

April 1, 2021

Liisa Schmoele
U.S. Fish and Wildlife Service
Colorado Field Office
Denver Federal Center (MS 65412)
PO Box 25486
Denver, Colorado 80225

Re: Threatened and Endangered Species Habitat Assessment—515 Struthers Loop, El Paso County, Colorado

Dear Ms. Schmoele,

ERO Resources Corporation (ERO), on behalf of Aaron Atwood, is requesting technical assistance regarding threatened, endangered, and candidate (T&E) species for residential home construction in El Paso County, Colorado.

Background

Aaron Atwood retained ERO to conduct a habitat evaluation for federally listed T&E species on a 5-acre private parcel in El Paso County, Colorado (project area; Figure 1). Mr. Atwood would like to build one or more residential homes on the project area. The northern edge of the project area contains a small portion of an ephemeral tributary to Jackson Creek (Figure 2). No construction would occur within the drainage or adjacent upland scrub-shrub vegetation communities. Because no fill would occur within the drainage, the project would not require U.S. Army Corps of Engineers authorization under one or more Nationwide Permits under the Clean Water Act. No other potential wetlands or waters of the U.S. occur within the project area. The project area is approximately 0.5 mile from designated critical habitat for Preble's meadow jumping mouse (*Zapus hudsonius preblei* or Preble's), a species listed as threatened under the Endangered Species Act (ESA). All impacts on Preble's habitat have been avoided.

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Ron Beane, ERO senior wildlife biologist, visited the site on February 9, 2021 and evaluated the project area for T&E species, streambeds, and open water (2021 site visit). The project must comply with the ESA by ensuring that the project would not have significant adverse effects on federally listed T&E species. Preble's is a species listed as threatened under the ESA that has been captured in nearby areas along Jackson Creek.

General Description of the Project Area

Project Location

The project area is a 5.04-acre parcel in Section 36, Township 11 South, Range 67 West of the 6th Principal Meridian in El Paso County, Colorado (Figure 1). The UTM coordinates for the

approximate center of the project area are NAD 83: Zone 13N; 514155mE, 4322766mN. The longitude/latitude of the project area is 104.836405°W/ 39.053861°N. The elevation of the project area is approximately 6,895 feet above sea level.

Site Description and Ecological Features of the Project Area

The project area is bounded by developed 2- to 5-acre lots on all sides (Figures 2 and 3). An ephemeral tributary to Jackson Creek is located on the very northwest boundary of the project area. This drainage is severely fragmented and heavily altered by human activities since the original listing of Preble's. The total length of the tributary is approximately 1 mile and the drainage is effectually blocked from connecting to any contiguous habitat by Baptist Road on the north and Struthers Road on the west (Figure 3). The drainage is piped under Struthers Road through a 150-foot-long, 3-foot-diameter concrete culvert. The drainage has been further fragmented by the Leather Chaps Drive road culvert and construction of several small ponds (Figure 3). Approximately 15 residential or commercial buildings have been constructed within 300 feet of the drainage center, with several structures located less than 100 feet from the drainage (Figure 3).

The project area consists primarily of pastureland dominated by upland nonnative and native grassland species such as western wheat (*Pascopyrum smithii*), blue grama (*Bouteloua gracilis*), and yucca (*Yucca glauca*) (Photo 1). The southern portion of the project area is dominated by the introduced grass smooth brome (*Bromus inermis*) (Photo 2), and noxious weeds such as diffuse knapweed (*Centaurea diffusa*) and common mullein (*Verbascum thapsus*) are scattered throughout the uplands, particularly in the northern portion of the project area (Photo 3). A small grove of Gambel oak (*Quercus gambelii*) occurs along the drainage on the northern border of the project area (Photos 3 and 4), which provides cover for mule deer (*Odocoileus hemionus*) and cottontail rabbits (*Sylvilagus* sp.), but very little cover for small rodents (Photo 5). As described above, an ephemeral tributary to Jackson Creek occurs along the northern border of the project area and generally runs from east to west. This tributary is shown as an intermittent drainage on U.S. Geological Survey topographic maps. The drainage is entirely dominated by cattails (*Typha* sp.) and the area north of the project area boundary is severely disturbed (Photos 4 and 6).

