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# Biological Resources Summary Report Sutey Ranch Land Exchange Colorado River Valley Field Office Pitkin, Garfield and Eagle Counties, Colorado

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*prepared for:*

**U.S. Bureau of Land Management**  
Colorado River Valley Field Office  
2300 River Frontage Road, Silt, CO 81652

*prepared by:*

**Western Ecological Resource, Inc.**  
711 Walnut Street, Boulder, CO 80302

&

**Wildlife Specialties, LLC**  
PO Box 1231, Lyons, CO 80540

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## 1.0 Introduction

This Biological Resources Report was prepared for the proposed Sutey Land Exchange project located in Eagle, Garfield and Pitkin Counties, Colorado. The public lands considered in the proposed land exchange are administered by the Colorado River Valley Field Office of the U.S. Bureau of Land Management (BLM). The proposed Sutey Ranch Land Exchange includes six Federal parcels with a combined area of  $\pm 1,465$  acres and two non-Federal parcels totaling 674 acres (Figure 1; Table 1).

To assist BLM personnel with the NEPA analyses required to evaluate the proposed land exchange, Western Ecological Resource, Inc. and Wildlife Specialties, LLC conducted field investigations to document the Vegetation and Wildlife Resources on the exchange parcels. This report summarizes the findings of the field investigations conducted in 2011 on the exchange parcels. Specifically, it documents surveys and/or habitat assessments for Federally Listed and BLM Sensitive Species, Wetland and Riparian Habitats, Significant Natural Plant Communities, Noxious Weeds, Raptors, and Heron Colonies. Please note, all Figures are in Section 5.0, Tables are in Section 6.0, and Photos are in Section 7.0.

## 2.0 Proposed Land Exchange Parcels

### 2.1 Federal Parcels

#### 2.1.1 Parcel A

Parcel A, the largest of the Federal parcels, is located approximately five miles southeast of the Town of Carbondale in Pitkin County, Colorado (Figure 2). This 1,240 acre parcel ranges in elevation from a high of approximately 8,040 feet in the extreme southeastern corner to a low of 6,720 feet in the northwest corner. Most of the parcel is characterized by a rolling topography with numerous southeast to northwest trending ridges and valleys. In the south, there is a significant cliff habitat known as The Mane just north of Potato Bill Creek, a perennial stream. There are three small wetland drainages in the southern portion of the parcel which are tributaries to Potato Bill Creek. In addition, Thomas Creek, another perennial stream, bisects the central portion of the parcel and there is an unpaved ranch road known as Thomas Road that runs approximately parallel to the creek. Thomas Creek and Potato Bill Creek are both tributaries of the Crystal River, which is located less than  $\frac{1}{2}$  mile west of the parcel. Numerous unpaved ranch roads and ATV trails are present on the parcel north of Potato Bill Creek, and it is grazed by cattle. The BLM has been actively managing the vegetation on this parcel in order to reduce the abundance of Gambel oak (*Quercus gambellii*) and enhance wildlife habitat. Mountain shrublands and sagebrush shrublands are the dominant vegetation types, with extensive stands of Gambel oak and snowberry (*Symphoricarpos rotundifolius*) interspersed with areas of mountain big sagebrush (*Artemisia tridentata ssp. vaseyana*), Utah serviceberry (*Amelanchier utahensis*), mountain mahogany (*Cercocarpus montanus*), and antelope bitterbrush (*Purshia tridentata*). In addition, Utah juniper (*Juniperus osteosperma*) and pinyon pine (*Pinus edulis*) woodlands are very common. In the south, there are stands of Douglas-fir (*Pseudotsuga menziesii*) and aspen (*Populus tremuloides*), as well as wetland and riparian habitats along Thomas Creek, Potato Bill Creek, and their tributary drainages. Table 2 lists the vascular plant species observed on the Sutey Ranch Land Exchange Parcels during field reconnaissance.

#### 2.1.2 Parcels B and B1

Parcels B and B1 are located approximately  $6\frac{1}{2}$  miles southeast of the Town of Carbondale in Pitkin County, Colorado (Figure 3). Parcel B includes about 28.37 acres and Parcel B1 is a narrow 1.0 acre tract. Elevations of Parcel B range from a high of 8,450 feet in the southeastern corner to a low of approximately 8,240 feet in the northwest. Parcel B is grazed by cattle, which is evident in the degraded riparian plant community that occurs along Thomas Creek, a perennial stream that flows north across the parcel. Other perennial streams on the parcel include Prince Creek, an

unnamed tributary of Prince Creek, and an unnamed tributary of Thomas Creek. Parcel B1, located approximately 1,300 feet north of the northeastern corner of Parcel B, ranges in elevation from a high of 8,280 feet in the south to a low of approximately 8,040 feet on the northern boundary. This parcel is bisected by a perennial tributary of Prince Creek that flows through Parcel B. The dominant vegetation type of these two parcels is aspen forest, with areas of mountain shrubland and riparian/wetland habitats located along Prince Creek, Thomas Creek, and their tributary drainages.

### **2.1.3 Parcels C and D**

Federal Parcels C and D are located in Eagle County, approximately seven miles southeast of the Town of Eagle (Figure 4). Parcel C, the larger of the two parcels, encompasses approximately 172 acres of the northern, western and southern slopes of Horse Mountain. The irregularly shaped parcel ranges in elevation from a high of approximately 8,600 feet in the west near the summit of Horse Mountain to a low of approximately 7,320 feet in the north near Salt Creek, a perennial stream. The Bemis irrigation ditch also crosses the northern portion of the parcel approximately 450 feet south of Salt Creek. In addition, there are two deeply eroded ephemeral drainages; one drains the northwestern face of Horse Mountain and flows out of the northwestern corner of the parcel; the second drains west-southwest from near the center of the parcel and leaves the western parcel boundary. The northern of these two drainages has a defined bed and bank, whereas the southern drainage supports discontinuous stands of upland vegetation within the channel. Parcel D is located southwest of Parcel C near the base of Horse Mountain. The  $\pm 17$  acre Parcel D is separated from Parcel C by a tract of private land. Elevations of the parcel range from a high of approximately 7,800 feet in the north to a low of 7,560 feet in the southwestern corner along Bruce Creek, an ephemeral stream. Bruce Creek Road also crosses the southwestern corner, and an unpaved access road extends upslope into Parcel D to the site of the Lady Belle Mine, which is no longer active. This unpaved road crosses the private land between Parcels C and D, and continues upslope onto Parcel C, where it traverses the steep slopes of Horse Mountain. Parcel C is dominated by mountain shrublands and pinyon-juniper woodlands, with areas of Douglas-fir on the north-facing slopes of Horse Mountain. In addition, wetland and riparian habitats occur along Salt Creek and the adjacent floodplain, and line the Bemis irrigation ditch. Parcel D is dominated by pinyon-juniper woodlands with a small area of mountain shrubland, and has wetland and riparian habitats along Bruce Creek. There is a small area of irrigated pasture in the southwestern corner.

### **2.1.4 Parcel E**

Federal Parcel E is located approximately 1,300 feet south of Parcel D in Eagle County (Figure 4). This  $\pm 12$  acre, rectangular shaped parcel ranges in elevation from a high of approximately 8,400 feet in the south to a low of 7,720 feet in the north. A four-wheel-drive road bisects the parcel. There are no streams on this parcel; an ephemeral drainage illustrated on the USGS quadrangle map is a vegetated upland swale. The dominant vegetation types on the parcel are mountain shrublands and sagebrush shrublands, and aspen forests are also present in the south.

## **2.2 Non-Federal Parcels**

### **2.2.1 Parcel 1 – Sutey Ranch**

The Sutey Ranch parcel is located approximately 2.25 miles north of the Town of Carbondale in Garfield County, Colorado (Figure 5). This  $\pm 555$  acre parcel ranges in elevation from a high of approximately 7,240 feet in the south to a low of 6,520 feet along an ephemeral tributary of Cattle Creek that parallels Garfield County Road 112 in the northeast. The parcel has an agricultural land use and a number of large irrigated pastures created by sagebrush removal, as well as some areas of sagebrush shrubland where the native understory has been eliminated and replaced with introduced pasture grasses. In addition, there are areas of juniper woodland and three stock ponds. The topography of the Sutey Ranch is characterized by rolling hills separated by small, gentle valleys. The Parcel is adjacent to the BLM Red Hill Special Recreation Management Area (RHSRMA), which abuts the western and southern boundaries of the parcel.

### 2.2.2 Parcel 2 – West Crown Access

The West Crown Access parcel is located approximately four miles southeast of the town of Carbondale in Garfield County, Colorado (Figure 2), and is just east of Federal Parcel A. This 118.5 acre parcel is located east of Prince Creek and includes flat-topped ridges and steep, deeply eroded drainages that slope to the west towards Prince Creek. The western portion of the parcel includes flatter topography along the valley bottom near Prince Creek. Several unpaved roads and recreational mountain bike and ATV trails are located on the parcel. Elevations range from a high of approximately 7,240 feet on the flat ridge top in the east, to a low of 6,880 feet along Prince Creek Road in the northwestern corner. An irrigation ditch diverts water from Prince Creek across the parcel, flowing in a generally north direction through the northwestern portion. The dominant vegetation type on the parcel is mountain shrubland dominated by Gambel oak, mountain mahogany, mountain big sagebrush, Utah serviceberry, Utah juniper, pinyon pine, and antelope bitterbrush. In addition, there is a narrow band of riparian and wetland habitat along the Prince Ditch vegetated by sandbar willow (*Salix exigua*) and narrowleaf cottonwood (*Populus angustifolia*).

## 3.0 Methods

Field reconnaissance on the exchange parcels was conducted in June and August, 2011. During the field visits, Heather Houston of Western Ecological Resource, Inc. conducted surveys for the federally listed Ute Ladies' tresses orchid (*Spiranthes diluvialis*) and the BLM sensitive plant Harrington penstemon (*Penstemon harringtonii*). In addition, she surveyed the parcels for the presence of wetlands and riparian habitats, Significant Natural Communities as defined by the Colorado Natural Heritage Program, and state-listed noxious weeds. Rare plants, wetlands and riparian habitats were marked in the field with a hand-held Global Positioning System (GPS) unit and the data were imported into ArcGIS to create maps of these features and to quantify their area.

Wildlife surveys were conducted by a biologist from Wildlife Specialties, LLC. During field reconnaissance, the habitat types present on each parcel were evaluated to determine if they have the potential to support federally listed or BLM sensitive wildlife species, raptors, or great blue heron (*Ardea herodias*) colonies, and if any of these species were present. No species-specific surveys (e.g. northern goshawk call broadcast) were conducted. However, in areas with thick vegetation, great horned owl (*Bubo virginianus*) calls were broadcast using a Fanon® bullhorn to attempt to elicit a response from nesting raptors. The Universal Transverse Mercator (UTM) location of nest sites was collected using a hand-held GPS unit with a locational accuracy of <10 m (33 feet) (Garmin GPSmap 60CSx). To collect the UTM coordinates for nest sites located away from the surveyor, the surveyor would project the location of the nest with a GPS unit by identifying the distance (using a laser range finder) and direction (compass degrees) the nest was from the surveyor's known UTM location. Biologists also looked for the locations of non-occupied raptor and corvid (common raven [*Corvus corax*] and American crow [*Corvus brachyrhynchos*]) nests because of the propensity of raptors to reuse old nests and to take over corvid nests (Stokes and Stokes 1996, Wheeler 2003). Although corvids are not classified as raptors, they ecologically fill the same niche and select similar nest sites as raptors (Craighead and Craighead 1956, Boarman and Heinrich 1999). Sources used to determine vertebrate and invertebrate wildlife species habitat types include Fitzgerald et al. (1990), Hammerson (1999), Kingery (1998), the Colorado Division of Parks and Wildlife (CPW) website, NatureServe (2011), and Birds of North America online.

## 4.0 Biological Resources

### 4.1 Vegetation Resources

#### 4.1.1 Federal Threatened, Endangered and Candidate Plants

Based on the known habitat types of the exchange parcels, BLM personnel determined that surveys for the threatened Ute Ladies' tresses orchid should be conducted in suitable wetland habitats on the exchange parcels. Potential wetland habitats identified during the initial field reconnaissance in June were visited in August to complete the surveys. To confirm that the surveys were being conducted during the orchid's blooming period, Heather Houston visited two known populations of the orchid in Carbondale with Carla DeYoung of the BLM (Photo 1). No individuals or populations of Ute ladies' tresses orchid (*Spiranthes diluvialis*) were identified on any of the exchange parcels, and none of the wetlands contain suitable habitat for this federally threatened plant.

#### 4.1.2 BLM Sensitive Plants

Based on the habitat types of the exchange parcels and the known distribution of sensitive plants, BLM personnel determined that surveys for Harrington penstemon should be conducted on the exchange parcels. These surveys were conducted on all parcels during the blooming period in late June, and additional habitat on Parcel A was mapped in August. Harrington penstemon was identified on Federal Parcels A and C, as well as Non-Federal Parcel 2 (West Crown Access).

Federal Parcel A. Federal Parcel A contains extensive habitat for Harrington penstemon, which has been enhanced by vegetation management procedures designed to reduce the density of Gambel oak (*Quercus gambelii*). More than 830 individual Harrington penstemon plants were identified within an area of at least 51.5 acres of occupied habitat (Figure 6; Photo 2). Please note, additional habitat for Harrington penstemon is present on Parcel A, however a more detailed inventory would be required to effectively map all occupied habitat. Based on guidance from Carla DeYoung of the BLM, the potential habitats with the highest probability of containing Harrington penstemon were drawn onto an aerial photograph in ArcGIS, and have a combined area of approximately 4.74 acres. However, the total area of occupied habitat on the Parcel A is likely greater than 57 acres.

