NATURAL FEATURES AND WETLANDS REPORT

for

Life Church at Bent Grass Meadows Drive
El Paso County, CO

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1.0 INTRODUCTION

HR Green, Inc. ("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 Life Church at Bent Grass Meadows Drive development project ("Project"), located in unincorporated El Paso County (EPC), Colorado. Contact information for both Applicant and Agent is provided below:

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1.1. Purpose and Goals

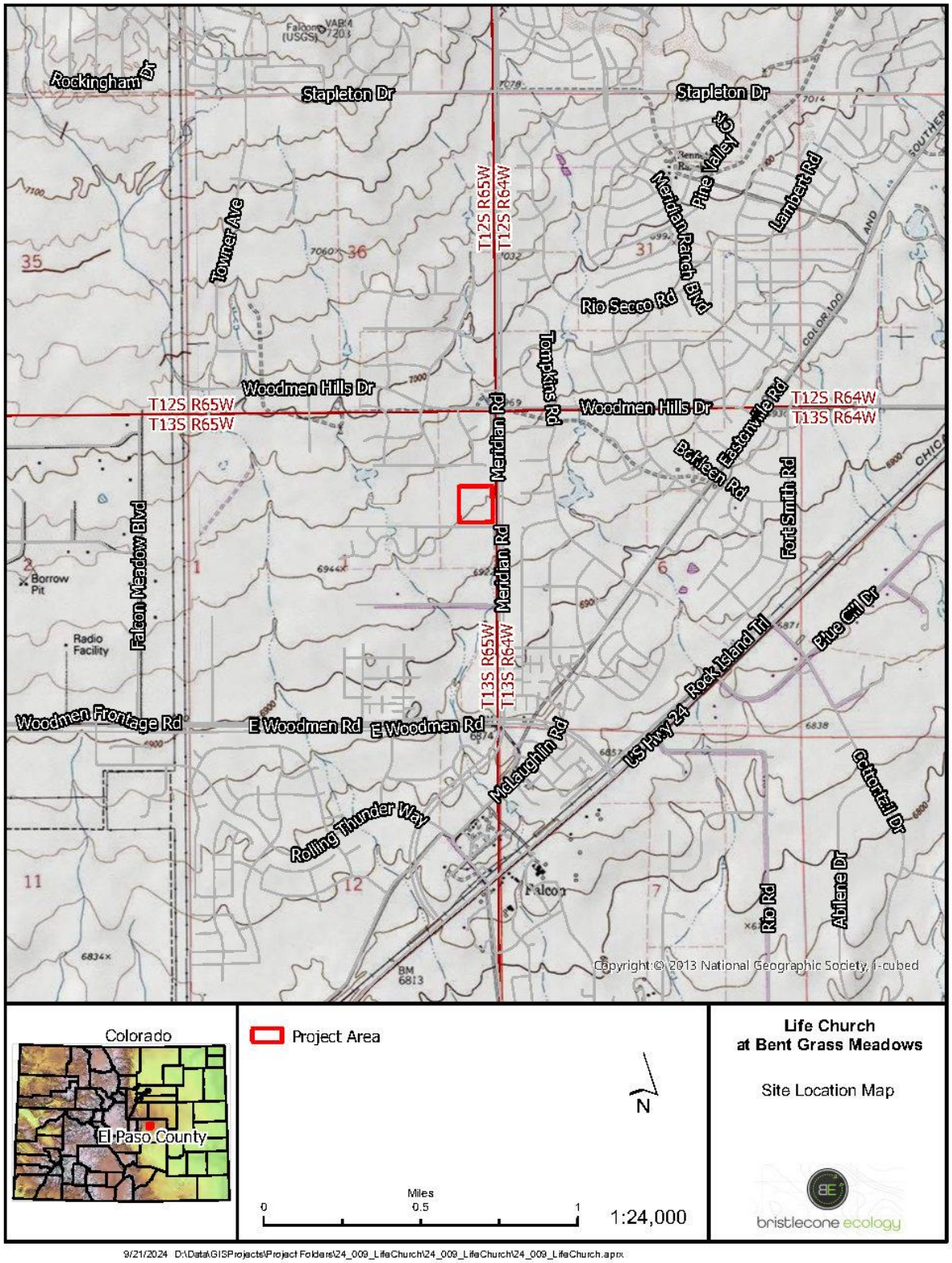
The purpose of this Natural Features and Wetlands Report is to document natural resources and existing site conditions in order to identify potential environmental constraints that may affect the development of the Project. In addition, a goal of this report is to provide guidance on regulatory issues 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 development of a church on approximately 8.3 acres within El Paso County Parcels No. 5301000033 and No. 5301000026. The Project Area is located northwest of the intersection of Meridian Road and Bent Grass Meadows Drive (**Figure 1**: *Site Location Map*). It is bounded on all sides by rural residential and light commercial development. The Project will consist of a single church lot, entrance roads and parking, utilities, and other associated facilities and infrastructure. The site is located on a portion of Sections 1 in Township 13 South, Range 65 West. The site can be found on the U.S. Geological Survey's (USGS) Falcon 7.5-minute quadrangle (USGS 2020). The topography of the Project consists of relatively flat, disturbed foothills grasslands.

Figure 1: Site Location Map



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 September 19th, 2024, 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.

3.0 ENVIRONMENTAL SETTING

The Project Area is located within the Foothill Grasslands ecoregion in Colorado (Chapman et al. 2006). The Foothill Grasslands Ecoregion is composed of a mixture of tall and mid-grasses and isolated pine woodlands (Chapman et al. 2006). Dominant species in the ecoregion include little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), switchgrass (*Panicum virgatum*), needle-and-thread (*Hesperostipa comata*), slender wheatgrass (*Elymus trachycaulus*), and yellow Indiangrass (*Sorghastrum nutans*) (Chapman et al. 2006). Scattered pines and shrubs are common.

The topography of the Project Area consists entirely of a flat grassland dominated by prairie-dog burrows. Elevations of the Project site range between approximately 6,940 and 6,950 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

Vegetation on the site was not dominated by typical Foothill Grasslands vegetation and was rather dominated primarily by weedy uplands with a low diversity of species, mostly in the Asteraceae family. Dominant species throughout the site included, hairy false goldenaster (*Heterotheca villosa*), white sagebrush (*Artemisia ludoviciana*), annual ragweed (*Ambrosia artemisiifolia*), buffalograss (*Bouteloua dactyloides*), and Tahoka daisy (*Machaeranthera tanacetifolia*). The northeast corner of the site was dominated heavily by curlycup gumweed (*Grindelia squarrosa*). Other species found on site included smooth brome (*Bromus inermis*), fringed sagebrush (*Artemisia frigida*), blue grama (*Bouteloua gracilis*), ten-petal blazingstar (*Mentizelia decapitala*), prickly-pear cactus (*Opuntia polyacantha*), and common sunflower (*Helianthus annuus*). Weeds common throughout the site included great mullein (*Verbascum thapsus*), prickly Russian thistle (*Salsola tragus*), and musk thistle (*Carduus nutans*). There were no trees or shrubs present. Diversity was low for this ecoregion, and the structure of the vegetation throughout the site was poorly developed.

B.E. reviewed CNHP data for the Falcon 7.5-minute quadrangle, which summarizes vegetation communities in the state by USGS quadrangle. Data were reviewed to determine the probability of significant natural communities, rare plant areas, or riparian corridors being present 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**: *Potentially Impacted Vegetation Communities*. The majority of the plant communities listed within the Falcon quadrangle were described to be dominated by species not found anywhere on site, and thus were precluded from consideration.

