



November 9, 2021

U.S. Army Corps of Engineers
Albuquerque District-Southern Colorado Regulatory Office
201 West 8th Street, Suite 350
Pueblo, CO 81003

RE: Nationwide Permit 29 Application
Winsome Filing No. 3
El Paso County, Colorado

To Whom It May Concern:

On behalf of Winsome, LLC (“Applicant”), Bristlecone Ecology, LLC. (B.E. or “Agent”) is submitting the enclosed Nationwide Permit (NWP) Application and Pre-Construction Notification (PCN) for the proposed Winsome Filing No. 3 residential project (“Project”) located in unincorporated El Paso County, Colorado. The Project is planned on a portion of a 767-acre parcel north of Hodgen Road and west of Meridian Road in the Black Forest area. The property is located in portions of Sections 13 and 24, Township 11 South, Range 65 West, and a portion of Section 19, Township 11 South, Range 64 West, and can be found on the U.S. Geological Survey’s (USGS) Eastonville 7.5-minute quadrangle (USGS 2020). The parcels where the Project is located are 4100000435, 5100000495, 5100000496, and 5100000497. The Project will involve construction of a residential development, along with associated/attendant facilities: open space tracts, stormwater detention facilities, arterial roads, utilities, and other infrastructure. The portion of the Project affecting Waters of the U.S. (WOTUS) includes the installation of two box culverts at the proposed Alamar Way and Twinkling Star Lane crossings of West Kiowa Creek. Minor permanent impacts to WOTUS, including wetlands, would result in West Kiowa Creek from the construction of the two box culverts. As such, the Project qualifies for NWP 29 for Residential Development Projects; impacts are described in detail in Form 6082 for this PCN (**Attachment A: Form 6082 – Nationwide Permit Pre-Construction Notification**). West Kiowa Creek is presumed to be jurisdictional, as are other aquatic resources on the property associated with the creek. A natural features and wetlands report was prepared previously for the Project by Ecosystem Services, LLC (ECOS) and is included here as reference (**Attachment B: Natural Features and Wetlands Report**). Some areas identified as aquatic features in the report are believed not to be jurisdictional under the Clean Water Act (CWA); as such, a request for an approved jurisdictional determination (AJD) is included here as a component of the Section 404 permit request (**Attachment C: Request for Approved Jurisdictional Determination**). Per the recent reissuance and modification of Nationwide Permits, including NWP 29, published in the Federal Register on January 13th, 2021, and effective March 15th, 2021 (86 FR 2744), there is no longer a permit threshold for linear feet (LF) of stream channel –



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the only limit for an NWP 29 is ½-acre of impacts to WOTUS. Since the Project is under the threshold for acreage of WOTUS impacted and will affect greater than 1/10th-acre of wetlands and greater than 3/100th-acre of stream channel, the following PCN describes the Project in detail below, including aquatic resources, threatened and endangered species (TES), cultural resources, and compensatory mitigation.

SITE CONDITIONS AND PROJECT DESCRIPTION

The topography of the site consists of rolling hills as well as a few deep ravines and is bisected by West Kiowa Creek which drains the Project area from northeast to southwest. There are several minor tributaries, ravines, and swales that drain into West Kiowa Creek. Wetlands on the site are all associated with this stream system. Elevations at the site range from approximately 7,450 feet in the northwest corner to approximately 7,275 feet near the southeast corner. Nearly all of the area surrounding the property has seen well-spaced residential development, with scattered homes in low densities in all directions. The site is located in the Black Forest region, which supports two primary vegetation communities: ponderosa pine (*Pinus ponderosa*) forest, and shortgrass prairie. Portions of the site that are in ponderosa pine forests are in the northwest corner and along the southern boundary. The majority of the rest of the site is dominated by shortgrass prairie with dominant species including blue grama (*Bouteloua gracilis*), green needlegrass (*Nasella viridula*), hairy false goldenaster (*Heterotheca villosa*), and fringed sage (*Artemisia frigida*).

The Project will involve the construction of a residential development and associated infrastructure, including two rural local roadways, Alamar Way and Twinkling Star Lane, that will affect WOTUS. Two triple-cell reinforced concrete box culverts are planned at each road's crossing of West Kiowa Creek to convey flows under the roadways. Including the abutments and concrete aprons, the culverts will be approximately 40 feet wide and approximately 50-55 feet long (the width of the wetlands at each location). Soil riprap will be placed for approximately 50-100 feet downstream of the culverts to provide stabilization and aid the exit transitions. The culverts will continue to route flows along West Kiowa Creek in the existing channel. (**Attachment D: Winsome Filing No. 3 Culvert Layout**).

AQUATIC RESOURCES

ECOS conducted an informal wetland assessment for the Project in 2018. Results of the wetland assessment indicated that West Kiowa Creek and several areas of associated and adjacent wetlands exhibit the characteristics of a jurisdictional stream and/or wetlands throughout its reach in the Project area. Based on the presence of a defined bed and bank and its hydrologic connection to downstream WOTUS, West Kiowa Creek, in the ECOS report, is believed to be a jurisdictional aquatic resource. Wetlands associated with West Kiowa Creek are therefore also jurisdictional, as are adjacent wetlands. In total, ECOS identified five jurisdictional wetlands associated with West Kiowa Creek (**Attachment B**). There was an isolated wetland identified in the report that is identified as non-jurisdictional; there are no other aquatic resources delineated on the site. Several upland swales were identified in the

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report as tributaries to West Kiowa Creek and can be seen in **Attachment B**. Three tributaries were identified as intermittent tributaries or ravines in the ECOS report but are believed to be ephemeral and non-jurisdictional based upon observations B.E. made on-site. These ravines and tributaries do not typically flow year-round, nor do they have seasonally continuous flow, and generally flow only in response to precipitation events. A tributary to the south of West Kiowa Creek identified as an intermittent tributary did not possess a defined streambed, stream banks, or ordinary high water mark (OHWM). These tributaries do not contribute a significant nexus to downstream WOTUS. Please see **Attachment C** for a request for an AJD of these resources.

Construction of the Project would result in minor impacts to West Kiowa Creek, resulting in the permanent loss of .49 acre of wetlands. West Kiowa Creek and wetlands adjacent to and associated with the stream have been assumed to be jurisdictional based on the presence of wetland hydrology, hydric soils, and dominant hydrophytic vegetation, as well as their hydrologic connection to downstream WOTUS.

FEDERAL TES

ECOS completed a habitat assessment of the Project site for species listed under the Endangered Species Act (ESA) (**Attachment B**). The USFWS Information for Planning and Consultation (IPaC) database was used to determine the likelihood of occurrence of federally listed threatened and endangered species (TES) within the Project area. ECOS' IPaC query listed ten species that could occur on the site, including two mammals, four birds, two fishes, and two flowering plants with the potential to occur within the Project area. Since the analysis was performed in 2018, B.E. conducted another IPaC query for the site to confirm the species listed in ECOS' assessment and review any additional that could have become listed since the assessment was performed. B.E.'s IPaC query revealed that three of the species in ECOS' report were no longer listed in the query, and that one additional species had become federally listed in the time since the last query. Least tern (*Sternula antillarum*), Mexican spotted owl (*Strix occidentalis lucida*), and North American wolverine (*Gulo gulo luscus*) were listed in ECOS' report but are no longer included in an IPaC query of the Project site. In ECOS' report, the probability of impacts to these three species was listed as none based on the lack of habitat for each at the site. A newly-listed species, Eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*), was included in the new IPaC query and is discussed below.

Of the eight total species listed in B.E.'s IPaC query, four of the species (piping plover [*Charadrius melodus*], whooping crane [*Grus americana*], pallid sturgeon [*Scaphirhynchus albus*], and Western prairie fringed orchid [*Platanthera praeclara*]) are listed under a conditional effects' analysis, and only need to be considered if a project will involve water-related activities and/or use in the North Platte, South Platte, or Laramie River basins. While the Project is located in the South Platte River Basin, development of the Project will not affect water use in Nebraska, and these species will not be impacted by development. The four remaining species listed in the IPaC query were the federally

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threatened greenback cutthroat trout (*Oncorhynchus clarkii stomias* or GCT), Preble's meadow jumping mouse (*Zapus hudsonius preblei* or PMJM), Ute ladies'-tresses orchid (*Spiranthes diluvialis* or ULTO), and the aforementioned Eastern black rail. Designated Critical Habitat (DCH) is not present at this location, though there is DCH present for PMJM in El Paso County. Each species is summarized in **Table 1: Federally Listed TES Potentially Impacted by the Project** and discussed individually below.

