

2011 Wildlife Surveys

Introduction

During 2011, wildlife surveys at the Rocky Flats Site (Site) consisted of observing black-tailed prairie dogs (*Cynomys ludovicianus*), monitoring mountain bluebird (*Sialia currucoides*) 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 not uncommon 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 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. Several prairie dog towns have existed for many years at these locations. From an ecological standpoint, the prairie dogs are an important component of the ecosystem, providing food for raptors and coyotes, and 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.

Mountain bluebirds are migratory songbirds that typically visit the Site during their migration in the spring and fall. The species winters south of Colorado in New Mexico, Arizona, west Texas, and northern Mexico, but the birds travel as far north as northern Canada and southeastern Alaska to breed in the spring and summer (National Geographic 1999). In Colorado, mountain bluebirds commonly inhabit the foothills and mountains. Their typical habitat is open meadows and rangeland above 5,000 feet, though they also nest in tree cavities, buildings, and birdhouses. Both open prairie and elevations of approximately 6,000 feet on the upper pediment (mesa) tops are present at the Site. In an effort to increase wildlife use of the Site, and as an activity for Bring Your Child to Work Day in 2009, children painted nine bluebird boxes, which were installed at selected locations throughout the COU (Figure 1).

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. Other fortuitous wildlife observations were recorded as they were made.

Methods

In 2011, 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.

The findings from these observations were documented in field notes.

Mountain bluebird nest boxes were surveyed for nesting activity on June 21 and July 28, 2011, by visual observations of the nest box from a distance or by approaching the box on foot.

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

Other wildlife observations were made fortuitously and noted in field notebooks.

Results and Discussion

Prairie Dog Surveys

Figure 2 shows the locations of former prairie dog towns in the COU and on the adjacent POU property as of 2008. 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 that pass on the bacterium to wild rodents by biting them. Prairie dogs are susceptible to plague, and colonies can be wiped out by plague every few years. Observations of the former towns in the COU and adjacent POU during 2011 revealed that no prairie dog towns were active within the COU, and the small town north of the A-4 pond (northern town shown on Figure 2) had three or four individuals present.

No individual prairie dogs were observed roaming along the roads at the Site in 2011. 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 town north of the A-4 pond, inspectors have observed no signs of the prairie dogs' return throughout the remainder of the year across the COU and at the previously occupied prairie dog towns. Fortuitous monitoring of these locations will continue throughout 2012 to determine whether the prairie dogs have returned.

Mountain Bluebird Nest Box Monitoring

Table 1 summarizes the nest box observations made in 2011. Only three of the eight functioning nest boxes (one was destroyed when the tree fell over) showed evidence of nesting activity in 2011. Tree swallows (*Tachycineta bicolor*) were using the three active nest boxes. No mountain bluebirds were observed nesting in any of the nest boxes in 2011.

Raptor Nesting Observations

In 2011, only one active raptor nest was observed within the COU. Figure 3 shows the location of a great horned owl (*Bubo virginianus*) nest in Woman Creek. The owl nest was approximately 380 feet from where it was located in 2010. The tree was in the South Interceptor Ditch, and when inspectors approached the tree from the east, the nest was actually below eye level when they stood on the bank. Three young owls fledged from the nest (Figure 4).

