

Black-footed Ferret Reintroduction Summary December 28, 2015



Background

The black-footed ferret (BFF or ferret) was one of the first species to be listed under the Endangered Species Act (ESA) of 1973 and was believed to have gone extinct in the late 1970's. In 1985, a remnant population of ferrets was discovered near Meeteetse, Wyoming. This population experienced significant declines due to canine distemper and sylvatic plague. In 1986 and 1987, the U.S. Fish and Wildlife Service (USFWS) captured the remaining 18 wild individuals for a captive breeding and species preservation program. These ferrets became the seed population for all subsequent captive breeding and recovery efforts.

Three pieces of state legislation authorize the reintroduction of black-footed ferrets in Colorado - HB1314, SB169, and HB1267. The Colorado State Legislature approved the reintroduction of ferrets into northwest Colorado in 2000 through HB1314. SB169 was passed by the Colorado State Legislature in 2013 and allows for reintroduction on private land enrolled under the Safe Harbor agreement with a certificate of inclusion. The Colorado State Legislature passed HB 1267 in 2014, which allowed for the reintroduction of black-footed ferrets on land owned by political subdivisions of the state when enrolled under the Safe Harbor Agreement. The due diligence requirements on these releases include contacts with local governments and any neighboring landowners who would potentially be impacted.

In 2015, the Colorado Natural Resources Conservation Service continued the BFF Special Effort program with funding through the Environmental Quality Incentives Program (EQIP), which offers incentives to private landowners who wish to conserve BFF on their property. This year the program resulted in 3 qualified and approved applications. The property locations were in Southeastern Colorado. Expenditures to landowners for enrollment in 2015 were \$58,476, bringing the total expenditures (2014-2015) to \$1,039,883.

Colorado is one of eight states involved with the recovery of the species through reintroduction. With two new reintroductions in 2015, the total number of release sites in Colorado is seven.

Colorado Parks and Wildlife is also participating in sylvatic plague research, which will be vital to the recovery of this species. Weather patterns in 2015 were conducive to plague outbreaks throughout the state and plague was confirmed at 3 of the 4 active release sites in Colorado this year. Dusting was undertaken by USDA-APHIS (Liberty Complex and North Holly Complex) and Fort Collins Natural Areas (Soapstone Natural Area) with over 4,000 acres dusted. Additional efforts are being made to ensure that plague is appropriately managed at all ferret release sites in the future, an action that will be vital to the short and long-term success of these releases.

Colorado Black-footed Ferret Reintroduction Efforts

Wolf Creek - The reintroduction of ferrets into their former range in northwest Colorado and eastern Utah was a cooperative effort between the Bureau of Land Management (BLM), Colorado Parks and Wildlife (CPW), USFWS, and Utah Division of Wildlife Resources (UDWR). Reintroduction of ferrets into Colorado began in 2001 with a total of 252 ferrets being released into the Wolf Creek Management Areas (WCMA; north of Rangely) and 8 into the Coyote Basin Management Area (CBMA). In the WCMA, reintroductions occurred each fall from 2001 - 2008. A plague epizootic within the prairie dog population in the WCMA was discovered in 2008. This epizootic coincides with the reduction in detected ferrets during surveys. The epizootic continued through 2010 and populations of WTPDs were still very low in 2011. The CPW has taken measures to reduce the impact to prairie dogs and ferrets by dusting burrows with an insecticide and monitoring areas for further outbreaks. As a result of this disease and its impacts, CPW has declined to accept any captive-bred ferrets for release within the WCMA since 2009. Future allocation requests will be dependent on future disease surveillance, and ferret and prairie dog population monitoring. No surveys for ferrets have occurred at WCMA since 2010.

Wolf Creek Management Area Black-footed Ferret Surveys			
Year	# of Individuals	Acres Surveyed	Total Hours Surveyed
2003	1	-----	598
2004	2	-----	616
2005	5	7,067	700
2006	9	7,166	630
2007	16	7,660	660
2008	12	6,425	655
2009	0	6,425	482
2010	0	3,940	270

Walker Ranch - In November 2013, 55 black-footed ferrets were released on the Walker Ranch, Pueblo County, Colorado. The ranch is comprised of ~63,000 acres and borders Fort Carson to the south. Plague was documented at the Walker Ranch in 2015, however ~1,300 acres of black-tailed prairie dogs are still present. A supplemental release of 52 ferrets occurred in September and October, 2014. Additional releases did not occur in 2015. Spotlight surveys were undertaken by CPW personnel, in conjunction with USFWS and Cheyenne Mountain Zoo, in Fall 2013, Spring and Fall 2014, and Fall 2015. The 2015 surveys documented expansion of the area being used by ferrets to southern portions of the property where releases had not occurred.

Walker Ranch Black-footed Ferret Releases and Surveys			
Year	# of Individuals Released (M.F)	# of Individuals Observed	Total Hours Surveyed
2013	55 (28.27)	2	66
2014 (Spring)	-	7	105
2014 (Fall)	52 (26.26)	5	241
2015	0	4	228

Soapstone Natural Area -In September and October 2014, 42 black-footed ferrets were released on Soapstone Natural Area in Larimer County, Colorado. Soapstone maintains nearly 1,400 acres of active black-tailed prairie dogs. Plague was documented at Soapstone in 2015. Soapstone is one of 2 research sites for sylvatic plague vaccine trials in Colorado and Fort Collins Natural Areas staff dusted ~1,500 acres of active prairie dog colonies to control the outbreak of plague. Spotlight surveys were undertaken by Fort Collins Natural Areas, in conjunction with USFWS and CPW, in Fall 2014 and Fall 2015. A lactating female ferret was located during Fall 2015, documenting breeding at the site. A supplemental release of 20 ferrets occurred in September 2015.

