



NATURAL FEATURES AND WETLANDS REPORT

for

***Stimple Family Minor Subdivision
El Paso County, CO***

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August 23, 2024

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1.0 INTRODUCTION

Classic Communities, LLC (“Applicant”) has retained Bristlecone Ecology, LLC (“B.E.” or “Agent”) to perform a habitat and wetland assessment and prepare a Natural Features and Wetlands Report for the proposed Stimple Family Minor Subdivision (“Project”) located in unincorporated El Paso County (EPC), Colorado. Contact information for both Applicant and Agent is provided below:

Applicant

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1.1. Purpose and Goals

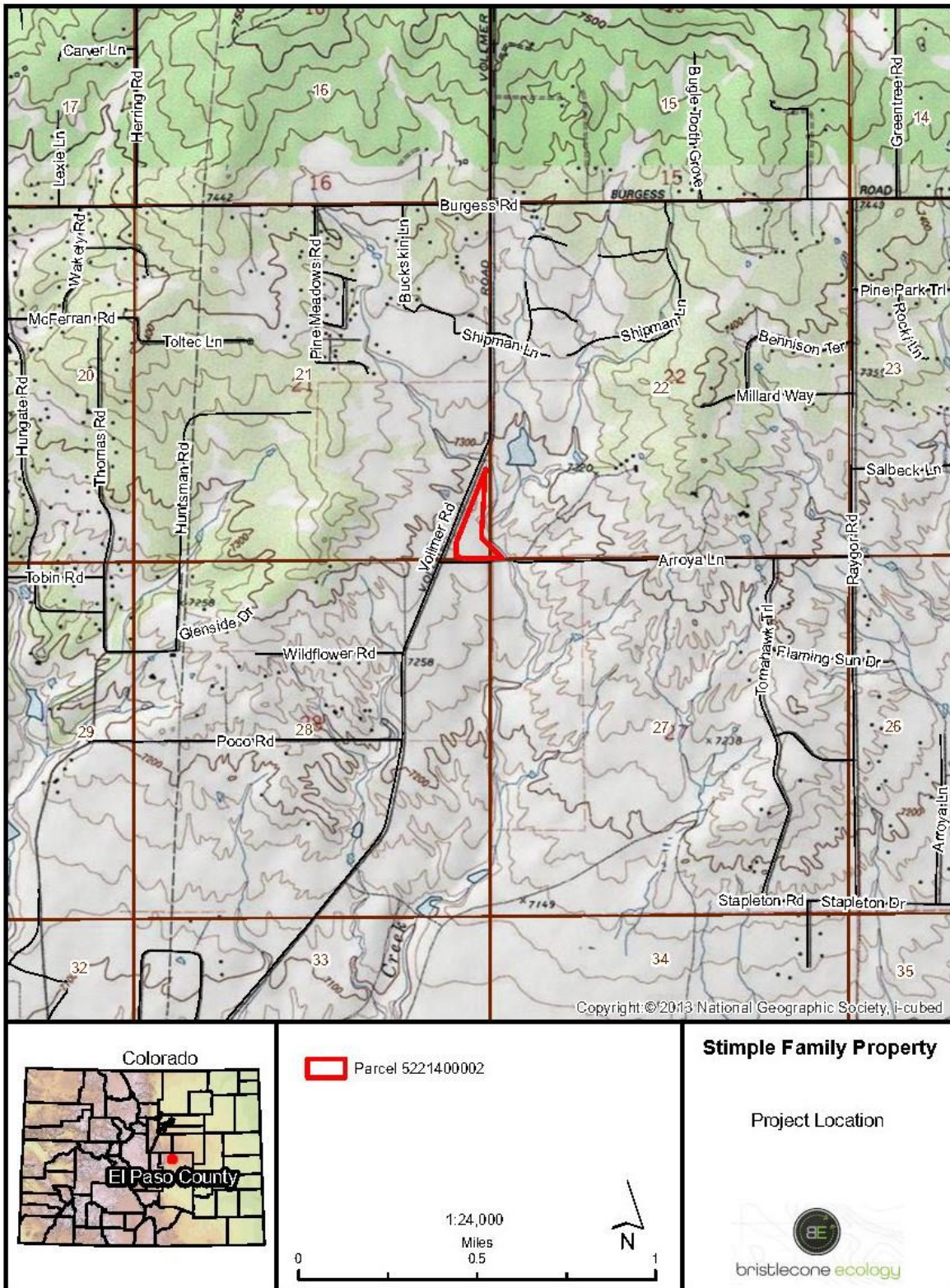
The purpose of this Natural Features and Wetlands Report is to document natural resources and existing site conditions in order to identify potential environmental constraints that may affect the development of the Project. In addition, a goal of this report is to provide guidance on regulatory issues that could influence site development in accordance with development planning and application submittals in EPC. Environmental resources and constraints addressed include:

- Vegetation
- Soils
- Aquatic Resources/Wetlands/Waters of the U.S. (WOTUS)
- Wildfire Hazard
- Flood Hazard
- Wildlife Impacts
- Federal and State Listed Threatened and Endangered (T&E) Species

1.2. Project Description and Site Location

The Project will involve the consolidation of a subdivided 7.5-acre parcel in northeast El Paso County, Colorado. The site is currently subdivided illegally, and the Project will legalize the parcel as a single, 7.5-acre lot to allow a single home to be constructed. The Project is located in Sections 21 and 22, Township 12 South, Range 65 West, and can be found on the U.S. Geological Survey’s (USGS) Falcon NW 7.5-minute quadrangle (USGS 2023) (**Figure 1: Project Location Map**). The Project encompasses the entire 7.5-acre property, EPC Parcel No. 5221400002, just north of Arroya Lane and east of Vollmer Road (**Figure 1**). The approximate Project center is 38.985016° N and 104.664445°W and elevations within the Project Area range between approximately 7,245 and 7,300 feet above mean sea level (AMSL). The Project is near the headwaters of Sand Creek and is found in the Middle Fountain Creek watershed, 10-digit hydrologic unit code (HUC) 1102000303. It is bounded to the north and west by open space, to the east by rural residential properties, and to the south by the Timber Ridge residential housing development. The topography of the Project consists of rolling foothills grasslands, scattered pine forest, and a minor wetland drainageway.

Figure 1: Site Location Map



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2.0 METHODOLOGY

B.E. performed a desktop review to gather background information about the environmental setting of the Project area. Publicly available data sources queried via desktop included:

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) data
- USFWS Critical Habitat Portal
- Species profiles and spatial data from Colorado Parks and Wildlife (CPW)
- USFWS National Wetland Inventory (NWI) data
- USGS National Hydrography Dataset (NHD)
- USGS aerial imagery
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panels
- Google Earth current and historic aerial imagery
- Colorado State Forest Service (CSFS) Wildfire Hazard Maps
- National Resources Conservation Service (NRCS) county soil survey data
- Colorado Natural Heritage Program (CNHP) Survey of Critical Biological Resources

Following the desktop review of these resources, site reconnaissance was conducted on November 28th, 2023, to field-verify results of the review and identify potential impacts to resources and constraints to development. The field reconnaissance focused on identifying and mapping wetland habitat and potential WOTUS, on classifying vegetation communities on the site, and on identifying suitable wildlife habitat, particularly that which could support T&E and sensitive species. The purpose of the threatened and endangered species review was to determine the potential for the occurrence of T&E species through an evaluation of suitable habitat presence/absence at the site. Other general wildlife, including big game species, were assessed through an analysis of the ranges of those species overlapping the site and the specific on-site habitat conditions that could either support or preclude their presence.

3.0 ENVIRONMENTAL SETTING

The Project Area is located at the intersection of two distinct ecoregions in Colorado: the Foothills Grasslands and the Pine-Oak Woodlands. The Foothills Grasslands ecoregion is composed of a mixture of tall- and mid-grasses and isolated pine woodlands (Chapman et al. 2006). Dominant species include little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), switchgrass (*Panicum virgatum*), and yellow Indiangrass (*Sorghastrum nutans*), among other commonly occurring grasses including blue grama (*Bouteloua gracilis*) needle-and-thread (*Hesperostipa comata*), Junegrass (*Koeleria macrantha*), and others (Chapman et al. 2006). The Pine-Oak Woodlands ecoregion is composed of a ponderosa pine (*Pinus ponderosa*) overstory, with a mid-story of Gambel oak (*Quercus gambelii*), mountain mahogany (*Cercocarpus montanus*), and other shrubs, and an herbaceous understory of mixed grasses such as mountain muhly (*Muhlenbergia montana*) and little bluestem. The Foothills Grasslands occupy the majority of the site, with scattered pine forest present along the southeast edge of the Project Area. Elevations within the Project Area range between approximately 7,245 and 7,300 feet above mean sea level (AMSL).

The Project site contains no Colorado Natural Heritage Conservation Areas or Potential Conservation Areas according to the CNHP (2022), and according to the USFWS' Information for Planning and Conservation (IPaC; 2022), does not contain Wildlife Refuges or Hatcheries. The area has been used historically as rangeland, but residential and commercial development is increasing steadily.