Table 1. Potentially Impacted Vegetation Communities (CNHP 2022)

Plant Community (Type)	Status[1]	Presence and Location	Probability of Impacts
Hesperostipa comata-Bouteloua gracilis Central Grassland	G4, S2	Common in the central Great Plains, on flat to rolling topography with sandy loam soils. Vast prairie dog (*Cynomys* spp.) towns are known to develop on the favorable substrates of this community, and prairie dogs may exploit its vegetation.	Not likely. While some *Bouteloua gracilis* is present, *Hesperostipa* comata is not, and the entire site is composed of a highly disturbed grassland mosaic. This community may have been present on the site in its native state, prior to disturbance by cattle, prairie dogs.

[1]G=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

Noxious weeds were prevalent at the site and were found in high densities throughout the property. The most prominent noxious weed species observed included musk thistle, a List B species in El Paso County, and common mullein, a List C species in El Paso County. Prickly Russian thistle, a nuisance plant not listed on the official noxious weed list, was also found throughout the site. Noxious weeds are discussed in greater detail in Section 3.4 below.

3.2. Soils

Soil survey data and reports were reviewed to determine the potential for the presence of geologic hazards within the Project (NRCS 2024a). County soil survey data indicate that the site is composed entirely of Columbine gravelly sandy loam (0 to 3 percent slopes; 100% of Project area) (NRCS 2024a) (**Figure 2:** *NRCS SSURGO Soils Data*). This soil is the primary series occupying the Project area; there are also minor components (called "inclusions") within each series or consociation that could contribute to the overall soil composition at the site.

The NRCS provides information on soil properties that could 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 2024b). Based on the soils present, the entire site is rated 'Not Limited' for small commercial buildings (NRCS 2024b).

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 Columbine soil series occurring on the site are described as having a low hydric rating in El Paso County, with a hydric rating of 2. Hydric ratings are on a scale of 1 to 100, with 100 having greater hydric components and zero having no hydric components (NRCS 2024a). The Pleasant soil series, a minor component of some 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 2024c). Pleasant soil is not likely to be found within 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 very low.

The Columbine soil series is grouped into Hydrologic Group A (NRCS 2024d). The 'A' grouping includes soils that have a high infiltration rate, which results in the soil having a corresponding high rate of surface and ground water transmission. Additional, detailed soil data for the Project will be presented in a soils/geology/geotechnical report that will be submitted separately.

Figure 2: NRCS SSURGO Soils Data

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. A ditch along Meridian Road was shown in both the NHD and NWI data, listed as R4SBC in the NWI data, located just east of the site (**Figure 3**: *Aquatic Resources Desktop Review*). No aquatic features were depicted in the data occurring within the site, as shown in **Figure 3**.

Because these desktop data are often inaccurate, the site was also inspected in the field to confirm the absence of aquatic features as depicted in the NHD and NWI data. The site survey confirmed there were no wetlands, streams, or other aquatic resources present on site (see **Appendix A:** *Photographic Log*).

Figure 3: Aquatic Resources Desktop Review

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* ("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. Such a plan is described herein in the following paragraphs.

The Act identifies three levels of priority for control of noxious weeds throughout the State of Colorado ("State"). The CWMA maintains an updated list of noxious weeds known to occur in the State. CWMA also maintains a "watch list" of noxious weeds that occur in proximity to State borders and/or those species with a distribution that is not yet understood (**Appendix B**: *Colorado State Noxious Weed List*). List A noxious weeds are those species targeted for eradication. List A noxious weed populations are typically isolated in nature or rare throughout much of the State (*Colorado Revised Statutes 35-5.5-103*). Eradication and reporting of List A populations is required by law (Colorado Department of Agriculture [CDA] 2006). List B species are discretely distributed throughout the State and must be eradicated, contained, or suppressed (*Colorado Revised Statutes 35-5.5-103*). EPC requires control of all List B noxious weed populations located within the Project area (EPC 2017a). List C noxious weed populations are widespread and well established. EPC requires control of List C species through education of the public and/or chemical control (EPC 2017a).

Management methods identified within this Plan will comply with *Chapter 6: General Development Standards of the EPC Land Development Code* (EPC 2017b), the *EPC Noxious Weed Management Plan* (EPC 2017a) and the Act (Colorado Revised Statutes 35-5.5-103). Biological control methods are not included due to the prohibition of their use on plants targeted for eradication by the Colorado Weed Management Association (CWMA) (2015). Noxious weed species targeted would be those identified in the Act, with special consideration for those species listed in the *EPC Noxious Weeds and Control Methods* (EPC 2018).

3.4.1. Construction

Noxious weed management protocols during construction include prevention and treatment. Prevention and treatment shall be accomplished at the Project through surveys of construction easements, followed by primary chemical treatment. Initial inventory surveys shall occur separately from treatment, but both shall be completed before initial ground disturbing activities commence.

Noxious weed surveys shall be conducted within all construction easements prior to any ground disturbing activities. Surveyors shall use GPS units to collect data on noxious weed populations. Data collected for List C populations shall include species and general coordinates

of population; data collected for List A and List B populations shall include species, coordinates for the approximate center of each identified population, and the approximate radius of the infestation. EPC shall receive a map of identified noxious weed populations within the Project. Should surveyors locate List A species, the specific data collected shall be sent to EPC. Treatment type shall be selected depending on the priority rank of the noxious weed species (List A, B, or C), and the location and density of the infestation. Chemical treatment shall include herbicide application; the suggested chemical treatment protocol is described below.

List A species must be eradicated by law (USDA 2006). Should surveyors identify List A species, a plant sample shall be collected for positive identification through EPC's Environmental Division. Upon positive confirmation of a List A species, hand pulling of the population shall be performed to remove the mechanism for creation of a seedbank. Chemical treatment shall be applied to the area and shall be selected in compliance with the *EPC Noxious Weeds and Control Methods* (EPC 2018). List B species shall be chemically treated with an herbicide selected in compliance with the *EPC Noxious Weeds and Control Methods* (EPC 2018). Herbicide selection may vary depending upon the time of year and the life cycle of the plant. All herbicide application shall occur concurrent with initial ground disturbing activities. The herbicide applicator shall treat noxious weed populations with EPC recommended chemicals (EPC 2017a). B.E. recommends not treating List C noxious weeds; List C noxious weeds are well established and difficult to treat since many have hardy seed beds that are not affected by herbicide application. Rather than completely eradicating List C populations, herbicide applicators manage populations with continued seasonal treatments. A more efficient protocol would be to avoid List C weeds to the greatest extent possible during construction to avoid spreading their seeds. It is anticipated that the church, a metro district, or other controlling entity will treat all noxious or weedy species within development areas post-construction, including List C species, and will maintain a weed-free landscape within the Project.

Additional construction phase noxious weed management protocols shall include prevention and maintenance. Contractors shall prevent the spread of noxious weeds through the use of clean equipment and through treatment of all List A and List B populations concurrent with initial ground disturbing activities. Heavy equipment used on the site shall be washed and sprayed before mobilization on the Project. Doing so shall ensure that soil and seeds are not transported from other sites. Noxious weed treatment shall occur to areas slated for ground disturbance or immediately after initial ground disturbance activities. Doing so will ensure that active List A and List B noxious weed populations will become inactive and/or effectively managed throughout the construction phase of the Project.