Best Management Practices (BMPs)

The following BMPs are incorporated as part of the project:

- The Jackson Creek tributary, Gambel oak grove, and a 20-foot buffer from the edge of the oaks (Figure 2) will be conserved in its natural vegetative state. This would result in a minimum 100-foot buffer from the stream center.
- Weed management to control noxious weeds will be implemented in the drainage buffer.

- The construction contractor will protect the Jackson Creek tributary from siltation using silt fence and other measures as necessary along the southern edge of the vegetation buffer.
- The construction contractor will repair all damage to erosion-control measures in the construction area due to rain, hail, and snow storms.
- All temporarily disturbed areas within the vegetation buffer will be reseeded with native seed mix.

Voluntary Conservation Measures

The following conservation measures consistent with U.S. Fish and Wildlife Service (Service) recommendations for emergency flood response activities (Service 2013) have been incorporated into the project design to avoid and minimize adverse impacts on Preble's.

1. Preconstruction design avoids riparian and upland habitats within the Jackson Creek tributary drainage and vegetation buffer. A vegetation buffer has been established from the drainage.
2. The number and footprint of access routes, staging areas, and work areas will be outside the vegetation buffer.
3. The project avoids fragmenting linear riparian corridors.
4. BMPs will be implemented to limit construction-related disturbance, such as soil compaction, erosion, and sedimentation, and to prevent the spread of invasive weeds:
 - a. Soil compaction: Access routes for workers, vehicles, and machinery will be outside of the vegetation buffer.
 - b. Weed control: Vehicles and equipment will be washed and inspected before entering or leaving the project area so that they are free of noxious weed seeds and plant parts.

Endangered Species Act Compliance

During the 2021 site visit, ERO assessed the project area for the presence of suitable habitat for federally listed T&E species protected under the ESA. Table 1 lists federally listed species likely to be present in El Paso County or that could be affected by projects in El Paso County. The table includes the listing status and if potential habitat is present in the project area. The project area does not fall within Service habitat or survey guidelines for the majority of the species listed by the Service as potentially occurring in El Paso County (Table 1).

Table 1. Federally threatened, endangered, and candidate species potentially found in El Paso County or potentially affected by projects in El Paso County.

Common Name	Scientific Name	Status*	Habitat	Habitat Present
Mammals				
Preble's meadow jumping mouse	<i>Zapus hudsonius preblei</i>	T	Shrub riparian/wet meadows	Occupied habitat approximately 0.5 mile downstream on Jackson Creek
Birds				
Eastern black rail	<i>Laterallus jamaicensis ssp. jamaicensis</i>	T	Wetland-dependent bird requiring dense overhead cover and moist to saturated soils within or near very shallow water	Dense cattails not likely to be occupied and will not be disturbed
Piping plover**	<i>Charadrius melodus</i>	T	Sandy lakeshore beaches and river sandbars	No habitat and no depletions
Whooping crane**	<i>Grus americana</i>	E	Mudflats around reservoirs and in agricultural areas	No habitat and no depletions
Fish				
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	T	Gravelly headwater streams or mountain lakes	No
Pallid sturgeon**	<i>Scaphirhynchus albus</i>	E	Large, turbid, free-flowing rivers with a strong current and gravel or sandy substrate	No habitat and no depletions
Plants				
Ute ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	T	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 7,800 feet in elevation	No, habitat on-site not conducive to establishment of this species; tributary and floodway will be avoided
Western prairie fringed orchid**	<i>Platanthera praeclara</i>	T	Moist to wet prairies and meadows	No habitat and no depletions

*T = Federally Threatened Species, E = Federally Endangered Species.

**Water depletions in the South Platte River may affect the species or critical habitat in downstream reaches in other counties or states.

Source: Service 2021.

There is no likelihood for the proposed project to affect the greenback cutthroat trout because the project area is outside the range of the species and because of the lack of habitat in the project area. Although the ESA does not apply to take of plants on private lands, ERO evaluated impacts of the project on ULTO and found the project area lacked suitable habitat. The piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid are species that are affected by continued or ongoing water depletions to the Platte River system. Jackson Creek and its tributaries drain into the Arkansas River basin and no depletions to the South Platte River are expected. In addition, the project is being designed to avoid all wetlands and endangered species habitat and no federal permit or funding is being requested. Because this project has no federal nexus, no ESA Section 7 depletions consultation is required.

