

COMPLETED PRAIRIE DOG MANAGEMENT ON THUNDER BASIN NATIONAL GRASSLAND

2014

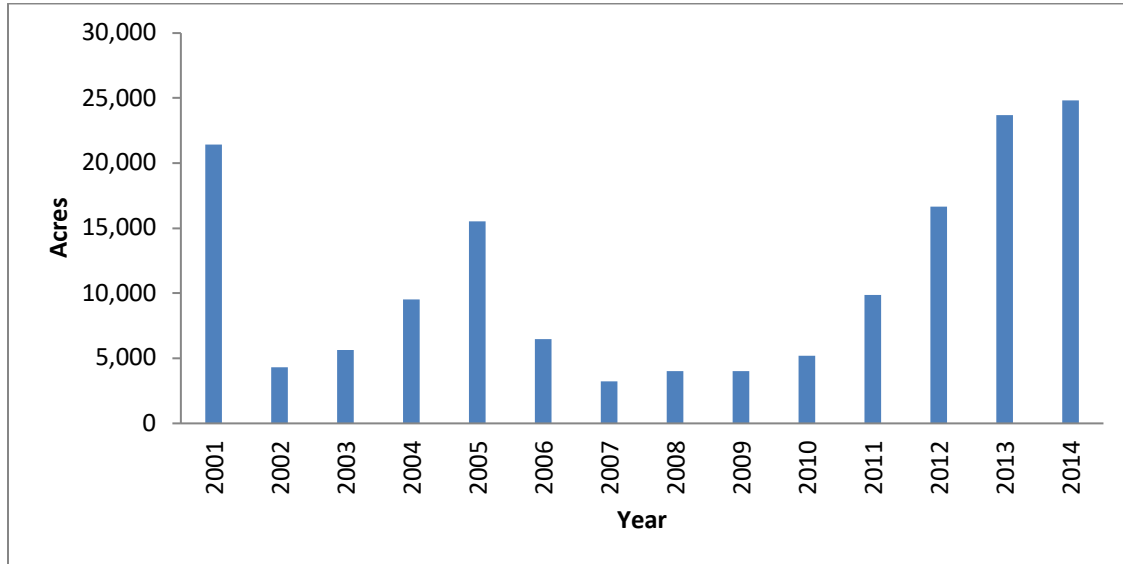


The Land and Resource Management Plan (Grassland Plan) for the Thunder Basin National Grassland, Wyoming was amended in 2009 to better provide for the conservation of black-tailed prairie dogs and their habitat, to address private landowner concerns about unwanted prairie dog encroachment onto private lands within and adjacent to the TBNG boundaries, and to facilitate future recovery of endangered black-footed ferrets. Implementation has included:

- Prescribed burning
- Mowing
- Temporary fence
- Permanent vegetative buffer fence
- Dusting
- Larger shooting closure
- No shooting portal signs installed
- Translocation
- Rodenticide application
- Raptor perch construction

MAPPING

All active prairie dog colonies on Thunder Basin NG are mapped annually. Currently, the population for 2014 is **24,824** acres. The current acreage of occupied prairie dog colonies is approximately **4.5%** of the Thunder Basin NG.



Acres by Category:

Category	Acres	Objective	Current % of Objective
1	15,508	18,000	86%
2	1,411	3,000	47%
3	2,776	1,000	277%
4	1,592	4,000	39%
Control	3,231	NA	
New	306	NA	

POTENTIAL HABITAT MODELING

In an effort to help determine future prairie dog expansion, the entire TBNG was modeled using existing GIS layers that contained information related to slope, soil, and satellite imagery to determine vegetation cover. Using this information to exclude non-habitat, the remaining possible habitat was then field verified to determine if it was potential prairie dog habitat. Approximately 128,283 acres (NFS) are considered potential habitat using the variables available for the modeling. This is approximately 23% of the entire TBNG. Of that 128,283 acres, 86,318 are strictly 'Potential' (i.e. have not been occupied by PDogs according to our data, but are capable of supporting habitat), 24,727 are Suitable Occupied (i.e. occupied in 2014) and 17,238 are Suitable Historically Occupied (i.e. not occupied in 2014 but occupied previously at some other time). A Habitat Suitability Index Model has not been completed, due to the lack of more specific available variables.

