

Appendix H
Biological Resources

This page intentionally left blank.

Appendix H. Biological Resources

The Biological Resources Appendix contains a summary of Federally listed or Threatened and Endangered (TES) species for Pueblo County, a summary of State-listed Species for Pueblo County, and a description of Wetland Inventory and Delineation. In addition, this Appendix includes key correspondence between the Colorado Department of Transportation (CDOT) and the US Fish and Wildlife Service (USFWS) with jurisdiction over resources that may be affected by the US 50 Planning and Environmental Linkages (PEL) Study.

H.1 Summary of Federally listed Species for Pueblo County

According to the USFWS, three species listed as Threatened under the Endangered Species Act (1973, as amended), have the potential to occur in Pueblo County (see May 11, 2011, letter from Susan C. Linner, US Department of Interior, Fish and Wildlife Service, to Jeff Peterson, CDOT, regarding TES species, wetlands, and migratory birds at the end of this Appendix). These species are Canada lynx (*Lynx canadensis*), Greenback cutthroat trout (*Oncorhynchus clarki stomias*), and Mexican spotted owl (*Strix occidentalis lucida*). In addition, two other species were noted in the above-referenced letter: the mountain plover (*Charadrius montanus*), which is proposed for listing, and the Arkansas darter (*Etheostoma cragini*), a candidate species.

Based on habitat requirements, none of the species listed as threatened have the potential to occur in the PEL area (see **Table H-1**). All of these species are associated with mountain, or in the case of the Mexican spotted owl, mountain and woodland canyon habitats. The mountain plover is a species of the eastern plains and shorgrass prairie. Based on habitat within the vicinity of the Preferred Alternative, mountain plover has the potential to occur in the area. However, this species has not been observed in this area of Pueblo County (Kingery, 1998).

The Arkansas darter is associated with clear, slow-moving streams with sandy bottoms and rooted aquatic vegetation (CDOW, 2011a). In Colorado, this species has only been found in tributaries of the Arkansas River near springs; specifically in Fountain Creek south of Colorado Springs; and in Rush Creek and Big Sandy Creek of the Arkansas River farther east.

H.1.1 Analysis summary

Table H-1. Potential for Federally Listed Species to Occur in the US 50 Project Area

Species		Status ¹	Potential to Occur in PEL Project Area ²	Potential to be Affected by Project
Common Name	Scientific Name			
Birds				
Mexican spotted owl	<i>Strix occidentalis lucida</i>	T	No; habitat of rocky canyon with tall conifers (Kingery 1998)	None
Mountain Plover	<i>Charadrius montanus</i>	PT	Possible ³ based on shortgrass prairie habitat in the project area, may be affected by the project	More analysis is required to assess the potential for this species to occur in the project area

Species		Status ¹	Potential to Occur in PEL Project Area ²	Potential to be Affected by Project
Common Name	Scientific Name			
Fishes				
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	T	No; requires mountain stream habitat; restricted to headwaters within the Arkansas River system (CDOW, 2011b)	None
Arkansas darter	<i>Etheostoma cragini</i>	C	Unlikely; nearest known location is in Fountain Creek south of Colorado Springs and Rush Creek and Big Sandy Creek in eastern Colorado (CDOW, 2011a). No locations cited in project area	Unlikely
Mammals				
Canada lynx	<i>Lynx canadensis</i>	T	No; habitat of subalpine forest; no movement corridors in the vicinity of the project area (Fitzgerald, <i>et al.</i> , 1994)	None

¹Status: T = Threatened; E = Endangered, and PT = Proposed Threatened, and C = Candidate

²Categories are: Known to Occur; Likely; Possible; Unlikely; and No

² See **Section H.2.2** under state-listed species for an in-depth analysis of mountain plover potential to occur in the project area.

H.1.2 Conclusions

It is unlikely that any of the Federally listed species noted herein would be affected by the proposed project. Similarly, the project would be unlikely to affect the Arkansas darter. Based on habitat, the mountain plover has the potential to occur in the area, but because of the restricted area of the project footprint, the predicted amount of habitat loss from construction would likely be small. Moreover, based on known distributions, the potential for this species to occur in the project area would be low. However, the occurrence of this species in the project area should be evaluated further at the next phase of the project analysis.

H.1.3 References cited

- Colorado Division of Wildlife. 2011a. Wildlife Arkansas Darter Page. Natural Diversity Information Source. URL: <http://ndis.nrel.colostate.edu/wildlifesp.aspx?SpCode=010617>.
- . 2011b. Cutthroat Trout. URL: <http://wildlife.state.state.co.us/Research/Aquatic/CutthroatTrout/Pages/CutthroatTrout.aspx>
- Fitzgerald, J. P., C. A. Meaney, and D. M. Armstrong. 1994. Mammals of Colorado. Niwot, Colo.: Univ. Press of Colo. 467 pp.
- Kingery, H. Ed., 1998. Colorado Breeding Bird Atlas. Published by Colorado Bird Atlas Partnership and Colorado Division of Wildlife. 636 pp.



H.2 Summary of State-listed Species for Pueblo County

H.2.1 Introduction

Habitats along US 50 (including the project area) have been degraded by past grazing practices and now by urban development. This degradation results in decreased habitat suitability for wildlife for many state-listed species. The area is also transitional from shortgrass prairie to foothill and mountain habitats farther west, which appears to diminish the distribution of many state-listed species. The general distribution and habitat, and especially that for Colorado, are provided for each of the species listed by the State as threatened, endangered, or as species of concern for Pueblo County. A statement based on this information is provided as to likelihood of occurrence in the PEL area. The list follows the Colorado Division of Wildlife (CDOW) sequence of species groups of amphibians, birds, fish, mammals, and reptiles.

H.2.2 Species analysis

Couch's spadefoot (*Scaphiopus couchi*)

Status

Special concern

Habitat

Couch's spadefoots do well in extremely xeric (dry) conditions in areas with sandy, well-drained soils often occupied by creosote bush and mesquite trees. This species also occurs in shortgrass prairie, grasslands, cultivated lands, and along desert roadways during summer thunderstorms.

Distribution

In the southwestern United States, Couch's spadefoots range from southeastern California through southern Arizona and southern New Mexico. They continue into all of Texas, except the extreme north and east, and northward to southwestern Oklahoma. In Mexico, this frog is distributed along eastern Baja California and on the western and eastern coasts of mainland Mexico south to Nayarit and southern San Luis Potosi. In Colorado, Couch's spadefoot is known only from Otero County and is restricted to areas below 4,500 feet elevation.

Occurrence in PEL project area

Unlikely to occur in the PEL area based on known distribution records of the CDOW.

Sources

Arizona – Sonora Desert Museum, URL: http://desertmuseum.org/books/nhsd_spadefoot.php;
Colorado Division of Wildlife Natural Diversity Information Source



Plains leopard frog (*Rana blairi*)

Status

Special concern

Habitat

Plains leopard frogs occur in a variety of temporary and permanent aquatic habitats, including streams, rivers, ponds, lakes, ditches, and marshes (Degenhardt *et al.* 1996). They are often found great distances from water and for that reason they sometimes are known as “meadow frogs” (Wright and Wright 1949). Mass movements away from breeding ponds are sometimes undertaken by adults and young after summer rains (Fitch, 1958). *Rana blairi* is better adapted to dry conditions than the closely related *Rana pipiens* (Gillis 1975, 1979) and often uses shallow, muddy waters (Scott and Jennings, 1985; Stebbins 1985).