It is anticipated that portions of the Project may be landscaped. Topsoil sources for landscaped areas shall be provided from native, on-site topsoil. Any salvaged topsoil piles shall be treated for noxious weeds and maintained and protected from erosion and/or noxious weed establishment during construction through Best Management Practices (BMPs) identified in the Project's Grading, Erosion, and Sediment Control (GESC) Plan.

3.4.2. Post-Construction

Post-construction noxious weed management protocols shall be limited to maintenance treatment, as needed and as determined by the church, metro district, or other controlling entity. It is anticipated that any landscaped areas of the Project, including private lots, will require seasonal noxious weed treatment and maintenance. B.E. notes that any existing List A and List B noxious weed populations should be treated concurrent with construction. Treatment of the site concurrent with initial ground disturbing activities may halt the spread of List A and List B noxious weeds in the immediate vicinity of the Project. However, noxious weed populations may persist on the Project's periphery. It shall be the controlling entity's responsibility to identify and treat any persistent noxious weed populations on the Project site.

3.4.3. Results and Recommendations

B.E. surveyed the site for noxious weed infestations and mapped and inventoried any noxious weed populations observed. Noxious weeds are present on the Project site in several areas (**Appendix C**: *Vegetation Map*). Great mullein was abundant and well-established throughout the site. A few musk thistle individuals were also observed within the center third of the site, but no large populations were present (**Appendix C**). Musk thistle is a List B Noxious Weed while common mullein is a List C species (**Appendix B**).

The most common nuisance weed observed was Russian thistle, which was seen in small concentrations in the center of the western side of the site. Russian thistle is not a listed noxious weed in Colorado but could be treated during treatment for the other weeds.

Treatment should be performed as detailed in the sections above during or just before construction, and after construction has been completed. Post-construction maintenance treatments are an important part of maintaining a weed-free site. Treatment for great mullein and musk thistle is usually done chemically, with herbicide sprayed by a licensed applicator. Mullein can also be effectively controlled mechanically by removing the seed heads of existing plants in summer and spraying new rosettes in the spring.

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 (9 miles northwest of the site)
- Station 2; 16465 Ridge Run Drive, Colorado Springs, CO 80908 (13 miles northwest of the site)

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) and modified as appropriate using actual site observations. 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 at the site is primarily "Lowest Risk" (about 90% of the site), while the remainder of the site is rated as "Low" (about 10% of the site) (CSFS 2020; **Figure 4**: *Wildfire Risk to Assets*). "Wildfire Risk to Assets" 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 entirety of the site is rated Level 5, or "Moderate" (CSFS 2020; **Figure 5:** *Wildfire Burn Probability*). The Fire Intensity rating throughout the site is Low to Moderate (CSFS 2020; **Figure 6:** *Fire Intensity Rating*).

Based on observations during the site visit, B.E. believes the WRAP estimates the Wildfire Risk to Assets accurately, while the Burn Probability and Fire Intensity ratings are overestimated by the WRAP. There is little grass on the site, with buffalograss comprising almost the entirety of the grass that is present. The grass is kept low and thin by the presence of numerous prairie dogs that cover the entire property. The site is best categorized as under Fuel Model 1 described as:

> *"…fine, very porous and continuous herbaceous fuels that have cured or are nearly cured… Fires are surface fires that move rapidly through the cured grass. Very little shrub or timber is present."* (Scott & Burgan 2005).

The model can be further categorized to GR 2 – Low Load, Dry Climate Grass (Scott & Burgan 2005). However, herbaceous vegetation on the whole has been significantly reduced, limiting the burn potential of nearly the entire site. Furthermore, Fire Intensity ratings are also reduced because fuels are not sufficient to maintain a blaze for long before they are consumed.

In a Fuel Model 1, GR 2 (Low Load, Dry Climate Grass) system, recent weather plays a heightened role in fire intensity and spread compared to, for example, a Fuel Model 8 system (Timber Group). Time lag, a measure of the rate at which a given fuel gains or loses moisture, is less of a factor in grasslands than it is in forested areas. The lag time for grasses is one hour, whereas forested areas

have a 1,000-hour lag time for fuels. Thus, grasses tend to be influenced by the weather on an hourly basis, while forested areas require long periods of wet or dry weather to affect combustibility. This factor makes climatic conditions a heightened factor, and also more unpredictable, for grasslands which have an hour-to-hour combustion variability.

Another factor affecting the site's burn potential is the lack of topography. Slopes, draws, and drainages affect fire spread, with slopes increasing the rate of convection spread and drainages tending to draw in fire. In other words, fire spreads faster uphill and into valleys. Since the site is flat, it can be expected to burn at a consistent rate. Therefore, as a result of these factors, to more accurately describe Burn Probability and Fire Intensity ratings, B.E. would list the entire site as "Low" for both factors. Mitigation of fuels is unnecessary because the site has a form of built-in mitigation in the prairie dogs that dominate the property.

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 entire site is located in Zone X, and is thus not in a flood hazard zone, indicating that flood risk for the rest of the site is deemed by FEMA to be 'minimal', or outside of the 0.2% chance of flooding annually (**Figure 8**).