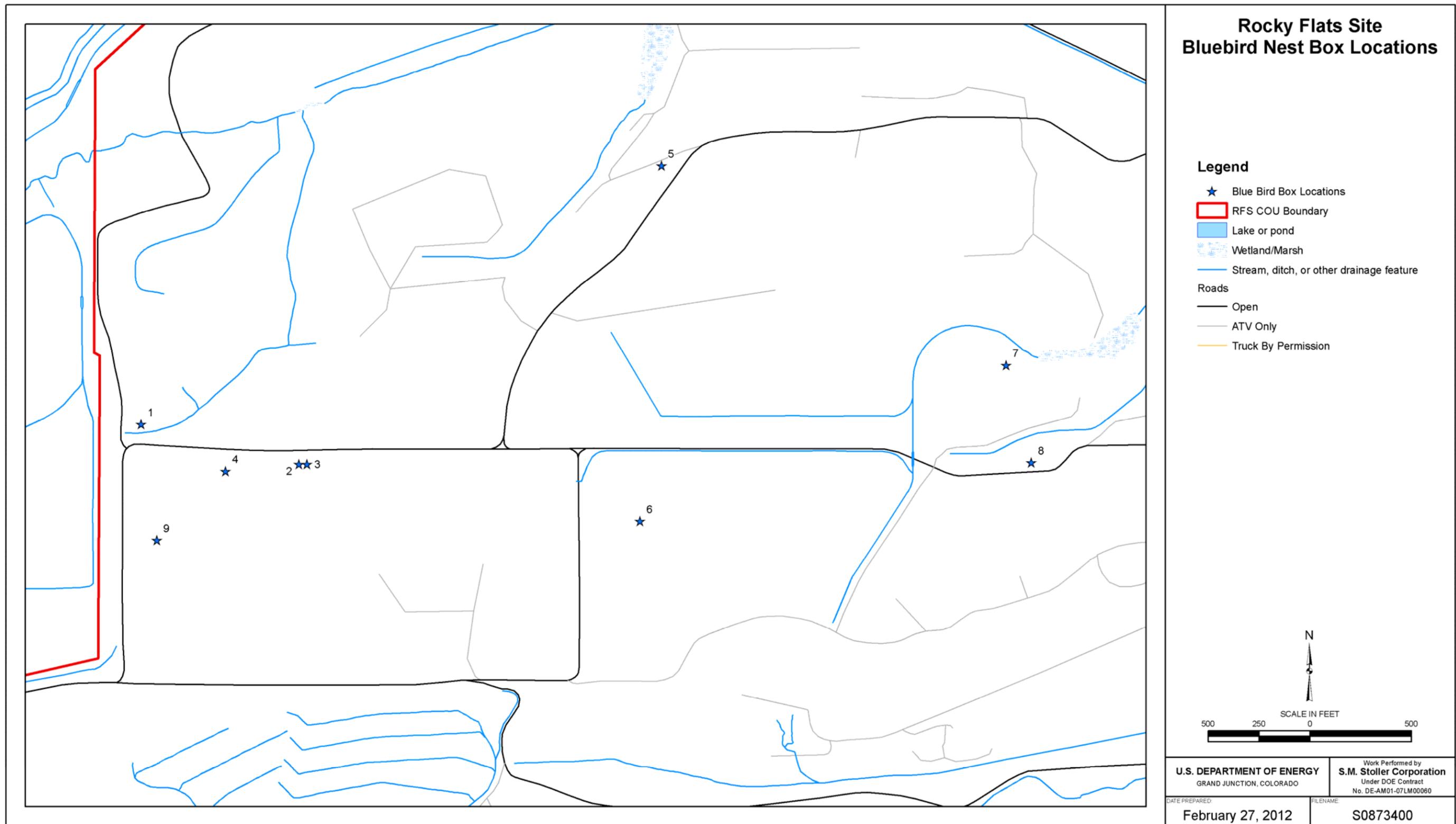
Summary

In 2011, no active prairie dog towns were present within the COU, and only a few animals were present at the northern town in the POU. Tree swallows used three of the eight mountain bluebird nest boxes; the other nest boxes were unused. One active great horned owl nest was observed in Woman Creek, and three owls fledged from the nest.