Because the project area falls within survey guidelines for Preble's and because the distribution of black rail is uncertain in central Colorado, ERO assessed the project area for suitable habitat for these species.

Eastern Black Rail

Species Background, Habitat Requirements, and Distribution

The eastern black rail was listed as a threatened species on October 8, 2020, under the ESA (see Federal Register Vol. 85, No. 196:63764-63803) by the Service. The eastern black rail ranges throughout central and eastern North America and south through the Caribbean and Brazil. This species has been documented along the Arkansas River drainage in southeastern Colorado and the Republican River in east-central Colorado. Threats include habitat fragmentation and conversion resulting in the loss of wetland habitats, sea level rise and tidal flooding, land management practices (e.g., incompatible fire management practices, grazing, and haying/mowing and other mechanical treatment activities), and increasing storm intensity and frequency. There are no exact counts of eastern black rail populations at the present time, so analysis units based on habitat have been identified across the United States. Colorado is included in the Great Plains analysis unit (Service 2019).

The eastern black rail is dependent on wetland and marsh habitat that contains a mix of wet, saturated, and some dry edges around the periphery. The subspecies requires dense overhead cover and soils that are moist to saturated (occasionally dry) and interspersed with or adjacent to very shallow water (Service 2019).

Potential Habitat in the Project Area

The project area contains herbaceous emergent wetland habitat north of Saint Vrain Creek that would be considered suitable for this species. However, the project area does not meet the preferred habitat conditions according to CPW's habitat scorecard for the eastern black rail (CPW 2020). Additionally, the Service currently considers the Arkansas River drainage as the breeding range for eastern black rails in Colorado and does not include the South Platte River drainage within the black rail's breeding range. Based on current knowledge of the black rail's distribution, there would be no effects on the species, and no further action is necessary.

Preble's Meadow Jumping Mouse

Species Background

Preble's was listed as a federally threatened subspecies under the ESA in May 1998 (63 Federal Register (FR) 26517 (May 13, 1998)). On July 9, 2008, the Service issued a final ruling to amend the listing for Preble's. The amended final rule states that Preble's is a distinct subspecies. Between 2008 and 2011, the statutes of Preble's and critical habitat for the species was evaluated through several rulemaking processes and court rulings. In 2011, the

Service confirmed the status of Preble's in Colorado and reinstated the listing of Preble's in Wyoming as a federally threatened species.

Several petitions to delist Preble's have been filed with the Service since 2011. In 2018, two petitions to delist Preble's were filed and 90-day findings on the petitions found that one of the two petitions presented substantial scientific or commercial information indicating that the petitioned action may be warranted (83 FR 16819 (April 17, 2018)). On August 10, 2018, the Service announced the initiation of a 12-month status review for Preble's (83 FR 39771). Until the completion of this 12-month finding, Preble's remains protected under the ESA.

Habitat

Along Colorado's Front Range, Preble's is found below 7,600 feet in elevation, generally in lowlands with medium to high moisture along permanent or intermittent streams. Preble's prefers riparian areas featuring well-developed, multistoried, and horizontal cover with an understory of grasses and forbs (Bakeman 1997; Bakeman and Deans 1997). Preble's typically inhabits areas characterized by plains riparian vegetation with relatively undisturbed grassland and a water source nearby (Armstrong et al. 2011). High-use areas for Preble's tend to be close to creeks and are associated with a high percentage of shrubs, grasses, and woody debris (Trainor et al. 2007). Previous studies have suggested that Preble's may have a wider ecological tolerance than previously thought and that the requirement for diverse vegetation and well-developed cover can be met under a variety of circumstances (Meaney et al. 1997). Radio-tracking studies conducted by the Colorado Parks and Wildlife (CPW) have documented Preble's using upland habitat adjacent to wetlands and riparian areas (Shenk and Sivert 1999). Additional research by CPW has suggested that habitat quality for Preble's can be predicted by the amount of shrub cover available at a site (White and Shenk 2000).

