

2013 Wildlife Surveys

Introduction

During 2013, wildlife surveys at the Rocky Flats Site (Site) consisted of observing black-tailed prairie dogs (*Cynomys ludovicianus*), monitoring bird nesting boxes, and observing active raptor nests. The Site consists of the Central Operable Unit (COU), which comprises the lands retained by the U.S. Department of Energy, and the Peripheral Operable Unit (POU), most of which was transferred to the U.S. Fish and Wildlife Service to become the Rocky Flats National Wildlife Refuge.

Black-tailed prairie dogs are infrequent at the Site. Prairie dog towns in the upper elevations of the COU and POU are scarce due to the abundance of rocks in the pediment soils. However, they are more common in the lower-elevation, deeper-soil areas on the eastern half of the POU and in one upper-elevation surface in the northeast corner of the POU where the soils are less rocky. In the past, several prairie dog towns existed for many years at these locations. From an ecological standpoint, the prairie dogs are an important component of the ecosystem. They provide food for raptors and coyotes, and they are also a source of natural disturbance to the vegetation communities where the prairie dog towns are located. In recent years, conflicts between people and prairie dogs have increased along the Front Range. Prairie dogs are perceived as hindering recreational use and harming the quality of habitat on public lands. Numerous municipalities along the Front Range have instituted relocation programs to avoid or limit the outright killing of the prairie dogs. Several of these programs have resulted in prairie dogs being moved just outside the POU on the Site's eastern and northern boundaries. At some offsite locations, the increase in prairie dog populations has denuded the landscape and created bare soil areas that become sources of large dust clouds during high winds.

The primary concern with the prairie dog colonies at the Site is the potential for the prairie dogs to create an erosional surface by removing vegetation cover. Two landfills are present at the Site, the Original Landfill and the Present Landfill. The Monitoring and Maintenance Plans for both landfills prohibit the presence of burrowing animals on the landfill covers. Additionally, infrastructure is buried at some locations in the former Industrial Area (within the COU), and the prairie dogs' natural tendency to dig makes them undesirable at these locations. Thus, from a management standpoint, it is important to monitor the locations and abundance of prairie dogs at the Site.

In an effort to increase wildlife habitat at the Site, bluebird and chickadee nest boxes have been installed at selected locations throughout the COU (Figure 1). The nest boxes are monitored to see what species are using the boxes.

Nesting raptors are also present at the Site. These and other bird species are protected under the Migratory Bird Treaty Act, and monitoring the location and nesting habits of the raptors (and other birds) at the Site is important for project planning activities.

Methods

In 2013, the following were observed during prairie dog surveys:

- The locations of prairie dog towns within the COU and adjacent to the COU fence on POU property.
- The locations of individual prairie dogs observed in the spring when they roam in search of potential locations for new prairie dog holes.

Nest boxes were surveyed for nesting activity on May 22, June 19, July 10, and August 27, 2013, by visual observations of the nest box from a distance or by approaching the box on foot.

Visual observations were made of raptor nests to document the approximate time frames of nesting at the Site and their nesting success.

In 2013, a game trail camera, capable of capturing still photos and video, was set out at various locations at the Site. In addition, a high-definition video camera was used to capture footage of the elk herd in the COU in fall 2013. Videos are provided on the Ecology DVD and may be watched by clicking on the various video links.

The findings from these observations were documented in field notes. Other wildlife observations were made fortuitously and were also noted in field notebooks.