BURNING

Prescribed fire and grazing were identified in the TBGA AMP EIS as a tool that could be used to achieve desired conditions for vegetative resources. The purpose of burning is to provide diverse and quality grassland habitat across the geographic area at levels that, in combination with habitat on adjoining lands, helps support stable or increasing populations of plover and prairie dogs and other wildlife with similar habitat needs. Burning was a tool identified to move vegetation resources toward desired conditions, benefiting wildlife habitat. Guidelines in the LRMP direct management to schedule prescribed fire activities at intervals designed to improve or maintain habitats of desired plant and animal species.

Due to an unstable political climate surrounding prairie dog management on Thunder Basin NG, prescribed burning has been precluded as an implementation tool since 2012.

Acres completed:

- 2009 – 2,193 acres
- 2010 – 2,500 acres
- 2011 – 4,000 acres
- 2012 – 2,500 acres

TRANSLOCATION

Translocation is a tool identified to provide for the conservation of black-tailed prairie dogs and their habitat, and to address private landowner concerns about unwanted prairie dog encroachment onto private lands within and adjacent to the TBNG boundaries.

As with prescribed fire, due to an unstable political climate surrounding prairie dog management on Thunder Basin NG, translocation has been precluded as an implementation tool since 2011.

Acres Completed/Number of Prairie Dogs Moved:

- 2010 – 550 prairie dogs (120 acres)
- 2011 – 349 prairie dogs (166 acres)

MOWING

Mowing was completed for translocation preparation to encourage prairie dogs to stay where they have been moved to. This is a tool that up until now has only been used as preparation for translocation, but it has potential to be used in the same way as prescribed fire is to reduce grass height to encourage prairie dog colony expansion, or discourage expansion onto private lands.

- 2010 – 12 acres
- 2011 – 40 acres

DUSTING

We applied Delta Dust to prevent plague transmission across Grassland, and to colonies within 1 mile of residences that have expressed concerns. It is worth noting that all of the Delta Dust for 2012 was either donated by the Bayer Corporation or purchased by WWF. In 2013, all dust was donated by WWF, PDC, and Defenders. They also exclusively paid for the WCC crews that did the majority of the dusting. The FS provided oversight and additional ground support while crews were here.

Acres Completed:

- 2010 – 132 acres
- 2011 – 1,997 acres
- 2012 – 780 acres
- 2013 – 3,000 acres
- 2014 – 2,400 acres

Burrow Density Data from Dusting:

- 2012 – 33 burrows/acre
- 2013 – 21 burrows/acre
- 2014 – 35 burrows/acre

SIGNING

We constructed wood portal type signs at every major road entrance into shooting closure to inform public of where the shooting closure was located. We also installed carsonites on two-tracks that enter the shooting closure area, and 3.63. We will continue to install signs as funding allows.

Signs Installed:

- 2010 – 4 signs
- 2011 – 8 wooden portal signs, 30 carsonite signs.