Critical Habitat

In June 2003, the Service designated critical Preble's habitat (50 Code of Federal Regulations 17). Critical habitat consists of specific areas that are designated for T&E species recovery (50 FR 78430). In addition to various other drainages in Wyoming and Colorado, critical habitat is designated along Monument Creek in portions of El Paso County. On December 14, 2010, the Service issued a final rule for revised critical habitat designation (50 FR 78430). Under this revised critical habitat designation, no critical habitat has been designated along Jackson Creek.

Distribution

Preble's is found along the foothills of southeastern Wyoming and southward along the eastern edge of the Colorado Front Range to Colorado Springs (Clark and Stromberg 1987; Fitzgerald et al. 1994). The semiarid climate in southeastern Wyoming and eastern Colorado limits the extent of riparian corridors and, therefore, restricts Preble's range, which is associated with these corridors. In El Paso County, Preble's has been primarily found along

Monument Creek and its tributaries. Preble's is known to occur throughout the Jackson Creek watershed extending from the western boundary of the Colorado Golf Club east to Cherry Creek. Preble's were captured immediately adjacent to the project area in 1998 and 2000 (Service 2013).

Preble's Habitat in the Project Area

Preble's were captured along Jackson Creek, approximately 0.5 mile downstream of the project area in 2004, prior to the construction of Struthers Road (Bakeman 2004). ERO mapped and quantified 0.88 acre of Preble's habitat in the project area during the 2021 site visit (Figure 2).

Rationale for Excluding the Project Area from Needing an Incidental Take Permit (ITP) Under Section 10(a)(1)(B) of the ESA

Based on guidance from the Department of the Interior (DOI) Principal Deputy Director (DOI 2018), it is ERO's professional opinion that the project would not result in "take" of a listed species, and application for an ITP under Section 10(a)(1)(B) of the ESA is not appropriate for the project. ERO has reviewed the guidance and completed the questionnaire to help decide on the need for an ITP (provided below).

1. Are there ESA listed species present in the area where your activity will occur or will they be present at some point in the duration of your activity?

Answer: Not Likely

2. Is it likely that any of these listed species will be exposed to your activities (or the results of your activity) during any of the various phases of your activity (construction, operation, maintenance, etc.)?

Answer: No, the project proponent will establish a 20-foot setback buffer from the tributary that encompasses the tributary, cattail marsh, and Gambel oak grove to avoid activities within the potential Preble's travel corridor.

3. Will that exposure likely result in any of the following actions to the listed species: pursuing, hunting, shooting, wounding, killing, capturing, or collecting or attempting to engage in any such conduct?

Answer: No, all construction activities would occur outside of riparian habitat and a 20-foot upland buffer.

4. Is your activity likely to harass a listed species?

- Will your activity, through an intentional or negligent act of omission, likely annoy the listed species to such an extent as to cause an injury to the species by **significantly disrupting normal behavior patterns** (e.g., breeding, feeding, or sheltering, etc.).

Answer: No, the project proponent would establish a 20-foot setback buffer from the tributary that encompasses the tributary, cattail marsh, and Gambel oak grove to avoid activities within the potential Preble's travel

corridor. BMPs and voluntary conservation measures would be implemented to avoid any significant disruption of normal behavior patterns by preventing or minimizing indirect impacts of sedimentation or soil erosion and nighttime construction activities.

5. Is your activity likely to result in an act that actually injures or kills a listed species?
Answer: No, the project area contains no suitable breeding, day roost, or hibernacula habitat and all activities would be conducted outside of any suitable Preble's travel corridor. All construction would occur during daylight hours when Preble's are inactive. The majority of disturbance would be restricted to nonnative grassland vegetation communities and noxious weeds that do not provide protective sheltering habitat for hibernation or day-resting Preble's.
6. Is your activity likely to harm a listed species through habitat modification (yes to all three questions below)?
- Is the activity likely to result in **significant** habitat modification or degradation? *Answer: No, see responses to questions 4 and 5.*
 - Will the modification or degradation **significantly** impair essential behavior patterns, including breeding, feeding, or sheltering? *Answer: No, see responses to questions 4 and 5.*
 - As a result of a. and b. above, is it likely there will be **an actual injury or death** to a listed species? *Answer: Not likely.*

ERO concludes that the project would not adversely impact Preble's or Preble's habitat because of the following:

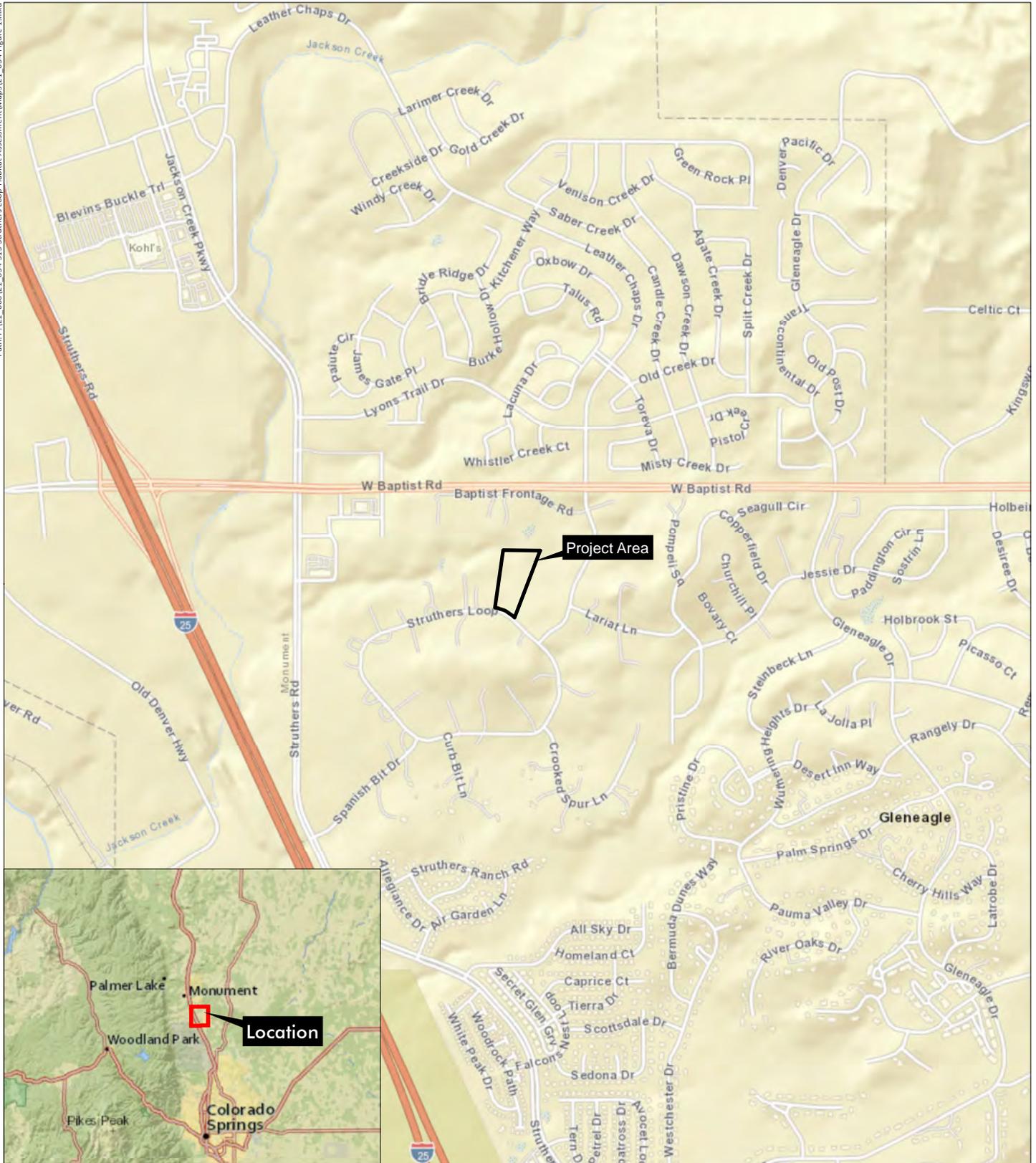
- Lack of suitable habitat - the project area contains no suitable breeding, day roost, or hibernacula habitat and all activities would be conducted outside of any suitable Preble's travel corridor habitat.
- Implementation of BMPs and voluntary conservation measures would substantially avoid and minimize direct and indirect impacts on the Jackson Creek tributary.