3.1. Vegetation

The majority of the Project site is within the Foothill Grasslands, with the predominant vegetation corresponding to that ecoregion. Little bluestem, blue grama, sand dropseed (*Sporobolus cryptandrus*), and fringed sage (*Artemisia frigida*) were the dominant species in uplands throughout the site. Other upland species present included big bluestem, lambsquarters (*Chenopodium album*), yarrow (*Achillea millefolium*), mountain muhly, and western wheatgrass (*Pascopyrum smithii*), among a variety of others. The only trees or shrubs present within the uplands on the site were the cluster of ponderosa pines in the southeast quadrant, and a few shrubs within wetter areas – mainly sandbar willow (*Salix exigua*) and bluestem willow (*S. irrorata*). Herbaceous vegetation in wetlands was dominated by sandbar willow, Baltic rush (*Juncus balticus*), and clustered field sedge (*Carex praegracilis*). Nebraska sedge (*Carex nebrascensis*) was also common in the wettest areas. Vegetative cover was relatively extensive with few disturbed areas. Plant diversity was moderate for this ecoregion, and the structure of the vegetation in uplands was moderately developed.

A few noxious weeds were present at the site, mostly scattered throughout the property in low densities where disturbance is most present. Noxious weed species observed included Canada thistle (*Cirsium arvense*), diffuse knapweed (*Centaurea diffusa*), yellow toadflax (*Linaria vulgaris*), and great mullein (*Verbascum thapsus*). Noxious weeds are discussed further in **Section 3.4**.

B.E. reviewed CNHP data for the Falcon NW 7.5-minute quadrangle, which summarizes sensitive vegetation communities in the state by USGS quadrangle. Data were reviewed to determine the probability of the presence/absence of significant natural communities, rare plant areas, or

riparian corridors that may be within the Project area. Based on CNHP’s data and the site reconnaissance, the probability of these plant communities being impacted by Project development is described below in **Table 1**.

Table 1. Potentially Impacted Vegetation Communities (CNHP 2022)

Plant Community (Type)	Status ¹	Presence and Location	Probability of Impacts
<i>Andropogon gerardii</i> - <i>Sporobolus heterolepis</i> Western Foothills Grassland (Xeric Tallgrass Prairie)	G2, S1	Mesic habitats of the Rocky Mountain foothills and riverine habitats. This type is a regional endemic found only in eastern Colorado, western Oklahoma, and possibly elsewhere. Reportedly occurs in the nearby Black Forest.	None. Community is not present in the Project area.
<i>Bouteloua gracilis</i> – <i>Bouteloua dactyloides</i> Grassland (Shortgrass Prairie)	G4, S2	Found in flat to rolling uplands throughout much of the central and southern Great Plains. Soil type is often sandy loam. A variety of other short graminoids make up much of the remaining habitat.	Not expected. Blue grama dominates portions of the Project area, but true Shortgrass Prairie is not present as the primary grassland community at the site.
<i>Hesperostipa comata</i> – <i>Bouteloua gracilis</i> – <i>Carex filifolia</i> Grassland (Montane Grasslands)	G5, S2	Occurs in relatively mesic savanna habitats, on gentle to moderate south- and west-facing slopes. Dense habitat occurs in some areas of the Black Forest.	None. Project area lies outside the range of this community.

¹G=Global; S=State

1=Critically Imperiled; 2=Imperiled; 3=Rare or Uncommon; 4=Widespread, Abundant, and Apparently Secure; 5=Demonstrably Widespread, Abundant, and Secure; NR=Not Ranked

3.2. Soils

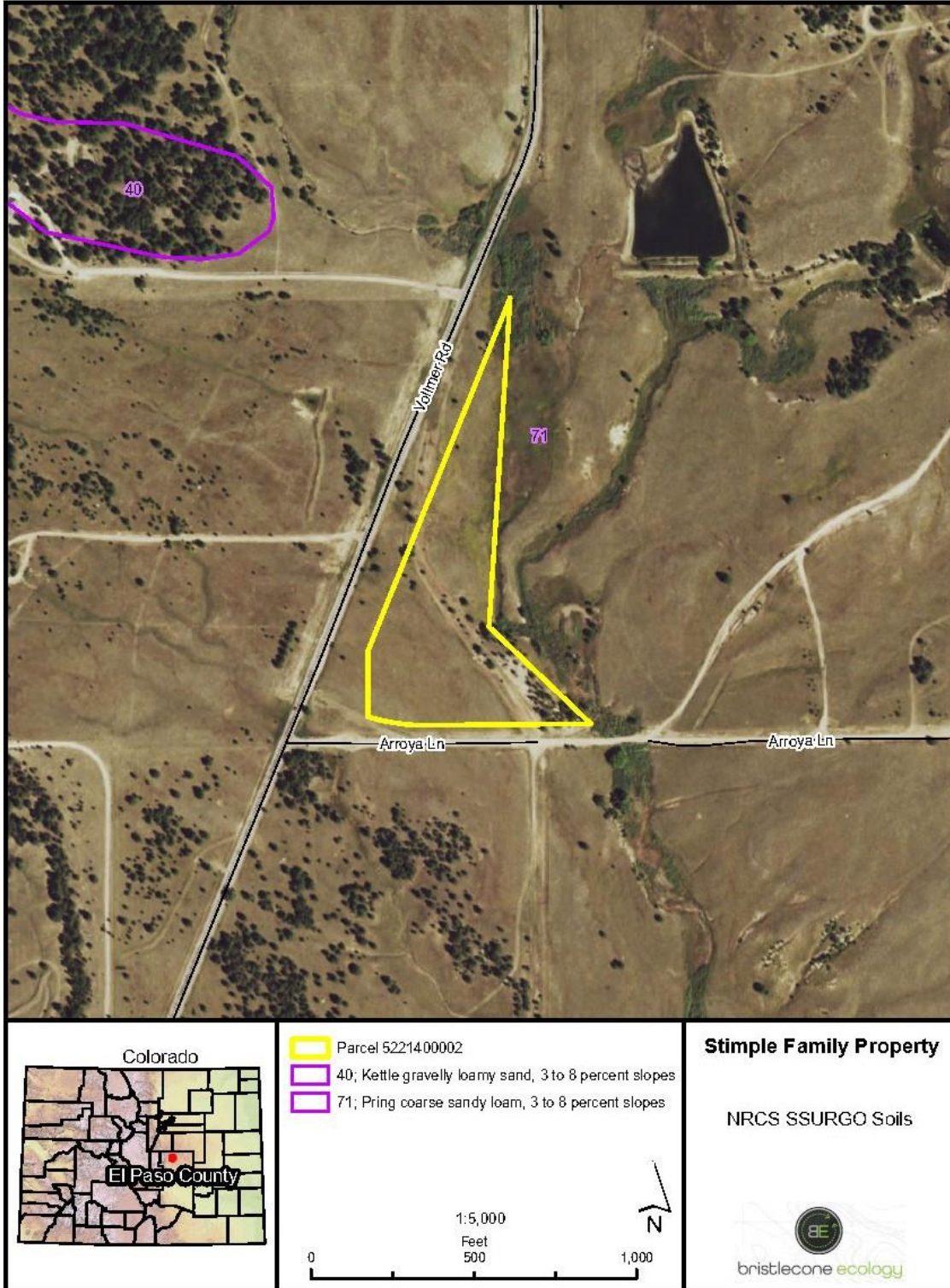
B.E. reviewed data provided by the NRCS Soil Survey to determine the potential for geologic hazards within the Project (NRCS 2022a). County soil survey data indicated that the site is composed entirely of Pring coarse sandy loam, 3 to 8 percent slopes (**Figure 2: NRCS SSURGO Soils**). The Pring soils series is a consociation, so other, minor soil series may be present within it (NRCS 2023). The primary minor series that forms the remainder of the consociation is the Pleasant series, which is typically found in depressions and drainageways and is rated as hydric in El Paso County (NRCS 2023).

The NRCS provides information on soil properties that would influence the development of building sites for dwellings with and without basements, as well as small commercial buildings, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Qualitative soil ratings are assigned to each major soil group and include ‘Not Limited’, ‘Somewhat Limited’, and ‘Very Limited’. ‘Not Limited’ indicates that the soil type has properties that are very favorable for the specified type of construction. ‘Somewhat

Limited' indicates that the soil type has properties that are moderately favorable for the specified type of construction. These limitations can generally be overcome through planning and design considerations. 'Very Limited' indicates that the soil type has properties that cannot generally be overcome through design and planning considerations (NRCS 2022b). Based on the soils present, the entire site is rated 'Not Limited' for dwellings with or without basements (NRCS 2022b).

B.E. reviewed the hydric soil ratings for all soil components present on the Project site to aid in the identification of wetland habitats during the site reconnaissance. Hydric soils are those that form under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions, and their formation is required in order for wetlands to become established. The Pring series is described as having no hydric rating in El Paso County, with a rating of 0. Hydric ratings are on a scale of 1 to 100, with 100 having greater hydric components and zero having no hydric components (NRCS 2022a). The Pleasant soil series, a minor component of the primary series on the site, is rated as hydric in El Paso County and is typically found in depressions and drainages where ponding can regularly occur (NRCS 2022c). Pleasant soil is most likely to be found in any depressions and along any streams on the site. Based on these ratings, the overall suitability of the site for the development of hydric soils, and thus the presence of wetlands, is low throughout the majority of the Project area, and relatively high along the Sand Creek drainageway on the eastern border.