Table 1. Federally Listed T&E Species Potentially Impacted by the Project (USFWS 2019)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status ¹
Mammals			
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. There is Critical Habitat approximately 6.5 miles from the site and the estimated occupied range of the species is 2.5 miles from the site. Likelihood of impacts: Very Unlikely to occur on site based on distance from known populations and lack of habitat connectivity.	FT
Birds			
Eastern black rail	<i>Laterallus jamaicensis</i> ssp. <i>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, Project does not support required habitat, and the site is outside of the known range of the species.	FT
Piping plover	<i>Charadrius melodus</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 will not affect water use within the watersheds listed.	FT
Whooping crane	<i>Grus americana</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 will not affect water use within the watersheds listed.	FE
Fishes			
Greenback cutthroat trout	<i>Oncorhynchus clarkii stomias</i>	Requires cold, clear, gravelly headwater streams and mountain lakes that provide an abundant food 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 not present.	FT

Table 1, Cont. Federally Listed T&E Species Potentially Impacted by the Project (USFWS 2019)

Common Name	Scientific Name	Habitat Requirements and Likelihood of Impacts	Federal Status ¹
Fishes, cont.			
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 will not affect water use within the watersheds listed.	FE
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. All of the wetlands on-site are potentially suitable habitat, but there are no known populations in El Paso County. Likelihood of impacts: Low, very unlikely for the species to occur in El Paso County, though suitable habitat is present along West Kiowa Creek.	FT
Western prairie fringed orchid	<i>Platanthera praeclara</i>	Occurs in tallgrass prairie in Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and Oklahoma. 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 will not affect water use within the watersheds listed.	FT

¹FE= Federally Endangered; FT=Federally Threatened

PMJM is a federally threatened species and is a state threatened species in Colorado. The species occurs along the Front Range of the Rocky Mountains throughout several counties in Wyoming and Colorado, including El Paso County. Preferred habitat includes well developed riparian corridors with gentle slopes and adjacent grasslands that allow for movement in and out of the stream channel. Populations have declined due to habitat fragmentation and degradation resulting from urban development in and adjacent to riparian areas (USFWS 2004). Critical Habitat has been designated by USFWS throughout its range. The closest DCH is approximately 6.5 miles southwest of the site along Black Squirrel Creek, a separate watershed. In addition to DCH, there is estimated occupied range (EOR) for PMJM that has been mapped by Colorado Parks and Wildlife (CPW). The nearest EOR is approximately 2.5 north of the site in another watershed, East Cherry Creek. In both instances, Therefore, PMJM presence at the site is very unlikely and impacts to the species are not anticipated.

GCT inhabit cold, clear, gravely headwater streams and mountain lakes that provide an abundant food supply of insects. Genetic sampling has confirmed that the only remaining native pure-strain

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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). The Project is not located within the Arkansas River Basin, and there are no suitable streams present that could support GCT.

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. They require 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 over the last decade. While there are perennially wet areas on the site that could support marshes, these areas have formed palustrine wetlands that lack the necessary dense cover to support Eastern black rails. Impacts to the species are not anticipated.

ULTO is a flowering herb that grows in sandy soils in a variety of wet areas associated with streams. It primarily occurs along seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels or valleys, and lakeshores. It may also occur along irrigation canals, berms, levees, irrigated meadows, excavated gravel pits, roadside borrow pits, reservoirs, and other human-modified wetlands. The species is unknown from sites above 6,500 feet in elevation, and there are no known populations in El Paso County. Nevertheless, some suitable wet areas are present at the site in association with West Kiowa Creek. While impacts to the species are not anticipated, out of an abundance of caution B.E. performed a focused ULTO survey on the Applicant's behalf during the flowering period on August 20th, 2021. No ULTO were found during the survey; full results of the survey are presented in **Attachment E: Ute Ladies'-tresses Orchid Survey Report**.

COMPENSATORY MITIGATION

Impacts to jurisdictional aquatic resources would result from construction of the two box culverts in West Kiowa Creek. There are wetlands associated with West Kiowa Creek, and a permanent loss of presumably jurisdictional aquatic resources would occur (**Attachment F: Aquatic Resources Impact Maps**). Impacts will be limited to .49 acre of permanent loss of wetlands, and there will be no additional temporary impacts (**Attachment F**). Because impacts will exceed the typical mitigation threshold of one-tenth of an acre of wetlands and three-hundredths of an acres of stream, compensatory mitigation for wetlands is proposed herein. To offset the permanent loss of WOTUS, the Applicant is proposing to preserve 18.69 acres of wetlands on the site. These wetlands represent a high-value wetland type in the Great Plains Region: previously undisturbed sedge meadows along a headwater stream. According to the *Colorado Mitigation Procedures Version 2.0* (COMP v2.0) published in July 2020, the USACE may approve wetland preservation alone as a form of mitigation where appropriate. The preservation of 18.69 acres of wetlands represents a mitigation ratio of approximately 38:1 based on 0.49 acre of impacts. In addition, all jurisdictional wetlands on the site will be buffered between 200 and 400 feet on all sides with open space tracts, creating riparian and upland buffers of West Kiowa Creek. Buffers will result in an additional 125.54 acres of riparian and upland habitat on the site being preserved that will further protect wetlands on the site. According to



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the COMP v2.0, buffer enhancement and preservation at a ratio of 5:1 to 15:1 may be approved in addition to other forms of mitigation to generate additional mitigation credits (USACE 2020). Upland and riparian buffers will be created to preserve habitats at a ratio of approximately 250:1 based on wetland impacts. It is B.E.'s professional opinion that the proposed mitigation will be more than sufficient to offset the loss of jurisdictional aquatic resources resulting from Project development. An overview of proposed mitigation on the site is provided in **Attachment G: Mitigation Overview Map**.

CULTURAL RESOURCES

Per requirements for federal undertakings such as Section 404 permit applications, a cultural and historic resources desktop records review and file search and a limited pedestrian survey were performed in accordance with Section 106 of the National Historic Preservation Act (NHPA). The cultural resources records review, or Class I, examined all registered historic properties and prehistoric resource finds for the Project site, and documented any prior cultural studies that have already been performed in the area. No eligible historic resource records have been found on the property, and no prior surveys of the site have been performed (**Attachment H: Limited -Results Cultural Resource Survey Form**). In addition, an on-site pedestrian survey, or Class III, was performed at wetland impact locations, defined as the area of potential effect (APE). No resources were observed at these locations during the survey (**Attachment H**). Based on the results of the desktop review and pedestrian survey, no cultural or historic resources would be affected by development of the Project. B.E. recommends a finding of "no effect" for cultural resources.

CONCLUSIONS

B.E., acting as Agent for the Applicant, hereby formally requests authorization for the Applicant to proceed with development of the aforementioned Project components under the jurisdiction of NWP 29 for residential development projects. Due diligence regarding WOTUS, TES, compensatory mitigation, and cultural resources are included herein for your review. If you should have any questions or require additional information, please feel free to contact me directly at 971.237.3906, or at dmaynard@bristleconeecology.com.

Sincerely,

Bristlecone Ecology, LLC

Daniel Maynard
Owner/Ecologist



Nationwide Permit 29 Application
Winsome Filing No. 3
El Paso County, Colorado

November 9, 2021

CC: Joe DesJardin, Winsome, LLC – JDesJardin@proterraco.com

ATTACHMENTS

- Attachment A: Form 6082 – Nationwide Permit Pre-Construction Notification
- Attachment B: Natural Features and Wetlands Report
- Attachment C: Request for Approved Jurisdictional Determination
- Attachment D: Winsome Filing No. 3 Culvert Plans
- Attachment E: Ute Ladies'-tresses Orchid Survey Report
- Attachment F: Aquatic Resources Impact Maps
- Attachment G: Mitigation Overview Map
- Attachment H: Limited-Results Cultural Resource Survey Form



Attachments
Winsome Filing No. 3
El Paso County, Colorado

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ATTACHMENT A

FORM 6082 – NATIONWIDE PERMIT PRE-CONSTRUCTION NOTIFICATION

U.S. Army Corps of Engineers (USACE)
NATIONWIDE PERMIT PRE-CONSTRUCTION NOTIFICATION (PCN)
33 CFR 330. The proponent agency is CECW-CO-R.

Form Approved -
OMB No. 0710-0003
Expires: 02-28-2022

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose Information provided on this form will be used in evaluating the nationwide permit pre-construction notification.

Routine Uses This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of the agency coordination process.

Disclosure Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued.

The public reporting burden for this collection of information, 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR RESPONSE TO THE ABOVE EMAIL.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see *sample drawings and/or instructions*) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Joe Middle - Last - DesJardin Company - Winsome, LLC Company Title - Director of Entitlements E-mail Address - JDesJardin@proterraco.com	8. AUTHORIZED AGENT'S NAME AND TITLE (<i>agent is not required</i>) First - Daniel Middle - Last - Maynard Company - Bristlecone Ecology, LLC E-mail Address - dmaynard@bristleconeecology.com
6. APPLICANT'S ADDRESS: Address- 1864 Woodmoor Drive City - Monument State - CO Zip - 80132 Country - USA	9. AGENT'S ADDRESS: Address- 2023 W Scott Place City - Denver State - CO Zip - 80211 Country - USA
7. APPLICANT'S PHONE NOs. with AREA CODE a. Residence b. Business c. Fax d. Mobile 719-476-0800 307-899-2020	10. AGENT'S PHONE NOs. with AREA CODE a. Residence b. Business c. Fax d. Mobile 971-237-3906

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Bristlecone Ecology, LLC to act in my behalf as my agent in the processing of this this nationwide permit pre-construction notification and to furnish, upon request, supplemental information in support of this nationwide permit pre-construction notification.

Joseph W. DesJardin

Digitally signed by Joseph W. DesJardin
Date: 2021.11.08 17:10:42 -0700

2021-11-08

SIGNATURE OF APPLICANT

DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (*see instructions*)

Winsome Filing No. 3 residential project

24. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and requires pre-construction notification, explain how the compensatory mitigation requirement in paragraph (c) of general condition 23 will be satisfied, or explain why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required for the proposed activity.

To offset the permanent loss of wetlands, the Applicant is proposing to preserve 18.69 acres of wetlands on the site. These wetlands represent a high-value wetland type in the Great Plains Region: previously undisturbed sedge meadows along a headwater stream. The preservation of 18.69 acres of wetlands represents a mitigation ratio of approximately 38:1 based on 0.49 acre of impacts. In addition, all jurisdictional wetlands on the site will be buffered between 200 and 400 feet on all sides with open space tracts, creating riparian and upland buffers of West Kiowa Creek. Buffers will result in an additional 125.54 acres of riparian and upland habitat on the site being preserved that will further protect wetlands on the site. Upland and riparian buffers will be created to preserve habitats at a ratio of greater than 250:1 based on wetland impacts.