Distribution

Rana blairi ranges westward from Indiana to southern South Dakota and eastern Colorado, and southward to Texas; isolated populations occur in southern Illinois, New Mexico, and Arizona (Stebbins, 1985; Brown, 1992; Conant and Collins, 1998). In Colorado, the range of the plains leopard frog generally is complementary to that of the northern leopard frog (*Rana pipiens*) (Hammerson, 1999). *Rana blairi* is found at elevations below 6,000 ft (1,850 m) in the Arkansas River drainage in southeastern Colorado and in the Republican River drainage of northeastern Colorado (Hammerson, 1999).

Occurrence in PEL project area

Possible, based on habitat and distribution records.

Source

Colorado Natural Heritage Program (CNHP), Colorado State University, 2003.

Burrowing owl (*Athene cunicularia*)

Status

Threatened

Habitat

The burrowing owl is associated with the Great Plains and shortgrass prairie, shrublands, deserts of the western states, and prairies of the Canadian provinces. Owls nest primarily in rodent burrows and often favor prairie dog colonies and mounds for perching, and close-cropped vegetation that affords a view of potential predators. More than 70 percent of the population is associated with shortgrass prairie or areas with low vegetation. Burrowing owls feed on insects, small rodents, and small songbirds, and often feed on insects during the day and hunt for small mammals at night.

Distribution

Burrowing owls breed from south-central British Columbia eastward to Saskatchewan and south through most of western US, as well as in Mexico and Latin America. Northern populations migrate



to warmer regions in fall. In Colorado, burrowing owls are widespread in the eastern plains but have been extirpated from the urban corridor along the Front Range. This species has been documented in Pueblo County, with confirmed sightings in numerous areas east of I-25. Probable distributions according to Kingery (1998), however, occur west of I-25.

Occurrence in PEL project area

Possible, based on habitat and distribution records.

Source

Kingery, 1998

Bald eagle (*Haliaeetus leucocephalus*)

Status

Special concern

Habitat

Bald eagles are seldom seen far from water, such as large rivers, lakes, and seacoasts. In Colorado, they are often found near reservoirs and along major rivers (South Platte, Arkansas, Rio Grande, Yampa, and Colorado) during both the summer and winter. During the breeding season bald eagles defend territories and most frequently can be found nesting in large cottonwood trees. In the winter bald eagles communally roost in large trees for warmth and protection.

Distribution

Historically, bald eagles occurred throughout North America from Alaska to Newfoundland, and from Florida to California. During the early-mid 20th Century, bald eagle populations declined in size due to pesticides (primarily DDT), human disturbance, and loss of trees for nesting habitat. Consequently, the bald eagle was placed on the Endangered Species List. With the ban of the pesticide DDT and protection of nesting habitat, bald eagle populations have significantly recovered. In Colorado, bald eagles are found throughout much of the state during both the summer and winter. They can often be seen near large reservoirs and along major rivers (South Platte, Arkansas, Rio Grande, Yampa, and Colorado). Bald eagles occur along the main stem of the Arkansas River and Pueblo Reservoir.

Occurrence in PEL project area

No nest sites occur in the vicinity of the project area and no wintering habitat, such as roost trees, occurs in the PEL project area. However, bald eagles occur along the Arkansas River and Pueblo Reservoir. The project area is within the foraging area and a prey base exists for birds that occur along the Arkansas River and Pueblo Reservoir.

Source

Colorado Division of Wildlife, URL:

<http://wildlife.state.co.us/WildlifeSpecies/Profiles/Birds/Pages/baldeagle.aspx>



Long-billed curlew (*Numenius americanus*)

Status: Special concern

Habitat

Breeding Long-billed curlews are most often associated with shortgrass prairie, grazed mixed grass prairie, or combinations of short grasses, sage, and cactus, often on gently rolling terrain (Johnsgard, 1978). They are considered an indicator species for healthy native grasslands (Kingery, 1998).

Favored nest sites are damp, grassy hollows in prairie vegetation or long slopes near lakes or streams (Johnsgard, 1978). Nests are frequently located near ponds, playas, or lakes (Kingery, 1998). The presence of water may influence initiation of nesting the first year and site fidelity may induce them to return even if the nearby water has dried up (Kingery, 1998). The nest is simply a slight hollow lined with a varying amount of grasses or weeds (Johnsgard, 1978). At times the birds nest in loose colonies and frequently place their nests beside dried cow dung, presumably for better concealment (Johnsgard, 1978). Long-billed curlews sometimes nest in wheat fields or fallow fields (Andrews and Righter, 1992).

Distribution

The current range of the Long-billed curlew has contracted from historic times (Kingery, 1998). The historical range extended from Canada to Illinois, northern California, and northern Texas (Kingery, 1998). The current breeding range includes southwest North Dakota, western South Dakota, western Nebraska (the sandhills area), eastern Colorado, and southwestern Kansas, northwestern Oklahoma, the western panhandle of Texas, and eastern New Mexico (Johnsgard, 1978). In Colorado, the heaviest concentration extends from Baca County west in Las Animas County to the Purgatoire River. A second population breeds north of the Arkansas River from eastern El Paso and Pueblo counties to Kansas. A small contingent apparently nests on the Western Slope (Kingery, 1998).

Occurrence in PEL project area

Unlikely; although the PEL is located in shortgrass prairie habitat with cacti (*Opuntia* spp.), no nesting habitat (damp, grassy hollows within shortgrass prairie) is present. Moreover, the shortgrass prairie in the PEL project area is not considered to be optimal native prairie, which diminishes the potential for Long-billed curlews to occur in this area.

Source

CNHP, 2003

Mountain Plover (*Charadrius montanus*)

Status

Special concern

Habitat

Breeding Mountain Plovers occupy open habitats with low-growing vegetation, especially shortgrass prairie characterized by the presence of blue grama grass and buffalo grass (Graul, 1975; Graul and Webster, 1976; Knopf and Miller, 1994). In grasslands where vegetation grows taller than

approximately 3 inches in height, Mountain Plovers use intensively grazed areas (Graul and Webster, 1976; Knopf, 1996c), prairie dog towns (Knowles *et al.*, 1982; Knowles and Knowles, 1984, Olson and Edge, 1985; Shackford, 1991), and fallow or recently plowed agricultural fields (Shackford, 1991; Shackford *et al.*, 1999). On their wintering grounds in California, Mountain Plovers use plowed or burned agricultural fields and heavily grazed annual grasslands (Knopf and Rupert, 1995). In Texas, wintering Mountain Plovers use coastal prairies, alkaline flats, plowed fields, and Bermuda grass fields (Oberholser, 1974).