Figure 4: Wildfire Risk to Assets

Figure 5: Wildfire Burn Probability

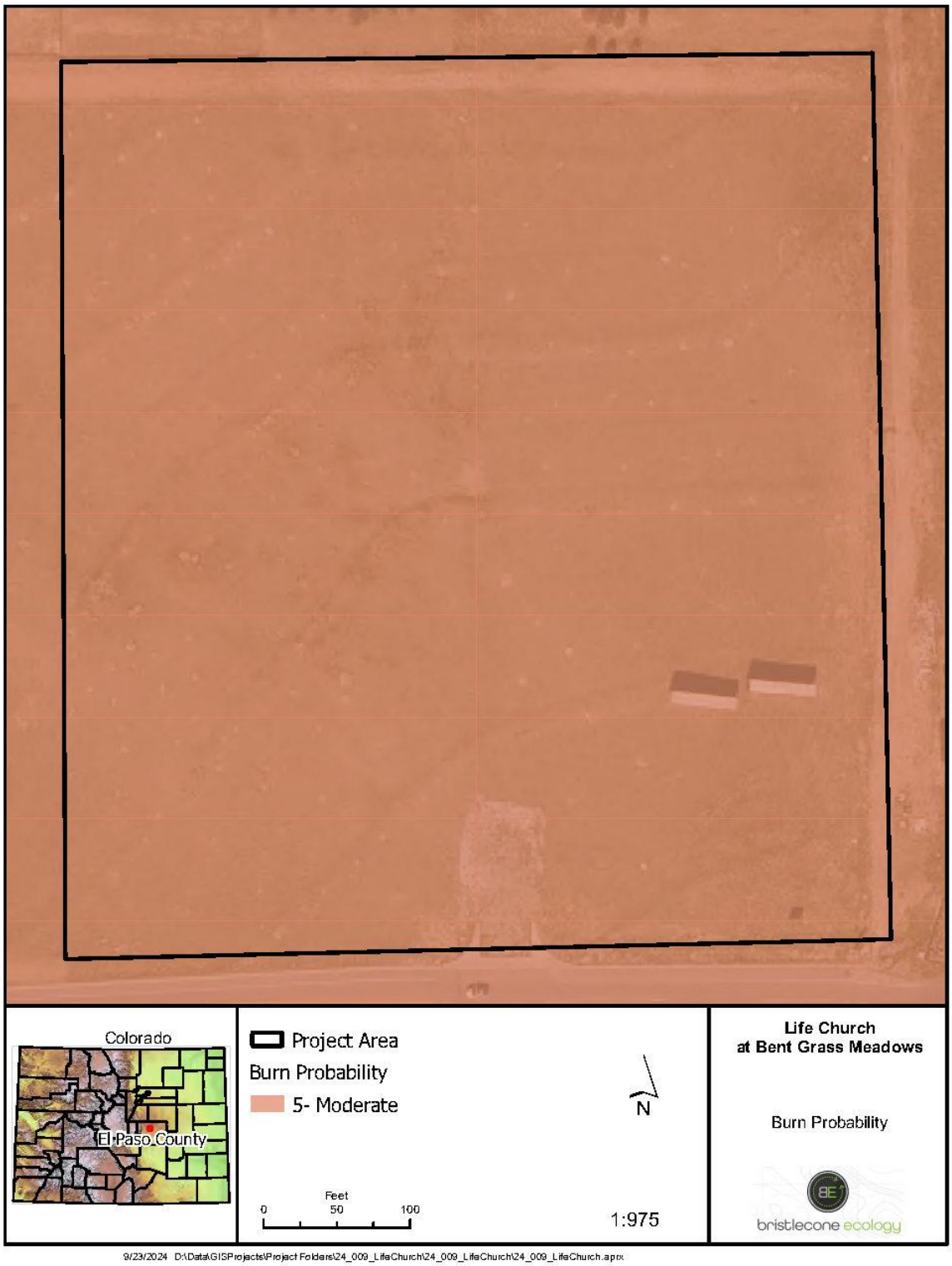


Figure 6: Fire Intensity Scale

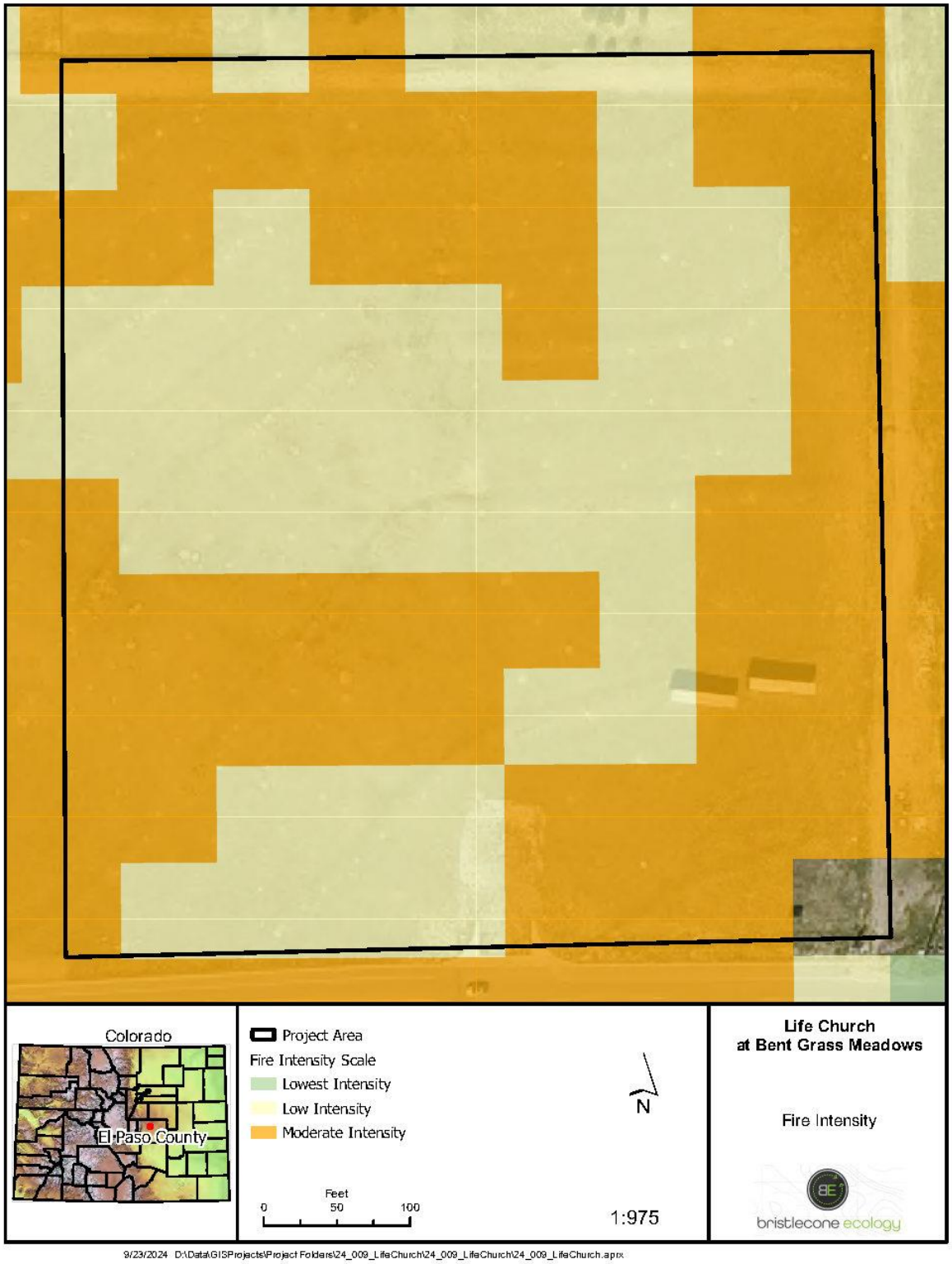


Figure 7: FEMA Flood Hazard Map

3.7. Federally Listed T&E Species

The USFWS IPaC database (USFWS 2021) was used to determine the likelihood of occurrence of federally listed T&E species that could be affected by Project development. The IPaC query listed five species, including two birds, one fish, one insect, and one flowering plant with the potential to occur within or be affected by development of the site (**Table 2:** *Federally Listed T&E Species Potentially Impacted by the Project*). B.E. has provided our professional opinion regarding the probability of occurrence of T&E species at the Project site and their probability of being impacted by Project development. Preble's meadow jumping mouse (*Zapus hudsonius preblei*), a federally and state listed threatened species, was not included in the IPaC species list and is excluded because the site is within the Preble's Block Clearance Zone for Colorado Springs (**Appendix D:** *Preble's Meadow Jumping Mouse Block Clearance Map*)

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]
Birds			
Piping plover	*Charadrius melodus*	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. **Likelihood of impacts: None, the Project is not within the watersheds listed.**	FT
Eastern black rail	*Laterallus jamaicensis* ssp. *jamaicensis*	Eastern black rail is a subspecies of black rail that occurs east of the Rocky Mountains in North America. Black rails are small, cryptic marsh/wetland specialists, and depend entirely upon these habitats to support their resource needs. Requires dense overhead cover (usually cattails [*Typha* spp.] or bulrushes [*Schoenoplectus / Scirpus* spp.]) and moist to saturated soils. Eastern black rails have been expanding their range in Colorado. **Likelihood of impacts: None; suitable habitat is not present.**	FT
Insects			
Monarch butterfly	*Danaus plexippus*	Monarch butterflies require milkweeds (*Asclepias sp.*) as a host plant. Caterpillars consume the plant, and adults lay their eggs on milkweed. Monarch butterfly 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 listing 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 but possible – a handful of showy milkweed plants are present onsite (see *Appendix C* for locations of individuals). There are no statutory requirements for candidate species, but due diligence is encouraged. The loss of less than 15 milkweed plants is unlikely to have significant adverse affects on monarch butterflies.**	C