25. Is Any Portion of the Nationwide Permit Activity Already Complete? ☒ Yes ☐ No If Yes, describe the completed work:

Construction of the project has already begun but is limited to construction in uplands

26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. (see instructions)

Ute-ladies' tresses orchid (*Spiranthes diluvialis*) could potentially occupy wet areas were the road crossing is planned. Surveys of these areas have been performed to ensure no orchids are present

27. List any historic properties that have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic property or properties. (see instructions)

None; surveys have confirmed absence

28. For a proposed NWP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":

N/A

29. If the proposed NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the Corps district having jurisdiction over that project? ☐ Yes ☒ No

If "yes", please provide the date your request was submitted to the Corps District:

30. If the terms of the NWP(s) you want to use require additional information to be included in the PCN, please include that information in this space or provide it on an additional sheet of paper marked Block 30. (see instructions)

See attached PCN cover letter for additional info

31. Pre-construction notification is hereby made for one or more nationwide permit(s) to authorize the work described in this notification. I certify that this information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Joseph W. DesJardin

Digitally signed by Joseph W. DesJardin
Date: 2021.11.08 17:13:29 -07'00'

2021-11-08

SIGNATURE OF APPLICANT

DATE

Daniel Maynard

Digitally signed by Daniel Maynard
Date: 2021.11.09 09:02:18 -07'00'

2021-11-09

SIGNATURE OF AGENT

DATE

The Pre-Construction Notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in block 11 has been filled out and signed, the authorized agent.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

**Instructions for Preparing a
Department of the Army
Nationwide Permit (NWP) Pre-Construction Notification (PCN)**

Blocks 1 through 4. To be completed by the Corps of Engineers.

Block 5. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the preconstruction notification, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed Nationwide Permit Activity Name or Title. Please provide a name identifying the proposed NWP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the NWP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed NWP activity is located at a site having a street address (not a box number), please enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed NWP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed NWP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed NWP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed NWP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific Nationwide Permit(s) You Propose to Use. List the number(s) of the Nationwide Permit(s) you want to use to authorize the proposed activity (e.g., NWP 29).

Block 19. Description of the Proposed Nationwide Permit Activity. Describe the proposed NWP activity, including the direct and indirect adverse environmental effects the activity would cause. The description of the proposed activity should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide sketches when necessary to show that the proposed NWP activity complies with the terms of the applicable NWP(s). Sketches usually clarify the activity and result in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed NWP activity (e.g., a conceptual plan), but do not need to be detailed engineering plans.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20. Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed NWP activity. The description of any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or additional mitigation measures.

Block 21. Purpose of Nationwide Permit Activity. Describe the purpose and need for the proposed NWP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed Nationwide Permit Activity. For discharges of dredged or fill material into waters of the United States, provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed NWP activity. For structures or work in navigable waters of the United States subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed NWP activity.

For multiple NWPs, or for separate and distant crossings of waters of the United States authorized by NWPs 12 or 14, attach an extra sheet of paper marked Block 21 to provide the quantities of wetlands, streams, or other types of waters filled, flooded, excavated, or drained (or dredged or occupied by structures, if in waters subject to Section 10 of the Rivers and Harbors Act of 1899) for each NWP. For NWPs 12 and 14, include the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained for each separate and distance crossing of waters or wetlands. If more space is needed, attach an extra sheet of paper marked Block 21.

Block 23. Identify Any Other Nationwide Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by NWPs 12 or 14 that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 24. Compensatory Mitigation Statement for Losses of Greater Than 1/10-Acre of Wetlands When Pre-Construction Notification is Required. Paragraph (c) of NWP general condition 23 requires compensatory mitigation at a minimum one-for-one replacement ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed NWP activity are no more than minimal without compensatory mitigation, and provides an activity-specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than 1/10 acre, or provide an explanation of why the district engineer should not require wetland compensatory mitigation for the proposed NWP activity. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 25. Is Any Portion of the Nationwide Permit Activity Already Complete? Describe any work that has already been completed for the NWP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed NWP activity, or if the proposed NWP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any historic properties have the potential to be affected by the proposed NWP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the Nationwide Permit Activity Would Occur in such a River. If the proposed NWP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit <http://www.rivers.gov/>

Block 29. Nationwide Permit Activities that also Require Permission from the Corps Under 33 U.S.C. 408. If the proposed NWP activity also requires permission from the Corps under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a Corps federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the Corps district having jurisdiction over that project.

Block 30. Other Information Required For Nationwide Permit Pre-Construction Notifications. The terms of some of the Nationwide Permits include additional information requirements for preconstruction notifications:

- * NWP 3, Maintenance –information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
- * NWP 31, Maintenance of Existing Flood Control Facilities –a description of the maintenance baseline and the dredged material disposal site.
- * NWP 33, Temporary Construction, Access, and Dewatering –a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
- * NWP 44, Mining Activities –if reclamation is required by other statutes, then a copy of the final reclamation plan must be submitted with the pre-construction notification.
- * NWP 45, Repair of Uplands Damaged by Discrete Events –documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
- * NWP 48, Commercial Shellfish Aquaculture Activities –(1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).
- * NWP 49, Coal Remining Activities –a document describing how the overall mining plan will result in a net increase in aquatic resource functions to the district engineer and receive written authorization prior to commencing the activity.
- * NWP 50, Underground Coal Mining Activities –if reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre-construction notification.

If more space is needed, attach an extra sheet of paper marked Block 29.

Blocks 31 and 32. For bank stabilization activities, we are collecting information on the use of living shorelines in coastal waters and lakes to inform future NWP rulemaking efforts. If the PCN is for a proposed NWP 13 activity, and it is located in coastal waters or a lake, please check the appropriate box in block 31 to indicate whether you considered the use of a living shoreline to protect your property from erosion. If the PCN is for a proposed NWP 13 activity, and it is located in coastal waters or a lake, please check the appropriate box in block 32 to indicate whether there are contractors in your area that construct living shorelines.

Block 33. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the NWP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the NWP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the NWP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 45 day PCN review period will not start until the delineation is submitted or has been completed by the Corps.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one original, or good quality copy, of all drawings on 8½x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed NWP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived (see NWP general condition 25). Some States, Tribes, or EPA have issued water quality certification for one or more NWPs. Please check the appropriate Corps district web site to see if water quality certification has already been issued for the NWP(s) you wish to use. For proposed NWP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur (see NWP general condition 26). Some States have issued Coastal Zone Management Act consistency concurrences for one or more NWPs. Please check the appropriate Corps district web site to see if Coastal Zone Management Act consistency concurrence has already been issued for the NWP(s) you wish to use.



Attachments
Winsome Filing No. 3
El Paso County, Colorado

November 9, 2021

ATTACHMENT B

NATURAL FEATURES AND WETLANDS REPORT



Natural Features and Wetland Report for the McCune Ranch Property in El Paso County, Colorado

October 2, 2018

Prepared for:

PT McCune, LLC
1862 Woodmoor Drive, Suite 100
Monument, Colorado 80132

Prepared by:



1455 Washburn Street
Erie, Colorado 80516
(p): 970-812-3267

Project Number: 2018-10-3



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LIST OF ACROYNMS AND ABBREVIATIONS

AMSL	above mean sea level
Applicant	Proterra Properties, LLC
CCRs	Codes, Covenants and Restrictions
CDA	Colorado Department of Agriculture
CNHP	Colorado Natural Heritage Program
COGCC	Colorado Oil and Gas Conservation Commission
CPW	Colorado Parks and Wildlife
Creek	West Kiowa Creek
CWA	Clean Water Act
Ecos or ecos	Ecosystem Services, LLC
JD	jurisdictional under the Clean Water Act
Non-JD	non- jurisdictional under the Clean Water Act
PMJM	Preble's meadow jumping mouse
Report	Natural Features and Wetland Report
Site	McCune Ranch
NRCS	Natural Resource Conservation Service
NTCHS	National Technical Committee for Hydric Soils
NWI	National Wetland Inventory
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WOUS	Waters of the United States

1.0 INTRODUCTION

Ecosystem Services, LLC (Ecos or ecos) was retained by PT McCune, LLC (Applicant) to perform a natural resource assessment for the proposed McCune Ranch Development (Site) and to prepare this Natural Features and Wetland Report (Report).