Harrington penstemon on Parcel A occurs primarily on small hilltops or ridgetops, and extends down onto the west-facing slopes in areas of lower vegetation cover. In particular, hilltops where Gambel oak has been roller-chopped commonly support Harrington penstemon, as well as areas of sagebrush shrubland with wide crown spacing. Some of the common associates in these areas include serviceberry (*Amelanchier utahensis*), snowberry, mountain mahogany, antelope bitterbrush, and scattered Utah juniper and pinyon pine (*Pinus edulis*), along with grasses and forbs including junegrass (*Koeleria macrantha*), squirreltail (*Elymus elymoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Indian ricegrass (*Oryzopsis hymenoides*), hairy golden aster (*Heterotheca villosa*), purple locoweed (*Oxytropis lambertii*), lupine (*Lupinus sp.*), potato cactus (*Opuntia fragilis*), pricklypear (*Opuntia polyacantha*), and a diversity of other native species. In addition, cheatgrass (*Bromus tectorum*) occurs in several areas although it does not form large, dense stands. Grazing impacts are evident on this parcel as the majority of the inflorescences of Harrington penstemon had been removed in the most heavily grazed areas.

Federal Parcel C. Harrington penstemon was also identified on Federal Parcel C, on an east-to-west trending ridgetop and just below the top of the ridge on a steep west-facing slope (Figure 7; Photo 3). In this area, an estimated 0.9 acre of occupied habitat was identified, containing approximately 75 plants. This ridgetop habitat and the steep slope below are dominated by mountain mahogany with scattered pinyon pine and Utah juniper, as well as mountain big sagebrush. Some of the common herbaceous species in this area include bluebunch wheatgrass, junegrass, Watson's penstemon (*Penstemon watsonii*), phlox (*Phlox hoodii*), mat penstemon (*Penstemon caespitosus*), and lobeleaf groundsel (*Packera multilobata*).

Non-Federal Parcel 2. On the West Crown Access parcel (non-Federal Parcel 2), approximately 1.45 acres of occupied Harrington penstemon habitat was identified, containing more than 131 plants (Figure 6; Photo 4). This population is located on the flat ridgetop habitat in the western portion of the parcel, which has been heavily grazed and is characterized by low herbaceous cover. The woody overstory is dominated by mountain big sagebrush, mountain mahogany, serviceberry (*Amelanchier alnifolia*), antelope bitterbrush, and snowberry, with scattered Utah junipers and pinyon pine. Some of the common herbaceous species in these areas include squirreltail (*Elymus elymoides*), needle and thread (*Hesperostipa comata*), Kentucky bluegrass (*Poa pratensis*), and silvery lupine (*Lupinus argenteus*).

#### 4.1.3 Wetlands and Riparian Habitats

Wetlands and Riparian habitats were identified on Federal Parcels A, B, B1, C, and D, as well as Non-Federal Parcels 1 and 2. Table 3 provides a summary of these areas.

Federal Parcel A. Federal Parcel A contains the largest area of wetlands and riparian habitat, located in the southern portion of the parcel lining Potato Bill Creek and three tributary drainages, and along Thomas Creek which bisects the central portion of the parcel (Figure 8).

The riparian corridor that lines Thomas Creek, which encompasses approximately 11.7 acres, includes both wetland and upland habitats which have been significantly impacted by cattle grazing (Figure 8, Photo 5). The channel itself has a variable width that ranges from 6-7 feet wide in some of the more narrow and incised areas to 15-20 feet wide in other areas where it may be braided. The riparian overstory is dominated by narrowleaf cottonwood trees, with some aspen and a few blue spruce (*Picea pungens*) trees. In the shrub layer, some of the common species include chokecherry (*Prunus virginiana* var. *melanocarpa*), Woods' rose (*Rosa woodsii*), serviceberry, snowberry, and mountain maple (*Acer glabrum*). A narrow band of wetlands lines the creek, and there are some larger stands of wetland vegetation in low areas adjacent to the creek where water pools and the groundwater is likely shallow. Some of the most abundant wetland species include Nebraska sedge (*Carex nebrascensis*), Baltic rush (*Juncus balticus* ssp. *ater*), smallwing sedge (*Carex microptera*), creeping spikerush (*Eleocharis palustris*), slimstem reedgrass (*Calamagrostis inexpansa*), redtop (*Agrostis gigantea*), and shortawn foxtail (*Alopecurus aequalis*). Due to grazing impacts, most of the forbs are weedy species such as common plantain (*Plantago major*), willow-leaved dock (*Rumex triangulivalvis*), and the noxious weeds plumeless thistle (*Carduus acanthoides*) and houndstongue (*Cynoglossum officinale*). In the adjacent upland portions of the riparian habitat, vegetation cover is low in many areas due to grazing and there is a high cover of weeds. Some of the common plants include dandelion (*Taraxacum officinale*), the noxious weeds houndstongue and common mullein (*Verbascum thapsus*), common plantain, Canada bluegrass (*Poa compressa*), and yarrow.

Potato Bill Creek and the three tributary wetland drainages in the southern portion of the parcel are characterized by similar vegetation (Photo 6). These wetlands are protected from cattle grazing, and therefore they have excellent cover and are dominated by native species. The riparian corridor along Potato Bill Creek, as illustrated by Figure 8, includes approximately 1.23 acres of wetland and upland habitats. The three tributary riparian/wetland drainages have a combined area of approximately 1.61 acres. The overstory of these drainages is dominated by aspen, with a diverse shrub layer that includes chokecherry, serviceberry, Woods' rose, Bebb and mountain willows (*Salix bebbiana*; *S. monticola*), snowberry, Gambel oak, bush honeysuckle (*Distegia involucrata*), and hawthorn (*Crataegus rivularis*). Douglas-fir trees are occasionally present. The wetland understory is dominated by native graminoids and forbs. Some of the most common graminoids include fowl mannagrass (*Glyceria striata*), swordleaf rush (*Juncus ensifolius*), smallwing sedge, fowl bluegrass (*Poa palustris*), and beaked sedge (*Carex utriculata*), which occur in the shallow water and saturated soil habitats lining the drainages. The forb diversity is somewhat higher, and includes species such as heartleaf bittercress (*Cardamine cordifolia*) and water speedwell (*Veronica catenata*) in the shallow water, as well as shore buttercup (*Halerpestes*

*cymbalaria*), largeleaf avens (*Geum macrophyllum*), common monkeyflower (*Mimulus guttatus*), sweet cicely (*Osmorrhiza depauperata*, *O. occidentalis*), golden glow (*Rudbeckia ampla*), monkshood (*Aconitum columbianum*), and Rocky Mountain iris (*Iris missouriensis*). Field horsetail (*Equisetum arvense*) is also common and forms dense stands in some areas. In some of the drier soils near the wetland margin, species such as timothy (*Phleum pratense*), blue wildrye (*Elymus glaucus*), orchardgrass (*Dactylis glomerata*), Richardson's geranium (*Geranium richardsonii*), dandelion, nettle leaf hyssop (*Agastache urticifolia*), and American vetch (*Vicia americana*) also occur. There is a low cover of noxious weeds including Canada thistle (*Cirsium arvense*) and houndstongue.

Federal Parcel B. On Parcel B, wetlands and riparian habitat occur where Thomas Creek crosses the parcel in two locations and along a perennial tributary drainage to Thomas Creek, along Prince Creek in the central portion of the parcel, and along three unnamed tributaries of Prince Creek in the eastern portion of the parcel (Figure 9). The easternmost of these tributaries is a perennial stream that also flows through Parcel B1.

The wetland and riparian habitats along Thomas Creek have been severely degraded by cattle grazing, which has resulted in sparse vegetation cover in the herbaceous understory. Photos 7 & 8 illustrate the differences in the grazed and ungrazed portions of the Thomas Creek riparian corridor that occur along the southern fence line of the Parcel. The stream leaves the parcel for about 1,000 linear feet and then crosses through the northwestern portion, where the grazing impacts are less severe. These two riparian/wetland habitats have a combined area of approximately 0.14 acre. The overstory along Thomas Creek is dominated by narrowleaf cottonwood and aspen, with mountain willow, Bebb willow, whiplash willow (*Salix lasiandra*), thinleaf alder (*Alnus incana ssp. tenuifolia*), and serviceberry in the shrub layer. In addition, young Douglas-fir and Engelmann spruce (*Picea engelmannii*) are occasional along the stream. In the understory near the south fence line, the sparse herbaceous vegetation includes dandelion, redtop, Kentucky bluegrass, Richardson's geranium, cow parsnip (*Heracleum sphondylium*), field horsetail, and largeleaf avens, with heartleaf bittercress in the shallow flowing water of the channel, which averages 4-8 feet wide. Where Thomas Creek flows back onto Parcel B in the northwestern corner, the understory is more diverse although it has also been grazed. In this area, native wetland species such as beaked sedge, fowl bluegrass, fowl mannagrass, and Nebraska sedge occur with introduced grasses such as timothy and Kentucky bluegrass. Some of the common forbs include heartleaf bittercress, largeleaf avens, sweet cicely, false hellebore (*Veratrum tenuipetalum*), and alsike clover (*Trifolium hybridum*).

The perennial tributary to Thomas Creek has a stream channel averaging approximately 2½ feet wide, and the riparian/wetland habitat is an estimated 0.25 acre. The vegetation along this drainage is similar to the lower portion of Thomas Creek in the northwestern portion of the parcel. An ephemeral drainage that joins this perennial stream has approximately 0.04 acre of riparian/wetland habitat.

The riparian/wetland habitat along Prince Creek has also been grazed by cattle but there is fairly good vegetation cover in most areas, although weedy species are present in the understory (Photo 9). The riparian overstory in this area is dominated by spruce trees with abundant thinleaf alder and scattered aspen. In addition, mountain willow and Bebb willow are very common. Seeps are extensive along Prince Creek creating a broad wetland zone adjacent to the channel, which averages between 10-15 feet wide within the parcel. Some of the most abundant species in the herbaceous understory include beaked sedge and arrowleaf groundsel (*Senecio triangularis*). The small tributary drainages located just east of Prince Creek are characterized by similar vegetation, however the stream channels are only about 2½ -3 feet wide. Similar to the Prince Creek wetland, there are many seeps adjacent to the channel which create a broad zone of wetlands that extends 15 feet or more from the channel in some areas.

The unnamed perennial tributary of Prince Creek located near the eastern parcel boundary has a channel that averages approximately 2-3 feet wide. The riparian/wetland corridor, as mapped on Figure 9, covers approximately 0.23 acre. Stands of aspen form a discontinuous riparian overstory, with Bebb and mountain willows in the shrub layer. The grazed wetland understory includes both native and introduced weedy species. Some of the most common graminoids include beaked sedge, redtop, longstyle rush (*Juncus longistylis*), swordleaf rush, smallwing sedge, and the introduced pasture grasses timothy and Kentucky bluegrass. Native forbs such as false hellebore, willowherb (*Epilobium sp.*), and Siskiyou aster (*Aster lanceolatus ssp. hesperius*) occur, however weedy forbs such as the noxious weeds plumeless thistle and oxeye daisy (*Chrysanthemum leucanthemum*) are more common.

Federal Parcel B1. Within this parcel, the unnamed perennial tributary to Prince Creek is larger and has a channel bed averaging approximately 6-10 feet wide (Figure 9; Photo 10). Due to the narrowness of the parcel, only about 330 square feet of riparian/wetland habitat are estimated to occur on the parcel. The riparian community has an overstory dominated by aspen trees, with a few Engelmann spruce as well as snowberry and Woods' rose shrubs. There is very little wetland development along this portion of the stream, with only a narrow band of redtop growing with the introduced upland grasses timothy and orchard grass, and the native forbs checkermallow (*Sidalcea sp.*) and largeleaf avens.

Federal Parcel C. Parcel C contains wetlands along Salt Creek and adjacent low-lying areas of the floodplain, and along the Bemis Ditch (Figure 10).

The Salt Creek wetland is a somewhat alkaline community that supports extensive stands of sandbar willow and a few whiplash willows with a somewhat weedy wetland understory (Photo 11). Due to the high groundwater along the creek, the wetland forms a broad band that extends onto the floodplain. The riparian/wetland corridor, as illustrated by Figure 10, covers approximately 0.23 acre. The introduced perennial reed canarygrass (*Phalaris arundinacea*) is very common, forming dense stands with Canada goldenrod (*Solidago canadensis*) and willow-leaved dock (*Rumex triangulivalvis*). In addition, there are some areas of broadleaf cattails (*Typha latifolia*). Other common species include the noxious weeds Canada thistle, plumeless thistle, musk thistle (*Carduus nutans*), oxeye daisy, and flixweed (*Descurainia sophia*), as well as the native forb goldenglow (*Rudbeckia ampla*), and the graminoids swordleaf rush and Canada bluegrass.

Just south of Salt Creek, a berm vegetated by basin big sagebrush (*Artemisia tridentata*) separates the Salt Creek wetland from a second smaller, flowing channel lined by wetland seeps at the toe of the north slope of Horse Mountain. This wetland measures approximately 0.04 acre. It is likely that this wetland connects to Salt Creek off of the project site. This herbaceous wetland is dominated by Baltic rush, with arrowgrass (*Triglochin maritima*), hardstem bulrush (*Scirpus acutus*), alkali bulrush (*Scirpus maritimus*), foxtail barley (*Hordeum jubatum*), redtop, and the forbs Siskiyou aster, a native, yellow sweet clover (*Melilotus officinalis*), and the noxious weed oxeye daisy.

The Bemis irrigation ditch, which crosses the northern portion of Parcel C approximately 500 feet south of Salt Creek, is lined by a narrow band of redtop. Wetlands associated with irrigation ditches can potentially be considered jurisdictional by the U.S Army Corps of Engineers, and are treated on a case-by-case basis.

The ephemeral drainage that flows out of the northwestern corner of the project site is steep and narrow, with a discontinuous bed and bank that averages 2-4 feet wide, and sparse upland vegetation in the channel. This drainage is not a wetland but would likely be regulated by the U.S. Army Corps of Engineers as a water of the U.S. The other ephemeral drainage, which originates near the center of the Parcel and extends to the west, is a vegetated swale 2-4 feet wide

dominated by upland plants. Because it lacks the characteristics of a bed and bank, this drainage would be unlikely to be regulated by the U.S. Army Corps of Engineers.