Results and Discussion

Prairie Dog Surveys

Figure 2 shows the locations of former and current prairie dog towns in the COU and on the adjacent POU property. In 2009, the prairie dogs throughout the COU and POU were killed by an outbreak of plague that began in the colonies east of the POU on the adjacent Westminster Hills Open Space/Dog Park (Jefferson County 2009). Plague is an infectious disease caused by *Yersinia pestis*, a bacterium found in fleas. The fleas pass on the bacterium to wild rodents. Prairie dogs are susceptible to plague, and colonies can be wiped out by plague every few years. Observations of the former towns in the southern portion of the Site during 2013 revealed that no prairie dog towns were active within the COU. However, two small towns in the POU north of the A-4 pond (northern towns shown on Figure 2) had prairie dogs present this year. The maximum number of individuals recorded at each of these towns varied throughout the year, but the northern-most town had approximately 11 individuals present in October and November, 2013, while the town closer to the COU fence had approximately 37 individuals in August. In general, the numbers of prairie dogs have been gradually increasing over the past few years at the towns north of the COU.

No individual prairie dogs were observed roaming along the roads at the Site in 2013. The prairie dogs typically travel beyond their existing towns in search of other potential burrow locations in the late spring and early summer. With the exception of the sightings at the towns north of the A-4 pond, inspectors have observed no signs of the prairie dogs' return at the previously occupied prairie dog towns in the southern areas. Fortuitous monitoring of these locations will continue throughout 2014 to determine whether the prairie dogs are returning at these locations.

Nest Box Monitoring

Table 1 summarizes the nest box observations made in 2013. Seven of the sixteen nest boxes showed evidence of nesting activity in 2013. For the first time a mountain bluebird (*Sialia currucoides*) nested in one of the boxes in the center of the COU (#3; Figure 1). Tree swallows (*Tachycineta bicolor*) occupied five nest boxes (# 5, 6, 9, 12, and 15) and house wrens (*Troglodytes aedon*) occupied the other nest box (#11) that was used this year. During the cleanout of the nest boxes conducted in December it was discovered that two of the boxes (#3, 6) were broken. One had fallen off the tree, and the wooden sides of another box had split causing it to fall apart. The boxes will be repaired or replaced before the nesting season begins in 2014.

Raptor Nesting Observations

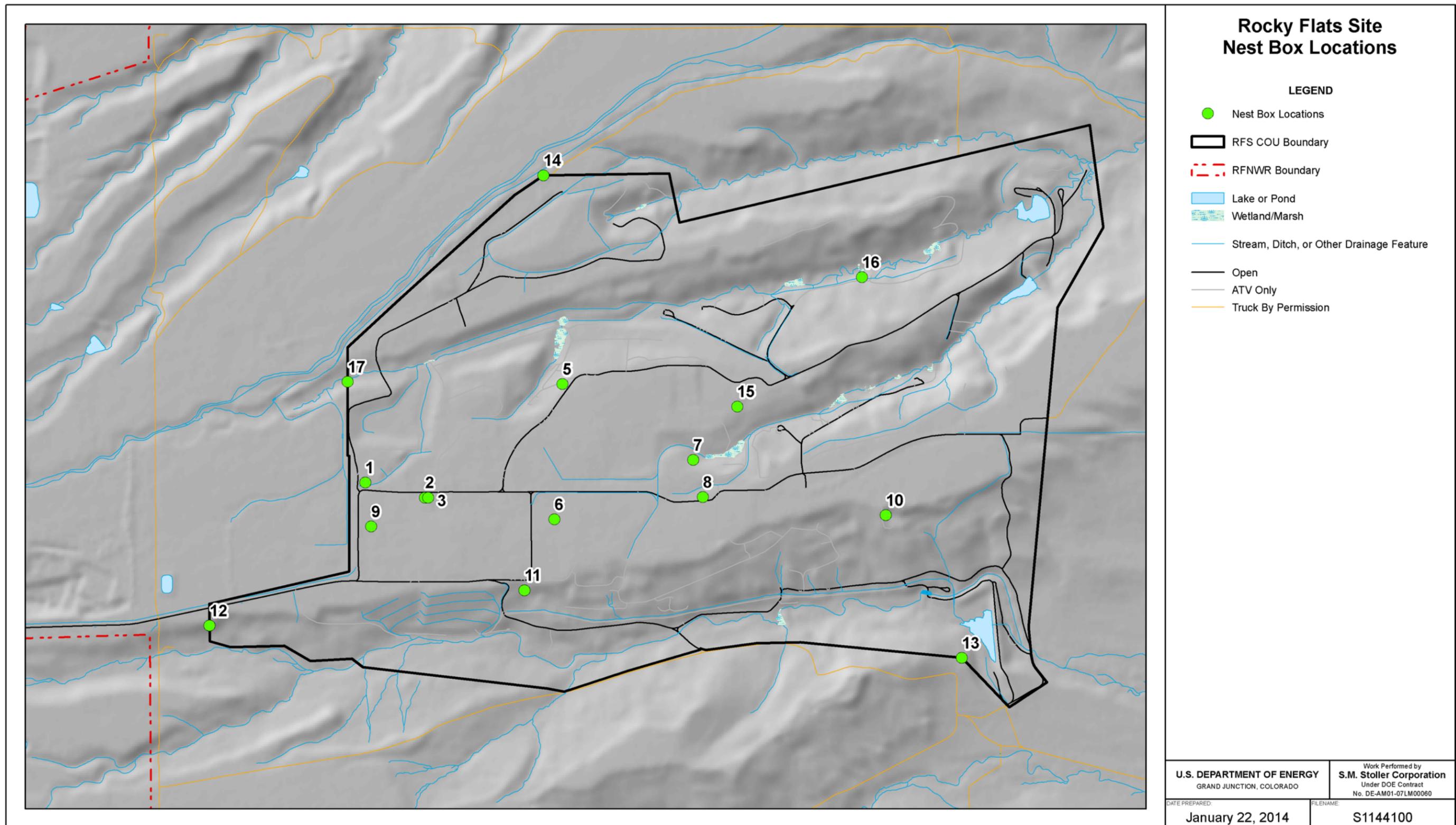
In 2013, no active raptor nests were observed within the COU.