The contact information for the Applicant and ecos representatives for this Report is provided below:

Applicant

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1.1 Purpose

The purpose of this Report is to identify and document the natural resources, ecological characteristics and existing conditions of the Site; identify potential ecological impacts associated with Site development; and provide current regulatory guidance related to potential development-related impacts to natural resources. The specific resources and issues of concern addressed in this Report are in conformance with the El Paso County requirements (refer to Section 2.0), and include:

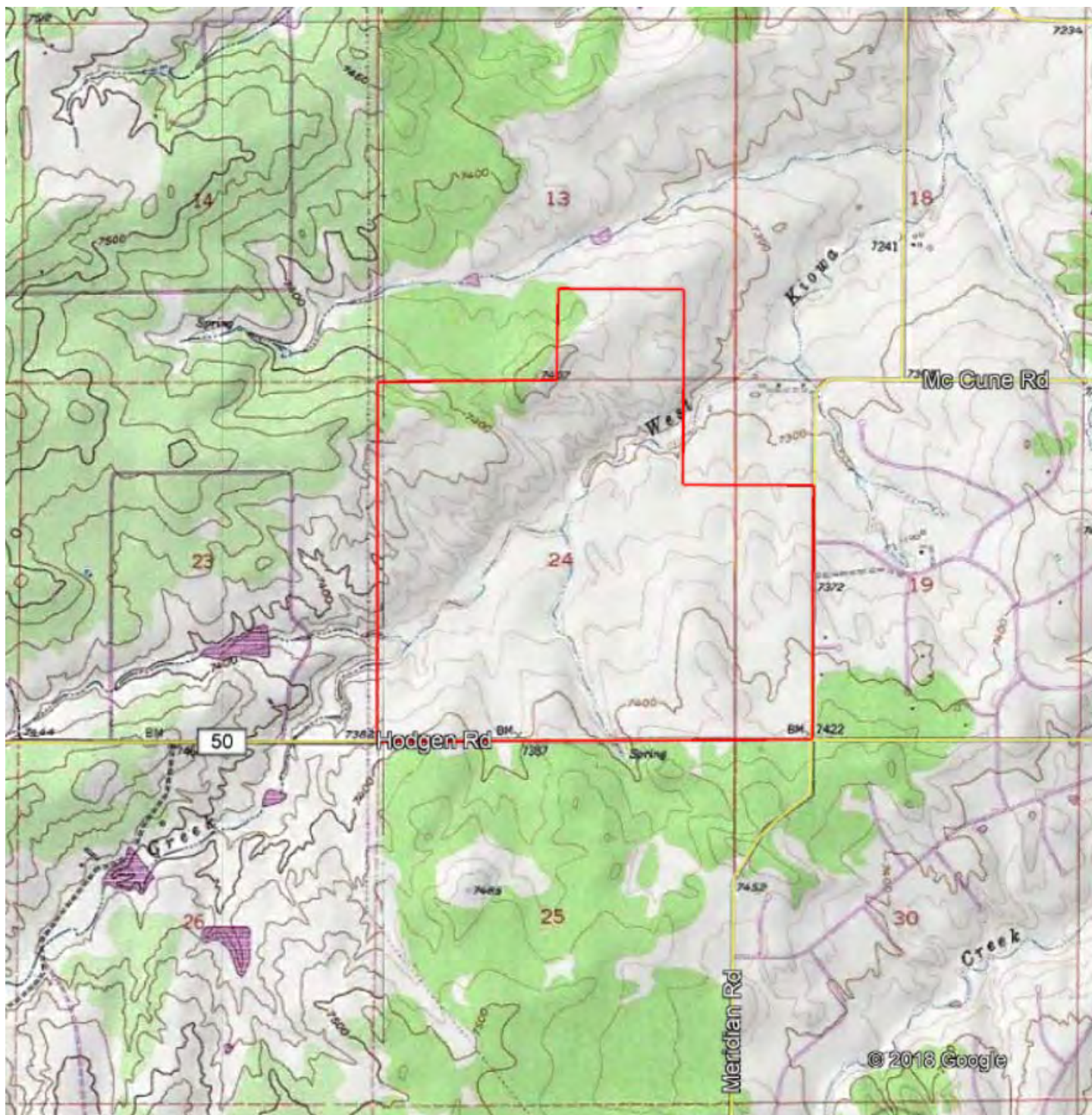
- Mineral and Natural Resource Extraction;
- Vegetation;
- Wetland Habitat and Waters of the U.S.
- Weeds;
- Wildfire Hazard;
- Wildlife;
- Federal and State Listed Candidate, Threatened and Endangered Species; and
- Raptors and Migratory Birds.

1.2 Project Description and Site Location

The Applicant proposes to form a metropolitan district within El Paso County and develop the 765-acre Site as a residential community consisting of 5-acre and 2.5 acre single-family detached rural-residential lots and one commercial lot, including trails, utilities, and streets and cul-de-sacs that provide access to each lot; and preserve 148.6 acres of open space along West Kiowa Creek.

The Site is located in the northeastern corner of the Black Forest approximately 12.5 miles east of Monument and 7.3 miles east of Highway 83, in El Paso County, Colorado. The Site is located in the northwest corner of Hodgen and Meridian Roads. The Site is specifically located within Section 24, the south ¼ of Section 13, and the west ½ of

Section 19, Township 11 South, Range 65 West in El Paso County, Colorado (refer to Figures 1 and 2).



USGS 7.5 min. Quad: Eastonville
Latitude: 39.078344°N
Longitude: -104.614832°W
Section 24, Township 11 South, Range 65 West



SITE PLAN

2.0 METHODOLOGY

Ecos performed an office assessment in which available databases, resources, literature and field guides on local flora and fauna were reviewed to gather background information on the environmental setting of the Site. We consulted several organizations, agencies, and their databases, including:

- Colorado Department of Agriculture (CDA) Noxious Weed List;
- Colorado Natural Heritage Program (CNHP);
- Colorado Oil and Gas Conservation Commission (COGCC) GIS Online;
- Colorado Parks and Wildlife (CPW);
- El Paso County Black Forest Preservation Plan Update;
- Google Earth current and historic aerial imagery;
- CNHP Survey of Critical Biological Resources, El Paso County, Colorado;
- CNHP Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties, Colorado;
- U.S. Fish and Wildlife Service (USFWS) Region 6;
- USFWS National Wetland Inventory (NWI); and
- U.S. Geological Survey (USGS).

Ecos reviewed, and incorporated the requirements of the following regulations into, this Report:

- 1) Historic El Paso County Land Development Code (circa 1991 – 1995, updated on June 29, 2000) – The county still utilizes this old version as they have not yet updated current codes. Applicable Sections include:
 - a. Chapter IV, Section 35.13 – Development Requirements for Mineral and Natural Resource Extraction Operations: The developer must include a statement that no resource extraction will occur during the development of the Project;
 - b. Chapter V, Section 51.5 – Wildfire Hazard and Vegetation Reports; and
 - c. Chapter V, Section 51.6 – Streams, Lakes, Physical Features and Wildlife Habitats(Note: Sections 51.5 and 51.6 information must both be addressed in assessment and reporting).
- 2) Current El Paso County Land Development Code (available on their website). Applicable Sections include:
 - a. Chapter 6 General Development Standards, Section 6.3 Environmental Standards:
 - i. 6.3.3 – Fire Protection and Wildfire Mitigation;
 - ii. 6.3.7 – Noxious Weeds
 - iii. 6.3.8 – Wetlands; and
 - iv. 6.3.9 – Wildlife.
 - b. Chapter 8 Subdivision Design, Improvements and Dedications:

- i. Section 8.4.2 Environmental Considerations, Item A.4. – Threatened and Endangered Species Compliance.
- 3) El Paso County, Draft Procedures Manual (unpublished, provided by El Paso County).
Applicable Sections include:
 - a. Procedure # R-RE-002-08 – Wetlands Analysis Report; and
 - b. Procedure # R-RE-004-08 – Wildlife Report.
- 4) El Paso County Master Plan: Pertinent Maps and Descriptors to append all of the topics, regulations and guidance referenced above, including:
 - a. Wetland Habitat Maps and descriptors; and
 - b. Wildlife Habitat Maps and descriptors.

Following the collection and review of existing data and background information, ecos conducted a field assessment of the Site on September 5, 2018 to identify any potential impacts to natural resources associated with the Project. Field reconnaissance concentrated on identification of wetland habitat, waters of the U.S. and on the presence of habitat suitable to support threatened and endangered wildlife. Ecos conducted a follow-up field assessment on September 20, 2018 to conduct a noxious weed inventory and wildfire assessment. Wetland habitat and waters of the U.S. boundaries, wildlife habitat, and major weed stands were sketched on topographic and aerial base maps and located using a hand-held Global Positioning System as deemed necessary. Representative photographs were taken to assist in describing and documenting Site conditions and potential ecological impacts.

The office and onsite assessment data, the pertinent El Paso County regulations outlined above, and Natural Resource Assessment and Wetland report examples used in previous County land development review submittals (provided by El Paso County) were used in the preparation of the Report.

3.0 ENVIRONMENTAL SETTING

A review of the El Paso County Master Plan revealed that the Site is within the Black Forest Preservation Area. The Site contains no Colorado Natural Heritage Conservation Areas or Potential Conservation Areas according to the CNHP (CNHP, 2018), and no Wildlife Refuges or Hatcheries according to the USFWS IPaC Trust Resources Report (USFWS, 2016a).

3.1 Topography

The Site is generally characterized by rolling hills and valleys with some deep ravines draining to the West Kiowa Creek (Creek). The topography of the Site trends gently downward from the southwest to the northeast with north facing and south facing slopes tilting toward the Creek. Topography ranges from high elevations of 7448 feet above mean sea level (AMSL) in the northwestern corner and 7426 feet in the southeast corner to 7276 feet where the Creek exits the site on the east boundary, a total elevation drop of 172 feet. The Creek enters the site at the west boundary at an elevation of 7336 and drops 60 feet before flowing off of the Site. Naturally undulating

and intermittent drainage swales drain toward the Creek that contain wetlands in low areas and dry areas where alluvial deposits have formed.