Federal Parcel D. Bruce Creek, an ephemeral stream, flows across the southwestern corner of Parcel D (Photo 12). During field reconnaissance, the creek was flowing northwest through the parcel (Figure 10). The channel was dry just upstream of the parcel boundary but water, likely irrigation return flow, was entering the channel near the southern parcel boundary. The densely vegetated riparian/wetland habitat along Bruce Creek is dominated by river hawthorn, with aspen and narrowleaf cottonwood trees, as well as mountain willow, Woods' rose, snowberry, chokecherry, whitestem gooseberry (*Ribes inerme*), and serviceberry shrubs. Due to the steepness of the banks, wetland development is limited along this portion of the creek, however the riparian habitat covers approximately 0.87 acre. Some of the common herbaceous species in this area include redtop, cow parsnip, Siskiyou aster, goldenglow, and the introduced pasture grasses timothy, smooth brome, orchard grass, and Kentucky bluegrass. The noxious weed Canada thistle is problematic in some areas.

Non-Federal Parcel 1 (Sutey Ranch). Wetlands and riparian habitat are present along a tributary of Cattle Creek located in a roadside ditch that parallels County Road 112. This tributary is fed in part by a spring or flowing seep in the pasture to the south (Figure 11; Photo 13). Heavy grazing from cattle and horses has eliminated the wetland vegetation from the groundwater discharge area (Photo 14). The ground has been trampled, making it difficult to determine if the discharge would have a defined channel, which is a characteristic used to identify springs. The water discharged drains north to an ephemeral stream channel that parallels County Road 112 and drains into Cattle Creek. There is no water in the stream channel upstream of the spring/seep discharge. The riparian habitat along the ephemeral stream channel supports junipers and pinyon pine, gambel oak, snowberry, serviceberry, chokecherry, and a few broadleaf cattails in the channel bottom. Canada thistle is also present. This riparian/wetland habitat covers approximately 0.18 acre. In addition, there are three stock ponds which are seasonal aquatic sites surrounded by crested wheatgrass (*Agropyron cristatum*) and other upland pasture grasses. The maximum water surface of these three stock ponds is estimated to cover approximately 0.16 acre.

Non-Federal Parcel 2 (West Crown Access). Wetlands on the West Crown Access Parcel are limited to the banks of the Prince irrigation ditch (Figure 8). Two drainages mapped as ephemeral streams on the USGS quadrangle are discontinuous vegetated swales dominated by upland plants.

#### **4.1.4 Significant Natural Communities**

Based on the Colorado Natural Heritage Program's data for Eagle, Garfield, and Pitkin Counties, Carla DeYoung identified the Significant Natural Communities that should be mapped for the Sutey Land Exchange project. None of the communities identified by Ms. DeYoung are present on the exchange parcels.

#### **4.1.5 Noxious Weeds**

No significant stands of noxious weeds were observed on any of the exchange parcels during field reconnaissance. However, noxious weeds are common in some of the riparian/wetland habitats, including the Thomas Creek riparian corridor on Parcel A (houndstongue, plumeless thistle), along a tributary of Prince Creek on Parcel B (Canada thistle, plumeless thistle, musk thistle, oxeye daisy), the Salt Creek riparian habitat on Parcel C (Canada thistle, musk thistle, plumeless thistle, oxeye daisy, and flixweed), and along Bruce Creek on Parcel D (Canada thistle).

### **4.2 Wildlife Resources**

#### **4.2.1 Federal Threatened, Endangered, and Candidate Wildlife**

Table 4 lists the U.S. Fish and Wildlife Service (USFWS) listed species that potentially occur in Eagle, Garfield, and Pitkin Counties. The pre-field review and the field reconnaissance resulted in the determination that no habitat capable of supporting federally threatened or endangered

species occurs within the project area. Federally threatened and endangered species will not be addressed further in this report. Additionally, no proposed or designated critical habitat for any federally listed species occurs within the project area. Designated critical habitat will not be addressed further in this report.

#### 4.2.2 BLM Sensitive Wildlife Species

Table 6 identifies the BLM sensitive terrestrial and aquatic wildlife species considered and evaluated in this report. Species noted in Table 6 as not being potentially present within any of the parcels will not be addressed further in this document.

Suitable habitat for eight BLM sensitive wildlife species was identified on one or more of the exchange parcels. Collectively, these include the Townsend's big-eared bat (*Plecotus townsendii*), northern goshawk (*Accipiter gentilis*), greater sage grouse (*Centrocercus urophasianus*), Brewer's sparrow (*Spizella breweri*), Great Basin spadefoot (*Spea intermontana*), northern leopard frog (*Rana pipiens*), milk snake (*Lampropeltis triangulum taylori*), and bluehead sucker (*Catostamus discobolus*). A brief discussion of each species and the parcels on which they potentially occur is provided below.

Townsend's Big-eared Bat. Townsend's is widely distributed in Colorado except on the eastern plains (Armstrong *et al.*, 1994). Habitat includes open montane forests, semidesert shrublands, and pinyon/juniper shrublands. These bats are generally solitary or gather in small groups; during summer females may form larger maternity colonies located in mines, caves, abandoned structures, and crevices in rock cliffs, in woodlands and forests to elevations up to 9,500 feet (Armstrong *et al.*, 1994, Fitzgerald *et al.*, 1994). They are relatively sedentary and do not move long distances from hibernacula to summer roosts (Fitzgerald *et al.*, 1994). Foraging occurs over water, along the margins of vegetation and over sagebrush. Townsend's feed chiefly on small caddis flies and moths, but will take beetles, flies and wasps. Potentially suitable habitat is likely present within all the Parcels at elevations up to 9,500 feet. The Lady Belle Mine on Federal Parcel D could be appropriate habitat for use by Townsend's as a maternity site or as hibernacula.

Northern Goshawk. - The northern goshawk is a forest habitat generalist, utilizing a variety of forest types, forest ages, structural conditions, and successional stages. The principal forest types occupied by the goshawk are ponderosa pine, aspen, mixed-conifer, and spruce-fir. Studies of nesting habitat show that goshawks nest in older-aged forests with variable tree species. The most consistent vegetation characteristic of goshawk nest sites is a high percent of canopy closure. Stand structure ranges from dense canopy mixed conifer with an open understory to aspen groves with trees exhibiting heavy upper branching to provide nest platforms and protection. Because of its large body size and wingspan, the goshawk seldom uses young, dense forests. Nest habitat can occupy up to 200 acres and may include two to three scattered large nest trees (Reynolds *et al.* 1992). In a review of the scientific literature, Finch (1992) found that nest sites may be revisited from year to year and are generally within 0.25 mile of water. Fledgling areas contain a mix of large trees with a canopy cover greater than 50 percent and young trees for hiding cover near the ground (Reynolds *et al.* 1992). Potentially suitable nesting habitat is located on Federal Parcel A.

Suitable foraging areas can be as large as 6,000 acres and include a variety of forest cover types and vegetation structural stages. Limited radio-telemetry evidence suggests that goshawks prefer mature forests for foraging. However, forest edges, openings and underneath forest canopies of all timber types are used for hunting. Prey species include rabbits, squirrels, woodpeckers, robins, jays, and other small birds and mammals (Reynolds *et al.* 1992). Snags, downed logs, woody debris, small openings, large trees, and herbaceous and shrubby understories are important features to many goshawk prey populations. Downed logs (>12 inch dbh and 8 feet long) provide cover, feeding and nest sites for a great variety of species, including several woodpeckers, chipmunks, golden-mantled ground squirrels, cottontail rabbits, red squirrels, and blue grouse. Forest openings of less than four acres benefit blue grouse, chipmunks and golden-mantled ground squirrels, while minimizing the effects on other interior forest prey species of the goshawk

(Reynolds et al. 1992). All of the parcels could potentially be used by northern goshawks while foraging.

Greater Sage-grouse. Potential habitat is found on Non-Federal Parcel 1 (Sutey Ranch) and Non-Federal Parcel 2 (West Crown Access) and is within the historic range of the greater sage-grouse; occupied sage-grouse breeding habitat occurs north of the project area across the Colorado River. Because the project area is a long distance from known occupied habitat coupled with the lack of recent sightings of greater sage grouse near the project area, it can be assumed that appropriate habitats within the project area are seldom if ever used by greater sage-grouse.

Brewer's Sparrow. The Brewer's sparrow is most often associated with big sagebrush shrublands but also is found in lesser densities in greasewood (*Sarcobatus vermiculatus*), hopsage (*Grayia spinosa*), and saltbush (*Atriplex spp.*) shrublands in low country, or mountain mahogany and snowberry at higher elevations (Kingery 1998). Potentially suitable habitat is located within Non-Federal Parcel 1 (Sutey Ranch) and Non-Federal Parcel 2 (West Crown Access).

Great Basin Spadefoot. This species is found in piñon-juniper woodlands, sagebrush, and semidesert shrublands at elevations below 7,000 feet (Hammerson 1999). It is inactive most of the year, emerging from the substrate of seasonal ponds or ephemeral streams to breed and feed during periods of protracted surface moisture (Hammerson 1999). Individuals have been located in both Garfield and Mesa Counties. The toad has the potential to occur in all habitats present on Federal Parcel A and Non-Federal Parcel 1 (Sutey Ranch) at elevations below 7,000 feet.

Northern Leopard Frog. The northern leopard frog is distributed throughout Colorado from an elevation of below 3,500 feet on the plains of the northeastern corner of the state to over 11,000 feet in the San Juan Mountains in the southwestern corner (Hammerson 1999). Although formerly abundant throughout its range, the northern leopard frog has become rare or been extirpated from many areas, especially high elevation populations due to changes in habitat conditions (Hammerson 1999, CDOW 2003). The northern leopard frog has the potential to occur along perennial streams and irrigation ditches, where present, on all parcels.

Milk Snake. The milk snake occurs in a wide variety of habitats in Colorado, including shortgrass prairie, sand prairie, shrubby hillsides, canyons, open stands of ponderosa pine, pinyon-juniper woodland, and arid river valleys. The milk snake could use appropriate habitat types at elevations below 8,500 feet (Hammerson 1999) on Federal Parcels A and E and Non-Federal Parcels 1 (Sutey Ranch) and 2 (West Crown Access).

Bluehead Sucker. This species is found throughout the middle and upper Colorado River Basin, in a variety of areas from headwater streams to large rivers (Woodling 1985). The bluehead sucker prefers areas with a rock substrate and mid to fast flowing waters. Potential habitat is found within perennial streams on Federal Parcels A, B and B1.

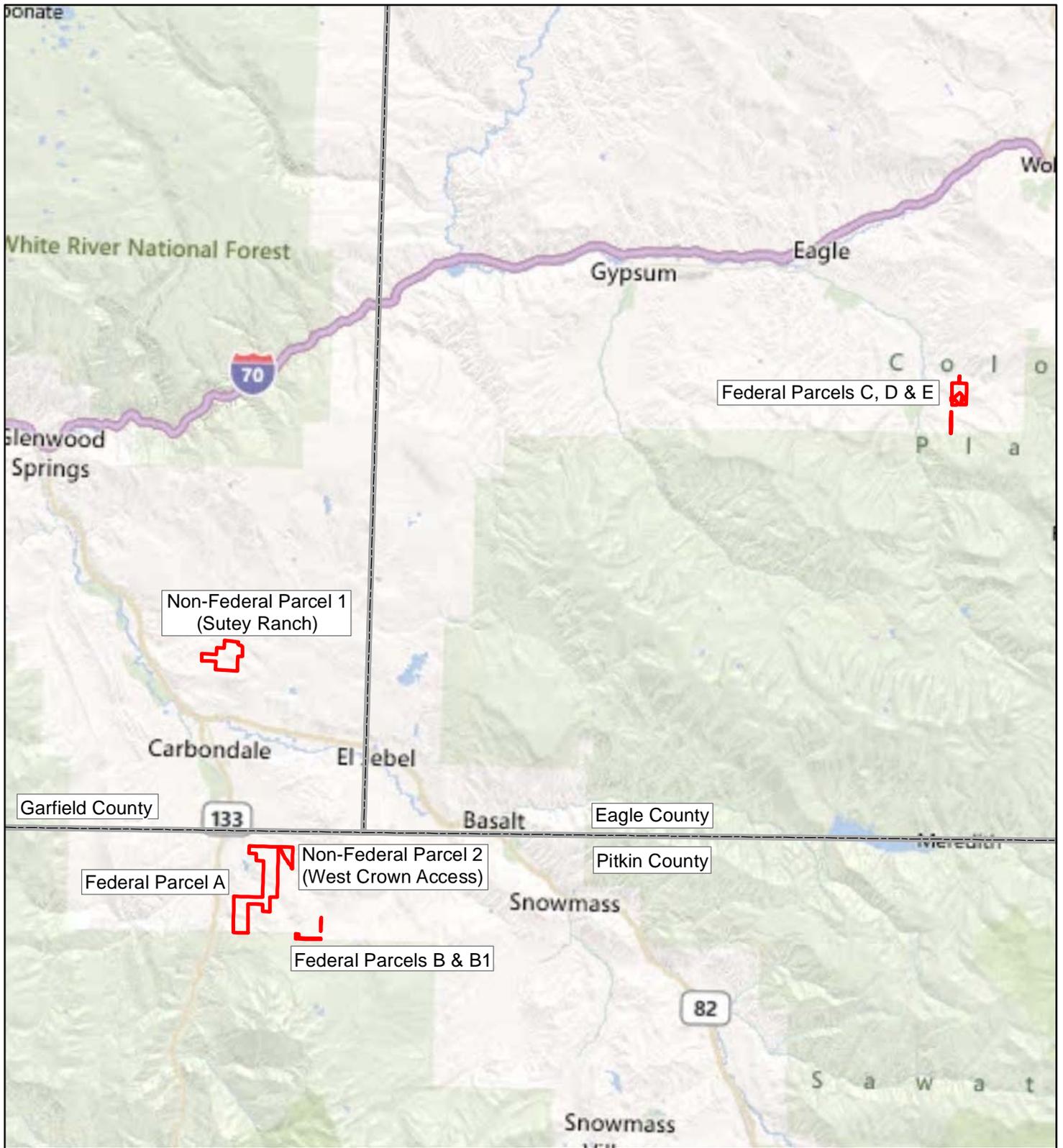
#### **4.2.3 Raptors**

The proposed land exchange parcels were surveyed for raptor nests. The results of this survey are summarized in Table 6. Red-tailed hawks (*Buteo jamaicensis*) were observed on Federal Parcel A and non-Federal Parcel 1 (Sutey Ranch). The approximate location of the red-tailed hawk nest on the Sutey Ranch Parcel is near the top of the ridge line in the vicinity of the electric transmission line, as indicated in Table 6. The nest location on Federal Parcel A was not identified, however, the investigative behavior of the hawk and its response to a great horned owl broadcast call suggests that a nesting pair was present in the area. Additionally, a great horned owl was observed on Federal Parcel A, flying over the hillside south of Thomas Creek. A large stick nest suitable for use by a great horned owl was observed in a spruce tree to the east along Thomas Creek, however it is not known if the owl is associated with this nest. One Cooper's hawk (*Accipiter cooperi*) was also observed in the west-central portion of Federal Parcel A.