References

- Armstrong, D.M., J.P. Fitzgerald, and C.A. Meaney. 2011. Mammals of Colorado. University Press of Colorado. Boulder. 620 pp.
- Bakeman, M.E. 1997. Report on habitat findings of the Preble's meadow jumping mouse. Presented to the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife. 91 pp.
- Bakeman, M.E. 2004. Trapping survey results submitted to the U.S. Fish and Wildlife Service along the Jackson Creek, El Paso county, CO. Reference provided by U.S. Fish and Wildlife Service (2021).

- Bakeman, M.E. and A. Deans. 1997. Habitat of the Preble's meadow jumping mouse at Rocky Flats, Colorado. Pp. 18-32 *In* Bakeman, M.E. 1997. Report on habitat findings of the Preble's meadow jumping mouse. Presented to the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife. 91 pp.
- Clark, T.W. and M.R. Stromberg. 1987. Mammals in Wyoming. University of Kansas Museum, Lawrence, KS. 314 pp.
- Fitzgerald, J.P., C.A. Meaney, and D.M. Armstrong. 1994. Mammals of Colorado. University Press of Colorado, Niwot, CO, USA.
- Meaney, C.A., A. Deans, N.W. Clippenger, M. Rider, N. Daly, and M. O'Shea-Stone. 1997. Third year survey for Preble's meadow jumping mouse (*Zapus hudsonius preblei*) in Colorado. Under contract to Colorado Division of Wildlife. Boulder, CO.
- Shenk, T.M. and M.M. Sivert. 1999. Movement patterns of Preble's meadow jumping mouse (*Zapus hudsonius preblei*) as they vary across time and space. Unpublished report of the Colorado Division of Wildlife. 27 pp. + figures.
- Trainor, A.M., T.M. Shenk, and K.R. Wilson. 2007. Microhabitat Characteristics of Preble's Meadow Jumping Mouse High-Use Areas. *Journal of Wildlife Management* 71(2):469-477.
- U.S. Department of the Interior (DOI). 2018. Guidance on trigger for an incidental take permit under Section 10(a)(1)(B) of the Endangered Species Act where occupied habitat or potentially occupied habitat is being modified. FWS/AES/067974. April 26.
- U.S. Fish and Wildlife Service (Service). 2013. Recommended Conservation Measures to Avoid and Minimize Impacts to the Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*), the Ute Ladies'-tresses Orchid (*Spiranthes diluvialis*), and the Colorado butterfly plant (*Guara neomexicana* spp. *coloradensis*) from Emergency Flood Response Activities Along Streams, Rivers, or Transportation Corridors. Prepared by the U.S. Fish and Wildlife Service's Colorado Field Office. September 14.
- U.S. Fish and Wildlife Service (Service). 2021. Endangered, Threatened, Proposed and Candidate Species. <http://ecos.fws.gov/ipac/>. Last accessed April 1, 2021.
- White, G.C. and T.M. Shenk. 2000. Relationship of Preble's meadow jumping mouse densities to vegetation cover. Unpublished report of the Colorado Division of Wildlife. May 12.