[1]FE= 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]
Fishes			
Pallid sturgeon	*Scaphirhynchus albus*	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. **Likelihood of impacts: None, the Project is not within the watersheds listed.**	FE
Flowering Plants			
Ute ladies'-tresses orchid	*Spiranthes diluvialis*	Primarily occurs along seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels, and lakeshores. May also occur along irrigation canals, berms, levees, irrigated meadows, gravel pits, borrow pits, and other human-modified wetlands. There are no known populations in El Paso County. **Likelihood of impacts: None. No potentially suitable habitat is present on the site, and no known populations exist in El Paso County.**	FT

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

3.8. Wildlife Communities

The Project site provides overall low quality habitat for grassland wildlife, including birds, mammals, and reptiles. 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 low, on woodland species as 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 presence. 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 potential for the occurrence of 15 mammals, 15 birds, and 14 reptiles, including one state mammal of concern, one state and federally threatened mammal, one state threatened bird, and one federally protected bird (**Table 3:** *SAM Wildlife Potential for Occurrence*).

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

Common Name	Scientific Name	Type of Occurrence (CPW 2022)	Status[1,2]
Mammals			
Big brown bat	*Eptesicus fuscus*	Overall range	n/a
Black bear	*Ursa americanus*	Overall range Human conflict area	n/a
Black-tailed prairie dog	***Cynomys ludovicianus***	***Overall range*** ***Low colony potential***	**SC, S3**
Dwarf shrew	*Sorex nanus*	Overall range	G4, S2
Hoary bat	*Lasiurus cinereus*	Overall range	n/a
Little brown myotis	*Myotis lucifugus*	Overall range	n/a
Mountain lion	*Puma concolor*	Overall range Peripheral range	n/a
Mule deer	*Odocoileus hemionus*	Overall range	n/a
Olive-backed pocket mouse	*Perognathus fasciatus*	Overall range	G5, S3
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	Overall range	FT, ST, S1
Pronghorn	*Antilocapra americana*	Overall range Resident population area	n/a
Red bat	*Lasiurus borealis*	Overall range	G3G4, S2S3B
Silver-haired bat	*Lasionycteris noctivagans*	Overall range	n/a
White-tailed deer	*Odocoileus virginianus*	Overall range	n/a
White-tailed jackrabbit	*Lepus townsendii*	Overall range	n/a
Birds			
Band-tailed pigeon	*Patagioenas fasciata*	Breeding range	n/a
Brewer's sparrow	*Spizella breweri*	Breeding range	S4B
Burrowing owl	***Athene cunicularia***	***Breeding range***	**ST**
Cassin's sparrow	*Peucaea cassinii*	Breeding range	n/a
Golden eagle	*Aquila chrysaetos*	Breeding range	BGEPA, S3S4B
Grasshopper sparrow	*Ammodramus savannarum*	Breeding range	S3S4B
Lark bunting	*Calamospiza melanocorys*	Breeding range	S4
Lazuli bunting	*Passerina amoena*	Breeding range	S5B
Mountain plover	*Charadrius montanus*	Breeding range	n/a
Northern harrier	*Circus hudsonius*	Breeding range	S3B
Prairie falcon	*Falco mexicanus*	Breeding range	S4B, S4N
Rufous hummingbird	*Selasphorus rufus*	Migration range	n/a
Sandhill crane	*Antigone canadensis tabida*	Migration range	G5T5, S2B, S4N
Swainson's hawk	*Buteo swainsoni*	Breeding range	S5B
Virginia's warbler	*Leiothlypis virginiae*	Breeding range	n/a
Scaled quail	*Callipepla squamata*	Breeding range	n/a

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

Common Name	Scientific Name	Type of Occurrence (CPW 2022)	Status[1,2]
Reptiles and Amphibians			
Bullsnake	*Pituophis catenifer sayi*	Overall range	n/a
Coachwhip	*Masticophis flagellum*	Overall range	n/a
Common lesser earless lizard	*Holbrookia maculata*	Overall range	n/a
Hernandez short-horned lizard	*Phrynosoma hernadesi*	Overall range	n/a
Milksnake	*Lampropeltis elapsoides*	Overall range	n/a
Many-lined skink	*Plestiodon multivirgatus*	Overall range	n/a
Ornate box turtle	*Terrapene ornata ornata*	Overall range	n/a
Painted turtle	*Chrysemys picta*	Overall range	n/a
Prairie lizard	*Sceloporus consobrinus*	Overall range	n/a
Plateau fence lizard	*Sceloporus tristichus*	Overall range	n/a
Prairie rattlesnake	*Crotalus viridis*	Overall range	n/a
Six-lined Racerunner	*Aspidoscelis sexlineata*	Overall range	n/a
Smooth greensnake	*Opheodrys vernalis*	Overall range	n/a
Terrestrial gartersnake	*Thamnophis elegance*	Overall range	n/a

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

[2]State (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

Species observed during the site survey are bolded and italicized

Following the review of the SAM data, a site reconnaissance was performed to field-verify the information provided in the data and perform a general wildlife survey. In general, the site provides low quality grassland habitat for wildlife. The site is dominated by a low diversity of weedy species such as hairy false goldenaster, white sagebrush, ragweed, Tahoka daisy, and curlycup gumweed. Buffalo grass was also dominant throughout the site. There are no wetlands or aquatic habitats present within the site. Overall disturbance throughout the site is extensive: previously, cattle grazing impacted vegetation diversity, and currently the site is essentially one big black -tailed prairie dog (*Cynomys ludovicianus*) colony. As such, vegetation is reduced in quality, diversity, and extent, and invasive weeds such as great mullein, Russian thistle and musk thistle are spread throughout the site. All current vegetation communities present on the site provide low quality habitat for most wildlife.

In terms of sensitive species, some of the species listed in the SAM data likely occur on the site, though few of the species listed were observed. The majority are either not expected to occur or may occur only rarely based on the limited habitat available. Black-tailed prairie dogs, a state species of concern, were observed during the site reconnaissance; a rough count of 34 individuals during the reconnaissance is likely an underestimate. An approximately 6.8-acre colony was mapped during the site visit (**Figure 8:** *Black-tailed Prairie Dog & Burrowing Owl Location Map*). The

site is thus also suitable for the state-threatened burrowing owl (*Athene cunicularia*), which uses abandoned prairie dog burrows for nesting. One burrowing owl was observed during the site visit, and a formal survey may be necessary to confirm whether burrowing owls are inhabiting the prairie dog colony prior to construction (**Figure 8**). Other state-listed and state sensitive species were not observed.

Others such as big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*), common lesser earless lizard (*Holbrookia maculata*), plains garter snake (*Thamnophis radix*), and prairie lizard (*Sceloporus consobrinus*) are species in the SAM data that could reasonably be expected to occur on-site in the appropriate seasons and in the appropriate habitats.

