

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Establish a genetic repository for Mexican wolves and other canids samples

**Type of Project:** Technical Assistance  
**Discipline:** Natural Resources  
**Funding Agency:** US Fish and Wildlife Service  
**Other Partners/Cooperators:** University of Idaho  
**Effective Dates:** 12/31/2013 - 12/31/2018  
**Funding Amount:** \$65,700

**Investigators and Agency Representative:**

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**Project Abstract:**

The Mexican wolf was listed as endangered in 1976 under provisions of the Endangered Species Act, giving the Service the responsibility for its recovery. Captive breeding efforts stemming from only 7 founders have produced over 1300 studbooked Mexican wolves. The current captive population consists of approximately 300 Mexican wolves, held in zoos and other facilities throughout the United States and Mexico. No wild populations are known to exist, except those reintroduced by the Service in the United States and by the General de Vida Silvestre in Mexico. In 2012, the Service documented a minimum of 75 Mexican wolves in the wild as a result of active reintroduction that began in 1998. Mexico first began releasing wolves in 2011 and will continue reintroduction efforts into the future.

The captive population is managed to maintain or increase gene diversity through considerations of mean kinship, avoidance of inbreeding, differences in sire and dam mean kinships, and the degree of uncertainty within a pedigree. Mexican wolves of high mean kinship and genetically well represented in captivity are designated for release. The genetics of the wild population is primarily monitored by obtaining samples from all wolves released to and captured in the wild. In recent years the reintroduced population has shown a slight decline in retained gene diversity and founder genome equivalents, in addition there has been a decline in representation of the under-represented Mexican wolf lineages. An increase in all genetic parameters can be affected by the reintroduction of new wolves, and thus genetic monitoring of the wild population is critical in determining appropriate release candidates and to the overall success of the Program. In addition, genetic monitoring of the Mexican wolf population and other canids captured will help ensure any possible hybrid animals are managed appropriately.

**Keywords:** Mexican wolf, genetics, recovery, US Fish and Wildlife Service, University of Idaho