References

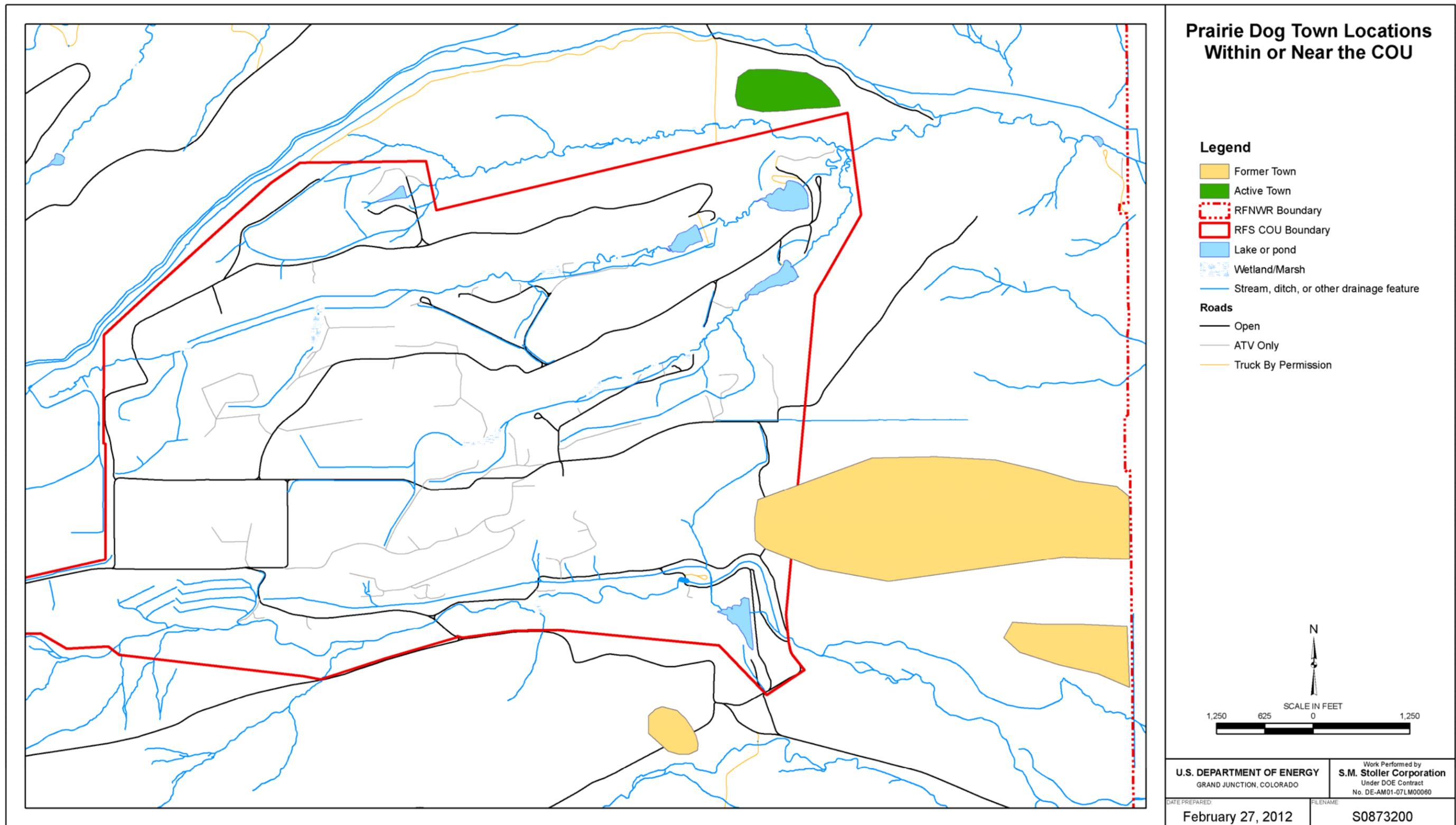
Jefferson County, 2009. "Re: Plague Confirmed in Jefferson County Prairie-Dog Population," Jefferson County Department of Health and Environment, Jefferson County, Colorado, July 15, 2009, http://www.jeffco.us/news/news_item_T3_R1441.htm (accessed December 2, 2009).

National Geographic, 1999. *Field Guide to the Birds of North America*, National Geographic Society, Washington, DC.