Golden eagles (*Aquila chrysaetos*), which nest mostly on cliffs in mountainous areas, and bald eagles (*Haliaeetus leucocephalus*), which are almost always found near large bodies of water or rivers, both receive federal protections under the Bald and Golden Eagle Protection Act (BGEPA). Golden eagles may occasionally nest in large trees (primarily cottonwoods) on Colorado's eastern plains. The site does not contain mature cottonwoods or other large trees that could support Golden eagle nests, and there are no cliffs within or near the Project area. There are also no large bodies of water within the site, so it is unlikely that either species would occur. The presence of prairie dogs could provide a prey base to attract eagles or other raptors, particularly during the winter.

The site does not provide potential nesting habitat for other raptors, as there are no mature trees throughout the site. Trees in the surrounding area may support habitat for tree-nesting raptors such as Swainson's hawk (*Buteo swainsoni*), red-tailed hawk (*Buteo jamaicensis*), and the cavity-nesting American kestrel (*Falco sparverius*). Raptor species may also utilize the site for hunting, and one red-tailed hawk was observed actively hunting the prairie dog colony during the site survey. Nests were not observed during the site visits.

The Project area also may provide habitat for mammals, including rodents, ungulates, and carnivores. Other than black-tailed prairie dog, mammals were not observed during the site reconnaissance, but other species may occur, including pronghorn (*Antilocapra americana*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), and/or red fox (*Vulpes vulpes*). The area is also suitable year-round for mule deer (*Odocoileus hemionus*), though habitat for this species is not high quality. The site has the potential to provide both foraging and breeding habitat for predators such as coyote, red fox, and gray fox; it is also listed as a potential human conflict area for black bear (*Ursa americanus*), though based on the available habitat, this species is unlikely to occur. Other fossorial mammals such as pocket gophers (*Geomyidae* family) could also occur, though eskers were not observed.

No amphibians were observed during the survey, nor are any expected to occur within the stie due to the lack of aquatic features.

Figure 8: Black Tailed Prairie Dog & Burrowing Owl Location Map

4.0 SUMMARY OF IMPACTS

4.1. Vegetation

Vegetation will be unavoidably disturbed through development of the Project site. Though located in the Foothill Grasslands ecoregion, the majority of the site is composed of low diversity, weedy forbs with a low-quality grassland understory, and this is the primary ecosystem type that will be impacted. The upland areas of site are generally of low quality and impacts are not expected to imperil or substantially harm habitat in the Foothill Grasslands. Development of the site will result in the loss of up to 8.3 acres of low diversity, disturbed grasslands. The dominance by invasive weeds and nonnative grasses in most of the grasslands indicates low potential harm overall to this ecosystem. No globally sensitive vegetation communities are present according to CNHP data for sensitive vegetation communities and the site reconnaissance (CNHP 2022.)

4.2. Aquatic Resources

There are no wetlands, streams, or other aquatic resources present on the site. Development of the site will not result in impacts to wetlands or other regulated Waters or the U.S.

4.3. Noxious Weeds

Noxious weeds are present on the Project site in several areas. List A Species, which require reporting and eradication by Colorado law (Colorado Department of Agriculture [CDA] 2006), were not detected. List B Species require either eradication, containment, or suppression; List C species require control through either public education or chemical control. List B and C noxious weeds that were detected during the site reconnaissance included:

List B:

- Musk thistle

List C

- Great mullein

The location of noxious weeds was mapped and can be seen in **Appendix C**. Great mullein is abundant throughout the entire property.

It is anticipated that noxious weeds will concentrate along areas to be disturbed during construction, such as temporary construction staging areas, entrance roads, and other highly trafficked areas within the development. As such, construction and post-construction maintenance methods should be used to prevent, control, and monitor the spread of identified noxious weed populations within the Project. It will be the responsibility of the controlling entity to establish covenants to prevent and control the spread of noxious weeds in the post-construction phase. Typically, the controlling entity will contract a licensed herbicide applicator to seasonally survey and spray for noxious weeds throughout the development as necessary. Additionally, communal landscaped areas should be regularly mowed and/or treated for noxious weeds. Integrated management methods shall include the following:

- surveys to inventory and map established noxious weed populations;
- sharing of data with EPC to aid in EPC level tracking and inventory;
- physical, biological, and/or chemical treatment of all identified noxious weed populations following recommended treatment protocols;
- and periodic post-construction treatment as needed and as determined by the church, metro district, or other controlling entity.

4.4. Wildfire

Roughly 90% of the Project area is mapped as 'Lowest' wildfire risk to assets while the remaining 10% is mapped as 'Low' risk. There is little difference in vegetation composition between the 'Low' and 'Lowest' risk portions of the site. The site is rated 'Low' in terms of values and assets present that could be lost to wildfire, however, it is rated 'Moderate' in terms of burn probability based on the available fuels at the site, which includes disturbed and undisturbed weedy grasslands. Fire intensity at the site is rated 'Low to 'Moderate throughout the site. B.E., upon analyzing the site's topography, vegetative composition and cover, and connectivity to habitats with moderate or higher burn probability, proposed a 'Low' rating throughout the site for both Burn Probability and Fire Intensity. Fire Intensity and Burn Probability are also highly dependent upon atmospheric conditions at the time of a fire; in a Fuel Model 1, GR 2 (Low Load, Dry Climate Grass) system, recent weather plays a heightened role, which hourly moisture lag times for grasses (versus 1,000-hour lag times for timber).

The nearest fire response is Station 1 in the Black Forest FPD, which is located 9 miles from the site; the second closest station is Station 2, also in the Black Forest FPD, which is 13 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 index for the Project is expected to be similar or somewhat lower after development. Mitigation efforts, either before or after construction, are unlikely to have any effect on the site's Burn Probability or Fire Intensity scales.

4.5. Wildlife

Similar to the impacts for vegetation, some wildlife will inevitably be affected by development of the Project area. The main consideration for wildlife is the presence of a black-tailed prairie dog colony that extends throughout the entirety of the site. Black-tailed prairie dogs are a state species of concern. One burrowing owl, a state threatened species, was also observed to be utilizing the burrows within the site. The colony also serves as a prey base for raptors such as red-tailed hawk, which was observed actively hunting in the colony. Other raptors may also be attracted to the colony as a food source, particularly during the winter when resources are scarce.

The greatest impact to wildlife will be to the state sensitive black-tailed prairie dogs present in a 6.8-acre colony; this colony would presumably be removed prior to development of the site. State threatened burrowing owls may also be present seasonally at this colony, and one was observed during the September site survey. A formal burrowing owl survey would be necessary to confirm their presence/absence. Raptors may also be affected indirectly through the loss of a prey source.

4.6. Federally Listed T&E Species

Federally listed T&E species are not expected to occur at the site or be affected by development of the Project. All species listed in the IPaC report for the site occur in habitats that were not present on the site or would only be affected if development were to occur within floodplains or involve water depletions in different river systems. Furthermore, the site is within the Preble's meadow jumping mouse block clearance zone for Colorado Springs, meaning that species is precluded from occurring. There is no habitat for any listed species. There is potential habitat for monarch butterfly, based on the presence of a handful of showy milkweed plants; this species is a candidate species and thus there are no requirements under Section 9 of the Endangered Species Act for this species, though due diligence is encouraged. It is unlikely that the loss of a dozen milkweed plants would have a significant effect on monarch butterflies.