#### 4.2.4 Heron Colonies

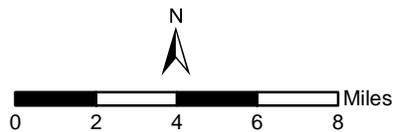
The proposed land exchange parcels were surveyed for the presence of great blue heron (*Ardea herodias*) colonies. None were identified within any of the proposed exchange parcels.

**5.0 Figures**



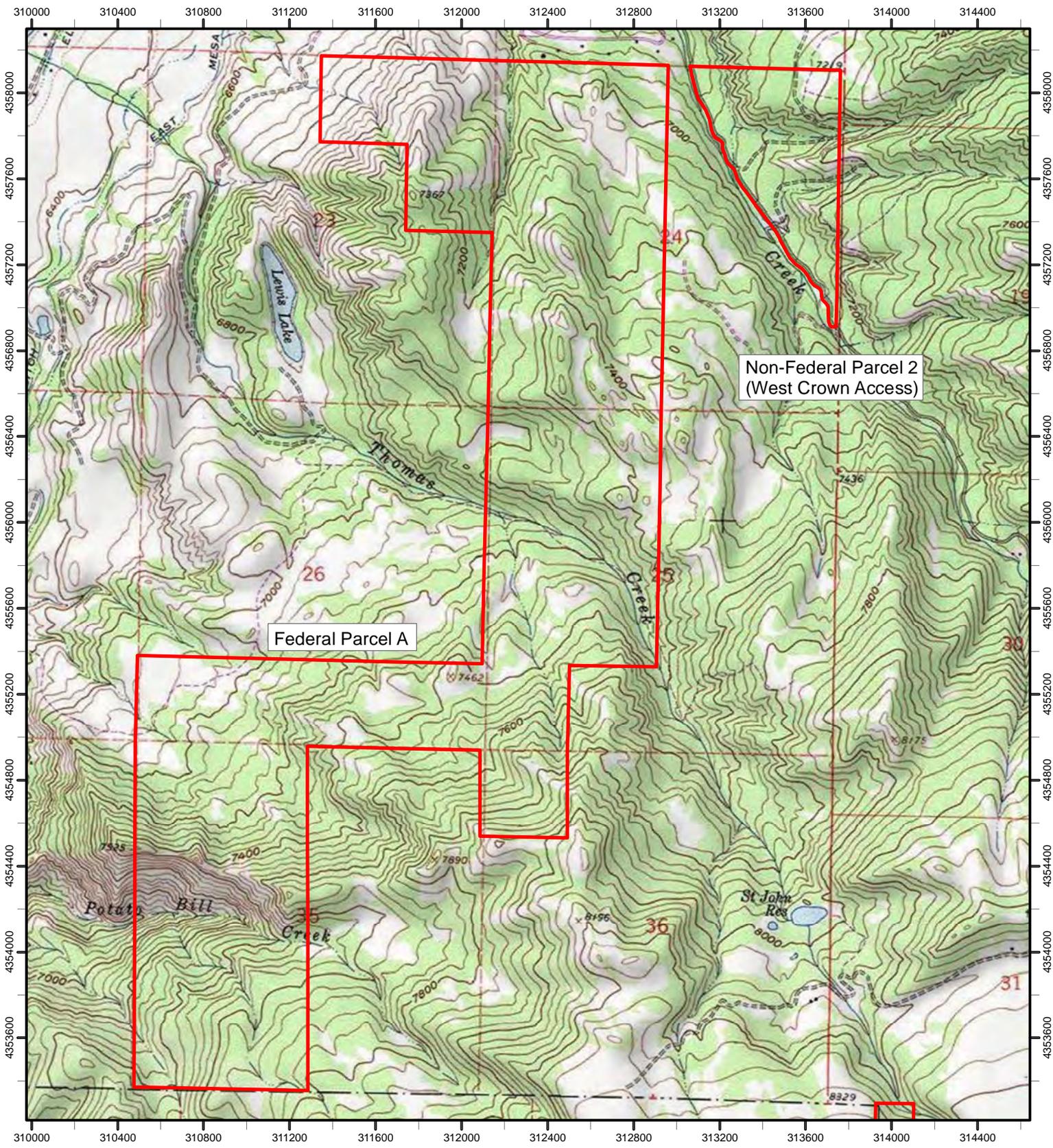
**Legend**

 Exchange Parcel Boundaries



**Figure 1. Vicinity Map  
Sutey Ranch Land Exchange**

Date: May 2012

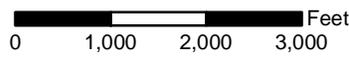


Non-Federal Parcel 2  
(West Crown Access)

Federal Parcel A

**Legend**

 Exchange Parcel Boundaries

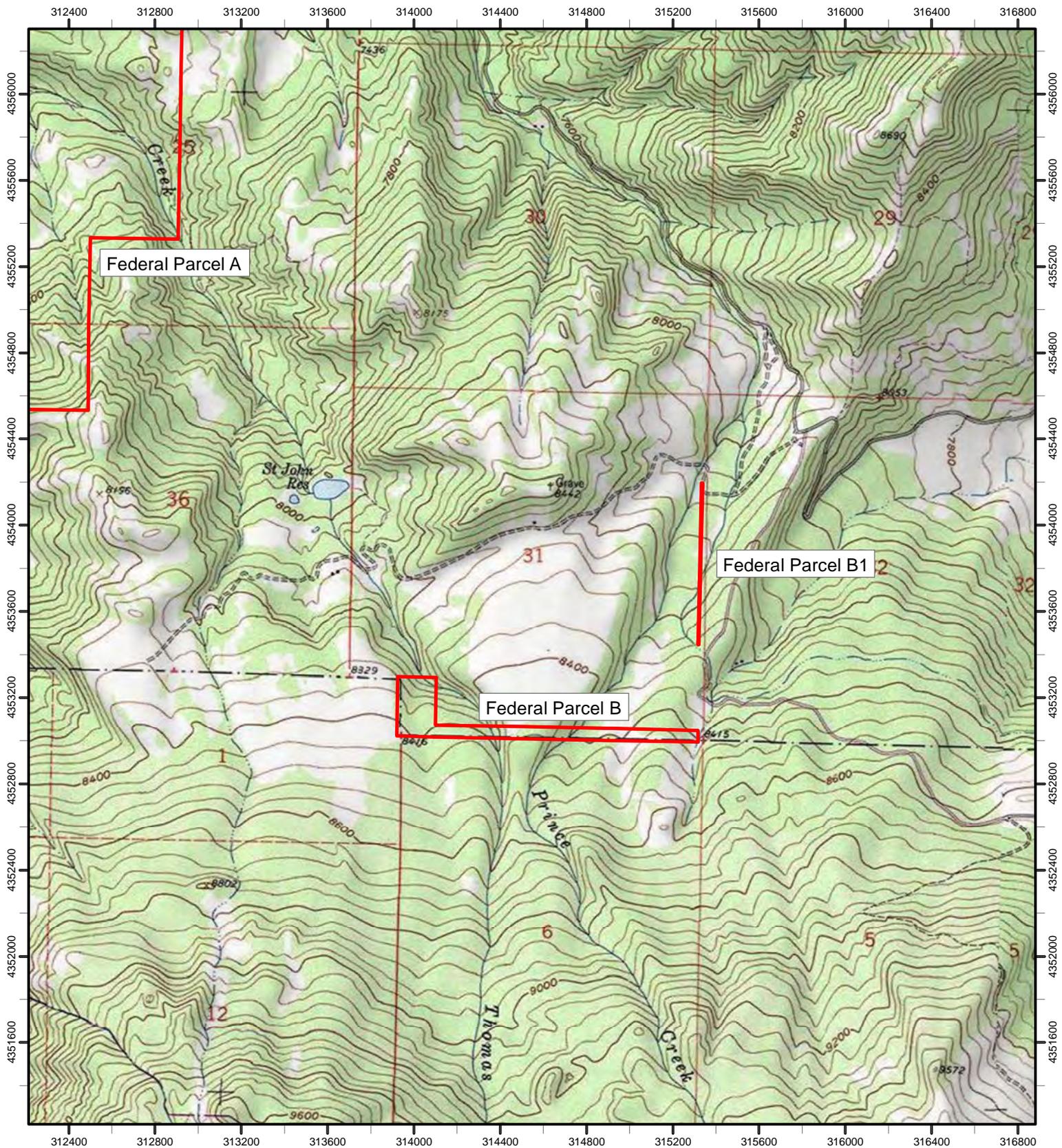


**Figure 2. Project Location Map  
Federal Parcel A & Non-Federal Parcel 2  
Sutey Ranch Land Exchange**

Date: May 2012



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**Legend**

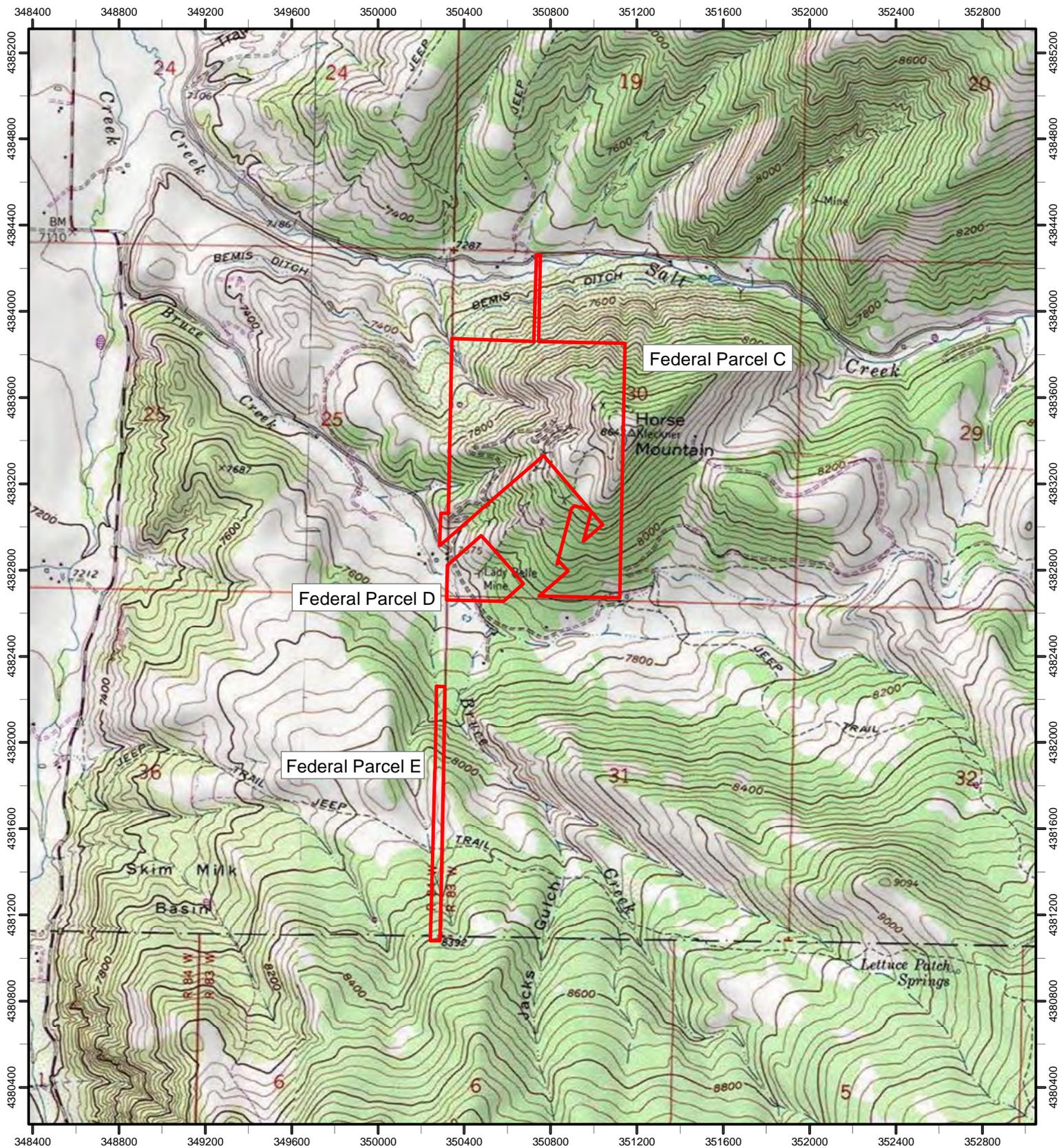
 Exchange Parcel Boundaries



 Feet  
0 1,000 2,000 3,000

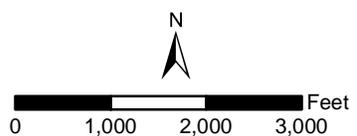
**Figure 3. Project Location Map  
Federal Parcels B & B1  
Sutey Ranch Land Exchange**