Figure 2: NRCS SSURGO Soils Data



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3.3. Aquatic Resources

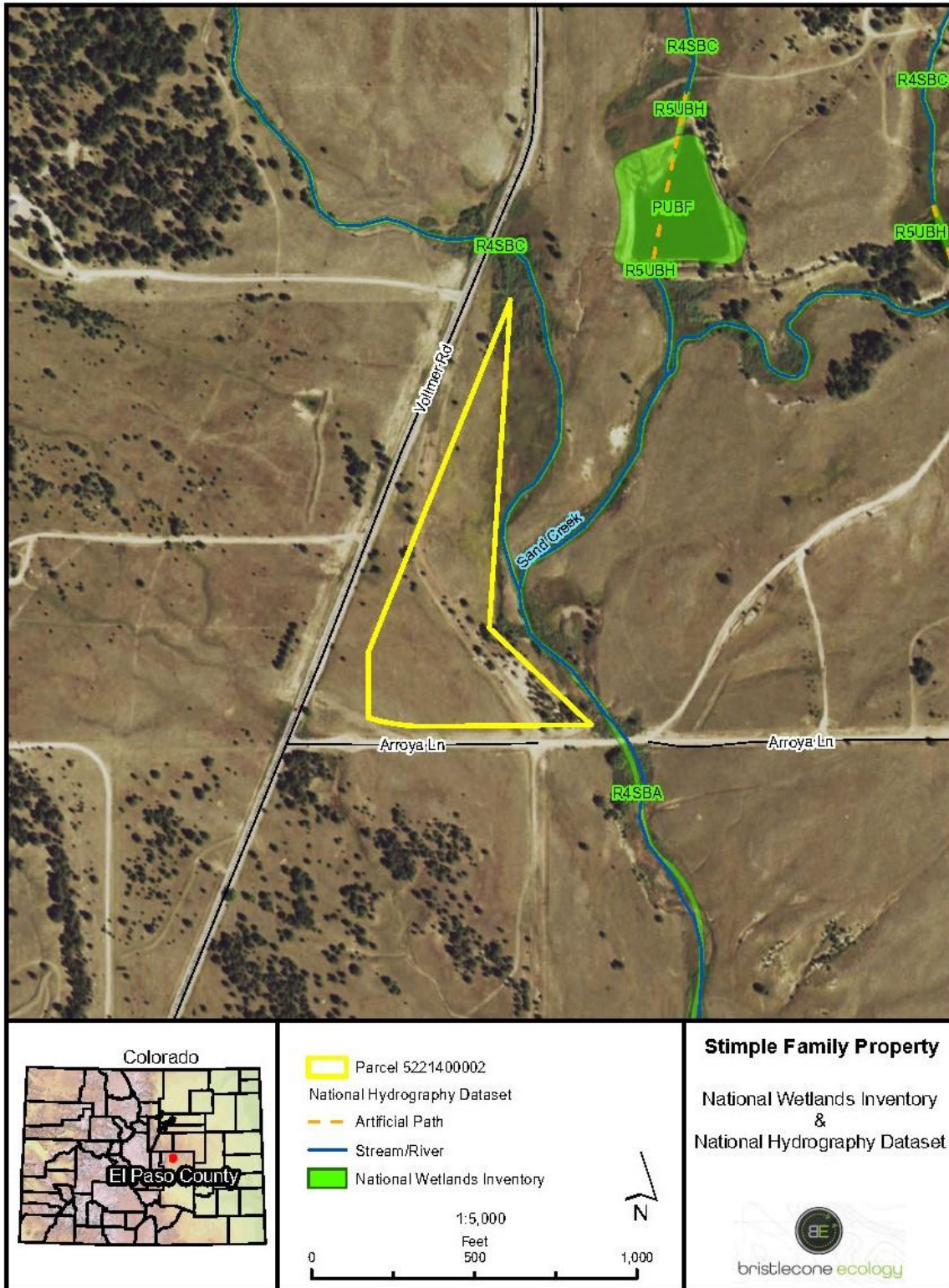
Aquatic resources include jurisdictional wetlands and other regulated WOTUS such as streams/rivers, ponds/lakes, and ditches, as well as non-regulated wetlands, streams/rivers, ponds/lakes, ditches, and other surface water features. The USFWS' NWI and USGS' NHD datasets were reviewed for the possible presence of wetlands and streams, respectively, within the Project Area. Aerial imagery (USDA 2019 and Google 2021) was reviewed to locate aquatic features not depicted in the NWI and NHD datasets. NHD and NWI data are notoriously inaccurate, necessitating field inspection to verify the presence or absence of the resources depicted in these datasets. No aquatic features were shown within the Project Area for either dataset (**Figure 3: Aquatic Resources Desktop Review**). Sand Creek can be found along the eastern boundary of the site, however, the NWI and NHD do not show the feature within the Project Area.

Because these desktop data are often inaccurate, the watercourses and other aquatic features identified in the preliminary desktop analysis were inspected in the field to assess their presence/absence and jurisdictional potential. A wetland delineation was performed on November 28th, 2023, in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) to determine if wetlands were present on the site. One wetland not shown in the NHD or NWI was found within the Project Area, and the maximum extents of the wetland were mapped (**Figure 4: Wetland Location Map**). This Palustrine wetland was located along the eastern edge of the site, within the Sand Creek floodplain (also see **Appendix A: Photographic Log** and **Appendix B: Wetland Delineation Data Sheet**):

Wetland soils throughout the site were clearly hydric, with indicators such as Thick Dark Surface (indicator A12), and various states of muck detected. Evidence of hydric soils and wetland hydrology were clear in the wetland areas and disappeared in intermediary riparian zones as vegetation transitioned to upland species. Maximum wetland extents were thus delineated based on the presence of hydric soils and wetland vegetation.

Based on the information obtained from the site reconnaissance, there is one wetland associated with Sand Creek present within the Project Area (**Figure 4**). Wetlands on the site are presumed to be jurisdictional and thus may require a Clean Water Act (CWA) Section 404 permit from the U.S. Army Corps of Engineers (USACE) if impacted by the development.

Figure 3: Aquatic Resources Desktop Review



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Figure 4: Wetland Location Map



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3.4. Noxious Weeds

Noxious weeds are defined as those non-native plants that aggressively invade and are detrimental to native vegetation communities and ecosystems. The *Colorado State Noxious Weed Act* (Colorado Revised Statute 35-5.5-103) developed a list of plants considered noxious in the state of Colorado that should be targeted for control by various methods dependent upon list category (A, B, or C). In addition, requirements have been set forth by the El Paso County Noxious Weed Management Plan (EPC 2017), and the El Paso County Noxious Weeds and Control Methods report (EPC 2018a), which contain guidelines for the control and treatment of noxious weeds found in the County. EPC requires that residential, commercial, or industrial projects that include ground disturbing activities submit a project-specific noxious weed management plan. The following noxious weed species were found within the Project Area during the field survey:

List B

- Canada thistle
- Diffuse knapweed
- Yellow toadflax

List C

- Great mullein

Based on the presence of noxious weeds, a site-specific plan should be developed to prevent and control the spread of noxious weeds at the construction and post-construction phases of the Project.

3.5. Wildfire Hazards

In the 2018 El Paso County Development Standards, the stated purpose and intent for fire protection and wildfire mitigation is to ensure that proposed development is reviewed for wildfire risks and adequate fire protection (EPC 2018b). No permit or approval associated with development, construction, or occupancy shall be approved or issued until the provisions of these standards are satisfied. The Project area is located within the Black Forest Fire Rescue's (BFFR) coverage. There are two fire stations in the district, including:

- Station 1; 11445 Teachout Road, Colorado Springs, CO 80908 (3.5 miles from the southern end of the site along Black Forest Road)
- Station 2; 16465 Ridge Run Drive, Colorado Springs, CO 80908 (1 mile northeast of the site along Black Forest Road)

The BFFR has the following operations equipment available:

Station 1:

- 3 fire engines
- 1 water hauler
- 1 ambulance

Station 2:

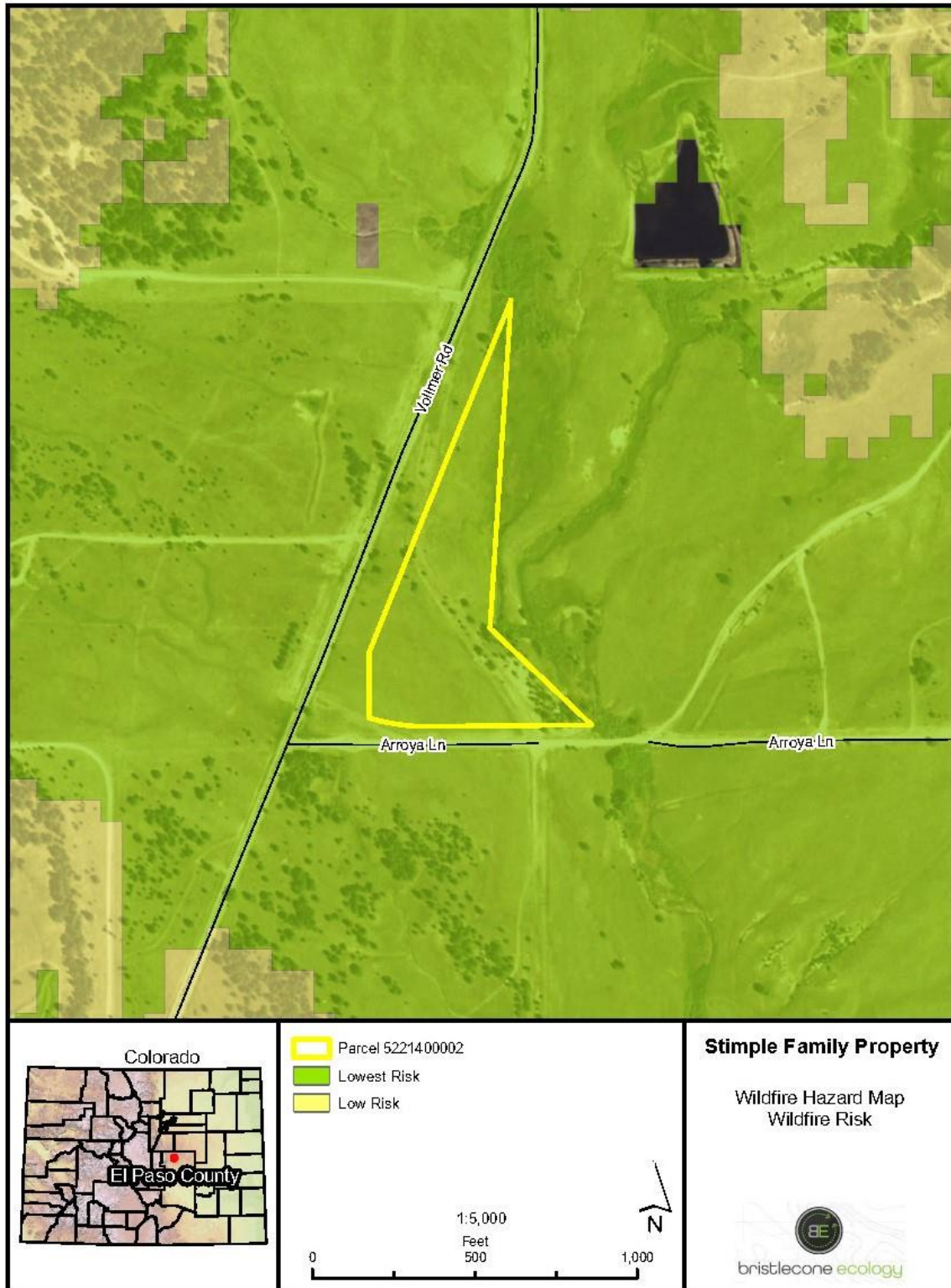
- 1 fire engine
- 1 brush truck
- 1 water hauler
- 1 ambulance

Wildfire hazard for the Project site was evaluated using the Colorado State Forest Service's (CSFS) online Wildfire Risk Assessment Portal (WRAP; CSFS 2020). WRAP allows professionals, planners, and the public to access the best scientific information regarding wildfire risk and establish prevention and mitigation measures accordingly. According to WRAP, the wildfire risk to assets for the Project site is "Lowest Risk" (CSFS 2020; **Figure 5: Wildfire Hazard Map – Wildfire Risk**). Wildfire risk is determined by CSFS by combining the burn probability rating of a site with the values-at-risk rating. While the Project site has a Low to Very Low rating of values and assets that would be adversely impacted by wildfire, the burn probability for the northern half of the site is rated Level 5, or "Moderate" and the southern half is rated Level 6, or "Moderately High" (CSFS 2020; **Figure 6: Wildfire Hazard Map – Burn Probability**). In terms of the available fuels, the majority of the site is composed of grasslands, with a handful of ponderosa pine trees in the southeast quadrant of the site.

3.6. Flood Hazards

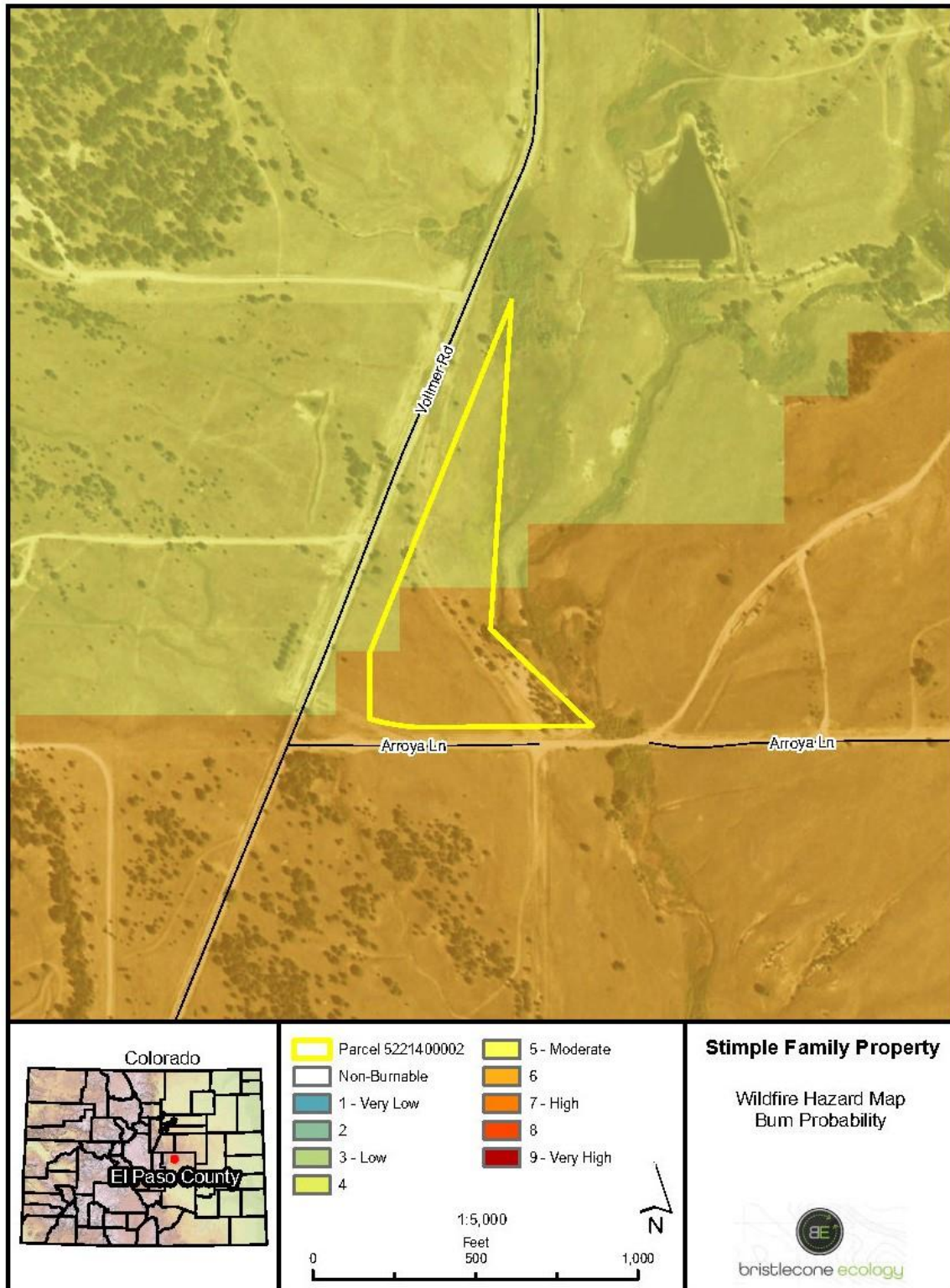
Flood hazard maps from the Federal Emergency Management Agency (FEMA) were reviewed to determine the potential for flood hazard at the site. The entirety of the site where development is planned is not located in a flood hazard zone, indicating that flood risk for the entire site is deemed by FEMA to be 'minimal' (**Figure 7: Flood Hazard Map**). Just south of the site, on the south side of Arroya Lane, the Sand Creek corridor is within Zone AE, however, the Project Area is not mapped within a FEMA-designated flood zone.