Attachments: Figures 1 through 3; Photo Log



515 Struthers Loop Habitat Assessment

Section 36, T11S, R67W; 6th PM

UTM NAD 83: Zone 13N; 514155mE, 4322766mN

Longitude 104.836405°W, Latitude 39.053861°N

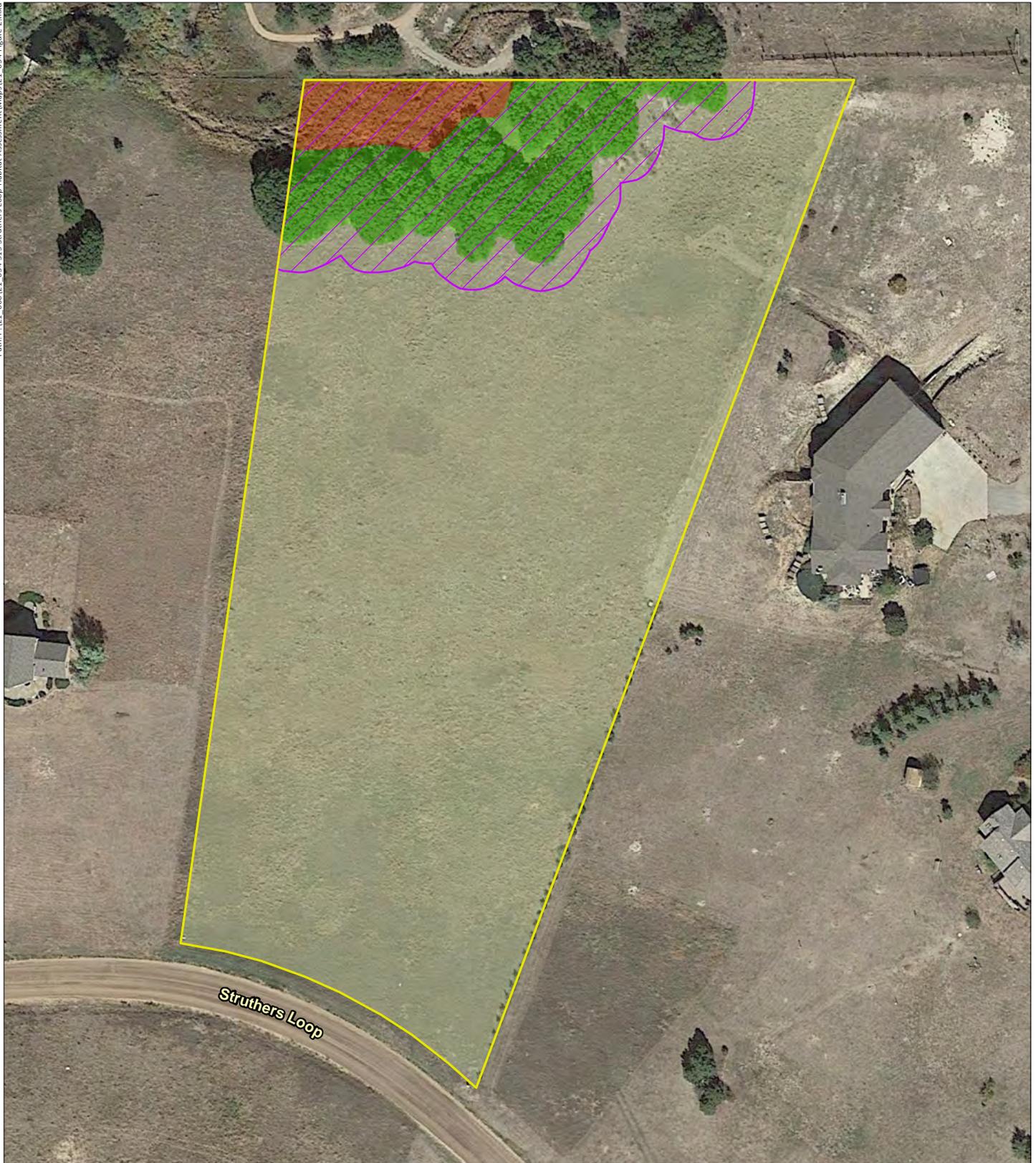
USGS Monument, CO Quadrangle

El Paso County, Colorado

Figure 1
Vicinity Map

Prepared for: Aaron Atwood
File: 21_034 Figure 1.mxd (GS)
April 1, 2021





515 Struthers Loop Habitat Assessment

-  Gambel Oak
-  Upland
-  Wetland
-  Preble's Habitat (0.880 ac)
-  Project Area Boundary