Distribution

Mountain Plovers breed in parts of Montana, Wyoming, Colorado, New Mexico, and in adjacent portions of Utah, Oklahoma, and Texas (Knopf, 1996b). An isolated breeding population occurs in the Davis Mountains of western Texas (Knopf, 1996b). In late summer, birds form flocks and disperse widely across the western and southern Great Plains before migrating to their wintering range (Knopf, 1996b). Mountain Plovers winter in California, southern Arizona, southern Texas, and Mexico (see refs. in Knopf, 1996b). In Colorado, the greatest numbers of breeding Mountain Plovers occur in Weld County (Graul and Webster, 1976). The breeding range of this species has undergone a dramatic long-term contraction, both in Colorado (Andrews and Righter, 1992) and throughout the western Great Plains (Graul and Webster, 1976).

Occurrence in PEL project area

Possible, based on habitat and general distribution. However, no populations or sightings have been recorded for the project area; known sightings occur east of Pueblo in less developed, rural areas.

Source

CNHP, 2003

Ferruginous hawk (*Buteo regalis*)

Status

Special concern

Habitat

The Ferruginous hawk prefers open grasslands, shrublands, and deserts (Bechard and Schmutz, 1995). Before the elimination of bison (*Bison bison*) in the west, its nests were often partially constructed of bison bones and wool (Bechard and Schmutz, 1995). Breeding pairs nest in isolated trees, on rock outcrops, structures such as windmills and power poles, or on the ground. Winter populations concentrate around prairie dog towns (Andrews and Righter, 1992).

Distribution

Global Range—This species winters in the southern United States and the northern interior parts of Mexico (Bechard and Schmutz, 1995).

State Range—About 1,200 birds winter in Colorado (Johnsgard, 1990), comprising about 20 percent of the total winter population in the United States (Andrews and Righter, 1992). This

species is a fairly common winter resident, but is a rare to uncommon summer resident on the eastern plains (Andrews and Righter, 1992).

Occurrence in PEL project area

Possible, as a prey base (for example, prairie dogs) occurs in the area. However, Kingery (1998) does not indicate specific distribution records for the PEL area.

Source

CNHP, 2003

Southern redbelly dace (*Phoxinus erythrogaster*)

Status

Endangered

Habitat

Southern redbelly dace prefer permanent small headwater streams of clear unpolluted water. Many of these streams are less than 5-ft wide and have moderate to high gradients with well developed pools and riffles. Good streams for this species occur in forested areas that are well shaded. They are found in pools with some flow and an abundance of hiding places such as undercut banks, down trees, and logs in the stream. This species relies heavily on the presence of these habitat features to sustain a large population in a given stream. This species is found throughout much of the state but is absent in Northwest Ohio, where the small streams are slow moving and have very few riffles.

Source

Ohio Department of Natural Resources, URL:

http://www.dnr.state.oh.us/Home/species_a_to_z/SpeciesGuideIndex/southernredbellydace

Distribution

The Southern redbelly dace's range is generally discontinuous in the Great Lakes Region (Lake Erie and Lake Michigan drainages) including southwestern Pennsylvania, Ohio, southeastern Michigan, and mid-Wisconsin. It is most widespread in the upper Mississippi River basin of Wisconsin and Minnesota; the Missouri and Ohio River drainages; the Tennessee River drainage (Alabama), and White-Arkansas river drainage (Arkansas and Oklahoma). Isolated populations exist on the former Mississippi Embayment (Mississippi), in the Kansas River system (Kansas), and in the upper-Arkansas River drainage (Colorado and New Mexico) (Page and Burr, 1991). These isolated populations suggest that this species was once more widespread across its range and may have been fragmented by degraded stream conditions. This species' evolutionary distribution was centered in the Ozarks, from which it radiated out to form a much wider distribution historically (Phillips *et al.*, 1982). In Colorado, this species was observed in the Arkansas River near Thatcher Ave. and Pueblo Blvd. in 1981, but not since that time (CNHP database, CDOW 1995 Eastern Colorado Plains Fish Database).



Occurrence in PEL project area

Distribution and range indicate that this species could occur in the PEL project area. However, habitat requirements of clear, unpolluted streams and undercut banks make it unlikely that it would occur in the streams that cross the PEL area.

Source

Michigan Natural Features Inventory

Swift fox (*Vulpes velox*)

Status

Special concern

Habitat

Swift foxes inhabit shortgrass, midgrass, and mixed-grass prairies, where they prefer well-drained, friable soils (Bee *et al.*, 1981; Nowak, 1999). Dens are excavated on slopes, ridges, or flat areas that afford good views of surrounding lands (Fitzgerald *et al.*, 1994).

Distribution

Swift foxes formerly occurred throughout the Great Plains from Canada to Texas. Populations were severely depleted from the 1830s through the 1950s. Swift fox numbers remain very low throughout the northern portion of the species' former range. In Colorado, swift foxes inhabit the eastern third of the state, where they live in low densities on areas of native shortgrass prairie (Fitzgerald *et al.*, 1994).

Occurrence in PEL project area

Possible, based on habitat and distribution, although the species is more likely to be associated with more rural, open shortgrass prairie east of Pueblo and not in an urbanized area.

Sources

CNHP, 2003; Survey of Critical Biological Resources of Pueblo County, Colorado.

Townsend's big-eared bat (*Plecotus townsendii pallescens*)

Status

Special concern

Habitat

Townsend's big-eared bats occur in a wide range of habitats including semi-desert shrublands, pinyon-juniper woodlands, and dry coniferous forest (Fitzgerald *et al.*, 1994). Because they naturally roost (and hibernate) in caves, their presence is strongly correlated with the availability of caves or cave-like roosting sites (Pierson *et al.*, 1999). Population densities are highest in areas with substantial surface exposures of cavity-forming rock (for example, limestone, sandstone, gypsum, or volcanic) and in old mining areas (Pierson *et al.*, 1999). Hibernacula generally are characterized by stable low



temperatures and moderate airflow (CDOW, 1984) and they are thought to be a population limiting factor for Townsend's big-eared bats (Fitzgerald *et al.*, 1994).

Distribution

The two western subspecies of *C. townsendii* are widely distributed throughout western North America; in several northwestern states there are extensive zones of intergradation of the two subspecies (Pierson *et al.*, 1999). *C. t. pallescens* occurs throughout Colorado, except on the eastern plains, and is found in mines, caves, and human-made, cave-like structures at elevations up to 9,500 ft (2,930 m) (CDOW, 1984). Only 11 maternity roosts and 30 hibernacula have been documented in Colorado (Pierson *et al.*, 1999). Almost all known colonies in Colorado are very small (< 30 bats); known historical records of big-eared bats in Colorado include only about 350 individuals (Pierson *et al.*, 1999). Available evidence suggests that dramatic declines in the sizes of Colorado colonies of big-eared bats may have occurred historically (Pierson *et al.*, 1999).

Occurrence in PEL project area

Unlikely to occur in the project area, as no cave or cave-like structures are known to occur along this area of US 50.