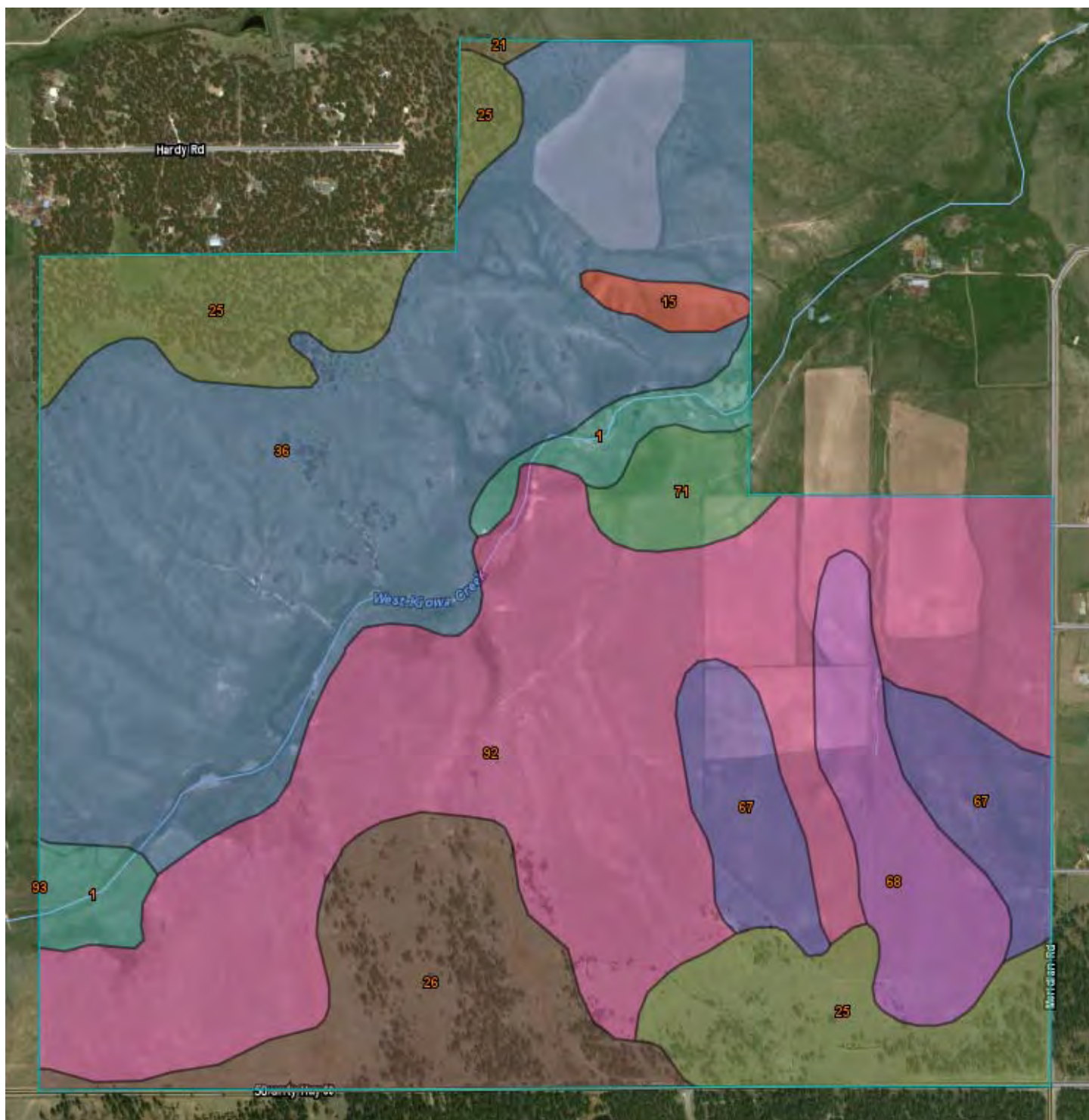
3.2 Soils

Ecos utilized the U.S. Department of Agriculture, Natural Resource Conservation Service Web Soil Survey (USDA, NRCS, 2016) to determine if hydric soils are present within the Site, as this data assist in informing the presence/absence of potential wetland habitat regulated under the Clean Water Act. The soils data were also utilized to supplement the field observations of vegetation, as the USDA provides correlation of native vegetation species by soils types. Please refer to Figure 3, NRCS Soil Map and Appendix A for additional USFWS wetland information.

Alamosa loam (Map Unit #1) is listed by the NRCS as a hydric soil with a rating of 85 on a scale of 1 to 100 with 100 having the major hydric components. Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS, 1994) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in *Field Indicators of Hydric Soils in the United States* (USDA, NRCS, 2010).

Additional, detailed soil data for the Project are presented in the Soils & Geology Report that will be included in the Project submittal.



Summary by Map Unit — El Paso County Area, Colorado (CO625)

Summary by Map Unit — El Paso County Area, Colorado (CO625)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Alamosa loam, 1 to 3 percent slopes	Alamosa loam, 1 to 3 percent slopes	22.9	3.0%
15	Brussett loam, 3 to 5 percent slopes	Brussett loam, 3 to 5 percent slopes	5.9	0.8%
21	Cruckton sandy loam, 1 to 9 percent slopes	Cruckton sandy loam, 1 to 9 percent slopes	1.1	0.1%
25	Elbeth sandy loam, 3 to 8 percent slopes	Elbeth sandy loam, 3 to 8 percent slopes	86.3	11.3%
26	Elbeth sandy loam, 8 to 15 percent slopes	Elbeth sandy loam, 8 to 15 percent slopes	67.3	8.8%
36	Holderness loam, 8 to 15 percent slopes	Holderness loam, 8 to 15 percent slopes	250.4	32.7%
67	Peyton sandy loam, 5 to 9 percent slopes	Peyton sandy loam, 5 to 9 percent slopes	45.2	5.9%
68	Peyton-Pring complex, 3 to 8 percent slopes	Peyton-Pring complex, 3 to 8 percent slopes	38.3	5.0%
71	Pring coarse sandy loam, 3 to 8 percent slopes	Pring coarse sandy loam, 3 to 8 percent slopes	15.0	2.0%
92	Tomah-Crowfoot loamy sands, 3 to 8 percent slopes	Tomah-Crowfoot loamy sands, 3 to 8 percent slopes	233.8	30.5%
93	Tomah-Crowfoot complex, 8 to 15 percent slopes	Tomah-Crowfoot complex, 8 to 15 percent slopes	0.0	0.0%
Totals for Area of Interest			766.1	100.0%

3.3 Vegetation

The Site is located in the Black Forest. The Black Forest region includes a mix of ponderosa pine (*Pinus ponderosa*) woodlands and native grassland. In addition to shortgrass prairie, there are also relict eastern American prairie and woodland plant communities with species otherwise unknown in Colorado except for some protected canyons in the outer Front Range (Weber, 2012). Well-developed riparian communities occur along drainages that support plains cottonwood (*Populus deltoides*), narrowleaf cottonwood (*Populus angustifolia*), crack willow (*Salix fragilis*) and sandbar willow (*Salix exigua*), sedges, rushes and grasses. The area has historically been used for rangeland; however, residential development is increasing.

3.3.1 Ponderosa Pine Forest

Ponderosa pine forest on Site is present along the southern edge and in the northwest corner. There are also ponderosa pine patches and individual trees scattered throughout the shortgrass prairie. Most of the forest areas have been heavily grazed, but still have a relatively diverse herbaceous understory. Mountain muhly (*Muhlenbergia montana*) is the most common grass species. Other grass species include junegrass (*Koeleria macrantha*), Canada wild rye (*Elymus canadensis*), and squirreltail (*E. elymoides*). Forbs include wild tarragon (*Oligosporus (Artemisia) dracunculus*), yarrow (*Achilla lanulosa*), harebell (*Campanula rotundifolia*), and Fendler's sandwort (*Arenaria fendleri*). Yellow toadflax, a noxious weed, is common in the forested areas in the northwest corner/south of Hardy Road.

The ponderosa pine forest in the northernmost portion of the Site appears to have been minimally grazed and the herbaceous vegetation is much taller and denser here. Two unique plant communities are present here:

- 1) Ponderosa Pine/Sun Sedge Woodland is present in the western half of this area. This community is comprised of a dense overstory of large ponderosa pine, and the dominant understory species is sun sedge (*Carex inops* ssp. *heliophila*). Mountain muhly and smooth brome are also common.
- 2) Ponderosa Pine/Little Bluestem Woodland occurs to the east. The ponderosa pines here are smaller and sparser, with only 10 to 30% cover. The understory consists of tall, dense grasses with three dominant species: little bluestem (*Schizachyrium scoparium*), mountain muhly, and blue grama. Hairy false goldenaster (*Heterotheca villosa*) is also common.

3.3.2 Shortgrass Prairie

The majority of the Site is vegetated with shortgrass prairie and the dominant species in almost all of these prairie areas is blue grama (*Bouteloua gracilis*) (Figure 4). The other most common species are hairy false goldenaster and fringed sage (*Artemisia frigida*). Other species include broom snakeweed (*Gutierrezia sarothrae*), wavy-leaf thistle (*Cirsium undulatum*), and green-needle grass (*Nassella viridula*). The prairie south of the

Creek is heavily grazed and there are scattered weeds throughout, primarily knapweed and common mullein. The prairie north of the Creek is on a drier, south facing slope, and this area appears to have been less impacted by grazing and weeds are limited to the lower areas.

Two subtypes of shortgrass prairie were mapped by ecos:

- 1) The moister portions of the shortgrass prairie tend to be weedy (See Section 3.5 for additional detail) and are mapped as “**shortgrass prairie-weedy**” (Figure 4). Most of the lower areas along the Creek have dense cover of common knapweed, which extends far into the adjacent uplands, especially along drainage swales and in areas disturbed by grazing.
- 2) Based on observed vegetation and aerial photographs, the easternmost and northernmost portions of the Site appear to have been occasionally plowed in the past and therefore are mapped as “**shortgrass prairie – disturbed**” (Figure 4). Past disturbance is evidenced by the presence of introduced pasture species, including smooth brome (20-30%) with minor amounts of alfalfa and crested wheatgrass. There is also decreased cover of blue grama and increased areas of bare ground. Weeds are generally low density, but scattered throughout and include common mullein, knapweed, and pigweed (*Amaranthus retroflexus*). Native forbs tend to be weedy and include fringed sage, hairy false golden aster, wild tarragon, white prairie aster (*Symphyotrichum falcatum*), and winged buckwheat (*Eriogonum alatum*).