5.0 RECOMMENDATIONS

Upon completion of a desktop review, site reconnaissance, and impact assessment, B.E. finds that some environmental constraints are 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 Clean Water Act prohibits the discharge of dredge or fill material into WOTUS (including wetlands) without a valid permit. There are no wetlands or other WOTUS within the site, so no action is required.

5.2. Endangered Species Act

Section 9(a)(1) of the Endangered Species Act 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 a small amount of potentially suitable habitat in the form of milkweed plants for monarch butterflies, a candidate species. There is no other habitat for listed species on the site. Impacts to listed species offsite would also not occur because the Project will not involve water depletions from the Platte River basins where these species are found. No impacts to any federally listed species are anticipated from site development and no further consultation is recommended.

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 (MBTA), which prohibits the intentional take of migratory birds. Bald eagles and golden 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 substrates for raptors were available within the site.

Nesting substrates for other migratory birds, including burrowing owls, are present in the form of open grasslands, which are expected to be used by some migratory birds during the breeding season. It is not known whether borrowing owls nest on the site, but one was observed utilizing a burrow during the site visit. This bird could have been a southbound migrant; further study would be required to determine if burrowing owls actively nest on the site. Burrowing owls are a state-listed species and are also protected under the MBTA. A focused survey for burrowing owls following CPW's *Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls* (CPW 2008) is recommended to determine whether there are any active nests within the colony prior to construction.

If possible, 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

Noxious weed management methods identified herein should comply with *Chapter 6: General Development Standards of the EPC Land Development Code* (EPC 2018b), the *EPC Noxious Weed Management Plan* (EPC 2017), and the Act (Colorado Revised Statutes 35-5.5-103). Biological control methods are not included due to the prohibition of their use on plants targeted for eradication by the Colorado Weed Management Association (CWMA) (2015). Noxious weed species targeted would be those identified in the Act, with special consideration for those species listed in the *EPC Noxious Weeds and Control Methods* (EPC 2018a).

Noxious weeds are present on the Project site in several areas with limited distribution. The only listed noxious weeds observed were musk thistle, a List B species, and great mullein, a List C species. Musk thistle was observed in limited quantities with sparse individuals spread throughout the center third of the site. Mechanical control of musk thistle may be effective, as it is suggested for infestations smaller than 0.5 acres (CDA 2016). Mechanical control includes tilling, hoeing and digging. Mowing, beheading, and chopping only stimulated more flower production and thus should not be applied. All flower buds and heads must be collected, bagged, and disposed of or destroyed (CDA 2016). Great mullein should be hand pulled, beheaded, and/or sprayed.

5.5. Non-Statutory Considerations

There is potential for general wildlife, including some big game such as pronghorn and possibly mule deer, to occur within the site. However, no big game migratory routes traverse the Project. In addition, ranges for several migratory birds, including the state-threatened burrowing owl, overlap the Project area, and habitat for burrowing owls is present based on the presence of black-tailed prairie dogs. A survey for burrowing owls is recommended prior to construction.

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

Daniel Maynard
Owner/Ecologist

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APPENDIX A

PHOTOGRAPHIC LOG

PHOTO 1 – Overview of typical habitat at the site. Nearly the entire site is flat, weedy, sparsely vegetated, and inhabited by numerous black-tailed prairie dogs (burrows can be seen dotting the landscape).

PHOTO 2 – View of the few showy milkweed (Asclepias speciosa) plants clustered in two locations at the site. There are perhaps a dozen plants in total, representing very minor potential habitat for monarch butterflies.

PHOTO 3 – View of the pocket of distinct habitat in the northeast corner where curlycup gumweed (Grindelia squarosa) is co-dominant; the rest of the site is uniform in terms of habitat.

APPENDIX B

COLORADO STATE NOXIOUS WEED LIST

Colorado Noxious Weeds (including Watch List), effective May, 2023

List A Species (26)

Common	***Scientific***
African rue	*(Peganum harmala)*
Bohemian knotweed	*(Fallopia x bohemicum)*
Camelthorn	*(Alhagi maurorum)*
Common crupina	*(Crupina vulgaris)*
Cypress spurge	*(Euphorbia cyparissias)*
Dyer's woad	*(Isatis tinctoria)*
Elongated mustard	*(Brassica elongata)*
Flowering rush	*(Butomus umbellatus)*
Giant knotweed	*(Fallopia sachalinensis)*
Giant reed	*(Arundo donax)*
Giant salvinia	*(Salvinia molesta)*
Hairy willow-herb	*(Epilobium hirsutum)*
Hydrilla	*(Hydrilla verticillata)*
Japanese knotweed	*(Fallopia japonica)*
Meadow knapweed	*(Centaurea x moncktonii)*
Mediterranean sage	*(Salvia aethiopis)*
Medusahead	*(Taeniatherum caput-medusae)*
Myrtle spurge	*(Euphorbia myrsinites)*
Orange hawkweed	*(Hieracium aurantiacum)*
Parrotfeather	*(Myriophyllum aquaticum)*
Purple loosestrife	*(Lythrum salicaria)*
Rush skeletonweed	*(Chondrilla juncea)*
Squarrose knapweed	*(Centaurea virgata)*
Tansy ragwort	*(Senecio jacobaea)*
Yellow starthistle	*(Centaurea solstitialis)*
Yellow flag iris	*(Iris pseudacorus)*

List B Species (38)

Common	***Scientific***
Absinth wormwood	*(Artemisia absinthium)*
Black henbane	*(Hyoscyamus niger)*
Bouncingbet	*(Saponaria officinalis)*
Bull thistle	*(Cirsium vulgare)*
Canada thistle	*(Cirsium arvense)*
Chinese clematis	*(Clematis orientalis)*
Common tansy	*(Tanacetum vulgare)*
Common teasel	*(Dipsacus fullonum)*
Cutleaf teasel	*(Dipsacus laciniatus)*
Dalmatian toadflax, broad-leaved	*(Linaria dalmatica)*
Dalmatian toadflax, narrow-leaved	*(Linaria genistifolia)*
Dame's rocket	*(Hesperis matronalis)*
Diffuse knapweed	*(Centaurea diffusa)*
Eurasian watermilfoil	*(Myriophyllum spicatum)*
Hoary cress	*(Lepidium draba)*
Houndstongue	*(Cynoglossum officinale)*
Jointed goatgrass	*(Aegilops cylindrica)*

List B Species Continued (38)

Common	***Scientific***
Leafy spurge	*(Euphorbia esula)*
Mayweed chamomile	*(Anthemis cotula)*
Moth mullein	*(Verbascum blattaria)*
Musk thistle	*(Carduus nutans)*
Oxeye daisy	*(Leucanthemum vulgare)*
Perennial pepperweed	*(Lepidium latifolium)*
Plumeless thistle	*(Carduus acanthoides)*
Russian knapweed	*(Rhaponticum repens)*
Russian-olive	*(Elaeagnus angustifolia)*
Salt cedar	*(Tamarix. ramosissima)*
Salt cedar	*(T. chinensis)*
Scentless chamomile	*(Tripleurospermum inodorum)*
Scotch thistle	*(Onopordum acanthium)*
Scotch thistle	*(O. tauricum)*
Spotted knapweed	*(Centaurea stoebe ssp. micranthos)*
Spotted x diffuse knapweed hybrid	*(Centaurea x psammogena)*
Sulfur cinquefoil	*(Potentilla recta)*
Wild caraway	*(Carum carvi)*
Yellow nutsedge	*(Cyperus esculentus)*
Yellow toadflax	*(Linaria vulgaris)*
Yellow x Dalmatian toadflax hybrid	*(Linaria vulgaris x L. dalmatica)*