BUFFER FENCE CONSTRUCTION

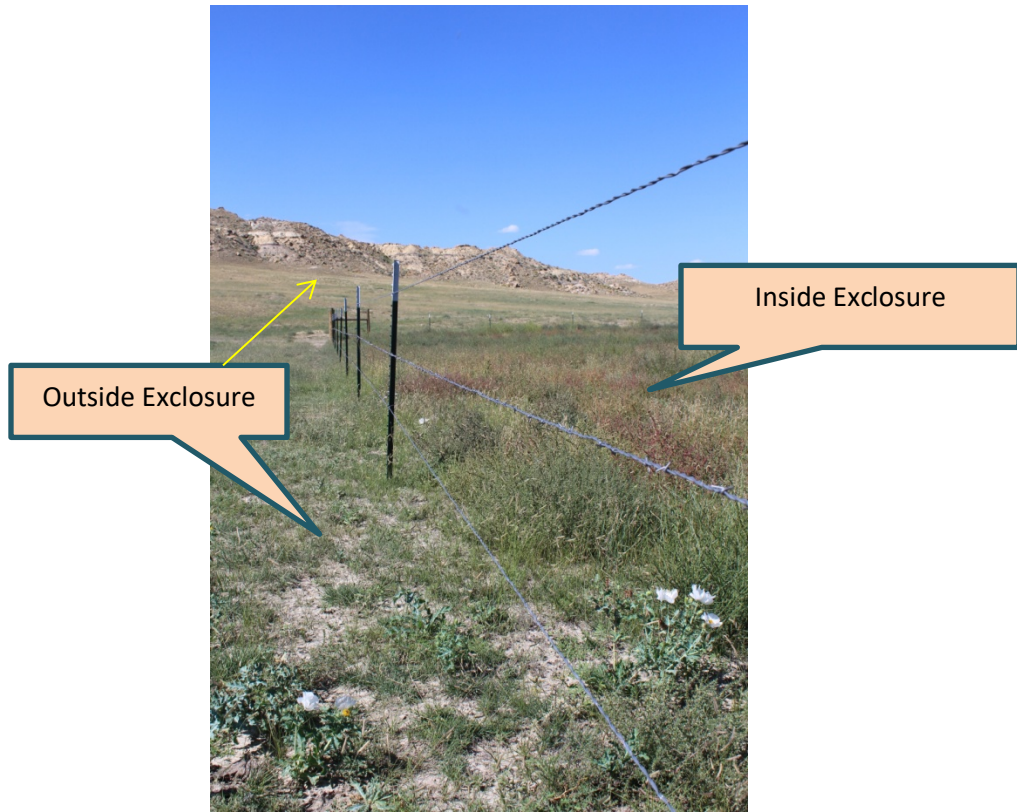
Constructed approximately 150 acres of permanent fence in 2010 around trapping site to create a vegetative buffer and prevent future re-colonization by prairie dogs. The Wyoming State Forestry Honor Farm built the majority of the fence at no cost to the USFS.

Acres Fenced:

- 2010 – 150 acres

2014 Conditions:

Based on 2014 monitoring, it appears that the remaining exclosure has been successful at reducing re-colonization following translocation and rodenticide use. There is only one small area within the exclosure that currently has prairie dogs, and this area is right next to the fence against private land. The private land located next to the FS exclosure continues to be heavily grazed by cattle, and includes installation of water and minerals stations. The private landowner has been unsuccessful at reducing the population of prairie dogs on the private land next to FS land, which are migrating onto the FS land within the exclosure. (all pictures were taken on FS land). Poisoning of prairie dogs currently occupying the NE side of the exclosure will occur in October of 2014.



BUFFER FENCE REMOVAL

In 2012, in response to a complaint by 4W ranch, we removed 1 of the 2 buffer fences constructed in 2010. This was the most northern enclosure and it was 66 acres in size. All fence material was removed with assistance from the WCC crew, and donated to the range shop to use in fence repair/restoration from fire loss.

Acres Removed:

- 2012 – 66 acres

2013 Conditions:

Due to the removal of the buffer fence and lack of prairie dog control on adjacent private lands, prairie dogs have re-colonized the area that has been translocated once and poisoned three times. With lack of control on the private land, and no type of barrier to minimize re-colonization, the area appears to be back to pre-translocation numbers.



RODENTICIDE APPLICATION

Completed to address the issue of human health and safety concerns, and expansion on to private land as identified in the strategy. The acres listed with 2014 are expected to be completed in October of 2014.