Source

CNHP, 2003

Black-tailed prairie dog (*Cynomys ludovicianus*)

Status

Special concern

Habitat

Black-tailed prairie dog occupies shortgrass and mixed-grass prairie habitats with well-drained, friable soils that permit the construction of complex burrow systems. The shrubs and herbaceous vegetation within colonies of blacktailed prairie dogs tend to be shorter than those located within colonies of Gunnison's and white-tailed prairie dogs because black-tailed prairie dogs clip tall plants (without eating them) to increase the detectability of approaching aerial and terrestrial predators (King, 1955; Pizzimenti, 1975; Fitzgerald *et al.*, 1994; Hoogland, 1995).

Distribution

Of the five species of prairie dogs in North America, *Cynomys ludovicianus* is the most widely distributed (Hoogland, 1996). Today the species occurs in isolated patches throughout its historical range, which included much of the Great Plains from southern Saskatchewan (Canada) to northern Mexico (Hoogland, 1996). In Colorado, black-tailed prairie dogs occupy suitable habitat included in the eastern 40 percent of the state, inhabiting shortgrass prairie and other areas of low-growing vegetation (Fitzgerald *et al.*, 1994). Throughout its range, the species occurs in much lower densities and in smaller colonies than it did historically (Fitzgerald *et al.*, 1994; Hoogland, 1996).

Occurrence in PEL project area

Known to occur in several areas on the north side of US 50, especially west of Pueblo Blvd.

Source

CNHP, 2003

Wolverine (*Gulo gulo*)

Status

Endangered

Habitat

Wolverines have a circumpolar distribution in the Northern Hemisphere and occur in tundra, taiga, boreal, and alpine biomes. These relatively unproductive habitats are areas where daily low temperatures can fall below freezing most of the year, growing seasons are short, and snow persists into the summer months. The wolverine occupies a unique niche by accessing scarce food resources available in these environments, despite the presence of deep snow-cover, and caching these resources in cold, rocky areas that inhibit competition from insects, bacteria, and other scavengers.

In Colorado, historical and recent reports show nearly all wolverines are from higher elevation, alpine areas that occur in an island-like fashion. Until recently, the last confirmed wolverine sighting in Colorado was in 1919. Occasional reports of wolverine sightings were investigated, but wolverine were never officially documented. In spring 2009, researchers with the Greater Yellowstone Wolverine Program tracked a wolverine from Grand Teton National Park south into north central Colorado. The wolverine was the first confirmed in the state in 90 years.

Distribution

Wolverines are animals of high alpine environments in both North America and Eurasia. In North America, they occupy western mountains in Alaska and Canada; the southern portion of their current range extends into the contiguous United States, including Washington, Idaho, Montana, and Wyoming.

Occurrence in PEL project area

Extremely unlikely, as mountain habitat does not occur in the PEL project area.

Source

Colorado Division of Wildlife, URL:

<http://wildlife.state.co.us/WildlifeSpecies/SpeciesOfConcern/Mammals/Pages/Wolverine.aspx>

Massasauga (*Sistrurus catenatus*)

Status

Special concern

Habitat

Over much of its range, massasauga inhabits moist habitats such as swamps, marshes, wet meadows, bogs, and associated wetlands (Wright and Wright, 1957; Ernst, 1992). In the drier, southwestern portions of its range, this small rattlesnake occupies river bottoms, dry grasslands, and shortgrass



prairies with sandy soil (Gloyd, 1955; Degenhardt *et al.*, 1996; Hobert, 1997; Hammerson, 1999). Use of relatively cool, moist rodent burrows for shelter enables massasaugas to exploit these arid habitats without excessive loss of moisture (Ernst, 1992).

Distribution

Extirpated over most of its historical range in the United States (Mackessy, 1998), the massasauga now occurs in disjunct populations that extend obliquely to the southwest from the Great Lakes region of southern Ontario and New York through the central and Great Plains states to Texas, southern New Mexico, southeastern Arizona, and Mexico (Minton, 1983). Over most of its range the species occurs below 5,000 ft (1,542 m) in elevation (Minton, 1983). In Colorado, the species occurs at elevations below 5,500 ft (1,696 m) in the southeastern quarter of the state (Maslin, 1965; Hammerson, 1999). The greatest concentration of these snakes is found in southern Lincoln County (Hobert, 1997; Mackessy, 1998).

Occurrence in PEL project area

Possible, based on habitat requirements of river bottoms and the distribution in the southeastern one-third of Colorado.

Source

CNHP, 2003

Triploid Colorado checkered whiptail (*Cnemidophorus neotesselatus*)

Status

Special concern

Habitat

Cnemidophorus neotesselatus occupies arid grasslands, rocky canyons, rocky hillsides, shrubby areas, and open savannahs associated with the Arkansas, Huerfano, Apishapa, and Purgatoire rivers and their tributaries (Walker *et al.*, 1997a; Walker *et al.*, 1997b).

Distribution

Cnemidophorus neotesselatus occurs only in southeastern Colorado, where it is patchily distributed in Fremont, Pueblo, Otero, and Las Animas counties (Hammerson, 1999). Several sites near Higbee, Colorado (Otero County) constitute the only area where coexistence between diploid and triploid stages in any complex of parthenogenetic *Cnemidophorus* is known to occur (Walker *et al.*, 1995; Walker and Cordes, 1998).

Occurrence in PEL project area

Possible, based on habitat and distribution records, although populations are patchy.

Source

CNHP, 2003

Texas horned lizard (*Phrynosoma cornutum*)

Status

Special concern

Habitat

Texas horned lizards occur in arid and semiarid habitats in open areas with sparse plant cover. Because horned lizards dig for hibernation, nesting, and insulation purposes, they commonly are associated with loose sand or loamy soils. Colorado populations are confined to the extreme southeastern part of the state and in the southeastern portions of Pueblo County south of SH 10 (Hammersmith, 1999; and CNHP database).

Distribution

Texas horned lizards range from the south-central United States to northern Mexico, throughout much of Texas, Oklahoma, Kansas, and New Mexico.

Occurrence in PEL project area

Unlikely, as sandy soil conditions for this species are not present in the project area and no records occur in Pueblo County.

Source

Texas Parks and Wildlife Department, URL:
<http://www.tpwd.state.tx.us/huntwild/wild/species/thlizard/>

H.2.3 Analysis summary

Table H-2. Potential for State-Listed Species to Occur in the US 50 Project Area

Species		Status ¹	Potential to Occur in PEL Project Area ²	Potential to be Affected by Project
Common Name	Scientific Name			
Amphibians				
Plains Leopard Frog	<i>Rana blairi</i>	SC	Possible with habitat present and distribution records	Possible effects from work in restructuring conveyances of creeks; requires additional assessment
Couch's Spadefoot (a type of frog that prefers dry conditions)	<i>Scaphiopus couchi</i>	SC	Unlikely; known distribution only from Otero County, Colorado; limited to elevations below 4500 feet	No
Birds				
Burrowing Owl	<i>Athene cunicularia</i>	T	Possible with prairie dog colonies and shortgrass prairie habitat	Most habitat avoided by construction footprint; requires additional assessment



US 50 West PEL Study: Swallows Rd. to Baltimore Ave.