Figure 5: Wildfire Hazard Map – Wildfire Risk



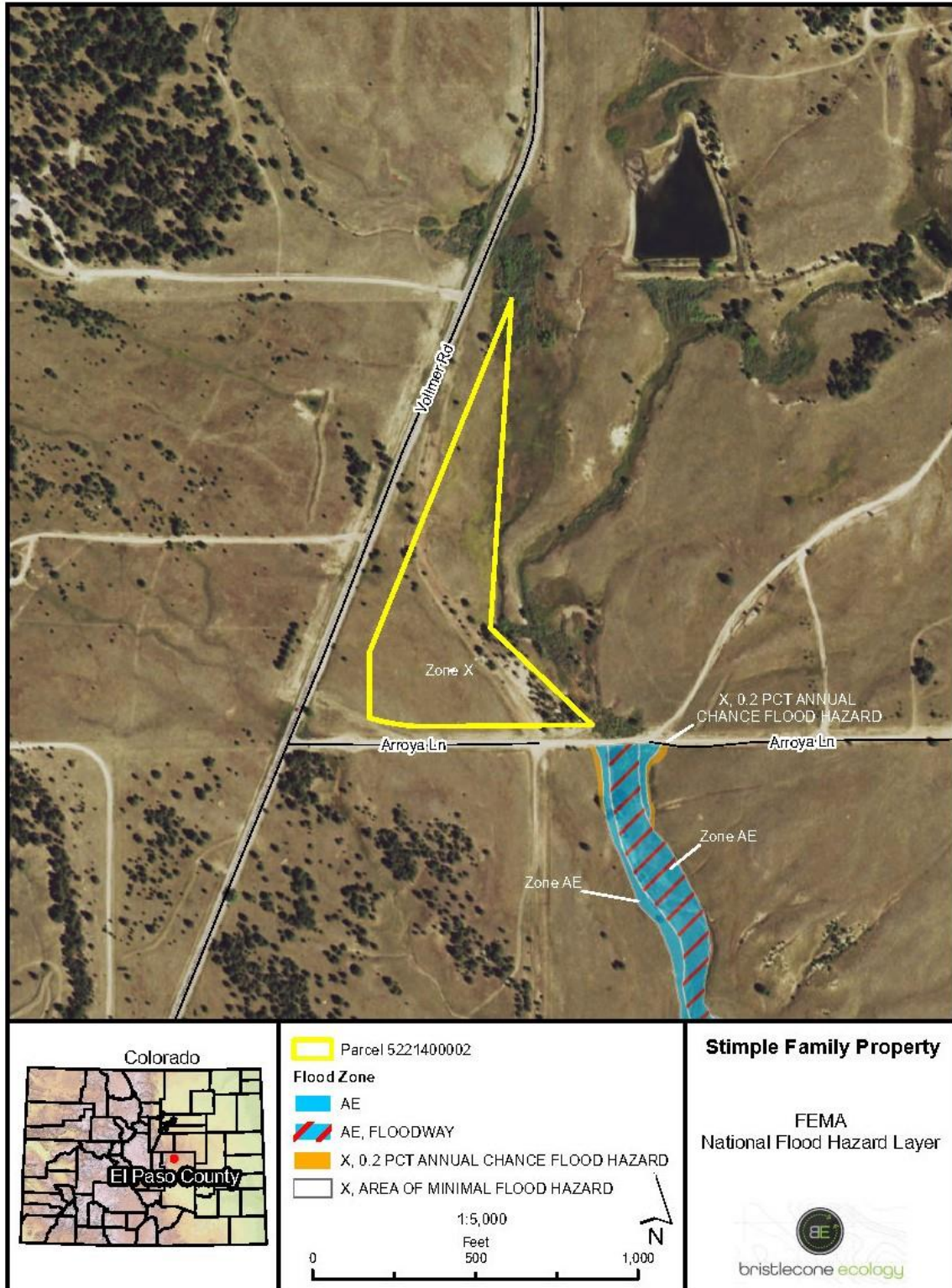
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Figure 6: Wildfire Hazard Map – Wildfire Burn Probability



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Figure 7: FEMA Flood Hazard Map



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3.7. Federally Listed T&E Species

Section 9(a)(1) of the Endangered Species Act (ESA) prohibits the take of federally listed species and their habitats, and defines such take as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 U.S.C. § 1531). Adverse effects to species listed under the ESA, or their habitats, may require consultation with USFWS. In order to determine if impacts to listed species could result from project development, the USFWS’ IPaC database (USFWS 2020a) and Critical Habitat Portal (USFWS 2022b) were used to determine the likelihood of occurrence of federally listed T&E species within the Project area.

According to the IPaC query, there are eight species with the potential to occur within or be affected by development of the site, including two mammals, two birds, two fishes, one insect, and one flowering plant (**Table 2: Federally Listed T&E Species Potentially Impacted by the Project**). Based on the information known about the site and the results of the site visit, B.E. provided our professional opinion regarding the probability of occurrence at the site for these species and their probability of being impacted by development. Likelihoods were confirmed following the site reconnaissance.

According to the USFWS’ Critical Habitat Portal, there is no Critical Habitat within nine miles of the Project site (USFWS 2022b). The site straddles the border of the Preble’s Meadow Jumping Mouse (*Zapus hudsonius preblei* or PMJM) Block Clearance Zone for Colorado Springs, with the southern half of the site within the Block Clearance Zone. There is no federally Designated Critical Habitat (DCH) for PMJM within the Project Area.

Table 2. Federally Listed T&E Species Potentially Impacted by the Project (USFWS 2022)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status ¹
Mammals			
Gray wolf	<i>Canis lupus</i>	Extirpated from Colorado and not known to occur since 1945. Reintroduction is ongoing, but current species range maps show the reintroduced wolves remain north of Interstate 70. Likelihood of impacts: None, extirpated; reintroduction range does not overlap with the site.	FE
Preble’s meadow jumping mouse	<i>Zapus hudsonius preblei</i>	Inhabits well-developed riparian corridors with adjacent, relatively undisturbed grassland communities, and a nearby water source. Riparian habitat includes a dense combination of grasses, forbs and shrubs; a taller shrub and tree canopy may be present. Has been found to regularly use uplands at least as far out as 100 meters beyond the 100-year floodplain. Likelihood of impacts: Unlikely; while the riparian corridor associated with Sand Creek along the eastern border of the site may contain habitat suitable for PMJM, the site is partially within the Colorado Springs Block Clearance Zone, and thus lacks habitat connectivity to occupied drainages to the south and west.	FT

¹FE= Federally Endangered; FT=Federally Threatened; C=Candidate for Listing

Table 2 (cont.). Federally Listed T&E Species Potentially Impacted by the Project (USFWS 2022)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status ¹
Birds			
Eastern black rail	<i>Laterallus jamaicensis ssp. jamaicensis</i>	Eastern black rails are cryptic, ground-dwelling marsh specialists. They require dense marsh habitats with nearly 100% cover. Likelihood of impacts: Very unlikely, the site supports only minimal areas of the required marshy habitat, and is at the edge of the species' known range.	FT
Piping plover	<i>Charadrius melodus</i>	Water-related activities in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. Likelihood of impacts: None, the Project is not located within the watersheds listed.	FT
Fishes			
Greenback cutthroat trout	<i>Oncorhynchus clarkii stomias</i>	Requires cold, clear, gravelly headwater streams and mountain lakes that provide an abundant supply of insects. Genetic sampling has confirmed that the only remaining native pure-strain population occurs in a four-mile stretch of creek outside of its native range in Bear Creek, a small tributary in the Arkansas River Basin (Metcalf et al. 2012). Likelihood of impacts: None, suitable habitat is not present.	FT
Pallid sturgeon	<i>Scaphirhynchus albus</i>	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. Likelihood of impacts: None, Project is not located within the watersheds listed.	FE
Insects			
Monarch butterfly	<i>Danaus plexippus</i>	Monarch butterflies require milkweeds (<i>Asclepias sp.</i>) as a host plant. This is a candidate species for listing under the ESA. The USFWS determined that listing the species was warranted but precluded by work on higher priority actions. The species will remain a candidate for listing and reviewed yearly. There are no requirements for candidate species, but due diligence is encouraged. Likelihood of impacts: Unlikely, milkweed species are not present onsite. There are no statutory requirements for candidate species.	C
Flowering Plants			
Ute ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	Primarily occurs along seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels or valleys, and lakeshores. May also occur along irrigation canals, berms, levees, irrigated meadows, excavated gravel pits, roadside borrow pits, reservoirs, and other human-modified wetlands. There are no known populations in El Paso County. Surveys for ULTO are only required for sites under 7,000 feet in elevation. Likelihood of impacts: None, very unlikely for the species to occur in El Paso County, and the site is above 7,000 feet in elevation. No known populations occur above 6,500 feet in Colorado.	FT

¹FE= Federally Endangered; FT=Federally Threatened; C=Candidate for Listing

3.8. Wildlife Communities

The Project site provides moderate quality habitat for some grassland wildlife, including birds, mammals, reptiles, and amphibians, as well as riparian and wetland habitat for these species. Development of the site would inevitably affect some habitat for wildlife; based on the findings of the site reconnaissance, B.E. classified the expected impacts on grassland species as moderately low, on woodland species as moderately low, and on reptiles and amphibians as low. Wildlife that could be affected were identified first by referencing CPW's Species Activity Mapping (SAM) spatial data to assess the likelihood of occurrence for state T&E species, state species of concern (SC), and other general wildlife, including big game species. The Colorado Natural Heritage Program (2022) also provides species status data from tracked natural animal and plant communities in the state. The review indicated that there is the potential for the occurrence of 17 mammals, 15 birds, and 14 amphibians or reptiles. Within those species whose range is within the Project area, the following species are included (see **Table 3: SAM Wildlife Potential for Occurrence**):

- Four big game species: black bear (*Ursus americanus*), mountain lion (*Puma concolor*), mule deer (*Odocoileus hemionus*), and pronghorn (*Antilocapra americana*);
- Two state threatened (ST) and one state sensitive species: Preble's meadow jumping mouse, burrowing owl (*Athene cunicularia*), and black-tailed prairie dog (*Cynomys ludovicianus*);
- One federally protected bird: golden eagle (*Aquila chrysaetos*).