Date: May 2012



**Legend**

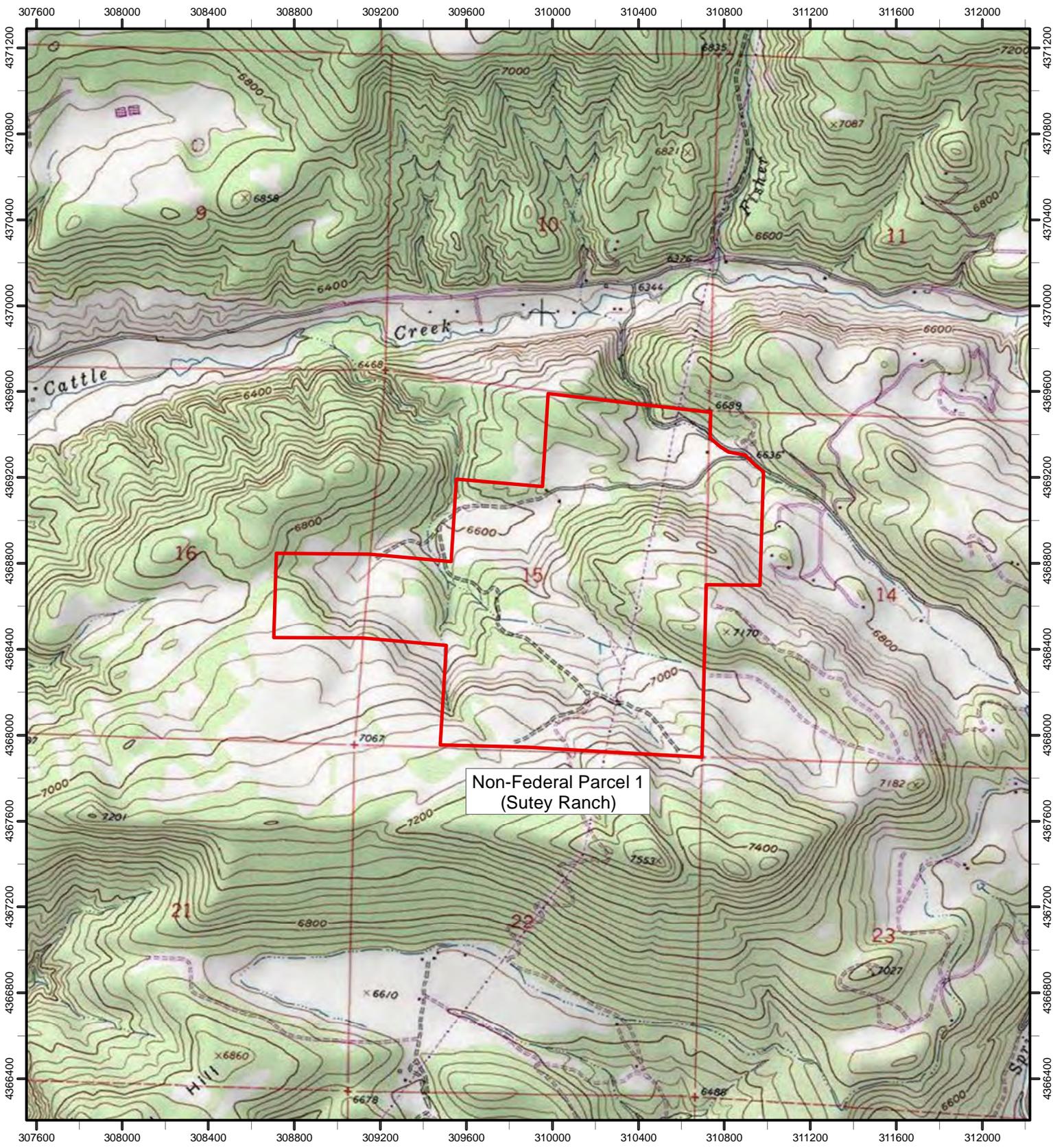
 Exchange Parcel Boundaries



**Figure 4. Project Location Map  
Federal Parcels C, D & E  
Sutey Ranch Land Exchange**

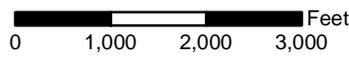
Date: May 2012

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**Legend**

 Exchange Parcel Boundaries

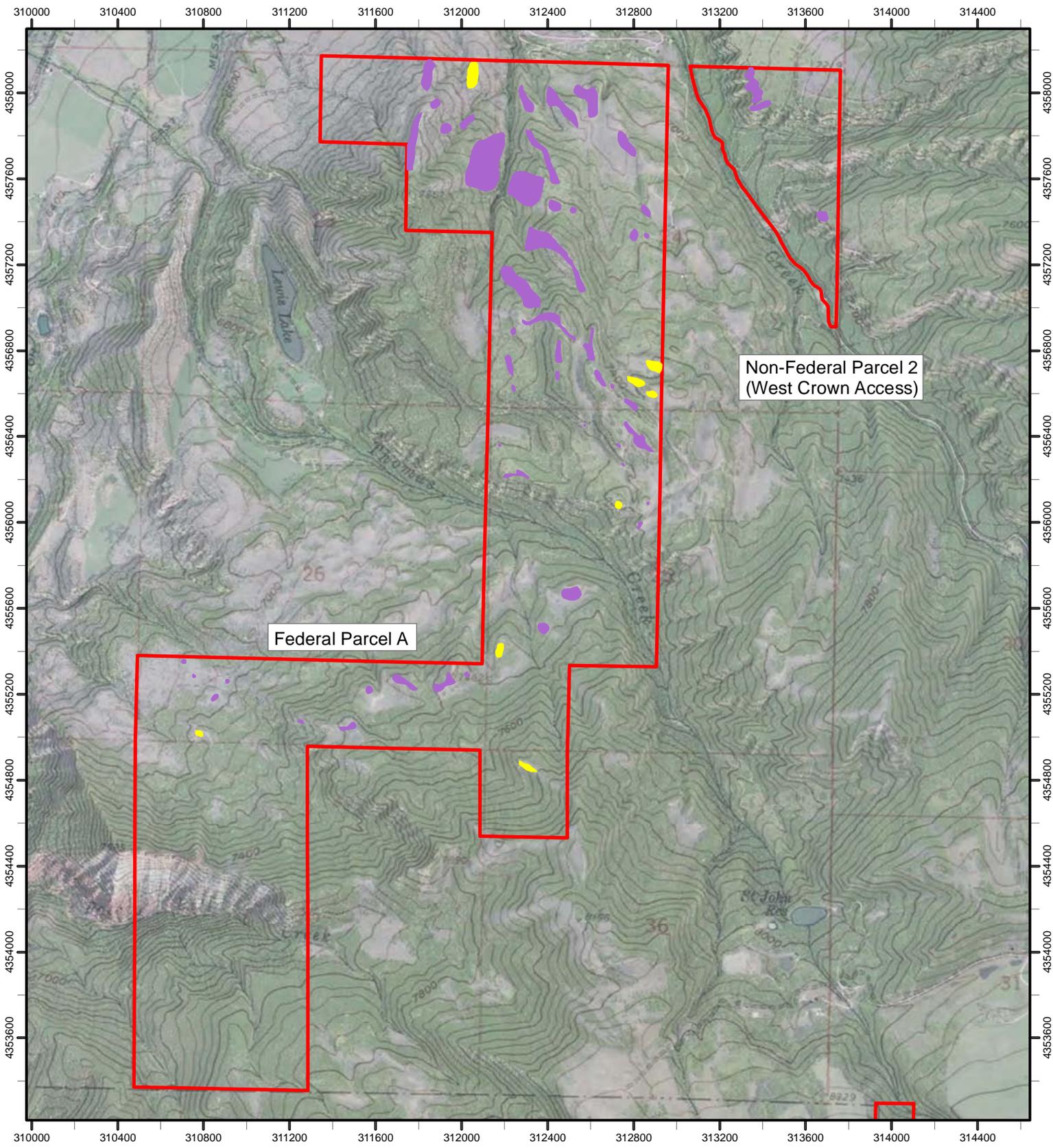


**Figure 5. Project Location Map  
Non-Federal Parcel 1  
Sutey Ranch Land Exchange**

Date: May 2012

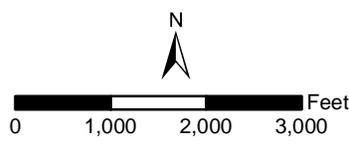


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**Legend**

- Exchange Parcel Boundaries
- Harrington Penstemon Populations
- Potential Harrington Penstemon Habitat\*

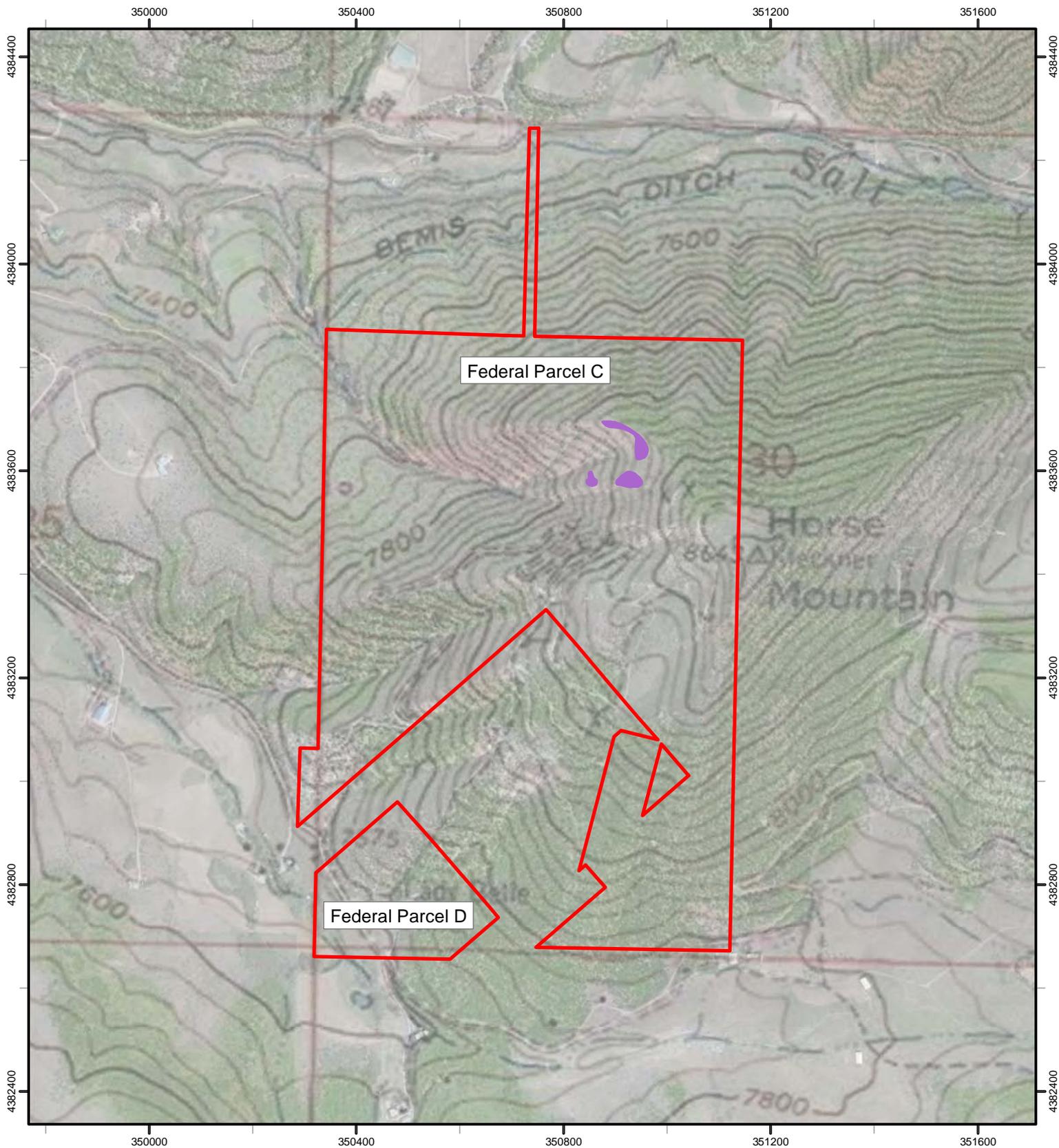


**Figure 6. Harrington Penstemon Map  
Federal Parcel A & Non-Federal Parcel 2  
Sutey Ranch Land Exchange**

Date: May 2012

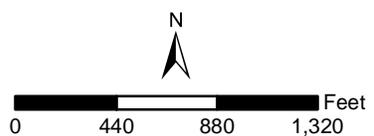
\* Potential Harrington penstemon habitat was mapped based on examination of aerial photography and topographic base maps following field reconnaissance on the project site.

