

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Sampling Mercury and other Contaminants in Bald Eagles and Osprey in Montana and Wyoming
Type of Project: Research
Project Discipline: Natural
Funding Agency: BLM
Other Partners/Cooperators:
Effective Dates: 8/31/2006 – 9/30/2011
Funding Amount: \$25,000.00 (FY06); \$25,000 (FY07)
Investigators and Agency Representative: Investigator: Alan R. Harmata, Affiliate, Department of Ecology, Montana State University, ubijt@montana.edu
Project Abstract: Mercury (Hg) is a major contaminant of ecological systems. Hg in the form of methylmercury is a bioaccumulated in organisms and is responsible for deleterious effects in birds and may have affected recovery of demes of bald eagles in the lower 48 States. Fossil fuels, mining, and industrial pollution are major anthropogenic sources of environmental mercury worldwide. Increasing or proposed resource development in the northern plains (e.g., coal bed methane, coal burning power plants) may result in increasing contamination of aquatic environments on which bald eagles depend. We will collect blood, feathers, and carcasses of nestling, free-flying, and rehabilitated bald eagles in Montana and Wyoming to determine levels of Hg and other contaminants. As osprey nest in high density in proximity to bald eagles, are easily accessible, exploit a similar food base, and have been shown as indicators of certain contaminants in the environment, they may serve as an appropriate surrogate for contaminant analysis of bald eagles. Baseline data on contaminant loads of aquatically associated species are needed to evaluate extent of impact of resource development. Environmental Hg contamination had implications for bald eagles population persistence and human health and results of this study may assist in identification, evaluation, and remediation of contaminated areas. The results of this study should also assist in evaluating the appropriateness of using osprey as surrogate indicators of environmental contamination of bald eagles and reveal pre-impact levels of deleterious compounds in aquatically dependent species.
Outcomes with completion dates (reports, publications, workshops, videos, etc.):
Keywords: Mercury, environmental contamination, bald eagles