List C Species (18)

Common	***Scientific***
Bulbous bluegrass	*(Poa bulbosa)*
Chicory	*(Cichorium intybus)*
Common burdock	*(Arctium minus)*
Common mullein	*(Verbascum thapsus)*
Common St. Johnswort	*(Hypericum perforatum)*
Downy brome, cheatgrass	*(Bromus tectorum)*
Field bindweed	*(Convolvulus arvensis)*
Halogeton	*(Halogeton glomeratus)*
Johnsongrass	*(Sorghum halepense)*
Perennial sowthistle	*(Sonchus arvensis)*
Poison hemlock	*(Conium maculatum)*
Puncturevine	*(Tribulus terrestris)*
Quackgrass	*(Elymus repens)*
Redstem filaree	*(Erodium cicutarium)*
Siberian elm	*(Ulmus pumila)*
Tree of Heaven	*(Ailanthus altissima)*
Velvetleaf	*(Abutilon theophrasti)*
Wild proso millet	*(Panicum miliaceum)*

Colorado Noxious Weeds (including Watch List), effective May, 2023

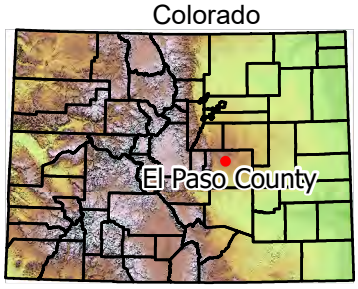
Watch List Species (19)

These species are not regulated by the Noxious Weed Act/Rule.

Common	***Scientific***
Baby's breath	*(Gypsophila paniculata)*
Caucasian bluestem	*(Bothriochloa bladhii)*
Common bugloss	*(Anchusa officinalis)*
Common reed	*(Phragmites australis)*
Garden loosestrife	*(Lysimachia vulgaris)*
Garlic mustard	*(Alliaria petiolata)*
Himalayan blackberry	*(Rubus armeniacus)*
Hoary alyssum	*(Berteroa incana L.)*
Meadow hawkweed	*(Hieracium caespitosum)*
Onionweed	*(Asphodelus fistulosus)*
Perennial Sweet Pea	*(Lathyrus latifolius)*
Scotch broom	*(Cytisus scoparius)*
Swainsonpea	*(Sphaerophysa salsula)*
Syrian beancaper	*(Zygophyllum fabago)*
Tall Oatgrass	*(Arrhenatherum elatius)*
Ventenata grass	*(Ventenata dubia)*
White bryony	*(Bryonia alba)*
Yellow bluestem	*(Bothriochloa ischaemum)*
Yellow mignonette	*(Reseda lutea)*

APPENDIX C

VEGETATION AND NOXIOUS WEEDS MAP



Project Area
Russian thistle (Salsola tragus)
Showy milkweed (Asclepias speciosa)
Musk thistle (Carduus nutans)
Russian thistle

N

Feet
0 50 100

1:975

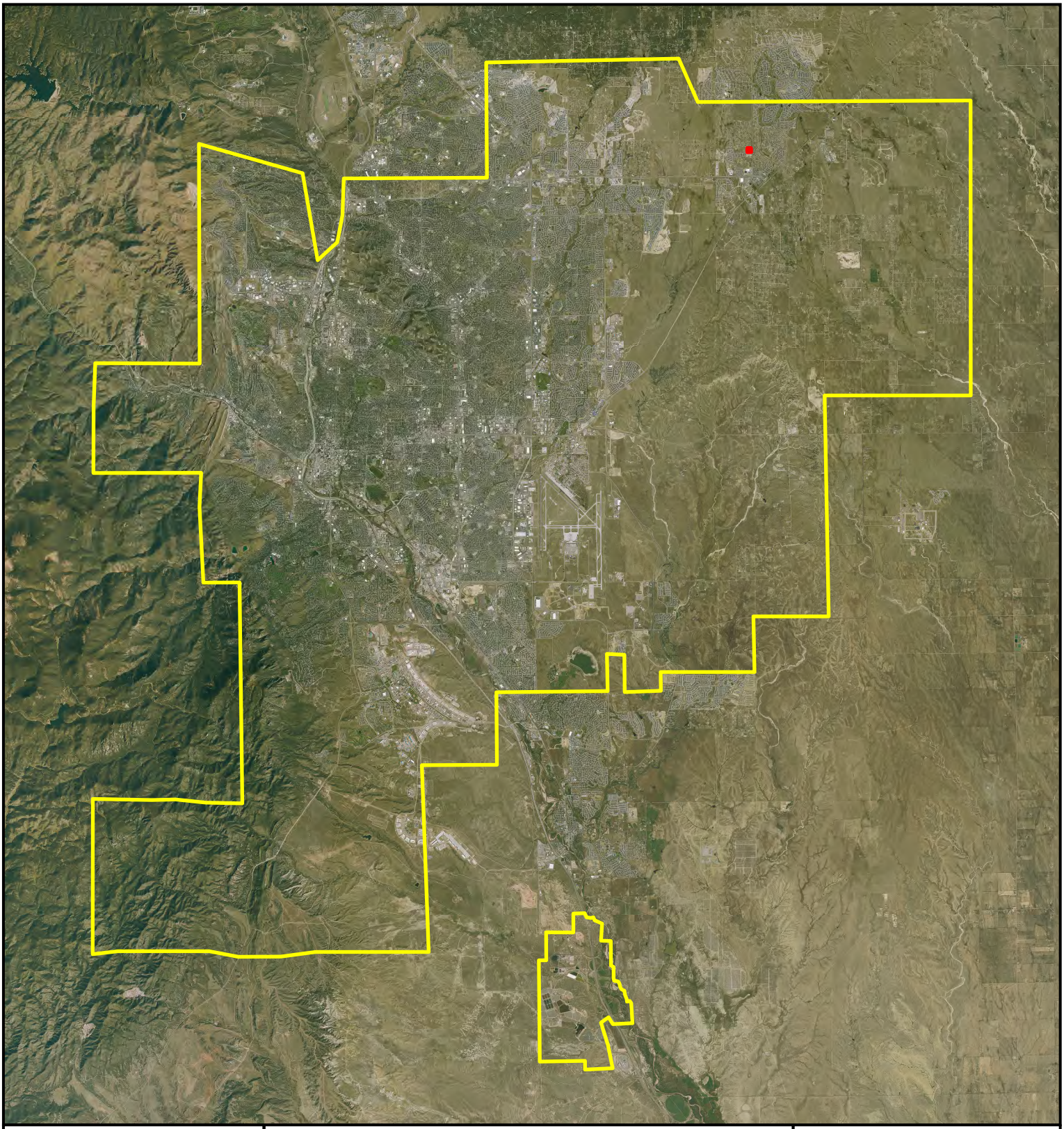
Life Church at Bent Grass Meadows

Vegetation and Noxious Weeds Map

bristlecone ecology

APPENDIX D

PREBLE'S MEADOW JUMPING MOUSE BLOCK CLEARANCE MAP



Colorado

El Paso County

Project Area

PMJM Block Clearance Zone

N

Miles

0 2.5 5

1:230,172

Life Church at Bent Grass Meadows

Preble's Meadow Jumping Mouse Block Clearance Zone

bristlecone ecology