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**Legend**

- Exchange Parcel Boundaries
- Harrington Penstemon Populations

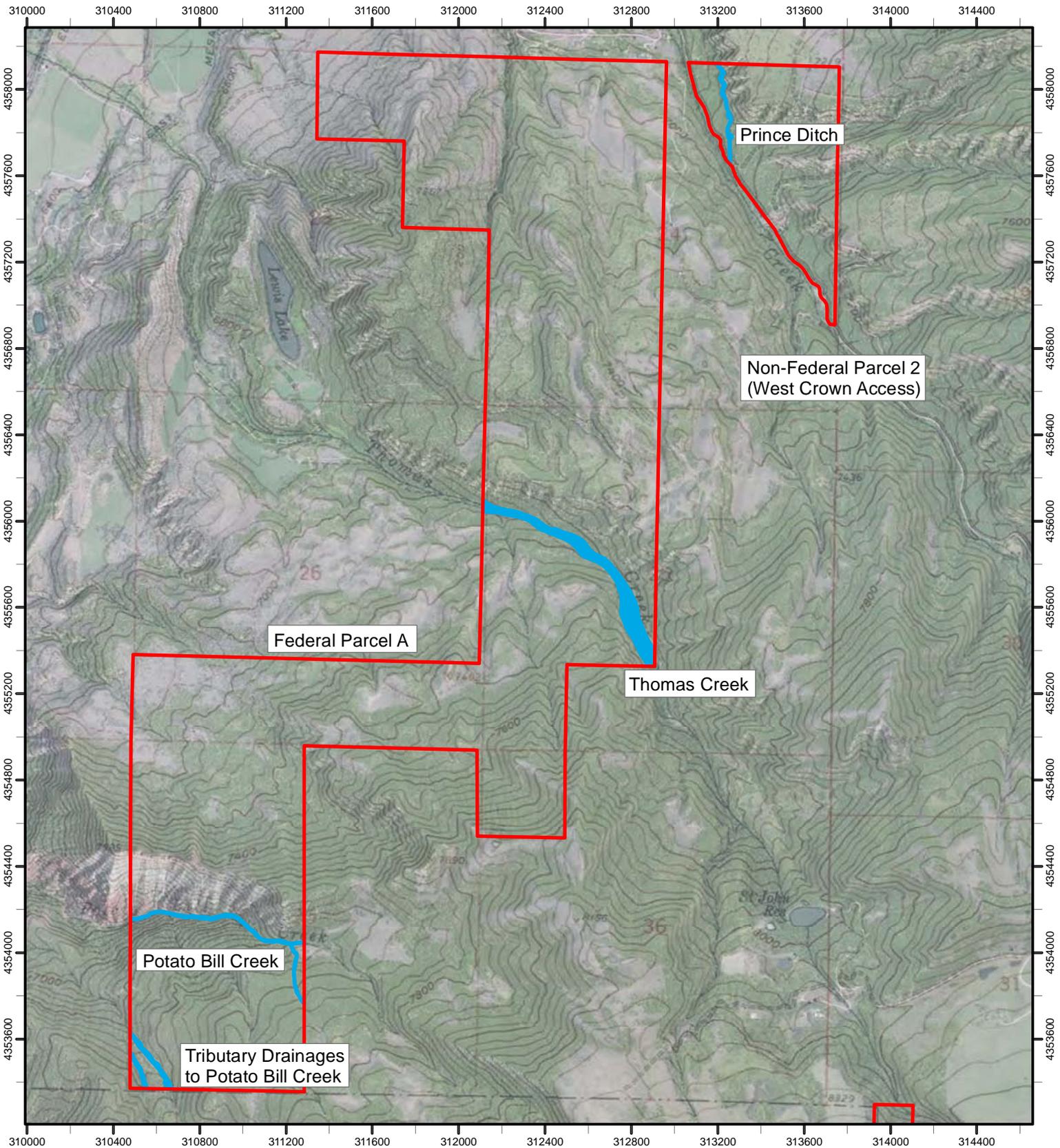


**Figure 7. Harrington Penstemon Map  
Federal Parcel C  
Sutey Ranch Land Exchange**

Date: May 2012

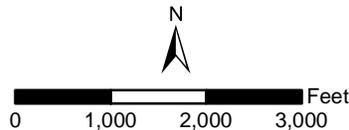


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**Legend**

- Exchange Parcel Boundaries
- Riparian/Wetland Habitats

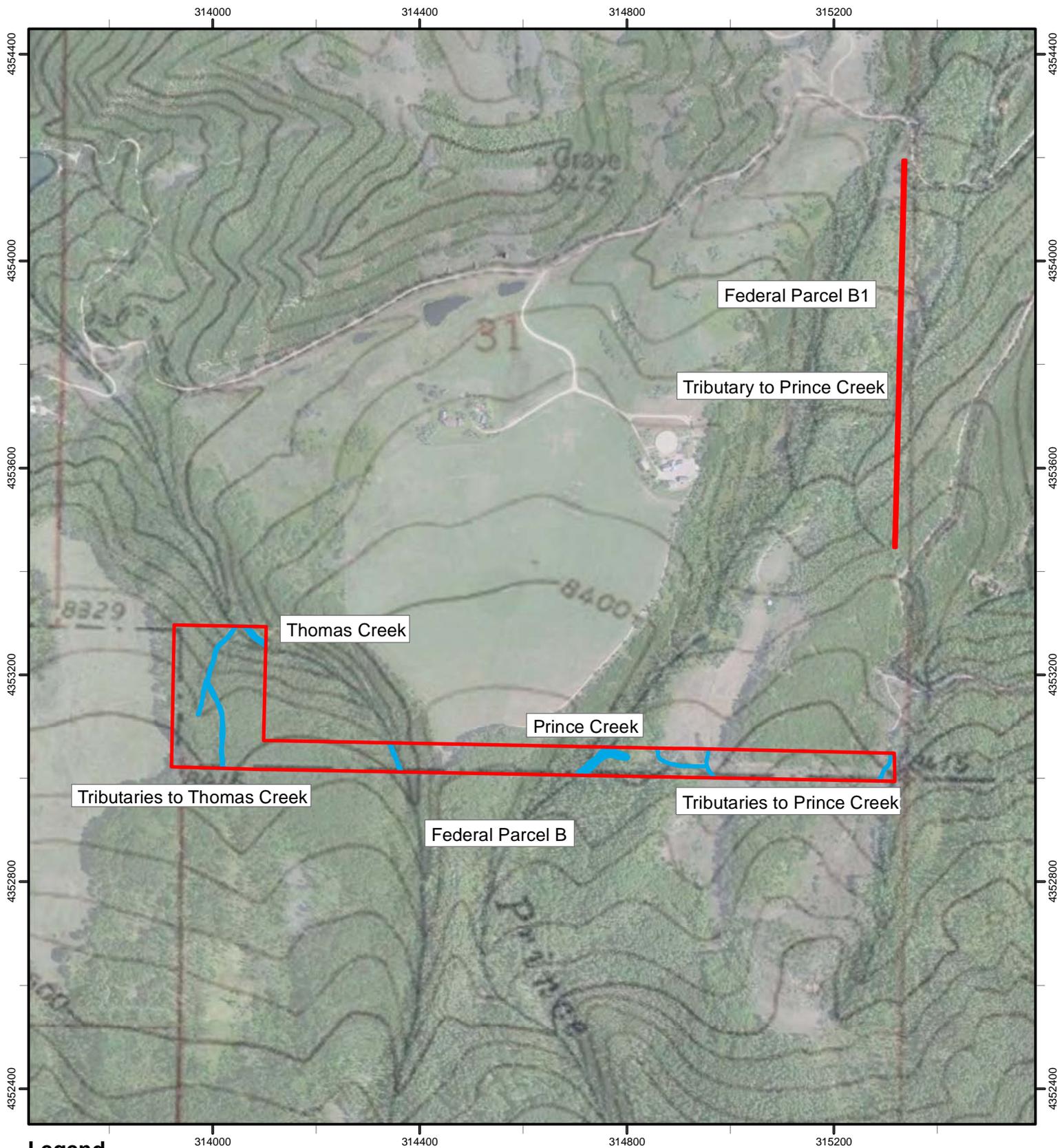


**Figure 8. Riparian & Wetland Habitats  
Federal Parcel A & Non-Federal Parcel 2  
Sutey Ranch Land Exchange**

Date: May 2012

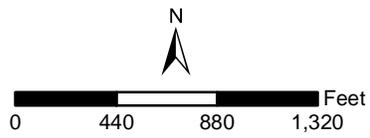


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**Legend**

- Exchange Parcel Boundaries
- Riparian/Wetland Habitats

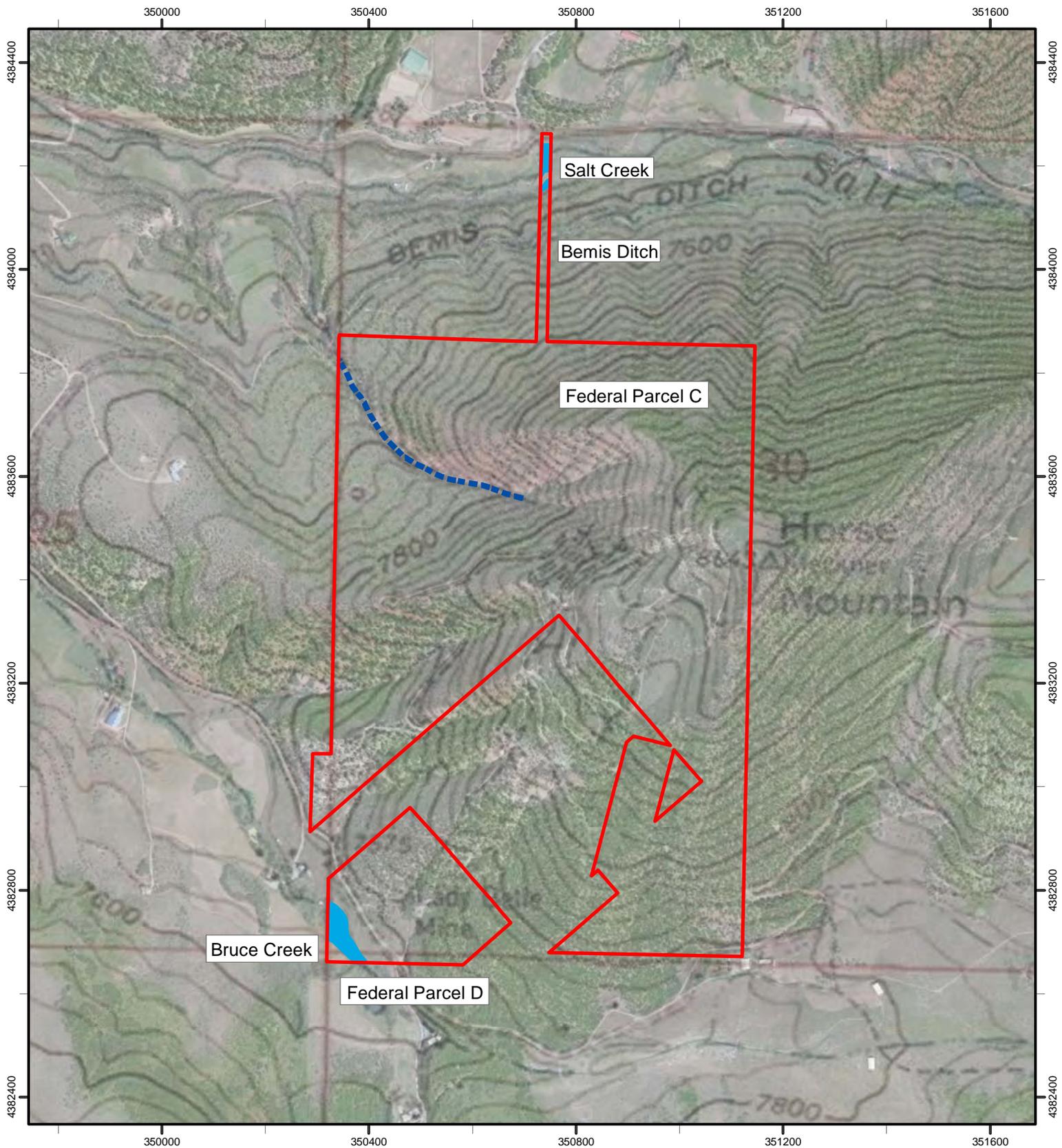


**Figure 9. Riparian & Wetland Habitats  
Federal Parcels B & B1  
Sutey Ranch Land Exchange**

Date: May 2012



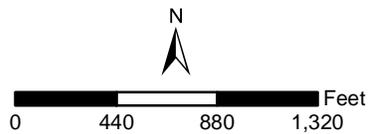
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**Legend**

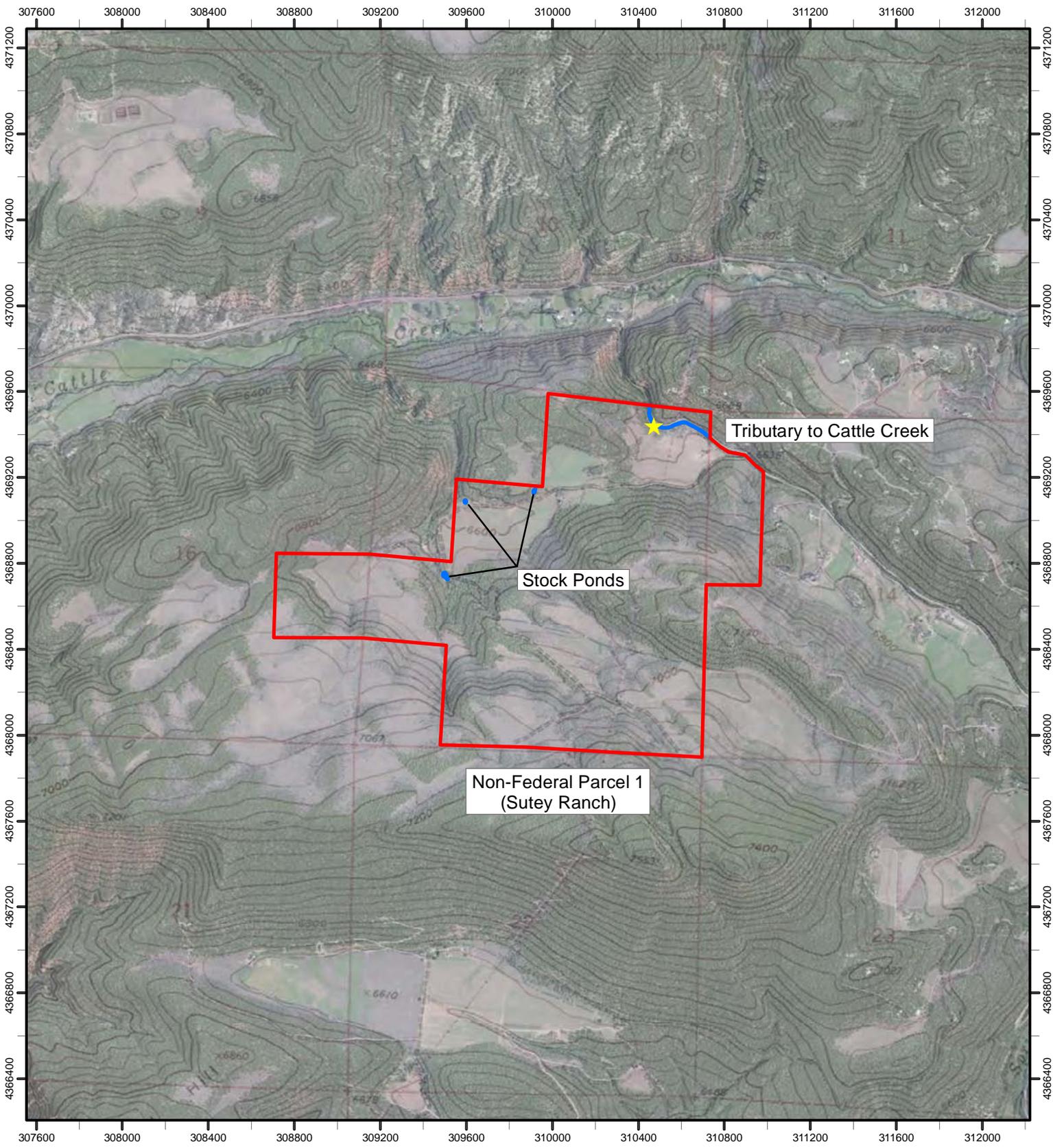
- Exchange Parcel Boundaries
- Riparian/Wetland Habitats
- Bed and Bank Drainage

