Line, sagebrush, BLM, Montana State University