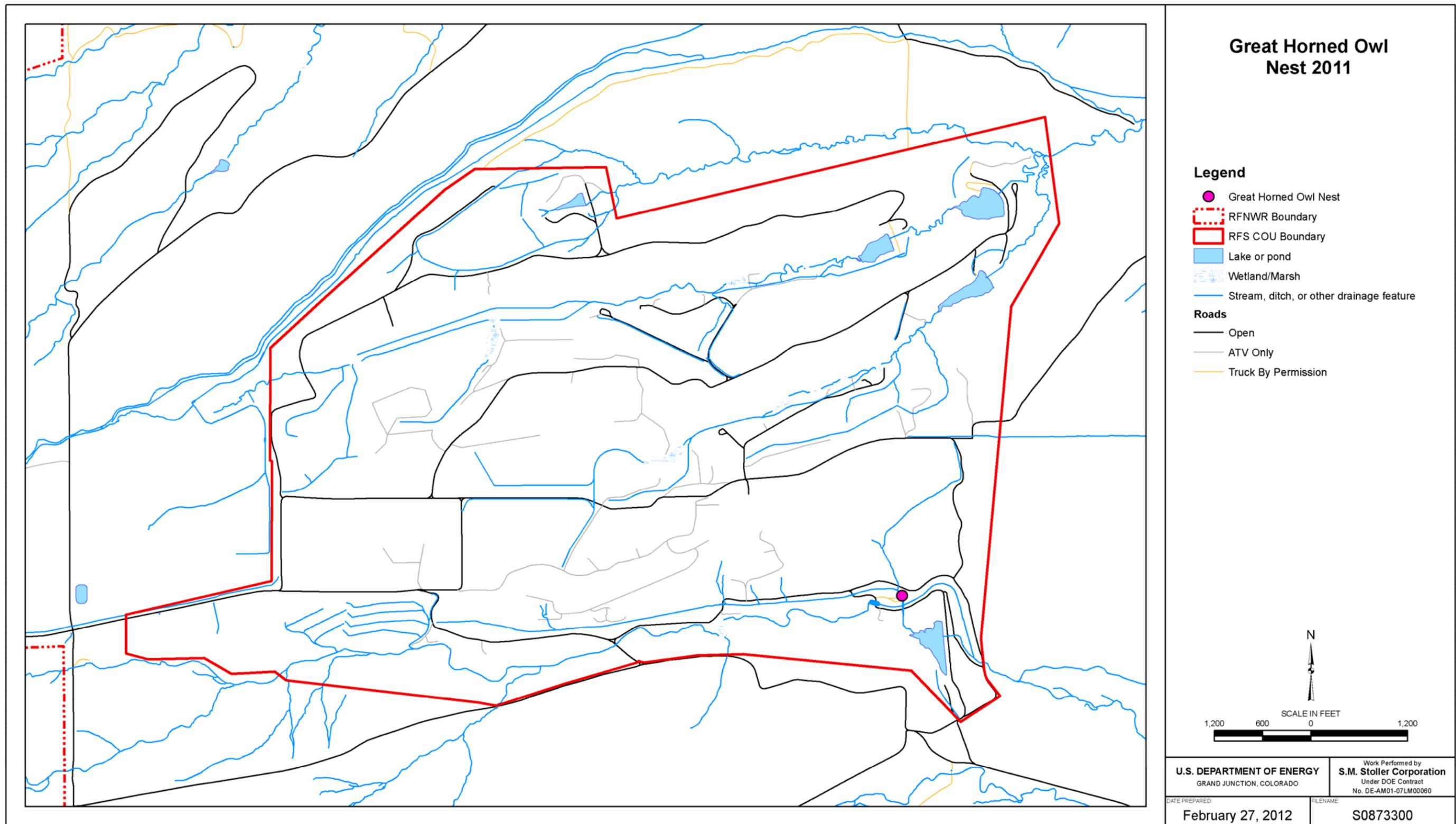
M:\LTS\111\0056\12\009\S08734\S0873400.mxd brownc 02/27/2012 1:56:11 PM

Figure 1. Rocky Flats Site Bluebird Nest Box Locations.



\\Gulfenvprojects\EBMLTS\11110056\121009\S08732\S0873200.mxd brownc 02/27/2012 1:15:52 PM

Figure 2. Prairie Dog Town Locations Within or Near the COU.



\\Gullenv\projects\EBMLT\S\11110056\121009\S08733\S0873300.mxd brownc 02/27/2012 1:34:36 PM

Figure 3. Great Horned Owl Nest 2011.



Figure 4. Great horned owlets in Woman Creek nest in 2011.

Table 1. Bluebird Nest Box Summary 2010

Nest Box Number	Birds Observed Using Nest	Active Nest Yes/No	Comments
1	None	No	Empty this year.
2	None	No	Empty this year.
3	None	No	Empty this year.
4	None	NA	Tree fell down and destroyed nest.
5	Tree Swallow	Yes	Tree swallow nest.
6	Tree Swallow	Yes	Tree swallow nest.
7	None	No	Empty this year.
8	None	No	Empty this year.
9	Tree Swallow	Yes	Tree swallow nest.