**Figure 10. Riparian & Wetland Habitats  
Federal Parcels C and D  
Sutey Ranch Land Exchange**



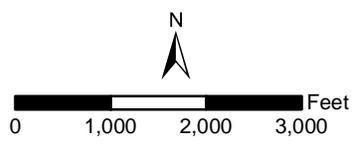
Date: May 2012

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**Legend**

- Exchange Parcel Boundaries
- Riparian/Wetland Habitats
- ★ Spring/Seep Discharge



**Figure 11. Riparian & Wetland Habitats  
Non-Federal Parcel 1  
Sutey Ranch Land Exchange**

Date: May 2012

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## 6.0 Tables

**TABLE 1**  
**Federal and Non-Federal Parcels**  
**Sutey Ranch Land Exchange**

<u>Land Exchange Parcels</u>	<u>Size (acres)</u>	<u>Location</u>
<b>Federal Parcels</b>		
A	1,240.00	Pitkin County
B	28.37	Pitkin County
B1	1.00	Pitkin County
C	166.43	Eagle County
D	17.41	Eagle County
E	11.97	Eagle County
<b>TOTAL</b>	<b>1,465.18</b>	
<b>Non-Federal Parcels</b>		
1 (Sutey Ranch)	557.00	Garfield County
2 (West Crown Access)	117.00	Pitkin County
<b>TOTAL</b>	<b>674.00</b>	

**TABLE 2**  
**Vascular Plant Species List**  
**Sutey Ranch Land Exchange**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin*</u>	<u>Wetland Status**</u>
<b>Trees</b>				
<i>Juniperus osteosperma</i>	Utah juniper	Cupressaceae	N	NL
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	Cupressaceae	N	NL
<i>Picea engelmannii</i>	Engelmann spruce	Pinaceae	N	FACU-*
<i>Picea pungens</i>	Blue spruce	Pinaceae	N	FAC-
<i>Pinus edulis</i>	Pinyon pine	Pinaceae	N	
<i>Populus angustifolia</i>	Narrowleaf cottonwood	Salicaceae	N	FAC*
<i>Populus tremuloides</i>	Aspen	Salicaceae	N	FAC
<i>Pseudotsuga menziesii</i>	Douglas fir	Pinaceae	N	NL
<b>Shrubs</b>				
<i>Acer glabrum</i>	Mountain maple	Aceraceae	N	FAC*
<i>Alnus incana</i> ssp. <i>tenuifolia</i>	Thinleaf alder	Betulaceae	N	FACW
<i>Amelanchier alnifolia</i>	Serviceberry	Rosaceae	N	FACU-
<i>Amelanchier utahensis</i>	Utah serviceberry	Rosaceae	N	NL
<i>Artemisia tridentata</i> <i>var. vaseyana</i>	Mountain big sagebrush	Asteraceae	N	NL
<i>Cercocarpus montanus</i>	Mountain mahogany	Rosaceae	N	NL
<i>Chrysothamnus</i> <i>viscidiflorus</i>	Green rabbitbrush	Asteraceae	N	NL
<i>Crataegus rivularis</i>	Hawthorn	Rosaceae	N	NL
<i>Distegia involucrata</i>	Bush honeysuckle	Caprifoliaceae	N	FAC
<i>Gutierrezia sarothrae</i>	Snakeweed	Asteraceae	N	NL
<i>Krascheninnikovia lanata</i>	Winterfat	Chenopodiaceae	N	NL
<i>Prunus virginiana</i> <i>var. melanocarpa</i>	Choke cherry	Rosaceae	N	FACU
<i>Purshia tridentata</i>	Bitterbrush	Rosaceae	N	NL
<i>Quercus gambelii</i>	Gambel's oak	Fagaceae	N	NL
<i>Ribes inerme</i>	Whitestem gooseberry	Grossulariaceae	N	FAC+
<i>Rosa woodsii</i>	Woods' rose	Rosaceae	N	FAC-
<i>Salix bebbiana</i>	Bebb willow	Salicaceae	N	FACW+
<i>Salix exigua</i>	Sandbar willow	Salicaceae	N	OBL
<i>Salix lasiandra</i> <i>var. caudata</i>	Whiplash willow	Salicaceae	N	OBL
<i>Salix monticola</i>	Mountain willow	Salicaceae	N	OBL
<i>Symphoricarpos</i> <i>rotundifolius</i>	Snowberry	Caprifoliaceae	N	NL
<b>Perennial Graminoids</b>				
<i>Agropyron cristatum</i>	Crested wheatgrass	Poaceae	I	NL
<i>Agrostis gigantea</i> ( <i>A. alba</i> )	Redtop	Poaceae	I	FACW

**TABLE 2**  
**Vascular Plant Species List**  
**Sutey Ranch Land Exchange**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin*</u>	<u>Wetland Status**</u>
<i>Alopecurus aequalis</i>	Shortawn foxtail	Poaceae	N	OBL
<i>Bromus inermis</i>	Smooth brome	Poaceae	I	NL
<i>Calamagrostis stricta</i>	Slimstem reedgrass	Poaceae	N	FACW
<i>Carex microptera</i>	Smallwing sedge	Cyperaceae	N	FAC
<i>Carex nebrascensis</i>	Nebraska sedge	Cyperaceae	N	OBL
<i>Carex utriculata</i> ( <i>C. rostrata</i> )	Beaked sedge	Cyperaceae	N	OBL
<i>Dactylis glomerata</i>	Orchard grass	Poaceae	I	FACU
<i>Eleocharis palustris</i>	Creeping spikerush	Cyperaceae	N	OBL
<i>Elymus elymoides</i>	Squirrel tail	Poaceae	N	UPL
<i>Elymus glaucus</i>	Blue wildrye	Poaceae	N	FACU
<i>Glyceria striata</i>	Fowl mannagrass	Poaceae	N	OBL
<i>Hesperostipa comata</i>	Needle-and-thread grass	Poaceae	N	NL
<i>Hordeum jubatum</i>	Foxtail barley	Poaceae	N	FAC*
<i>Juncus arcticus</i> ssp. <i>Ater</i> ( <i>J. balticus</i> )	Baltic rush	Juncaceae	N	FACW
<i>Juncus ensifolius</i>	Swordleaf rush	Juncaceae	N	FACW +
<i>Juncus longistylis</i>	Long styled rush	Juncaceae	N	FACW +
<i>Koeleria macrantha</i>	Junegrass	Poaceae	N	NL
<i>Nassella viridula</i>	Green needlegrass	Poaceae	N	
<i>Oryzopsis hymenoides</i>	Indian ricegrass	Poaceae	N	UPL
<i>Pascopyrum smithii</i>	Western wheatgrass	Poaceae	N	FACU
<i>Phalaris arundinacea</i>	Reed Canarygrass	Poaceae	I	OBL
<i>Phleum pratense</i>	Timothy	Poaceae	I	FACU
<i>Poa bulbosa</i>	Bulbous bluegrass	Poaceae	N	NL
<i>Poa compressa</i>	Canada bluegrass	Poaceae	I	FACU
<i>Poa leptocoma</i>	Bog bluegrass	Poaceae	N	FACW
<i>Poa palustris</i>	Fowl bluegrass	Poaceae	N	FACW
<i>Poa pratensis</i>	Kentucky bluegrass	Poaceae	I	FACU
<i>Pseudoroegneria spicata</i>	Bluebunch wheatgrass	Poaceae	N	UPL
<i>Scirpus acutus</i>	Hardstem bulrush	Cyperaceae	N	OBL
<i>Scirpus maritimus</i> ( <i>S. paludosus</i> )	Alkali bulrush	Cyperaceae	N	NI [OBL]
<i>Triglochin maritimum</i>	Arrowgrass	Juncaginaceae	N	OBL
<i>Typha latifolia</i>	Broadleaf cattail	Typhaceae	N	OBL
<b>Perennial Forbs</b>				
<i>Achillea lanulosa</i>	Yarrow	Asteraceae	N	FACU
<i>Aconitum columbianum</i>	Monkshood	Helleboraceae	N	FACW
<i>Agastache urticifolia</i>	Nettleleaf giant hyssop	Lamiaceae	N	NL
<i>Agoseris glauca</i>	Pale agoseris	Asteraceae	N	FACU
<i>Anticlea elegans</i>	Death camas	Melanthiaceae	N	FACU
<i>Artemisia frigida</i>	Fringed sage	Asteraceae	N	NL

TABLE 2  
Vascular Plant Species List  
Sutey Ranch Land Exchange

<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin*</u>	<u>Wetland Status**</u>
<i>Aster lanceolatus</i> <i>ssp. hesperius</i>	Siskiyou aster	Asteraceae	N	OBL
<i>Balsamorhiza sagittata</i>	Balsamroot	Asteraceae	N	NL
<i>Cardamine cordifolia</i>	Heartleaf bittercress	Brassicaceae	N	FACW+
<i>Castilleja flava</i>	Yellow Indian paintbrush	Fabaceae	N	
<i>Cirsium arvense</i>	Canada thistle	Asteraceae	I+	FACU
<i>Delphinium barbeyi</i>	Barbey's larkspur	Helleboraceae	N	FAC
<i>Delphinium nuttallianum</i>	Nuttall's larkspur	Helleboraceae	N	NL
<i>Epilobium angustifolium</i>	Fireweed	Onagraceae	N	FACU
<i>Epilobium ciliatum</i>	Northern willowherb	Onagraceae	N	FAC
<i>Eriogonum umbellatum</i>	Wild buckwheat	Polygonaceae	N	NL
<i>Galium septentrionale</i>	Northern bedstraw	Rubiaceae	N	FACU
<i>Geranium richardsonii</i>	Richardson's Geranium	Geraniaceae	N	FACU
<i>Geum macrophyllum</i>	Largeleaf avens	Rosaceae	N	OBL
<i>Heracleum sphondylium</i> <i>ssp. montanum</i>	Cow parsnip	Apiaceae	N	FAC
<i>Heterotheca villosa</i>	Golden aster	Asteraceae	N	NL
<i>Iris missouriensis</i>	Rocky Mountain iris	Iridaceae	N	OBL*
<i>Leucanthemum vulgare</i>	Oxeye daisy	Asteraceae	I+	NL
<i>Lupinus argenteus</i>	Silvery lupine	Fabaceae	N	NL
<i>Opuntia fragilis</i>	Brittle pricklypear	Cactaceae	N	NL
<i>Opuntia polyacantha</i>	Prickly Pear	Cactaceae	N	NL
<i>Osmorhiza depauperata</i>	Sweet cicely	Apiaceae	N	NL
<i>Osmorhiza occidentalis</i>	Sweet anise	Apiaceae	N	NL
<i>Oxytropis lambertii</i>	Purple locoweed	Fabaceae	N	UPL
<i>Packera multilobata</i> ( <i>Senecio</i> )	Lobeleaf groundsel	Asteraceae	N	NL
<i>Penstemon harringtonii</i>	Harrington penstemon	Scrophulariaceae	N	NL
<i>Penstemon osterhoutii</i>	Osterhout's penstemon	Scrophulariaceae	N	NL
<i>Penstemon watsonii</i>	Watson's penstemon	Scrophulariaceae	N	NL
<i>Phlox hoodii</i>	Hood's phlox	Polemoniaceae	N	NL
<i>Plantago major</i>	Common plantain	Plantaginaceae	I	FAC
<i>Ranunculus cymbalaria</i>	Shore buttercup	Ranunculaceae	N	OBL
<i>Rudbeckia ampla</i> ( <i>R. laciniata</i> var. <i>ampla</i> )	Goldenglow	Asteraceae	N	FAC+
<i>Rumex triangulivalvis</i>	Willow-leaved dock	Polygonaceae	N	FACW
<i>Senecio triangularis</i>	Arrowleaf groundsel	Asteraceae	N	OBL
<i>Solidago canadensis</i>	Canada goldenrod	Asteraceae	N	FACU
<i>Sphaeralcea coccinea</i>	Scarlet globemallow	Malvaceae	N	
<i>Taraxacum officinale</i>	Dandelion	Asteraceae	I	FACU+
<i>Trifolium hybridum</i>	Alsike clover	Fabaceae	I	FAC-
<i>Urtica gracilis</i> <i>subsp. gracilis</i>	Stinging nettle	Urticaceae	N	FAC

**TABLE 2**  
**Vascular Plant Species List**  
**Sutey Ranch Land Exchange**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin*</u>	<u>Wetland Status**</u>
<i>Veratrum tenuipetalum</i>	False hellebore	Melanthiaceae	N	FACW
<i>Veronica catenata</i>	Pink water speedwell	Scrophulariaceae	N	OBL
<i>Vicia americana</i>	American vetch	Fabaceae	N	NI
<b>Ferns &amp; Fern Allies</b>				
<i>Equisetum arvense</i>	Field horsetail	Equisetaceae	N	FAC+
<i>Equisetum hyemale</i>	Scouring rush	Equisetaceae	N	FACW
<b>Annual/Biennial Graminoids</b>				
<i>Bromus tectorum</i>	Cheatgrass	Poaceae	I+	NL
<b>Annual/Biennial Forbs</b>				
<i>Carduus acanthoides</i>	Plumeless thistle	Asteraceae	I+	NL
<i>Chaenactis douglasii</i>	Douglas' dustymaiden	Asteraceae	N	NL
<i>Cynoglossum officinale</i>	Houndstongue	Boraginaceae	I+	NL
<i>Descurainia sophia</i>	Flixweed	Brassicaceae	I+	NI
<i>Melilotus officinalis</i>	Yellow sweet clover	Fabaceae	I	FACU
<i>Mimulus guttatus</i>	Common monkey flower	Scrophulariaceae	N	OBL
<i>Thlaspi arvense</i>	Pennycress	Brassicaceae	I	NI
<i>Verbascum thapsus</i>	Great mullein	Scrophulariaceae	I+	NL