Image Source: Google Earth®, October 2019

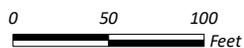
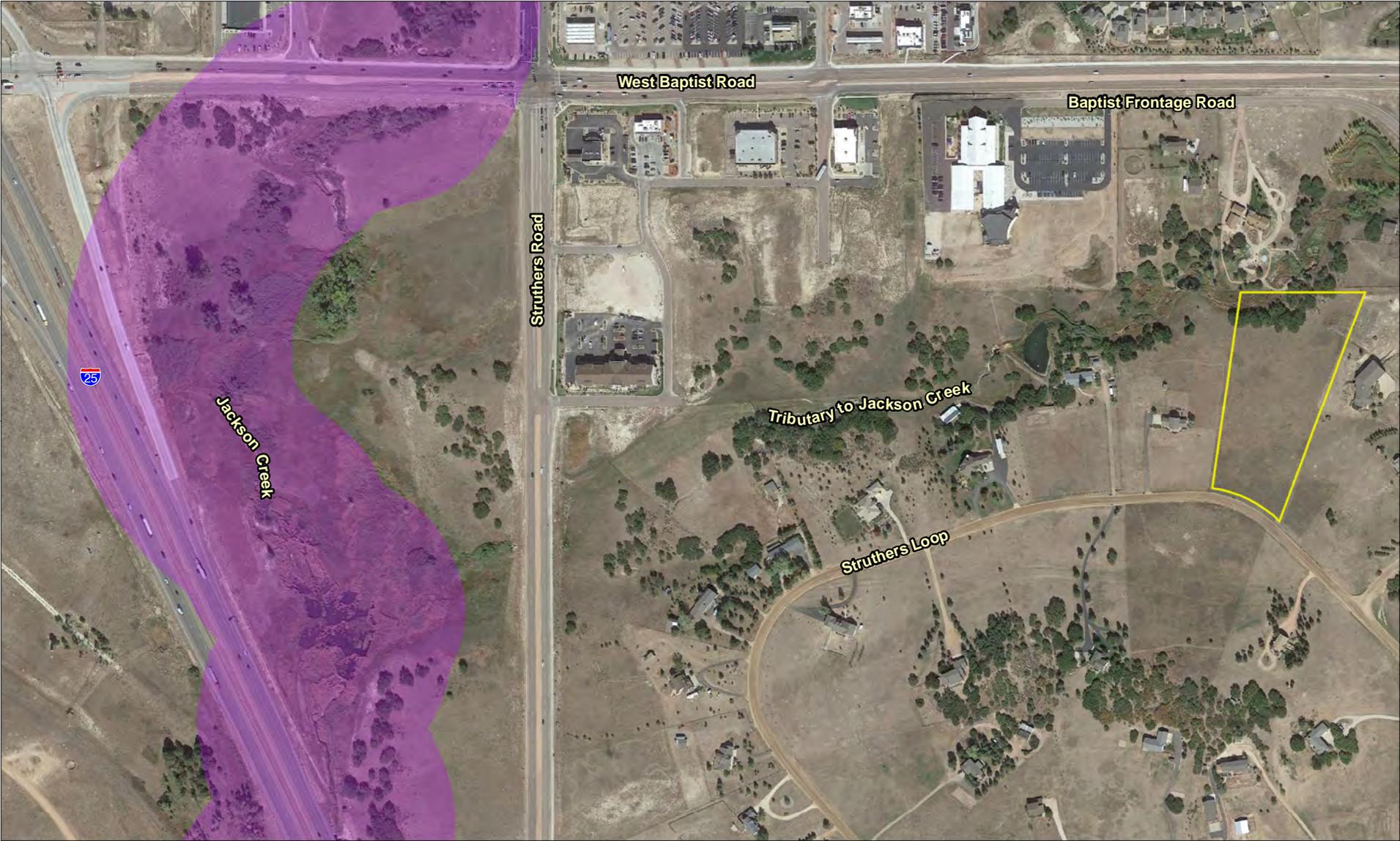


Figure 2 Existing Conditions

Prepared for: Aaron Atwood
File: 21_034 Figure 2.mxd (GS)
April 1, 2021



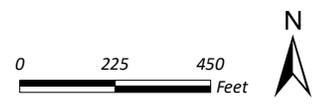


515 Struthers Loop Habitat Assessment

-  Preble's Critical Habitat
-  Project Area Boundary

Image Source: Google Earth®, October 2019

Figure 3 Environmental Baseline



Prepared for: Aaron Atwood
File: 21_034 Figure 3.mxd (GS)
April 1, 2021





Photo 1 - Pastureland dominated by upland native grassland in northern portion of project area.



Photo 2 - Pastureland dominated by the introduced grass smooth brome in southern portion of project area.



Photo 3 - Noxious weeds (knapweed) and Gambel oak grove in northern portion of project area.



Photo 4 - Gambel oak grove and drainage filled with cattails along northern project area boundary.



Photo 5 - Gambel oak understory.



Photo 6 - Disturbed area north of property boundary