Acres Poisoned:

- 2010 – 116 acres
- 2011 – 734 acres
- 2012 – 979 acres
- 2013 – 1,557 acres
- 2014 – 940 acres

SHOOTING CLOSURE EXPANSION

2010 - Expands shooting closure from 72,500 acres to 100,460 acres.

RAPTOR PERCHES

We constructed raptor perches to help encourage natural predation on prairie dog colonies that were along private land boundaries to help provide some control.

Perches Installed:

- 2011 – 2 perches

VEGETATION MONITORING

Monitoring of vegetation within sites impacted by prairie dogs was started in 2011 to determine what these impacts were, and how potentially they could affect forage to livestock. Currently, the FS is working with Dr. Jack Butler to design and implement more vegetation monitoring, and to potentially enlist him to do a 2-3 year research project on TBNG.

Sites Monitored:

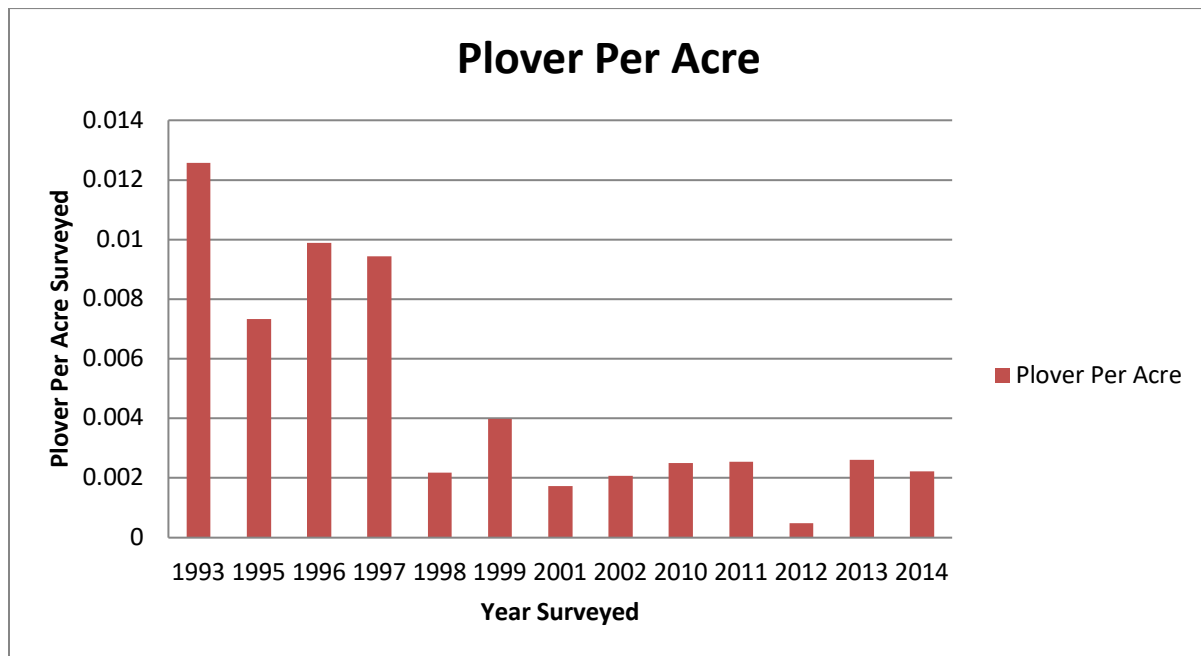
- 2011 – 17 sites
- 2012 – 17 sites
- 2013 – 17 sites

2014 – Sites were identified and the first year of data was collected. This monitoring is being analyzed and completed by the Douglas Range Staff.