Table 3. SAM Wildlife Potential for Occurrence (CPW 2022; CNHP 2022)

Common Name	Scientific Name	Type of Occurrence (CPW 2022)	Status ^{1,2}
Mammals			
Abert's squirrel	<i>Sciurus aberti</i>	Overall range	n/a
Big brown bat	<i>Eptesicus fuscus</i>	Overall range	n/a
Black bear	<i>Ursus americanus</i>	Overall range Human conflict area Summer concentration area	n/a
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	Overall range Potential colony occurrence	SC, S3
Dwarf shrew	<i>Sorex nanus</i>	Overall range	G4, S2
Fringed bat	<i>Myotis thysanodes</i>	Overall range	G4, S3
Hoary bat	<i>Lasiurus cinereus</i>	Overall range	n/a
Little brown myotis	<i>Myotis lucifugus</i>	Overall range	n/a
Mountain lion	<i>Puma concolor</i>	Overall range Human conflict area	n/a
Mule deer	<i>Odocoileus hemionus</i>	Overall range Resident population area Concentration area	n/a
Olive-backed pocket mouse	<i>Perognathus fasciatus</i>	Overall range	G5, S3
Preble's meadow jumping mouse	<i>Zapus hudsonius preblei</i>	Overall range	FT, ST, S1
Pronghorn	<i>Antilocapra americana</i>	Overall range Resident population area	n/a
Silver-haired bat	<i>Lasionycteris noctivagans</i>	Overall range	n/a
Western red bat	<i>Lasiurus blossevillii</i>	Overall range	n/a
White-tailed deer	<i>Odocoileus virginianus</i>	Overall range	n/a
White-tailed jackrabbit	<i>Lepus townsendii</i>	Overall range	n/a
Birds			
Band-tailed pigeon	<i>Patagioenas fasciata</i>	Breeding range	S4B
Brewer's sparrow	<i>Spizella breweri</i>	Breeding range	S4B
Burrowing owl	<i>Athene cunicularia</i>	Breeding range	ST
Cassin's sparrow	<i>Peucaea cassinii</i>	Breeding range	n/a
Golden eagle	<i>Aquila chrysaetos</i>	Breeding range	BGEPA, S3S4B
Grasshopper sparrow	<i>Ammodramus savannarum</i>	Breeding range	S3S4B
Lark bunting	<i>Calamospiza melanocorys</i>	Breeding range	S4
Lazuli bunting	<i>Passerina amoena</i>	Breeding range	S5B

¹FT=Federally Threatened; ST=State Threatened; SC=State Species of Concern; BGEPA=Bald and Golden Eagle Protection Act

²State (S) or Global (G) CNHP Status: 1=Critically Imperiled; 2=Imperiled; 3=Vulnerable; 4=Apparently Secure, but Cause for Long Term Concern; 5=Demonstrably Secure; B=Breeding; N=Non-breeding

Table 3, Cont. SAM Wildlife Potential for Occurrence (CPW 2022; CNHP 2022)

Common Name	Scientific Name	Type of Occurrence (CPW 2022)	Status ^{1,2}
Birds			
Lesser sandhill crane	<i>Antigone canadensis</i> ssp. <i>canadensis</i>	Overall range	n/a
Lewis' Woodpecker	<i>Melanerpes lewis</i>	Breeding range	G4, S4
Northern harrier	<i>Circus hudsonius</i>	Breeding range	S3B
Prairie falcon	<i>Falco mexicanus</i>	Breeding range	S4B, S4N
Rufous hummingbird	<i>Selasphorus rufus</i>	Migration range	n/a
Swainson's hawk	<i>Buteo swainsoni</i>	Breeding range	S5B
Virginia's warbler	<i>Oreothlypis virginiae</i>	Breeding range	S5
Band-tailed pigeon	<i>Patagioenas fasciata</i>	Breeding range	S4B
Brewer's sparrow	<i>Spizella breweri</i>	Breeding range	S4B
Reptiles and Amphibians			
Bullsnake	<i>Pituophis catenifer sayi</i>	Overall range	n/a
Common Lesser Earless Lizard	<i>Holbrookia maculata</i>	Overall range	n/a
Hernandez short-horned lizard	<i>Phrynosoma hernadesi</i>	Overall range	n/a
Milksnake	<i>Lampropeltis elapsoides</i>	Overall range	n/a
Many-lined skink	<i>Plestiodon multivirgatus</i>	Overall range	n/a
Ornate box turtle	<i>Terrapene ornata ornata</i>	Overall range	n/a
Painted turtle	<i>Chrysemys picta</i>	Overall range	n/a
Plains garter snake	<i>Thamnophis radix</i>	Overall range	n/a
Prairie lizard	<i>Sceloporus consobrinus</i>	Overall range	n/a
Plateau fence lizard	<i>Sceloporus tristichus</i>	Overall range	n/a
Prairie rattlesnake	<i>Crotalus viridis</i>	Overall range	n/a
Six-lined Racerunner	<i>Aspidoscelis sexlineata</i>	Overall range	n/a
Smooth greensnake	<i>Opheodrys vernalis</i>	Overall range	n/a
Terrestrial gartersnake	<i>Thamnophis elegance</i>	Overall range	n/a

¹FT=Federally Threatened; ST=State Threatened; SC=State Species of Concern; BGEPA=Bald and Golden Eagle Protection Act

²State (S) or Global (G) CNHP Status: 1=Critically Imperiled; 2=Imperiled; 3=Vulnerable; 4=Apparently Secure, but Cause for Long Term Concern; 5=Demonstrably Secure; B=Breeding; N=Non-breeding

For the majority of the species listed, the Project Area is within the “Overall Range” of that species, but most do not have any further designation. For a few species, including black bear, mountain lion, mule deer, and pronghorn, the Project area is within a more specific range or concentration area. The Project Area is listed as a Human Conflict Area for black bear and mountain lion, a Concentration Area for mule deer, and a Resident Population Area for mule deer and pronghorn.

Three state listed species were included – black tailed prairie dog, Preble’s meadow jumping mouse, and burrowing owl. Preble’s meadow jumping mouse is also listed federally. The federally protected golden eagle is also included in the dataset.

Following the review of the SAM data, site reconnaissance observations were used to field-verify the information provided in the data and perform a general wildlife survey. In general, the site provides moderate quality habitat for wildlife. The site is dominated by one primary vegetation community, represented by typical Foothill Grasslands vegetation such little bluestem, sand dropseed, fringed sage, and blue grama. Riparian and wetland vegetation communities were also present along the eastern boundary of the site; these areas support sandbar willows, sedges, and rushes. A handful of ponderosa pines represent a third habitat type, mostly along a low ridge in the southeast portion of the property.

Based on these habitat types, while some of the species listed in the SAM data likely occur on the site, few were observed in the area, and the majority are either not expected to occur, or may occur only rarely based on the habitats available. The field survey was performed late into the autumn, so none of the species listed in the SAM data were observed during the survey. Some species that could reasonably be expected to occur in the appropriate seasons include pronghorn, mule deer, Swainson’s hawk (*Buteo swainsoni*), big brown bat (*Eptesicus fuscus*), silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), grasshopper sparrow (*Ammodramus savannarum*), lark bunting (*Calamospiza melanocorys*), common lesser earless lizard (*Holbrookia maculata*), plains garter snake (*Thamnophis radix*), prairie lizard (*Sceloporus consobrinus*), and plateau fence lizard (*Sceloporus tristichus*).

State-listed and state sensitive species were not observed. Of note, the site is located on the edge of the Colorado Springs Block Clearance Zone for the state-listed Preble’s meadow jumping mouse, and this species is not expected to occur based on the lack of habitat connectivity to other occupied drainages. There is grassland habitat available for the state sensitive black-tailed prairie dog, but none were observed during the site reconnaissance and no burrows were detected. The site is also not suitable for the state-threatened burrowing owl, since this species is closely associated with abandoned burrows in prairie dog colonies, which were not observed. Golden eagles, which nest mostly on cliffs in mountainous areas, receive federal protections under the Bald and Golden Eagle Protection Act (BGEPA). Eagles are unlikely to occur except accidentally, as the site lacks suitable nesting habitat and prey sources.

The site vicinity provides some potential nesting habitat for raptors as there are a few suitable trees within the Project Area; there is also habitat for Northern harrier (*Circus hudsonius*), which nests on the ground in dense, midstory grasslands. The few pine trees present provide minimal sufficient substrate for tree-nesting raptors such as Swainson’s hawk, red-tailed hawk (*Buteo jamaicensis*), and the cavity-nesting American kestrel (*Falco sparverius*); these species may utilize the site for hunting as well. Nests were not observed in any of the trees during the site visit, so it is unlikely that raptors nest on the site.