Species		Status ¹	Potential to Occur in PEL Project Area ²	Potential to be Affected by Project
Common Name	Scientific Name			
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	Possible occurrence of foraging birds because of a prairie dog prey base; no nest sites or roost sites occur in the project area	Unlikely to be affected by construction; requires additional assessment
Long-billed Curlew	<i>Numenius americanus</i>	SC	Unlikely; no damp grassy hollows or optimal shortgrass prairie; no records exist West of I-25	No
Mountain Plover	<i>Charadrius montanus</i>	SC	Possible based on shortgrass prairie along US 50; no populations reported in this area	Most habitat avoided by construction footprint; requires additional assessment
Ferruginous Hawk	<i>Buteo regalis</i>	SC	Possible with prey base and nesting habitat in the area	Most habitat avoided by construction footprint; requires additional assessment
Fish				
Southern Redbelly Dace (a type of fish that prefers permanent small headwater streams of clear unpolluted water)	<i>Phoxinus erythrogaster</i>	E	Possible, but requires habitat of clear, unpolluted water; previous records from Arkansas River near Pueblo Blvd. and Thatcher Ave., south of PEL area	Possible effects from work in restructuring drainage system conveyances; more information is needed on water quality of project streams
Mammals				
Swift Fox	<i>Vulpes velox</i>	SC	Possible, based on habitat and prey species (prairie dogs) occurring in the project area	Most shortgrass prairie habitat avoided by construction footprint; requires additional assessment
Townsend's Big-eared Bat	<i>Plecotus townsendii pallescens</i>	SC	Unlikely, based on the lack of cave or cave-like structures in the project area	No
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	SC	Occurs in PEL area	Most shortgrass prairie habitat avoided by construction footprint; requires additional assessment to assess impact level
Wolverine	<i>Gulo gulo</i>	E	Unlikely, as no upper subalpine habitat occurs in the PEL area	No
Reptiles				
Massasauga (a type of small rattlesnake)	<i>Sistrurus catenatus</i>	SC	Possible based on habitat and distribution	Habitat along the drainages at North Pueblo Blvd could be affected; requires additional analysis
Triploid Colorado Checkered Whiptail	<i>Cnemidophorus neotesselatus</i>	SC	Possible based on habitat and distribution; observed near Florence, Colorado,	Most habitat avoided by construction footprint, requires additional

Species		Status ¹	Potential to Occur in PEL Project Area ²	Potential to be Affected by Project
Common Name	Scientific Name			
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	SC	and Turkey Creek Unlikely, as sandy soil habitat is not present and no known distributions occur west of I-25 in Pueblo County	assessment No

¹Status: SC = Species of Concern; E = State Endangered, and T = State Threatened

²Categories are: Known to Occur; Likely; Possible; and Unlikely

H.2.4 Conclusions

The Preferred Alternative minimizes the amount of construction that would occur outside the current CDOT right-of-way (ROW), which minimizes the amount of potential effects on State-listed species. However, a slight encroachment would occur into shortgrass prairie and prairie dog habitat on the north side of US 50 west of North Pueblo Blvd. Construction at this location has the potential to affect prairie dogs, associated shortgrass prairie species such as burrowing owl and swift fox, as well as the more ubiquitous species such as ferruginous hawk. Work within the intersection of US 50 and W. Pueblo Blvd. has the potential to affect aquatic/riparian associated species, including the southern redbelly dace and amphibian species. In all cases, more first-hand data are required to determine if such species occur in the area slated for construction and if they would be affected by the project.

H.2.5 References cited in CNHP, 2003

- Andrews, R., and R. Righter. 1992. Colorado birds: a reference to their distribution and habitat. Denver Mus. Nat. Hist., Denver. 442 pp.
- Bechard, M.J. and J.K. Schmutz. 1995. Ferruginous Hawk (*Buteo regalis*). No. 172 in A. Poole and F. Gill editors. The Birds of North America. The Academy of Natural Sciences, Philadelphia and the American Ornithologist's Union, Washington DC.
- Bee, J.W., G.E. Glass, R.S. Hoffmann, and R.R. Patterson. 1981. Mammals in Kansas. Univ. Kansas Mus. Nat. Hist., Public Educ. Ser. No. 7. 300 pp.
- Brown, L.E. 1992. *Rana blairi*. Cat. Amer. Amphib. and Reptiles 536:1-6.
- Colorado Division of Wildlife. 1984. The bats of Colorado: shadows in the night. Colo. Div. Wildl., Denver, Colo. 22 pp.
- Conant, R., and J.T. Collins. 1998. A field guide to reptiles and amphibians: eastern and central North America, third edition, expanded. Boston: Houghton Mifflin. 616 pp.
- Degenhardt, W.G., C.W. Painter, and A.H. Price. 1996. Amphibians and reptiles of New Mexico. Albuquerque: Univ. New Mexico Press. 431 pp.
- Ernst, C.H. 1992. Venomous reptiles of North America. Washington, D.C.: Smithsonian Inst. Press. 236 pp.



- Fitch, H. S. 1958. Home ranges, territories, and seasonal movements of vertebrates of the Natural History Reservation. Univ. Kansas Publ. Mus. Nat. Hist. 11:63-326.
- Fitzgerald, J.P., C.A. Meaney, and D.M. Armstrong. 1994. Mammals of Colorado. Niwot, Colo.: Univ. Press of Colo. 467 pp.
- Gillis, J.E. 1975. Characterization of a hybridizing complex of leopard frogs. Ph.D. dissertation, Colo. St. Univ., Fort Collins. 136 pp.
- Gillis, J.E. 1979. Adaptive differences in the water economies of two species of leopard frogs from eastern Colorado (Amphibia, Anura, Ranidae). J. Herpetol. 13:445-450.
- Gloyd, H.K. 1955. A review of the massasaugas, *Sistrurus catenatus*, of the southwestern United States (Serpentes: Crotalidae). Bull. Chicago Acad. Sci. 10:83-98.
- Graul, W.D. 1975. Breeding biology of the Mountain Plover. Wilson Bull. 87:6-31.
- Graul, W.D., and L.E. Webster. 1976. Breeding status of the Mountain Plover. Condor 78:265-267.
- Hammerson, G.A. 1999. Amphibians and reptiles in Colorado, second edition. Niwot, Colo.: Univ. Press of Colo. and Colo. Div. Wildl. 484 pp.
- Hobert, J.P. 1997. The massasauga rattlesnake (*Sistrurus catenatus*) in Colorado. M.A. thesis, Univ. No. Colo., Greeley. 154 pp.
- Hoogland, J.L. 1995. The black-tailed prairie dog. Chicago: Univ. Chicago Press. 557 pp.
- Hoogland, J.L. 1996. *Cynomys ludovicianus*. Mammalian Species 535:1-10.
- Johnsgard, P.A. 1979. Birds of the Great Plains: breeding species and their distribution. Lincoln: Univ. Nebr. Press. 539 pp.
- Johnsgard, P.A. 1990. Hawks, eagles and falcons of North America. Smithsonian Institution Press, Washington DC. xvi + 403 pp.
- King, J.A. 1955. Social behavior, social organization, and population dynamics in a black-tailed prairie dog town in the Black Hills of South Dakota. Contributions from the Laboratory of Vertebrate Biology, University of Michigan 67:1-123.
- Kingery, H. Ed., 1998. Colorado Breeding Bird Atlas. Published by Colorado Bird Atlas Partnership and Colorado Division of Wildlife. 636pp.
- Knopf, F.L., and B.J. Miller. 1994. *Charadrius montanus* - montane, grassland, or bare-ground plover? Auk 111:504-506.
- Knopf, F.L., and J.R. Rupert. 1995. Habits and habitats of Mountain Plovers in California. Condor 97:743-751.
- Knopf, F.L., and J.R. Rupert. 1996. Reproduction and movements of Mountain Plovers breeding in Colorado. Wilson Bull. 108:28-35.