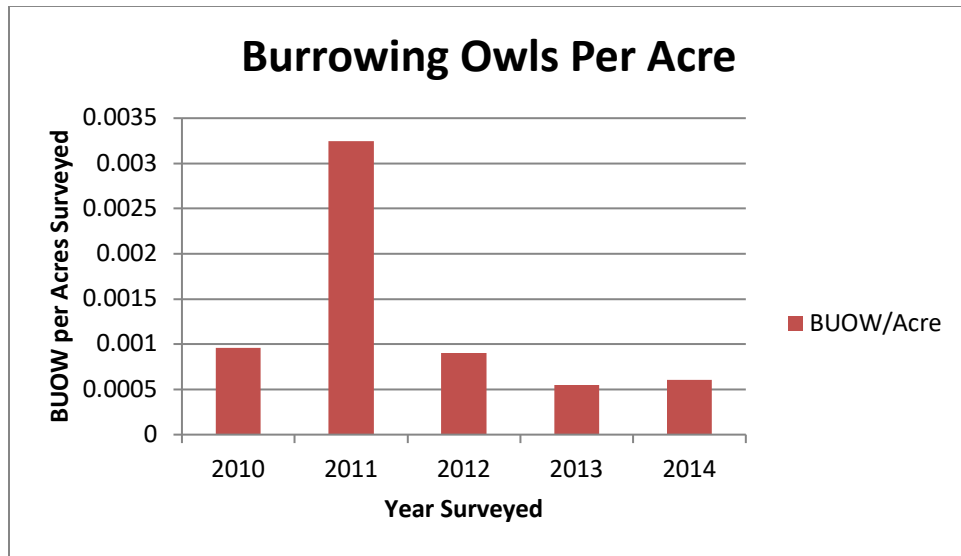
ASSOCIATED SPECIES SURVYES

The black-tailed prairie dog (BTPD) has garnered much attention as a species of conservation concern given that it only occupies 2% of its historical range in North America and only 0.01% of its former range in Wyoming. Although the species itself is not in immediate danger of extinction, the unique ecosystem they create is jeopardized by continuing fragmentation, isolation, and species persecution. Prairie dogs are considered a keystone species because the habitat they create cannot be duplicated by another species and is required, either directly or indirectly, by other wildlife. For these reasons, there continues to be widespread concern for the viability of species associated with BTPDs in Wyoming and on Thunder Basin National Grassland (TBNG). Associated species of immediate conservation concern include the Mountain Plover (*Charadrius montanus*), Burrowing Owl (*Athene cunicularia*), swift fox (*Vulpes velox*), and the black-footed ferret (*Mustela nigripes*).