The Project area also provides habitat for mammals including rodents, deer, and carnivores. Mammals were not observed during the site reconnaissance, but some mammal species may be

expected to occur, including raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), and/or red fox (*Vulpes vulpes*). The area is suitable year-round range for mule deer throughout the site, and elk (*Cervus canadensis*) and pronghorn could also occur. The site also has potential to provide foraging and breeding habitat for predators such as coyote, red fox, and potentially black bear or mountain lion.

Reptiles and amphibians were not observed within the Project area; however, due to the late timing of the site visit, amphibians and reptiles may occur within the site during the appropriate seasons. Distribution is limited to the eastern edge of the site where aquatic habitats are available.

In terms of big game species, the site contains suitable habitat for mule deer and pronghorn, but only marginal habitat for black bear and mountain lion. Both black bear and mountain lion are listed as having a potential human conflict area within the site. Based on the marginal available habitat, human conflict is unlikely. Black bears may be more likely to be encountered if trash is not contained properly on the site or in the adjacent neighborhoods, or if other attractions for black bears such as bird feeders are present near the site. Mountain lions are more likely to be attracted to pets in yards on the site or in adjacent neighborhoods around dawn and dusk. Limiting conflict with black bears and mountain lions by establishing keeping trash bins, bird feeders, and pets inside at night will lessen the likelihood of human conflict with these species. Mule deer and pronghorn are both listed as having resident population area present within the site, and based on available habitat, it is possible either could be found on the site.

4.0 SUMMARY OF IMPACTS

4.1. Vegetation

Vegetation would be unavoidably disturbed through development of the Project site. The majority of the site is classified as Foothill Grasslands, which is the primary ecosystem type that would be impacted. The site is generally of moderate quality and impacts are not expected to imperil or substantially harm this ecosystem, though development of the site could result in the loss of up to 7.5 acres of previously disturbed grasslands and scattered woodlands. Wetlands are not expected to be affected by site development.

No globally sensitive vegetation communities are present, and no state-sensitive vegetation communities are present according to CNHP data for sensitive vegetation communities and the site reconnaissance (CNHP 2022). The Project site is on the fringe of the Ponderosa Pine Woodlands, a globally and state stable vegetation community; a few scattered pine trees are clustered in open woodlands in the southeast quadrant of the Project Area.

4.2. Aquatic Resources

No aquatic features were shown in the NHD/NWI data, however, a field survey determined that there is one aquatic feature within the Project Area. A Palustrine wetland is present in the northern two-thirds of the site along the eastern border (see **Figure 3**); the wetland is associated with Sand Creek, which flows generally from north to southeast through the eastern limit of the site. The remainder of the site was composed of grasslands and scattered pine woodlands. The wetland is presumed to be a federally regulated aquatic resource based on its association with Sand Creek; if impacts occur, a Section 404 Clean Water Act permit would be necessary, and mitigation may be required.

4.3. Noxious Weeds

Noxious weeds were present on the Project site in several areas but in generally limited quantities. There were no large concentrations of noxious weeds, but scattered noxious weeds were found throughout various portions of the site, primarily where disturbance had previously occurred and in the transition zones between wetlands and uplands. List A Species, which require reporting and eradication by Colorado law (Colorado Department of Agriculture [CDA] 2006), were not detected. List B and List C Species require either eradication, containment, suppression, or public education. List B and C Species that were detected during the site reconnaissance included Canada thistle, diffuse knapweed, yellow toadflax, and great mullein. A plan to manage noxious weeds on the site and control their spread should be drafted prior to developing the site. It is possible that additional noxious weed populations may be present that were not detected during the site reconnaissance. A site inventory during the growing season to identify and map noxious weeds would be required to accurately catalogue all populations on the site. In accordance with EPC requirements, a Noxious Weed Management Plan should be developed to detail recommendations for identifying and controlling the spread of noxious weeds prior to, during, and following construction.

4.4. Wildfire

The site is rated “Moderate” to “Moderately High” in terms of burn probability based on the available fuels at the site, which include grasslands and a few scattered pine trees. The entire Project Area is mapped as “Lowest” wildfire risk, which is a combined measure of burn probability and risk to assets (CSFS 2020). The nearest fire response is Station 1 in the Black Forest FPD, which is 3.25 miles away.

Development of the site would result in a reduction of the available fuels for wildfires, while simultaneously increasing the values and assets present on the site. As such, the overall wildfire risk-to-assets index for the Project is expected to be similar before and after development.

4.5. Wildlife

Similar to the impacts for vegetation, some wildlife would inevitably be affected by development of the Project Area. Designated open spaces could conserve some of the grassland and woodland habitats that are currently available, but forested areas and undisturbed grasslands are likely to be reduced on the whole. Since grasslands are the most dominant habitat type, grassland species are expected to experience the greatest adverse impacts. Birds, deer, foxes, bears, raccoons, and skunks may experience minor adverse effects from development. No sensitive species were present, and thus are not expected to be affected any more than other species.

Implementation of a stormwater management plan will assist in protecting water quality downstream, which will provide additional benefits to aquatic species including invertebrates. Detention facilities may add seasonal water features that could support additional wildlife such as waterfowl and amphibians.

4.6. Federally Listed T&E Species

None of the eight T&E species listed in the IPaC query are expected to occur on the Project. All eight species listed occur in habitats that were not present on the site or would only be affected if development were to involve water depletions in different river systems. The northern half of the site contains potentially suitable habitat for PMJM, including a healthy riparian corridor with dense willows and flowing water, and relatively undisturbed adjacent grasslands. The southern half of the site is within the Colorado Springs PMJM Block Clearance Zone, and the site does not contain DCH for PMJM. The block clearance creates a large swath of unoccupied habitat that separates the site from occupied areas for PMJM. Thus, while the northern half of the site contains the primary constituent elements (PCEs) for PMJM, there is no connectivity to occupied drainages, and thus PMJM is not expected to be present on the site.

5.0 RECOMMENDATIONS

Upon completion of a desktop review, site reconnaissance, and preliminary wetland assessment, B.E. finds that some minor environmental constraints may be present within the Project area. Constraints are summarized below within the regulatory context that they apply, and recommendations are provided.

5.1. Clean Water Act

Section 404 of the CWA prohibits the discharge of dredge or fill material into WOTUS (including wetlands) without a valid permit. Regulated wetland habitats, including jurisdictional WOTUS lacking wetlands such as streams and ditches, are presumed to be present on the site. A formal wetland delineation was performed on November 28th, 2023, finding a small Palustrine wetland along the eastern edge of the site. This wetland is presumed to be jurisdictional. A Section 404 permit would be necessary should the wetlands on the site be determined to be jurisdictional and if they would be impacted by development.

5.2. Endangered Species Act

Section 9(a)(1) of the ESA prohibits the take of federally listed species and their habitats, and defines such take as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 U.S.C. § 1531).

There is no suitable habitat for federally listed species on the site. Impacts to listed species offsite would also not occur because the Project will not involve water depletions from the basins where these species occur.

5.3. Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

Migratory birds, and the parts, nests, or eggs of such a bird receive statutory protection under the Migratory Bird Treaty Act, which prohibits the intentional take of migratory birds. Eagles receive additional statutory protection from accidental take and disturbance under the BGEPA. Both acts particularly apply to nesting birds and their nests. There were no nests observed on the site, and no suitable nesting substrate for eagles. Nesting substrates for other migratory birds are present in the form of open forests, grasslands, and wetlands, which are expected to be used by some migratory birds during the breeding season.

It is recommended that vegetation clearing/grubbing/grading of the site occur outside of the nesting season (March 15th to July 31st) to avoid disturbing nesting migratory birds. If such timing restrictions are not possible, B.E. recommends conducting a migratory bird nesting survey during the nesting season to ensure impacts to nesting birds do not occur. In particular, ground nesting songbirds are expected to use the available grasslands at the site and surveys should be conducted to avoid disturbance.

5.4. Colorado Noxious Weed Act

In order to ensure Project compliance with the Colorado Noxious Weed Act, and to comply with the requirements of El Paso County's Noxious Weed Management Plan, B.E. recommends developing a site-specific Noxious Weed Management Plan, and site-specific weed management in accordance with such a plan should be implemented on an ongoing basis. In particular, control of Canada thistle, diffuse knapweed, and yellow toadflax (and any other List B noxious weeds observed on the site) is required by Colorado law.

5.5. Non-Statutory Considerations

No CNHP listed Vegetation Communities were found within the Project Area, and thus are not expected to be impacted by development of the site.

There is potential for other wildlife, including some big game, to occur within the site. Big game species with potential habitat on site include mule deer, pronghorn, and possibly black bear. B.E. recommends following guidance from CPW to determine the appropriate avoidance measures to take during and after construction regarding general wildlife. Impacts to wildlife should be reduced as much as practicable through the implementation of restrictions such as using bear-resistant trash containers and installing wildlife-friendly fencing. Impacts to wildlife should be reduced as much as practical through the implementation of typical covenants, such as using bear-resistant trash containers and fencing that allows safe passage for game animals.