- Knowles, C.J., and P.R. Knowles. 1984. Additional records of Mountain Plovers using prairie dog towns in Montana. *Prairie Nat.* 16:183-186.
- Knowles, C.J., C.J. Stoner, and S.P. Gieb. 1982. Selective use of black-tailed prairie dog towns by Mountain Plovers. *Condor* 84:71-74.
- Mackessy, S.P. 1998. A survey of the herpetofauna of southeastern Colorado with a focus on the current status of two candidates for protected species status: The massasauga rattlesnake and the Texas horned lizard. Final report to the Colorado Division of Wildlife. Unpublished report.
- Maslin, T.P. 1965. The status of the rattlesnake *Sistrurus catenatus* (Crotalidae) in Colorado. *Southwest. Nat.* 10:31-34.
- Minton, S.A. 1983. *Sistrurus catenatus*. *Cat. Amer. Amphib. and Reptiles* 332:1-2.
- Nowak, R.M., Ed. 1999. Walker's mammals of the world, sixth edition. Baltimore: Johns Hopkins Univ. Press. 1936 pp.
- Oberholser, H.C. 1974. The bird life of Texas (2 vols.) Austin: Univ. Texas Press. 1069 pp.
- Olson, S.L., and D. Edge. 1985. Nest site selection by Mountain Plovers in northcentral Montana. *J. Range Manage.* 38:280-282.
- Pierson, E.D., M.C. Wackenhut, J.S. Altenbach, P. Bradley, P. Call, D. L. Genter, C.E. Harris, B.L. Keller, B. Lengus, L. Lewis, B. Luce, K. W. Navo, J. M. Perkins, S. Smith, and L. Welch. 1999. Species conservation assessment and strategy for Townsend's big-eared bat (*Corynorhinus townsendii townsendii* and *Corynorhinus townsendii pallescens*). Idaho Conservation Effort, Idaho Dept. Fish and Game, Boise, Idaho. 63 pp.
- Pizzimenti, J.J. 1975. Evolution of the prairie dog genus *Cynomys*. *Occasional papers of the Museum of Natural History, University of Kansas* 39:1-73.
- Scott, N.J., Jr., and R.D. Jennings. 1985. The tadpoles of five species of New Mexican leopard frogs. *Occas. Pap. Mus. Southwest. Biol.* 3:1-21.
- Shackford, J.S. 1991. Breeding ecology of the Mountain Plover in Oklahoma. *Bull. Oklahoma Ornithol. Soc.* 24:9-13.
- Shackford, J.S., D.M. Leslie, Jr., and W.D. Harden. 1999. Range-wide use of cultivated fields by Mountain Plovers during the breeding season. *J. Field Ornithol.* 70:114-120.
- Stebbins, R.C. 1985. A field guide to western reptiles and amphibians, second edition. Boston: Houghton Mifflin. 336 pp.
- Walker, J.M., H.L. Taylor, and J.E. Cordes. 1995. Parthenogenetic *Cnemidophorus tessellatus* complex at Higbee, Colorado: resolution of 30 years of controversy. *Copeia* 1995:650-658.
- Walker, J.M., J.E. Cordes, and H.L. Taylor. 1997a. Parthenogenetic *Cnemidophorus tessellatus* complex (Sauria: Teiidae): a neotype for diploid *C. tessellatus* (Say, 1823), redescription of the taxon, and description of a new triploid species. *Herpetologica* 53:233-259.



US 50 West PEL Study: Swallows Rd. to Baltimore Ave.

- Walker, J.M., H.L. Taylor, J.E. Cordes, and M.A. Paulissen. 1997b. Distributional relationships and community assemblages of three members of the parthenogenetic *Cnemidophorus tesselatus* complex and *C. sexlineatus* (Squamata: Teiidae) at Higbee, Otero County, Colorado. *Herpetol. Nat. Hist.* 5:165-174.
- Wright, A.H., and A.A. Wright. 1949. Handbook of frogs and toads of the United States and Canada, third edition. Ithaca: Comstock Publ. Co. 640 pp.
- Wright, A.H., and A.A. Wright. 1957. Handbook of snakes of the United States and Canada. Volume 2. Ithaca: Cornell Univ. Press. 1105 pp.

H.3 Wetland Inventory and Delineation

H.3.1 Methods

Wetlands were identified and delineated for the US 50 PEL Study corridor to determine the possible effects from project alternatives and for subsequent site-specific projects. The work entailed identifying likely wetland areas from aerial photographic interpretation and inspecting these areas in the field using US Army Corps of Engineers (USACE) determination methods (USACE, 1987). The objectives are to delineate wetlands based on regulatory criteria, determine jurisdictional status under Section 404 of the Clean Water Act (CWA), and provide mapping for use in the PEL process of developing alternatives. In this manner, wetland delineation is used in the early stages of PEL planning, with the intent of avoiding wetlands to the extent possible. When avoidance is not possible, the objective is to minimize effects from the Preferred Alternative to the extent possible. Avoiding and minimizing impacts on wetlands are requirements of Section 404 of the CWA, specifically Section b(1) Guidelines, as well as guidance from CDOT's NEPA Manual (2008).

Potential wetland areas were initially identified from aerial photography of the project area along US 50. Areas of interest were refined based on the potential area of influence of project alternatives under consideration. A field reconnaissance was conducted on April 27, 2011, and May 2, 2011, to identify areas meeting USACE (1987) definitions of wetlands, and areas where field data are required for delineation. Data for delineations included noting:

- Hydrophilic plant species, their relative abundance (estimates of foliar cover using cover class % ranges), and wetland indicator status (Reed *et al.*, 1996)
- Hydrologic indications—surface water and depth, depth to free water, depth to saturated soil, evidence of past flows, debris lines, drift lines, and sediment deposits
- Soil indications of hydric conditions—reducing conditions such as gleyed or low-chroma, high organic streaking, or evidence of redox such as mottles, and wetland soils classes (for example, Histosol soil unit)

Routine determinations were conducted to identify wetlands in the vicinity of the proposed alternatives that were under study for the Pueblo Blvd. intersection (see **Chapter 2** in the PEL report). Comprehensive determinations were then conducted in areas with potential to be directly affected by the alternatives. Data were taken at a number of points to delineate the wetland unit. These data included recording plant species and estimating percentage classes of foliar cover; recording evidence of hydrology, including surface flow features; and observing soil profile characteristics, including colors using Munsell Soil Color Charts (Macbeth 1992 revised) and field textures. A photograph was taken of the area in general and each data point was recorded on a hand-held GPS (Garmin Oregon 300; accuracy to ~ 3 m).