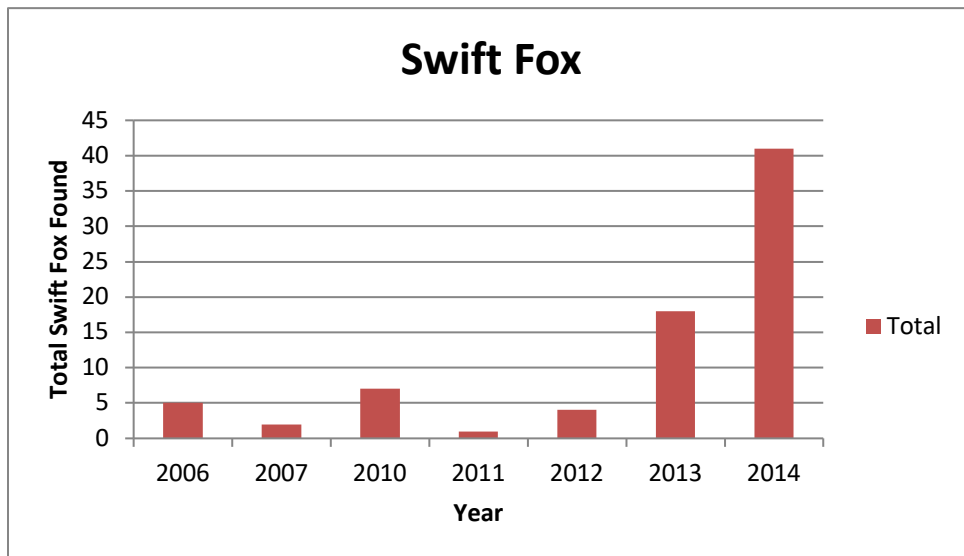
MOUNTAIN PLOVER



BURROWING OWL

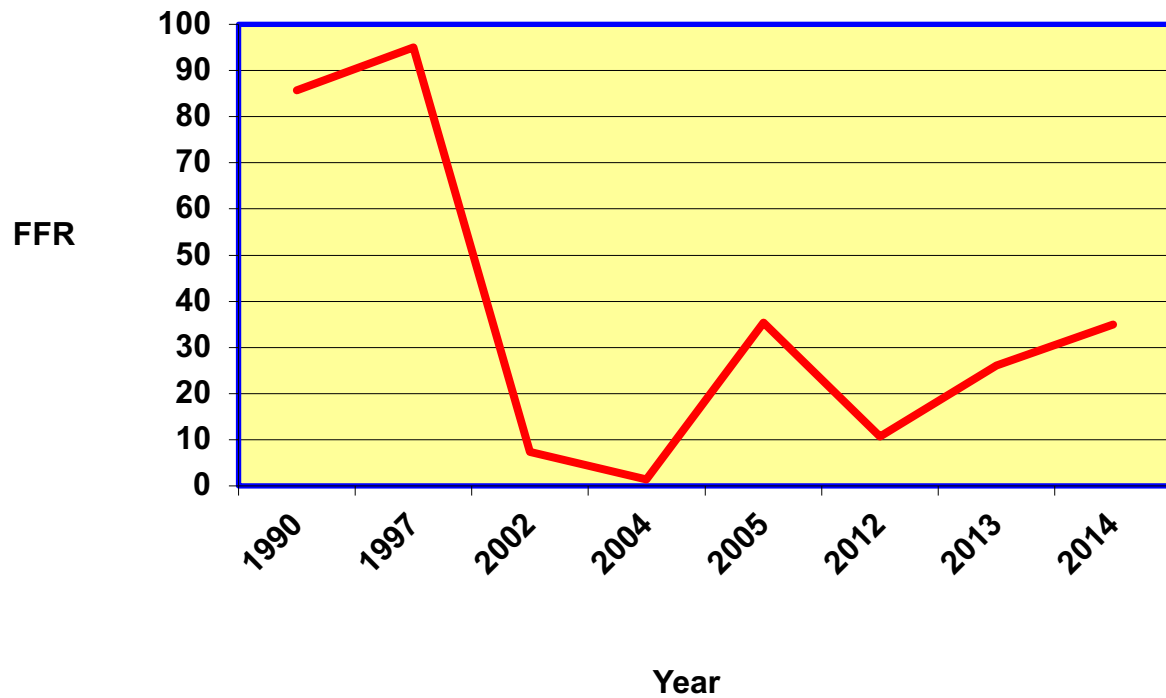


SWIFT FOX



FERRET FAMILY RATING FOR THUNDER BASIN NG

Ferret family ratings are used to determine approximately how many ferrets a prairie dog complex can support over times. Occupied acres and burrow density data are used in the formula to determine a FFR. A ferret family is defined by Biggins (1993) as the number of ferret families a prairie dog complex can support for one year (1 female, 3.3 young and 0.5 male).



2014 COST ESTIMATES

Mapping - \$12,000

Dusting - \$42,000

Associated Species Surveys - \$14,000

Rodenticide - Cost: \$ 20,140

Vegetation Monitoring - \$2,000

Total Prairie Dog Management Expenses --- \$ 90,140

FS Funds Expended \$ 59,140

Non-FS Funds Expended \$ 31,000

% Of Total Cost

% Of FS Cost

➤ Mapping	13%	20%
➤ Associated Species Surveys	16%	24%
➤ Dusting – FS expenses	12%	19%
➤ Dusting – NGO expenses	34%	
➤ Rodenticide	22%	34%
➤ Vegetation Monitoring	2%	3%