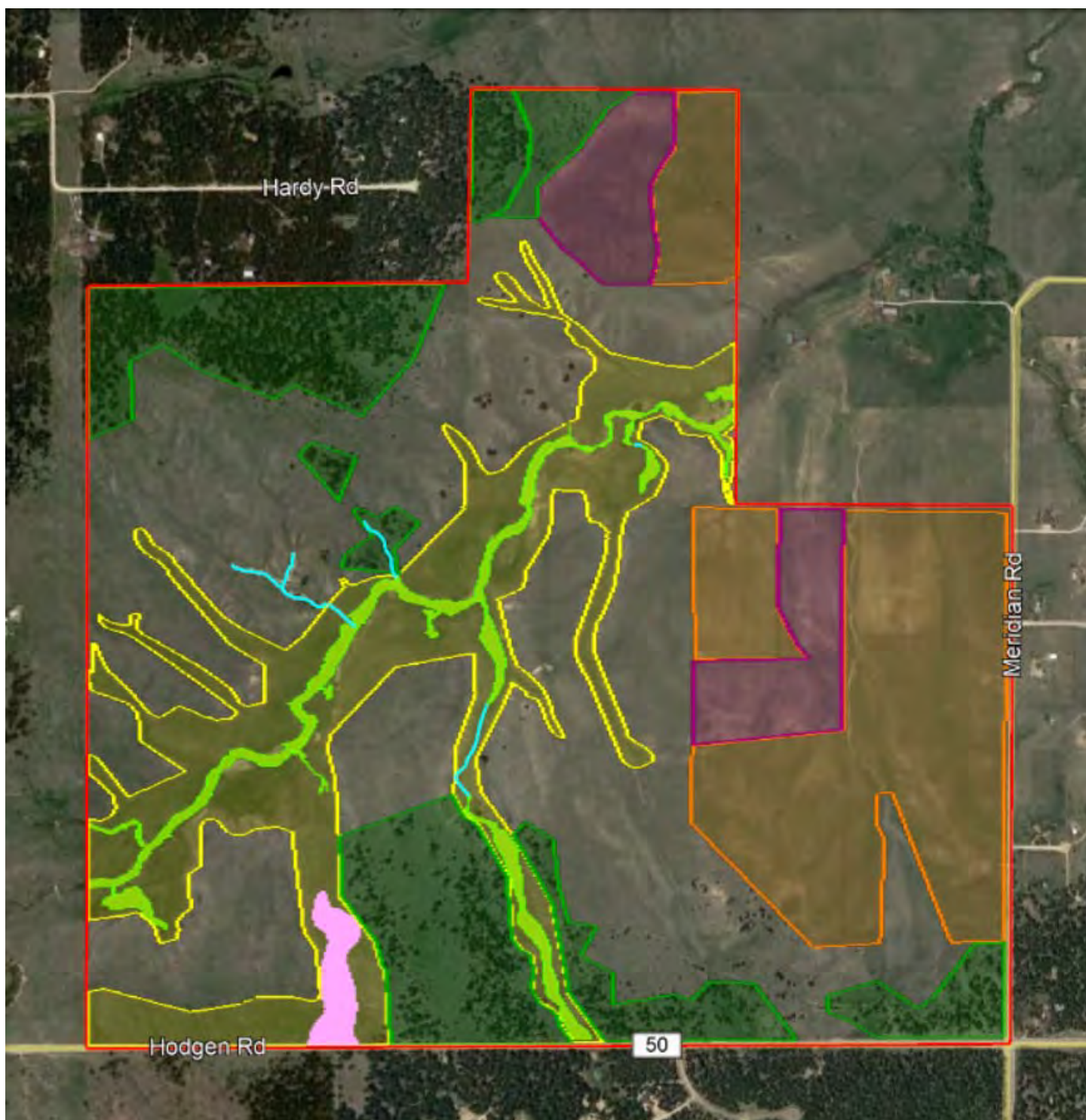
3.3.3 Plowed Fields

There are currently three recently plowed fields where bare ground is approximately 75%. Smooth brome (10%) is the most common species in these areas. Alfalfa (3%) was observed in the northern field. Knapweed (3%) was present in the eastern field. These three fields are all located within the areas mapped as shortgrass prairie – disturbed.

3.3.4 CNHP Vegetation Communities

Ecos reviewed the CNHP database and sorted the data for the Eastonville, Colorado 7.5-minute quadrangle, as that quadrangle includes the Site. We reviewed the Eastonville quadrangle data to determine the probability of the presence/absence of significant natural communities, rare plant areas, or riparian corridors that may be within the range of, and/or within the Site as summarized them in Table 1 below. Based on this data and our onsite assessment, ecos has provided our professional opinion regarding the probability that these species may occur within the Site and their probability of being impacted by the Project.

TABLE 1 – CNHP VEGETATION COMMUNITIES POTENTIALLY IMPACTED BY THE PROJECT			
Species	Status	Presence and Location	Probability of Impact by Project
PLANT COMMUNITIES			
Pinus ponderosa/Carex inops ssp. heliophila Woodland	State Rank: S3 (Vulnerable)	In the Black Hills region, occurs in relatively mesic, open savanna habitats, on gentle to moderate south- and west-facing slopes. Present in the northernmost portion of the Site (see Section 3.3.1).	High. Development is planned for the area where this community occurs.
Salix amygdaloides Riparian Woodland	State Rank: S1 (Critically imperiled)	Backwater areas and overflow channels of large rivers, on narrow floodplains of small creeks, and on the edges of ponds and lakes. Often in small isolated clumps. Present along the Creek (see Section 3.4.2 and Figure 7, Wetland A)	Low. The existing riparian woodland has been degraded by grazing. Woody vegetation is limited to scattered trees and tattered saplings. This habitat will be preserved as open space. Thus, the riparian habitat should improve once grazing stops, if stormwater and weeds are managed appropriately.
Schizachyrium scoparium - Bouteloua curtipendula Western Great Plains Grassland	State Rank: S2 (Imperiled)	Shallow sandy or rocky soil, usually on level or gently sloping terrain, mid grasses with tall and short grasses present to abundant. This community is not present.	None. This community is not present.



SOURCE: Plant Community Inventory, Ecosystem Services, LLC, 2018

Legend:

 Ponderosa Pine Forest	 Wetland - Palustrine Emergent
 Shortgrass Prairie	 Wetland - Isolated
 Shortgrass Prairie - Weedy	 Waters/Channel
 Shortgrass Prairie - Disturbed	
 Shortgrass Prairie - Plowed	

Note: Shortgrass prairie is shown in natural color of aerial photograph.

3.4 Wetland Habitat and Waters of the U.S.

3.4.1 Methodology

Ecos utilized the National Wetland Inventory (NWI) Wetlands Mapper (USFWS 2016); the Survey of Critical Biological Resources, El Paso County, Colorado (CNHP, 2001b); the Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties, Colorado (CNHP, 2001c); Colorado Wetland Inventory Mapping Tool (CNHP, 2018); historic and current Google Earth aerial photography; USGS 7.5-minute topographic mapping; and detailed Project topographic mapping to screen the Site for potential wetland habitat and waters of the U.S. Additionally, ecos performed a jurisdictional delineation to identify the Waters of the United States (WOUS), including wetlands. The Site contains no Wetland and Riparian Conservation Areas or Potential Wetland and Riparian Conservation Areas according to the CNHP, however, the site is directly north of and adjacent to the Pineries at Black Forest (CNHP, 2001b).

The mapping data above were proofed during the filed assessment and a wetland delineation was conducted to determine the presence/absence of potential WOUS, including wetland habitat. Once a feature was verified to be present, ecos determined whether it is a jurisdictional wetland/waters under the Clean Water Act. The U.S. Army Corps of Engineers (USACE), wetland delineation methodology was employed to document the 3 field indicators (parameters) of wetland habitat (i.e., wetland hydrology, hydric soils and a predominance of hydrophytic vegetation as explained in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and supplemented by the Regional Supplement to the *Corps of Engineers Wetlands Delineation Manual: Western Mountains, Valleys and Coats region (Version 2)* (USACE, 2010). The wetland delineation was surveyed by the project team surveyor

Consistent with the NWI and Colorado Wetland Inventory Mapping Tool, the wetland/waters delineation revealed the presence of palustrine emergent wetland habitat and perennial waters along West Kiowa Creek as well as an intermittent tributary draining to West Kiowa Creek from the south. Smaller intermittent drainages/ravines were also found to be connected with West Kiowa Creek. Other wetlands identified on the CNHP Colorado Wetland Inventory were investigated during the field assessment and we found to be upland swales, did not exhibit defined bed or bank, or were isolated and not connected with West Kiowa Creek. Please refer to Figure 4, National Wetland Inventory, Figure 5, CNHP Wetland and Riparian Areas Map, and Figure 6, ECOS Wetland and Waters Sketch Map. Project Plans illustrate the wetland and waters delineation in detail.

3.4.2 Field Assessment Findings

The results of the onsite assessment for each potential wetland and waters area is summarized below, with an explanation of the field indicators (parameters) of wetland habitat/waters that were observed, and an explanation as to whether ecos determined

each feature was jurisdictional or non- jurisdictional under Section 404 of the Clean Water Act. Jurisdictional features are mapped on Figure 5.