The boundaries of the wetlands were located by GPS and data points were used for GIS mapping. **Chapter 3, Figure 3–1**, in the PEL report provides the location of wetlands mapped for Williams Creek and Wild Horse Dry Creek. Photographs of wetlands in the area of US 50 and the Pueblo Blvd. intersection are provided in **Figure H-1 through Figure H-7**.



Figure H-1. Wetlands in Williams Creek Area EB US 50 at N. Pueblo Blvd. – Far Away



Figure H-2. Wetlands and Adjacent Shrubs in Williams Creek Area EB US 50 at N. Pueblo Blvd.



Figure H-3. Box Culvert and Ponding in Williams Creek Area EB US 50 at N. Pueblo Blvd.



Figure H-4. Wetlands in Williams Creek Area WB US 50 at N. Pueblo Blvd. -Far Away



Figure H-5. Wetlands and Adjacent Shrubs in Williams Creek Area WB US 50 at N. Pueblo Blvd.



Figure H-6. Wetlands Channel in Williams Creek Area WB US 50 at N. Pueblo Blvd.



Figure H-7. Wetlands in Williams Creek Area WB US 50 at N. Pueblo Blvd. – Near

H.3.2 Wetland inventory

Pueblo Blvd. – US 50 Interchange Area

Two drainages in the area of the Pueblo Blvd. and US 50 interchange support wetlands: Williams Creek and Wild Horse Dry Creek.

Williams Creek

Williams Creek bisects the area of the Pueblo Blvd. interchange, extending from the northwest to southeast under both eastbound and westbound lanes of US 50, as well as Pueblo Blvd. The creek was flowing at the time of field inspections and ranged in width from approximately 2 to 40-ft wide, and 0.5 to 3-ft in depth, depending on the topographic characteristics of the floodplain and restrictions to the flow. The wider pools occur immediately south of westbound US 50 and immediately north of eastbound US 50.

Vegetation that marks the riparian nature of Williams Creek consists of tamarisk and American three-square. Plant species along the stream channel and the adjacent riparian corridor are listed in **Table H-3**.

Table H-3. List of Plant Species that Occur along Williams Creek

Species		Cover Class (%)	Wetland Indicator Code ¹
Common Name	Scientific Name		
Tamarix	<i>Tamarisk ramosissima</i>	5 - 25	FACW
American three square	<i>Scirpus americanus</i>	25-50	OBL
Cattail	<i>Typha latifolia</i>	<5	OBL
Spikerush	<i>Eleocharis palustris</i>	<5	OBL
Manna grass	<i>Glyceria striata</i>	<5	OBL
Sedge	<i>Carex stenophylla</i> (?)	<5	OBL
Wiregrass	<i>Juncus arcticus</i>	<5	FACW
Golden currant	<i>Ribes aureum</i>	<5	NI
Saltgrass	<i>Distichlis spicata</i>	<5	FAC
Water hemlock	<i>Cicuta douglasii</i>	<5	FACW
Smooth brome	<i>Bromus inermis</i>	<5	FACU
Canada thistle	<i>Breea arvensis</i>	<5	FACU
Crown vetch	<i>Vicia villosa</i>	<5	UPL
Prairie or common sunflower	<i>Helianthus spp.</i>	<5	UPL
Curly dock	<i>Rumex crispus</i>	<5	FACW
Ragweed	<i>Ambrosia spp.</i>	<5	FAC - FACU

¹Wetland Indicator Code from NRCS (2011): OBL-Obligate Wetland; FACW-Facultative Wetland; FAC-Facultative; FACU-Facultative Upland; UPL-Obligate Upland; and NI-No indicator

The floodplain and flow channel of the creek contained surface water, and saturation extended into the lower terrace of the floodplain. The channel width is highly variable, ranging from approximately 2 to 40 ft, and depths ranged from approximately 0.5 to 3 ft. Wider pools occur on the north and south sides of box culvert under the eastbound US 50 lanes, and near the ROW fence line on the north side of the westbound US 50 lanes. In these areas, water depths increase to 1 to 2 ft. The wider areas appear to be in response to constrictions imposed by vegetation (for example, tamarisk), or to the box culvert. Most of this reach of Williams Creek, however, contains a narrow channel with depths of 0.5 to 1.0 ft. High flows are indicated by debris that has been deposited up to 4 to 5 ft. above the low-flow elevation.

Soils reflect saturated conditions with reduced status of iron and corresponding low chroma (10 YR 5/2 grayish brown, 7.5 YR 5/2 brown) or, conversely, containing reddish yellow mottles (7.5 YR 6/8) in a brown matrix (7.5 YR 5/4) or reddish soils (2.5 YR 5/6) within the stream, indicating iron staining. Soils of the terraces do not contain such saturation indications, or are of unconsolidated gravelly material sand with lower clay content, having been reworked during high flows.

Wild Horse Dry Creek

Wild Horse Dry Creek generally parallels Williams Creek and extends diagonally from northwest to southeast at the eastern edge of the US 50 and Pueblo Blvd. interchange. The vegetation is similar to that described for Williams Creek; however, differences include scattered occurrences of squirreltail (*Elymus elymoides*, FACU) and bouncing bet (*Saponaria officinalis*, FACU) and a higher component of weedy species including Canada thistle. Off-road vehicle trails extend into the drainage system on the south side of US 50 and extend under the bridge.

Soils contain a higher concentration of alkali (2.5YR 6/4, light yellowish brown) than Williams Creek, but were saturated because flows of the 4 to 8 ft-wide channel were 2 to 3-in deep at the time

of field observations. This drainage is slightly more incised than that of Williams Creek and no low-flow terrace occurs adjacent to the channel. Thus, upland conditions are prevalent on either side of the creek on an elevated terrace. As observed at Williams Creek, debris lines indicate substantial floods, occurring at approximately 4 ft above the low-flow channel.

Wetland/Waters of the US (WOUS) status

Based on the data acquired during the field investigation, wetlands were identified for all of the areas along Williams Creek and Wild Horse Dry Creek. The width of these wetlands varies depending on the width of the floodplain and the area of the floodplain that is saturated for at least part of the growing season. The wetlands also occur as WOUS (being connected to the Arkansas River) and are jurisdictional to Section 404 of the CWA.

Turkey Creek

General observations were made of Turkey Creek to determine if wetlands are supported along this drainage system. No flows were observed, and evidence of flows to support wetlands was not indicated. Thus, Turkey Creek occurs as a dry wash with steep banks 20 to 25-ft high. Vegetation consists mostly of weedy species (for example, Russian thistle). Several cottonwood trees occur approximately 600–800 ft north of US 50, and one contains a raptor nest. No birds were observed in this vicinity during the field observations.