There is potential for general wildlife, including some big game such as pronghorn and possibly mule deer, to occur within the site. In addition, ranges for several migratory birds overlap the Project area, and migratory birds were observed using the site during the site reconnaissance. Amphibians present in the wetland areas are not likely to be affected by Project development. Since impacts to the floodplain and wetlands are not anticipated, it is unlikely that amphibians using these areas would be affected by development of the site. B.E. recommends following guidance from CPW to determine the appropriate avoidance measures to take during and after construction regarding general wildlife. Impacts to wildlife should be reduced as much as practicable through the implementation of typical covenants, such as using bear-resistant trash containers and fencing that allows safe passage for game animals.

Should you have any questions regarding the information or recommendations provided in this report, please feel free to contact Bristlecone Ecology at dmaynard@bristleconeecology.com.

Sincerely,
Bristlecone Ecology, LLC

A handwritten signature in black ink, appearing to read 'Daniel Maynard', written in a cursive style.

Daniel Maynard
Owner/Ecologist

6.0 REFERENCES

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APPENDIX A

PHOTOGRAPHIC LOG



PHOTO 1 – View facing northeast of the eastern property boundary. The site boundary is marked by barbed wire fencing. Sand Creek can be seen flowing from the center to the right side of the photo. This portion of Sand Creek is shrub-scrub wetlands, dominated by sandbar willow. The wetlands in the photo cross into the site further to the north.



PHOTO 2 – View facing southeast taken from the east-central portion of the site showing the transition between shrub-scrub wetlands associated with Sand Creek to surrounding uplands. A few scattered pine trees can be seen at right; extensive pine forests nearby can be seen in the background.



PHOTO 3 – View facing southeast of the uplands present in the southern half of the site. Typical Foothills Grasslands vegetation dominates, with a few interspersed ponderosa pines as can be seen in the photo.



PHOTO 4 -- Broad overview of the northern half of the site. The wetland located along Sand Creek can be seen where the vegetation is a darker brown, while uplands are seen surrounding this area in lighter tan.



APPENDIX B

WETLAND DELINEATION DATA SHEETS

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Stimple Property City/County: El Paso Sampling Date: 11/28/23
 Applicant/Owner: Stimple Family State: CO Sampling Point: SP1
 Investigator(s): Dan Maynard Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Streamside terrace Local relief (concave, convex, none): Concave Slope (%): 5%
 Subregion (LRR): LRR E Lat: 38.986119 Long: -104.663991 Datum: WGS 84
 Soil Map Unit Name: Pleasant (Torrertic Argiustolls) NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks: <u>Very close to wetland boundary</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30' x 30'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																												
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)																												
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)																												
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																												
4. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">Total % Cover of:</td> <td colspan="2" style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>70</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>140</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>26</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>78</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>16</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>64</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>5</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>25</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>107</u></td> <td>(A)</td> <td style="text-align: center;"><u>307</u></td> (B)</tr></table>	Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>70</u>	x 2 =	<u>140</u>	FAC species	<u>26</u>	x 3 =	<u>78</u>	FACU species	<u>16</u>	x 4 =	<u>64</u>	UPL species	<u>5</u>	x 5 =	<u>25</u>	Column Totals:	<u>107</u>	(A)	<u>307</u>
Total % Cover of:		Multiply by:																														
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UPL species	<u>5</u>	x 5 =	<u>25</u>																													
Column Totals:	<u>107</u>	(A)	<u>307</u>																													
Prevalence Index = B/A = <u>2.87</u>																																

= Total Cover				
Sapling/Shrub Stratum (Plot size: 45' x 15')				
1. _____	_____	_____	_____	**Hydrophytic Vegetation Indicators:** + 1 - Rapid Test for Hydrophytic Vegetation + 2 - Dominance Test is >50% + 3 - Prevalence Index is ≤3.0¹ ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants¹ ___ Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
= Total Cover				
Herb Stratum (Plot size: 5' x 5')				
1. Carex praegracilis	30		FACW	
2. Juncus balticus	40		FACW	
3. Rosa woodsii	6		FACU	
4. Cirsium arvense	205		FAC	
5. Achillea millefolium	10		FACU	
6. Bromus inermis	5		UPL	
7. Rumex crispus	1		FAC	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
= Total Cover				
Woody Vine Stratum (Plot size: 30' x 30')				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
= Total Cover				
% Bare Ground in Herb Stratum 0%				
Hydrophytic Vegetation Present? Yes No _____				
Remarks: _____				

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	10YR 2/2	100					Loam	
5-12"	2.5N/	99	7.5 YR 5/8	1	C	M	SiCl	
12-18"	2.5N/	99	7.5 YR 5/8	1	C	M	SC	
18-24"	Gley	97	7.5 YR 5/8	3	C	M	SiC	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (except MLRA 1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|---|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost-Heave Hummocks (D7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

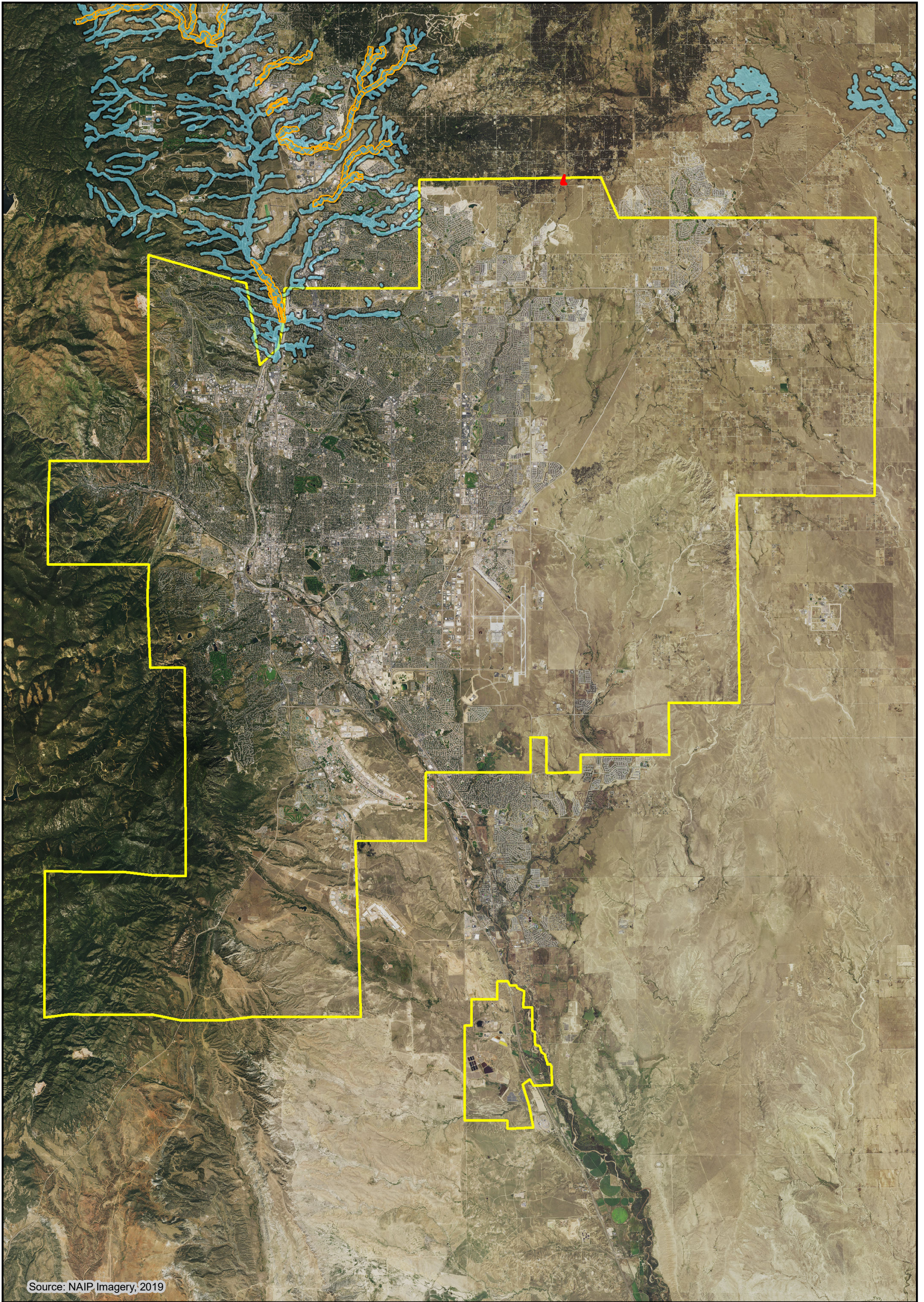
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



APPENDIX C

PREBLE'S MEADOW JUMPING MOUSE BLOCK CLEARANCE MAP



Source: NAIP Imagery, 2019



- Parcel 5221400002
- Block Clearance Zone
- USFWS Critical Habitat
- CPW Preble's Meadow Jumping Mouse Occupied Range



Stimple Family Property

Preble's Meadow Jumping Mouse Habitat Map