\* Origin

N = Native  
 I = Introduced  
 I+ = Colorado State Noxious Weed

\*\* Wetland Status

OBL = Obligate Wetland  
 FACW = Facultative Wetland  
 FAC = Facultative  
 FACU = Facultative Upland  
 UPL = Obligate Upland  
 NO/NL = No Status in this region

**TABLE 3**  
**Summary of Riparian and Wetland Habitats**  
**Sutey Ranch Land Exchange**

<u>Parcel</u>	<u>Location &amp; Description</u>	<u>Estimated Size*</u>
<b>Federal Parcels</b> Parcel A	Riparian/wetland corridor along Thomas Creek; impacted by grazing, channel is incised by several feet in places. The riparian/wetland area mapped is primarily upland riparian habitat; the high level of disturbance has likely caused some areas of wetlands to become weedy uplands.	~ 11.7 acres of riparian habitat, wetlands likely account for less than 25% of this area
	Potato Bill Creek has a 2-3 ft wide channel lined by a narrow band of riparian wetlands. No evidence of heavy grazing here.	~ 1.28 acres along Potato Bill Creek, wetlands and aquatic habitat may account for 50% of this area
	Three tributary wetland drainages to Potato Bill Creek	~ 1.61 acres, 50% wetlands and aquatic habitat
Parcel B	Thomas Creek riparian/wetland; crosses parcel in two locations; heavy grazing impacts	~ 0.14 acre of mostly riparian habitat
	Tributary to Thomas Creek	~ 0.25 acre; approximately 50% wetlands
	Prince Creek has a large number of seeps along this portion of the channel that create a broad wetland zone below the aspen forest	~ 0.36 acre, most of this area is likely wetlands
Parcel B1	Three tributaries to Prince Creek	~ 0.09 acre, primarily wetlands
	Perennial Tributary to Prince Creek; channel is 6-10 feet wide	Less than 0.01 acre of mostly riparian habitat
Parcel C	Salt Creek riparian wetland; alkaline community with abundant sandbar willows	~ 0.23 acre, primarily wetlands

**TABLE 3**  
**Summary of Riparian and Wetland Habitats**  
**Sutey Ranch Land Exchange**

<u>Parcel</u>	<u>Location &amp; Description</u>	<u>Estimated Size*</u>
	with a weedy understory	
	Wetland seep on the floodplain of Salt Creek	~ 0.04 acre of wetlands
Parcel D	Bruce Creek riparian/wetland habitat is partially supported by irrigation return flow	~ 0.87 acre of riparian habitat, wetlands likely account for less than 25% of this area
<b>Non-Federal Parcels</b>		
Parcel 1 (Sutey Ranch)	Riparian/wetland habitat along tributary to Cattle Creek; fed by a spring/seep with little vegetation due to heavy grazing; stream not flowing above the spring/seep	~ 0.18 acre of primarily riparian habitat
	Three seasonal stock ponds	~ 0.16 acre of aquatic habitat when full
Parcel 2 (West Crown Access)	Prince Ditch riparian/wetland habitat	~ 0.63 acre; wetlands are likely less than 10% of this area

\* Estimated size of riparian/wetland habitats is based on waypoints collected with a hand-held GPS unit and examination of aerial photography, which were used to draw the approximate limits in ArcGIS. Wetland areas listed also include the aquatic habitat of stream channels which is often partially vegetated.

**TABLE 4**  
**USFWS Listed Wildlife Species**  
**Potentially Occurring in Eagle, Garfield and Pitkin Counties, Colorado\***

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Potentially Present?</u>	<u>Parcel</u>
<b>Mammals</b>				
Canada lynx	<i>Lynx canadensis</i>	Threatened	No	None
Gunnison's prairie dog	<i>Cynomys gunnisoni</i>	Candidate	No	None
North American wolverine	<i>Gulo gulo luscus</i>	Candidate	No	None
<b>Birds</b>				
Greater sage grouse	<i>Centrocercus urophasianus</i>	Candidate	No	None
Gunnison sage grouse	<i>Centrocercus minimus</i>	Candidate	No	None
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Threatened	No	None
Yellow-billed cuckoo	<i>Coccyzus americanus americanus</i>	Candidate	No	None
<b>Fish</b>				
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	Threatened	No	None
Bonytail	<i>Gila elegans</i>	Endangered	No	None
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	Endangered	No	None
Humpback chub	<i>Gila cypha</i>	Endangered	No	None
Razorback sucker	<i>Xyrauchen texanus</i>	Endangered	No	None
<b>Invertebrates</b>				
Uncompahgre fritillary butterfly	<i>Boloria acrocynema</i>	Endangered	No	None

\*Information obtained from the USFWS Information, Planning, and Conservation System website (<http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action>); accessed January 4, 2012.

**TABLE 5**  
**BLM Colorado State Director's Sensitive Wildlife Species List**

<u>Common Name</u>	<u>Species</u>	<u>Habitat</u>	<u>Potentially Present?</u>	<u>Parcel</u>
<b>Mammals</b>				
Fringed myotis	<i>Myotis thysanodes</i>	Primarily at middle elevations of 1,200-2,150 m in desert, grassland, and woodland habitats; has been recorded at 2,850 m in spruce-fir habitat in New Mexico	No	None
Spotted bat	<i>Euderma maculatum</i>	Open habitat for foraging, rocky cliffs for roosting.	No	None
Townsend's big-eared bat	<i>Plecotus townsendii</i>	Semidesert shrublands, piñon-juniper woodlands and open montane forests below 2,900 m (9,500 ft). Requires caves or abandoned mines for roost sites during all seasons and stages of its life cycle, and its distribution is strongly correlated with the availability of these features.	Yes	Potentially forages over all the Parcels and could roost in the Lady Belle Mine on Federal Parcel D.
Big free-tailed bat	<i>Nyctinomops macrotis</i>	Roost in crevices on cliff faces or in buildings. Little known of their natural history. No occurrences for Pitkin County.	No	None
White-tailed prairie dog	<i>Cynomys leucurus</i>	In Colorado often encountered in desert scrublands; most records are below 2,600m (8,500 ft).	No	None
Kit fox	<i>Vulpes macrotis</i>	Found in desert scrublands in extreme Western Colorado.	No	None
Desert bighorn sheep	<i>Ovis canadensis nelsoni</i>	Found in desert lands near Colorado National Monument.	No	None
<b>Birds</b>				
American white pelican (BLM)	<i>Pelecanus erythrorhynchos</i>	Large bodies of water (i.e. lakes, reservoirs)	No	None

**TABLE 5**  
**BLM Colorado State Director's Sensitive Wildlife Species List**

<u>Common Name</u>	<u>Species</u>	<u>Habitat</u>	<u>Potentially Present?</u>	<u>Parcel</u>
Northern goshawk	<i>Accipiter gentilis</i>	Predominantly uses ponderosa pine, but will also use Douglas fir, various pines and aspens.	Yes	Potentially forage on all the Parcels. Potentially suitable nesting habitat is present on Federal Parcel A.
Ferruginous hawk	<i>Buteo regalis</i>	Flat and rolling terrain in grassland or shrubsteppe regions.	No	None
Bald eagle	<i>Haliaeetus leucocephalus</i>	Nest in mature cottonwoods or pines near water.	No	None
Greater sage grouse	<i>Centrocercus urophasianus</i>	Associated with sagebrush ecosystems.	Yes	Non-Federal Parcel 1 -Sutey Ranch. Potentially suitable habitat is present but it has been greatly modified and the understory is not capable of supporting nesting or food for fledglings.
Gunnison sage-grouse	<i>Centrocercus minimus</i>	Tall dense stands of sagebrush near wet meadows with tall grasses for hiding; occurring primarily in SW & W CO, but also including Saguache & S Chaffee County	No	None
White-faced ibis	<i>Plegadis chihi</i>	Feed in wet hay meadows and flooded agricultural croplands, favor tall emergent for nesting.	No	None
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	Breed in sandy areas, dry salt beds, reservoir shores.	No	None
Long-billed curlew	<i>Numenius americanus</i>	Breed on shortgrass prairies	No	None
Burrowing owl	<i>Athene cunicularia</i>	Open grasslands with available small mammal burrows.	No	None

**TABLE 5**  
**BLM Colorado State Director's Sensitive Wildlife Species List**

<u>Common Name</u>	<u>Species</u>	<u>Habitat</u>	<u>Potentially Present?</u>	<u>Parcel</u>
Brewer's sparrow	<i>Spizella breweri</i>	Sagebrush and other shrubs species with similar stand characteristics including greasewood, hopsage, and saltbush.	Yes	Non-Federal Parcel 1 -Sutey Ranch. The habitat is small and fragmented but likely capable of supporting a small number of territories.
<b>Amphibians/Reptiles</b>				
Great Basin spadefoot	<i>Spea intermontana</i>	Found in western Colorado at elevations below 2,135 m (7,000 ft).	Yes	Federal Parcels A,B,B1 and Non-Federal Parcel 1 - Sutey Ranch and Non-Federal Parcel 2 - West Crown Access
Canyon treefrog	<i>Hyla arenicolor</i>	Found in extreme western and south eastern Colorado.	No	None
Northern leopard frog	<i>Rana pipiens</i>	Wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches.	Yes	Federal Parcels A and B and Non-Federal Parcel 2 - West Crown Access. Potentially present in creeks and ditches.
Longnose leopard lizard	<i>Gambelia wislizenii</i>	Occurs in west-central Colorado and extreme southwestern Colorado at elevations below 1,585 m (5,200 ft).	No	None
Milk snake	<i>Lampropeltis triangulum taylori</i>	Occurs throughout most of eastern, southern, and western Colorado at elevations primarily below 2,400 m (8,000 ft)	Yes	All parcels in areas below 2,432 m (8,000 feet).
Midget faded rattlesnake	<i>Crotalus oreganus concolor</i>	Occurs in desert and semidesert habitats. Records for Colorado restricted to Garfield, Mesa, and San Miguel Counties.	No	None

**TABLE 5**  
**BLM Colorado State Director's Sensitive Wildlife Species List**

<u>Common Name</u>	<u>Species</u>	<u>Habitat</u>	<u>Potentially Present?</u>	<u>Parcel</u>
<b>Fish</b>				
Bluehead sucker	<i>Catostamus discobolus</i>	Variety of areas from headwater streams to large rivers.	Yes	Federal Parcels A and B and Non-Federal Parcel 2 - West Crown Access. Potentially present in creeks and ditches.
Flannelmouth sucker	<i>Catostomus latipinnis</i>	Restricted to larger streams and rivers.	No	None
Roundtail chub	<i>Gila robusta</i>	Restricted to larger streams and rivers.	No	None
Colorado River cutthroat trout	<i>Oncorhynchus clarki pleuriticus</i>	Clear, cold water, naturally-fluctuating flows, low levels of fine sediment in channel bottoms, well-distributed pools, stable stream banks, and abundant stream cover.	No	None
<b>Insects</b>				
Great Basin silverspot	<i>Speyeria nokomiis apacheana</i>	Spring fed and/or subirrigated wetlands at low (7,500 ft. or less) elevation	No	None

**TABLE 6**  
**Location of Raptors and Potential Nest Structures**  
**Federal Parcel A and Non-Federal Parcel 1**  
**Sutey Ranch Land Exchange**

<u>Raptor Species</u>	<u>Parcel</u>	<u>Nest located</u>	<u>Tree Species</u>	<u>UTM Coordinates<sup>#</sup></u>
Red-tailed hawk	Non-Fed 1	N	Juniper	0309721 E 4369164 N*
Unknown Nest	Non-Fed 1	Y	Pinyon pine	0309828 E 4369087 N
Red-tailed hawk	Fed A	N	-	-
Great horned owl	Fed A	N	-	-
Coopers hawk	Fed A	N	-	-
Unknown Nest	Fed A	Y	Spruce	0317143 E 4353930 N
Unknown Nest	Fed A	Y	Spruce	031794 E 4355500 N *

#All UTM Coordinates are in NAD83, zone 13 S

\*General nest location

7.0 Photos



**Photo 1.** Ute ladies tresses orchid (*Spiranthes diluvialis*) from a known population in Carbondale, Colorado. (8/16/11).



**Photo 2.** Harrington penstemon are abundant on Parcel A. (6/28/11).



**Photo 3.** Harrington penstemon from Horse Mountain on Parcel C. (6/27/11).



**Photo 4.** Harrington penstemon from Parcel 2 (West Crown Access). (6/29/11).



**Photo 5.** The Thomas Creek riparian corridor on Parcel A has been impacted by cattle grazing and the channel is incised by several feet in places. (6/28/11).



**Photo 6.** Wetland habitat along Potato Bill Creek on Parcel A.



**Photo 7.** Heavy grazing has impacted the riparian and wetland habitats along Thomas Creek on Parcel B. (8/16/11).



**Photo 8.** Low vegetation cover has resulted from heavy cattle grazing along Thomas Creek on Parcel B.



**Photo 9.** Riparian/wetland habitat along Prince Creek on Parcel B. (8/16/11).



**Photo 10.** Perennial tributary to Prince Creek on Parcel B1. (8/16/11).



**Photo 11.** Riparian and wetland habitats along Salt Creek on Parcel C. (8/15/11).



**Photo 12.** Bruce Creek riparian habitat on Parcel D. (8/15/11).



**Photo 13.** Ephemeral tributary to Cattle Creek on the Sutey Ranch parcel. (7/1/11).



**Photo 14.** Nearly all of the herbaceous vegetation has been eliminated from the spring/seep discharge area and it has been heavily trampled. (7/1/11).

## 6.0 References

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