Summary

In 2013, no active prairie dog towns were present within the COU. However, the towns north of the A-4 pond have an increasing number of prairie dogs. Mountain bluebirds, tree swallows, and house wrens used seven of the sixteen nest boxes in the COU that were available in 2013. No active raptor nests were observed in the COU in 2013.

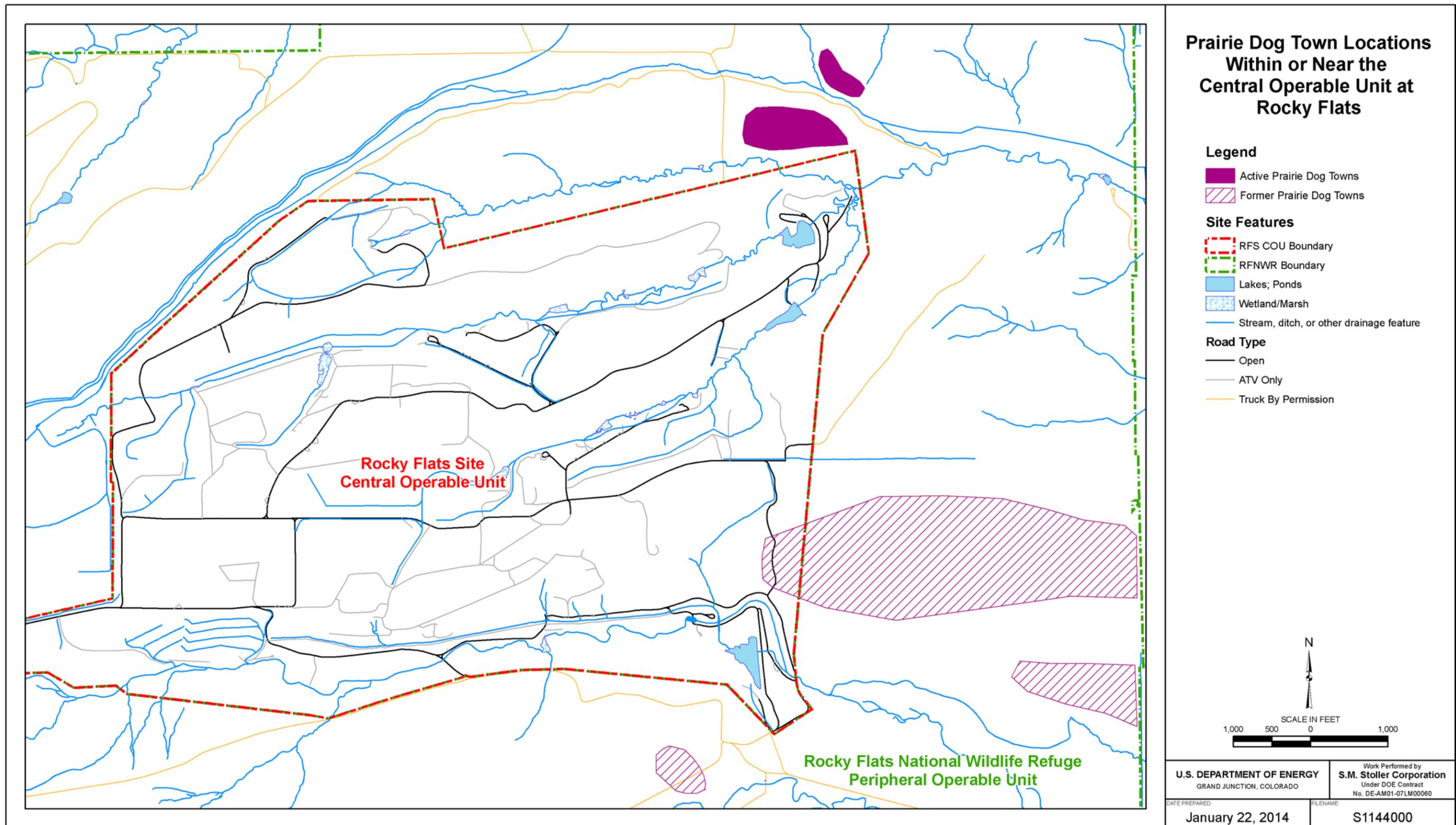
References

Jefferson County, 2009. "Re: Plague Confirmed in Jefferson County Prairie-Dog Population," Jefferson County Department of Health and Environment, Jefferson County, Colorado, July 15, 2009, http://www.jeffco.us/news/news_item_T3_R1441.htm (accessed December 2, 2009).



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Figure 1. Rocky Flats Site Nest Box Locations



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Figure 2. Prairie Dog Town Locations Within or Near the Central Operable Unit at Rocky Flats

Table 1. Bluebird Nest Box Summary 2013

Nest Box Number	Active Nest Yes/No	Species	Comments
1	No		
2	No		
3	Yes	Mountain Bluebird	A mountain bluebird flew out of the box in May and eggs were present. However, during June, July, and August the nest did not appear to be active, but the box was full of grass. A few bluish feathers were observed.
5	Yes	House Wren/Tree Swallow	In May the box was being filled with twigs, probably by a house wren. In June, a tree swallow flew out of the box. In July, the side of the box was open and most of the twigs had been pulled out. Also the metal number tag on the side of the box was torn. Perhaps a racoon or other animal found the box and pulled everything out.
6	Yes	Tree Swallow	Two tree swallows were at the box in June. One was observed going into the box.
7	No		
8	No		
9	Yes	Tree Swallow	A tree swallow was using the box in May. It was gone the remainder of the summer.
10	No		
11	Yes	House Wren	House wren flew out of box in July. Box was full of twigs in June.
12	Yes	Tree Swallow	Two tree swallows were at the box in June. One was observed going into the box while the other guarded the door opening. In July young could be heard in the box. Box was empty in August.
13	No		
14	No		
15	Yes	Tree Swallow	Nest material was present in June. A tree swallow was sitting in the box entrance in July.
16	No		
17	No		

Nest box #4 was destroyed when the tree fell over several years ago.