Soapstone Natural Area Black-footed Ferret Releases and Surveys			
Year	# of Individuals Released (M.F)	# of Individuals Observed (M.F)	Total Hours Surveyed
2014	42(23.19)	13 (5.8)	509
2015	20(9.11)	6(3.2)	431

North Holly Complex - In October and November 2014, 45 black-footed ferrets were released on the North Holly Complex, Prowers County, Colorado. The North Holly Complex is made up of 5 private ranches covering nearly 3,000 acres of active black-tailed prairie dogs. USDA-APHIS personnel dusted ~1,800 acres in June 2015 for plague management purposes. Spotlight surveys did not occur in Fall 2014 but were undertaken in the Fall of 2015. A supplemental release of 14 ferrets occurred in November 2015.

North Holly Complex Black-footed Ferret Releases and Surveys			
Year	# of Individuals Released (M.F)	# of Individuals Observed (M.F)	Total Hours Surveyed
2014	45 (24.21)	-	-
2015	14 (7.7)	1	294

Liberty Complex - In October 2014, 40 black-footed ferrets were released on the Liberty Complex, Baca County, Colorado. The Liberty Complex is made up of 2 private landowners. USDA-APHIS dusted over 750 acres in 2015 though it appears that a plague outbreak had already begun, reducing the active prairie dog complex to just under 400 acres. Spotlight surveys did not occur in Fall 2014 but were undertaken in the Fall of 2015. During the Fall 2015 surveys a juvenile male ferret was captured,

documenting at least one litter at this site. A supplemental release of 14 ferrets occurred in November 2015.

Liberty Complex Black-footed Ferret Releases and Surveys			
Year	# of Individuals Released (M.F)	# of Individuals Observed (M.F)	Total Hours Surveyed
2014	40 (24.16)	-	-
2015	14(6.8)	3	222

South Holly Complex - In November 2015, 15 black-footed ferrets were released on the South Holly Complex, Prowers County, Colorado. The South Holly Complex is made up of 3 private ranches covering over 1,700 acres of active black-tailed prairie dogs. Spotlight surveys did not occur in Fall 2015.

South Holly Complex Black-footed Ferret Releases and Surveys			
Year	# of Individuals Released (M.F)	# of Individuals Observed (M.F)	Total Hours Surveyed
2015	15 (8.7)	-	-

Rocky Mountain Arsenal Complex - The USFWS has taken the lead on a release at the Rocky Mountain Arsenal National Wildlife Refuge, Adams County, Colorado. The Rocky Mountain Arsenal is owned and operated by the USFWS. This release has received a great deal of positive media and public attention, which increases the interest in ferret reintroductions throughout the state.

Rocky Mountain Arsenal Complex Black-footed Ferret Releases and Surveys			
Year	# of Individuals Released (M.F)	# of Individuals Observed (M.F)	Total Hours Surveyed
2015	32	16	-

Sylvatic Plague Monitoring, Management, and Research

As part of the Colorado/Utah ferret reintroduction protocol disease surveillance was conducted annually in the WCMA, CBMA and Snake John Reef management areas. Disease monitoring consisted of sampling fleas from prairie dog burrows. The discovery of plague positive fleas and carcasses within the WCMA in 2008 marked the beginning of a CPW and BLM disease management project to limit the impact of the plague epizootic on the ferret population. A powdered insecticide was applied to prairie dog burrows in an attempt to control the infected flea population and slow or stop the transmission of the disease. The occurrence of plague positive fleas 1-2 years after treatment suggests that the insecticide provided only temporary protection against disease transmission and was unsuccessful at stopping the epizootic. Disease monitoring will resume in these areas when the prairie dog population recovers to a level that would support further black-footed ferret recovery efforts.

Starting in 2010, two CPW research projects investigating plague control and plague management strategies were continued in the WCMA. First, an evaluation of the effectiveness of flea control to manage plague outbreaks and second, a research collaboration with the USGS, National Wildlife Health Center to evaluate biomarker use to measure the consumption of an experimental bait for future delivery of an oral sylvatic plague vaccine. In 2012, sylvatic plague vaccine phase I field safety trials were conducted at two field sites in Colorado.

Sylvatic Plague Vaccine (SPV) - 2015 Preliminary Research Update

Colorado Parks and Wildlife began conducting large-scale phase II sylvatic plague vaccine (SPV) field trials at Gunnison's and black-tailed prairie dog sites during summer-fall of 2013. The field experiments undertaken by CPW have been designed to evaluate the oral plague vaccine developed by USGS and evaluate efficacy of vaccination as a plague management tool. In 2015 (the third year of a 3-4 year study), 221 acres of Gunnison's prairie dog colonies at 3 paired study areas (6 sites) were treated with either vaccine or placebo baits and 399 prairie dogs were marked for survival analysis of which 294 were sampled (blood/whiskers) for analysis of bait uptake. An additional 407 acres of black-tailed prairie dog colonies at 3 paired study areas were treated and 253 prairie dogs were marked with 250 of these individuals sampled for bait uptake. Small mammals were also captured on several study sites with 420 individuals of 8 species sampled in 2015. These Colorado field trials will be expanded in 2016 to include landscape scale adaptive management experiments.