Wetland/WOUS status

Turkey Creek is jurisdictional to Section 404 of the CWA (being connected to the Arkansas River). However, no wetlands were observed in this drainage near US 50.

H.3.3 Wildlife observations within wetland areas

Species or their evidence observed along Williams Creek and Wild Horse Dry Creek included magpies and four magpie nests, raven, raccoon tracks, desert cottontail, and minnows. Prairie dog towns occur north of westbound US 50, and north and west of Pueblo Blvd. Much of the dog town appears to be deserted, but several prairie dogs were observed in this area. In addition to the raptor nest site north of US 50 at Turkey Creek, a turkey vulture also was observed soaring on the south of US 50. Swallow (cliff or barn swallow) nests were observed beneath all of the bridges at the US 50 and Pueblo Blvd. interchange. No activity, however, was observed and the nests may be inactive. The status of these nests should be confirmed at the site-specific stages of the NEPA analysis.

H.3.4 Literature cited

- Macbeth. 1992. Munsell Soil Color Charts. Div. of Kollmorgen Instruments, Corp. Newburg, NY.
- Reed, P.B., Jr., R. Theriot, W. Sipple, and N. Melvin. 1996. 1996 National List of Vascular Plant Species That Occur in Wetlands. USFWS. National Wetlands Inventory. St. Petersburg, FL.
- US Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. USCOE Waterways Experiment Station, Vicksburg, MS.
- USDA Natural Resources Conservation Service (NRCS). 2011. Wetland Indicator Status, Indicator categories. URL: <http://plants.usda.gov/wetinfo.html>. Accessed August 29, 2011.

Insert USFWS PDF file of letter regarding Threatened, Endangered Species



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
P.O. Box 25486, DFC (65412)
Denver, Colorado 80225-0486



IN REPLY REFER TO:
ES/CO: T&E/Species List
TAILS: 65412-2011-SL-0466

MAY 11 2011

Jeff Peterson
Colorado Department of Transportation
4201 East Arkansas Avenue, Shumate Building
Denver, Colorado 80222

Dear Mr. Peterson:

Based on the authority conferred to the U.S. Fish and Wildlife Service (Service) by the Fish and Wildlife Act of 1956 (916 U.S.C. 742(a)-754); Fish and Wildlife Coordination Act (FWCA - 16 U.S.C. 661-667(e)); National Environmental Policy Act of 1969 (NEPA - 42 U.S.C. 4321-4347); Department of Transportation Act (49 U.S.C. 1653(f)), and; Endangered Species Act of 1973, as amended (ESA - 50 CFR §402.14), as well as multiple Executive Orders, policies and guidelines, and interrelated statutes to ensure the conservation and enhancement of fish and wildlife resources (e.g., Migratory Bird Treaty Act (MBTA - 16 U.S.C. 703), and Bald and Golden Eagle Protection Act (BGEPA - 16 U.S.C. 668)), the Service reviewed your April 19, 2011, request for information on the Service's trust resources in the vicinity of the **US50 Swallows Road to Baltimore Avenue Planning and Environmental Linkage (PEL) study in Pueblo, Pueblo County, Colorado.**

Threatened and Endangered Species

Following is a list of Federal endangered, threatened, proposed and candidate species for Pueblo County, which may be used as a basis for determining additional listed species potentially present in the project area. While other species could occur at or visit the project area, endangered or threatened species most likely to be affected include:

- Mammals: Canada lynx (*Lynx canadensis*), Threatened
- Fishes: Greenback cutthroat trout (*Oncorhynchus clarki stomias*), threatened
- Birds: Mexican Spotted Owl (*Strix occidentalis lucida*), Threatened
Mountain Plover (*Charadrius montanus*), Proposed Threatened

The Service also is interested in the protection of species which are candidates for official listing as threatened or endangered (Federal Register, Vol. 61, No. 40, February 28, 1996). While these species presently have no legal protection under the Act, it is within the spirit of this Act to consider project impacts to potentially sensitive candidate species. It is the

intention of the Service to protect these species before human-related activities adversely impact their habitat to a degree that they would need to be listed and, therefore, protected under the Act. Additionally, we wish to make you aware of the presence of Federal candidates should any be proposed or listed prior to the time that all Federal actions related to the project are completed. If any candidate species will be unavoidably impacted, appropriate mitigation should be proposed and discussed with this office.

Fishes : Arkansas darter, *Etheostoma cragini*

Migratory Birds

Under the MBTA construction activities in grassland, wetland, stream, and woodland habitats, and those that occur on bridges (e.g., which may affect swallow nests on bridge girders) that would otherwise result in the take of migratory birds, eggs, young, and/or active nests should be avoided. Although the provisions of MBTA are applicable year-round, most migratory bird nesting activity in eastern Colorado occurs during the period of April 1 to August 31. However, some migratory birds are known to nest outside of the aforementioned primary nesting season period. For example, raptors can be expected to nest in woodland habitats during February 1 through July 15. If the proposed construction project is planned to occur during the primary nesting season or at any other time which may result in the take of nesting migratory birds, the Service recommends that the project proponent (or construction contractor) arrange to have a qualified biologist conduct a field survey of the affected habitats and structures to determine the absence or presence of nesting migratory birds. Surveys should be conducted during the nesting season. In some cases, such as on bridges or other similar structures, nesting can be prevented until construction is complete. It is further recommended that the results of field surveys for nesting birds, along with information regarding the qualifications of the biologist(s) performing the surveys, be thoroughly documented and that such documentation be maintained on file by the project proponent (and/or construction contractor) for potential review by the Service (if requested) until such time as construction on the proposed project has been completed. The Service's Colorado Field Office should be contacted immediately for further guidance if a field survey identifies the existence of one or more active bird nests that cannot be avoided by the planned construction activities. Adherence to these guidelines will help avoid the unnecessary take of migratory birds and the possible need for law enforcement action.

Wetlands

FWCA provides the basic authority for the Service's involvement in evaluating impacts to fish and wildlife "whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified **for any purpose whatever**...by any department or agency of the United States, or by any public or private agency under Federal permit or license," including water crossings and wetland impacts, whether or not those wetlands are under the jurisdiction of the U.S. Army Corps of Engineers [16 U.S.C. 661(1), emphasis added]. It requires that fish and wildlife resources "receive equal consideration...to other

project features...through the effectual and harmonious planning, development, maintenance, and coordination of wildlife conservation and rehabilitation,” and requires Federal agencies to consult with the Service during the planning process to help “prevent the loss of or damage to such resources as well as providing for the development and improvement thereof” (16 U.S.C. 661 *et seq*). Full consideration is to be given to Service recommendations.

If the Service can be of further assistance, please contact Alison Deans Michael of my staff at 303 236-4758.

Sincerely,



Susan C. Linner
Colorado Field Supervisor

cc: Michael

Ref: Alison\H:\My Documents\CDOT 2007+\Region 2\US50 Pueblo PEL spplist.docx