- 1) Jurisdictional wetland habitat and waters of the U.S. – West Kiowa Creek (Area A) and adjacent and connected waters and associated wetlands (Areas B – F), share similar vegetation, soil and hydrologic characteristics and consist of the following wetland types:
 - a. PEMC1 Wetland Habitat – Wetland Area A is classified as a Palustrine Emergent, Persistent, Seasonally Flooded wetland (PEMC1). This area occupies the floodplain along West Kiowa Creek. Wetland Area A is dominated by Nebraska sedge, beaked sedge, redtop, water mint, Baltic rush, with small or immature patches of crack willow, peachleaf willow, sandbar willow, plains cottonwood, and narrowleaf cottonwood present. Soil samples indicate the presence of field indicators of hydric soils (10YR2.5/1 silty clay 0- 14 inches & 10YR2.5/1 silty sand from 14-18+ inches). Sustaining hydrology was evident as flowing water is present within a defined channel and saturated soils are present throughout the floodplain, including groundwater driven side-slope seepage. This area meets all 3 parameters for jurisdictional wetland habitat.
 - b. PEMC1 Wetland Habitat – Wetland Areas B – E are classified as a Palustrine Emergent, Persistent, Seasonally Flooded wetlands (PEMC1). These tributary wetlands are connected to West Kiowa Creek at their confluence. These wetlands are located at the lower end of numerous channels/swales that are tributary to West Kiowa Creek. Wetland Areas B – E are dominated by Nebraska sedge, beaked sedge, redtop, water mint, and Baltic rush with no tree or shrub component. Soil samples indicate the presence of field indicators of hydric soils (10YR2.5/1 silty clay 0- 14 inches & 10YR2.5/1 silty sand from 14-18+ inches). Sustaining hydrology from groundwater seepage was evident as saturated soil is present at or within 12 inches of the ground surface. These areas meet all 3 parameters for jurisdictional wetland habitat.
 - c. PEMC1 Wetland Habitat – Wetland Area F is classified as a Palustrine Emergent, Persistent, Seasonally Flooded wetlands (PEMC1), a tributary wetland in the upper reach of the southern drainage. This wetland exhibits the same characteristics of Wetland Areas B – E and meets all 3 parameters for jurisdictional wetland habitat. Unlike the other wetlands, this area is not contiguous with downstream wetlands but connected by tributary waters via an upland swale/channel within a defined valley.
 - d. R4SB2 Intermittent Ravines - Two intermittent ravines draining into West Kiowa Creek from the north are classified as Riverine, Intermittent, Streambed, Sand creek (R4SB2). These deeply incised sandy bottom channels support upland vegetation dominated by Ponderosa pine with small, insignificant patches of wetland and upland herbs. These channels meet the criterion for a WOUS as they are directly connected with West Kiowa Creek.

- 2) Isolated Wetland - A large patch of PEMC1 Wetland exists in the southwest corner of the site. This is a functional wetland that exhibits the same characteristics of other wetlands on site and meets all 3 parameters for jurisdictional wetland habitat. However, this wetland is clearly disconnected from West Kiowa Creek by uplands that do not exhibit a defined bed or bank. This area is clearly isolated and therefore not delineated.
- 3) Upland Swales – Numerous upland swales drain toward West Kiowa Creek which can be seen as dark green drainage signatures on aerial photography. Refer to Figure 6. These upland swales are ephemeral and may only flow during discrete rainfall events. These areas do not meet all 3 parameters for jurisdictional wetland habitat and do not meet the requirements to be deemed navigable waters and therefore are considered non-jurisdictional.

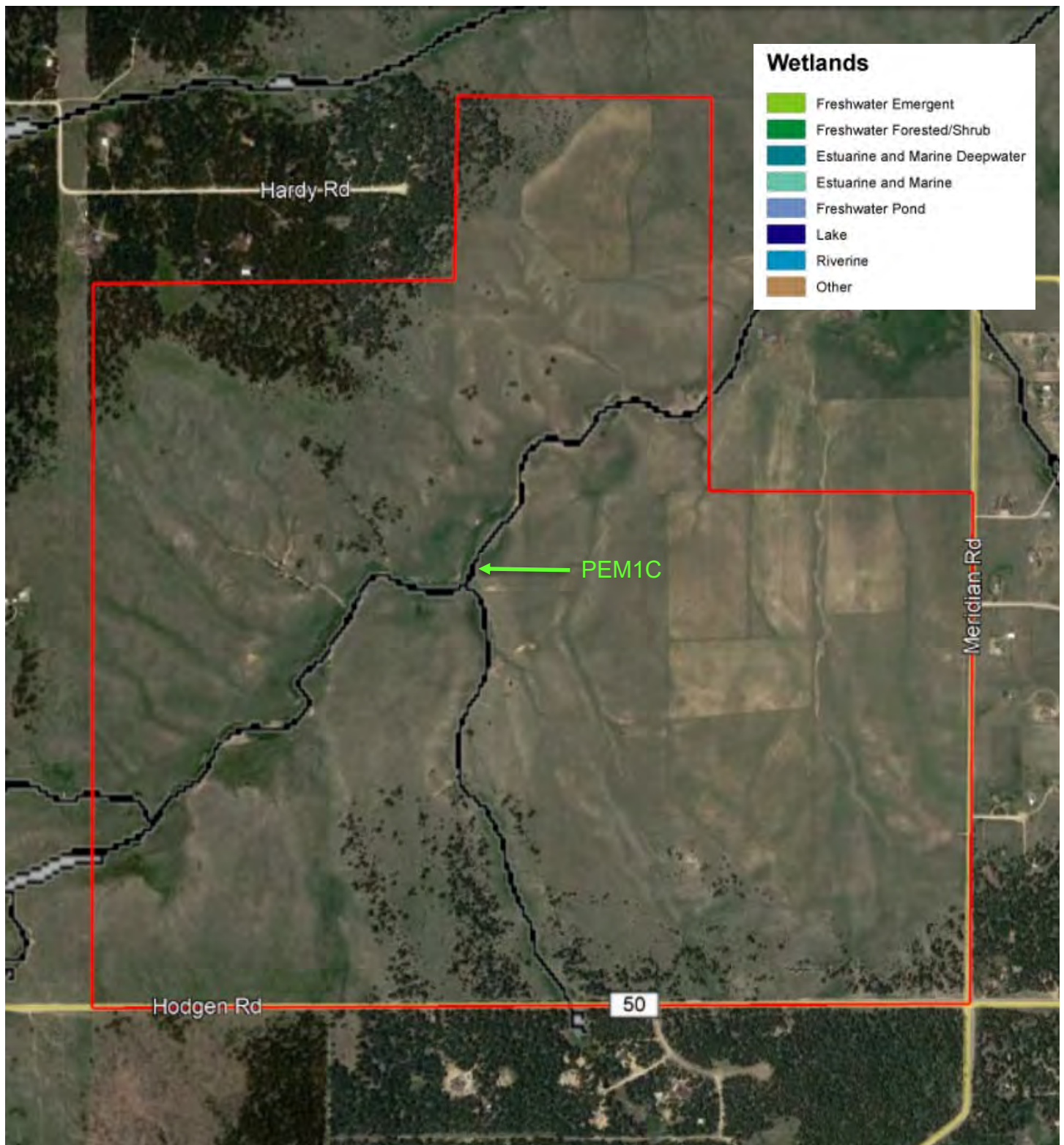
3.4.3 Summary of Jurisdictional and Non-Jurisdictional Wetlands and Waters

Jurisdictional Habitat – Wetland Areas A – F and Intermittent Tributary Waters and Ravines (refer to Figure 6) are jurisdictional wetland habitat and WOUS as they are tributary to the jurisdictional habitat in West Kiowa Creek. These natural features meet the criteria that the USACE uses to assert jurisdiction, as they are:

- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

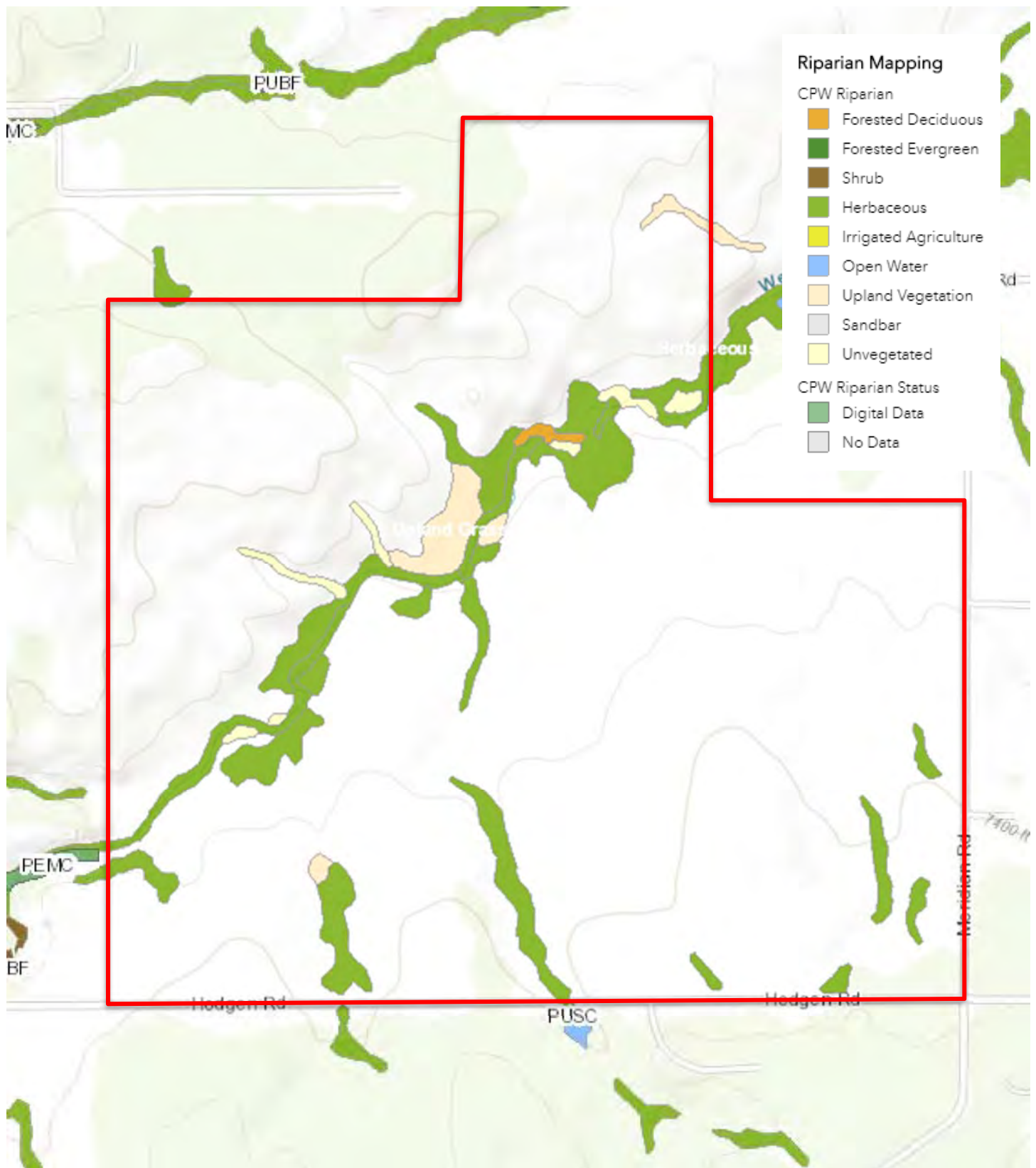
Non-Jurisdictional Areas – Pursuant to verification by the USACE, the Isolated Wetland in the southwest corner of the site and typical Upland Swales (generically labeled on Figure 6) present throughout the site are all considered non-jurisdictional. They do not meet the criteria that the Corps uses to assert jurisdiction, as they are not:

- Traditional navigable waters;
- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

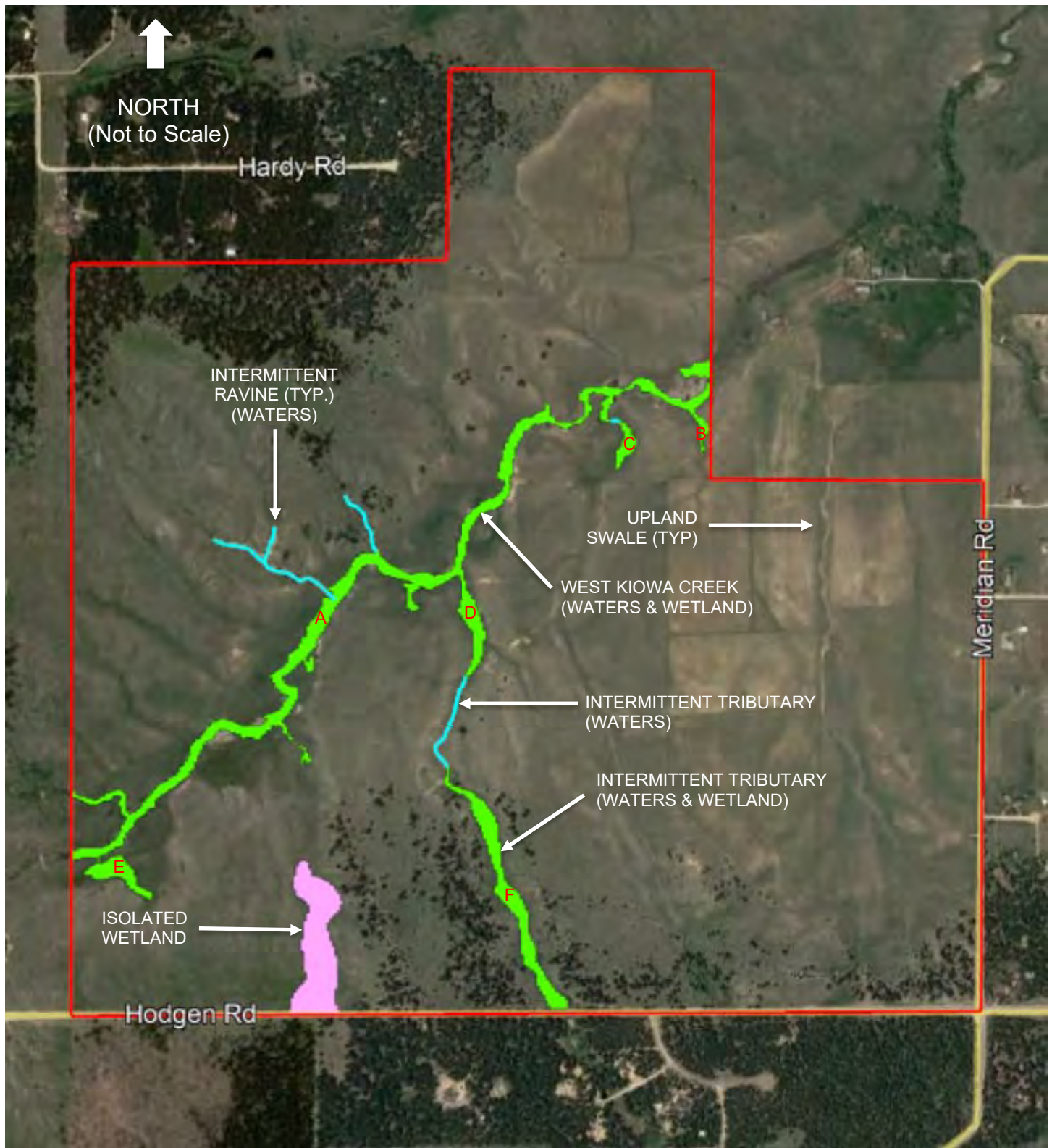


SOURCE: USFWS, National Wetland Inventory

Key: PEMC1 = Palustrine Emergent, Persistent, Seasonally Flooded



SOURCE: CNHP, Colorado Wetland Inventory



SOURCE: Google Earth Aerial, 6-9-17 and ECOS On-site Wetland and Waters Delineation.

3.5 Weeds

3.5.1 Regulatory Background

The Colorado Department of Agriculture maintains a list of noxious weed species (CDA, 2018a) and works with counties to manage noxious weeds. Weed management on Site must follow County requirements, including the “El Paso County Noxious Weeds and Control Methods” report (El Paso County, 2015b).

There are four CDA categories of noxious weeds:

- List A: Rare noxious that are designated for eradication statewide.
- List B: Discretely distributed noxious weeds that must be eradicated, contained, or suppressed, depending on their location, to stop their continued spread.
- List C. These species are well-established in Colorado. Species management plans are designed to support the efforts of local governing bodies to facilitate more effective integrated weed management. The goal of such plans is not to stop the continued spread of these species, but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species.
- Watch List Species are those may pose a potential threat to the agricultural productivity and environmental values. The Watch List is intended to serve advisory and educational purposes only. Its purpose is to encourage the identification and reporting of these species to the Commissioner in order to assist in determining which species should be designated as noxious weeds.

3.5.2 Noxious Weed Survey Results

No noxious weed species on the Colorado Department of Agriculture List A or the Watch List (CDA, 2018a) were observed on the Site.

Five List B noxious weed species (CDA, 2018a) were observed on the Site (listed in order of abundance):

- knapweed (two species and a hybrid between them occur in mixed stands);
 - diffuse knapweed (*Centaurea diffusa*),
 - spotted knapweed (*C. stoebe*), and
 - hybrid knapweed (*C. x psammogena*);
- musk thistle (*Carduus nutans*);
- Canada thistle (*Cirsium arvense*); and
- yellow toadflax (*Linaria vulgaris*).

Three List C noxious weed species (CDA, 2018a) were observed on Site (listed in order of abundance):

- common mullein (*Verbascum thapsus*);
- downy brome (cheatgrass) (*Bromus tectorum*); and
- field bindweed (*Convolvulus arvensis*).

Knapweed species are by far the most abundant noxious weed, with density ranging from 5-30% across large areas. Three species typically occur together on the Site: spotted knapweed, diffuse knapweed, and hybrid knapweed (Figure 4). They have similar management requirements and were mapped together. Common mullein is the second most common noxious weed and is present on much more of the Site than knapweed, but at lower densities (typically 1-5%). Yellow toadflax (*Linaria vulgaris*) is the third most abundant noxious weed, as multiple dense patches were observed in the northwest forest and scattered individuals are mixed with knapweed along the Creek. The other noxious weed species were present in limited areas and low densities.

The uplands adjacent to the Creek are the weediest areas. Knapweed species are dominant in most of the transitional areas between the wetlands and the adjacent upland. In many areas, there is a 100 to 200' wide swath of dense (20-30% cover) knapweed along the Creek. Knapweed continues up the slopes, with density gradually decreasing as conditions become drier. Common mullein is also present, but at lower density (2-5%) and extending farther into the uplands than the knapweed. All the other noxious weed species, except for field bindweed, were also observed along the Creek. They are mixed in with the dense knapweed, but only in limited areas and typically with less than one percent cover.

Noxious weeds are also present in most of the drainage swales and the forested areas, but at much lower density (1-5% cover) than along the Creek. Common mullein is present throughout most of the drainage swales and forested areas. Knapweed was present in limited patches within some swales and in the southeast forest. There are multiple patches of yellow toadflax in the northwest forest.

There are fields on the Site that have been recently plowed or appear to have been plowed in the past. They are all located on the east side of the Site, except for one recently plowed field in the northernmost section of the Site. All of the noxious weeds were seen in these areas, but typically with less than 5% total cover. Field bindweed was only observed in one location in the northernmost parcel, east of the plowed field, and 100 feet southwest of the large trees in trees in the drainage swale.

There are scattered noxious weeds within the shortgrass prairie south of the Creek, including knapweed, common mullein, and musk thistle. Few weeds were observed in the dry short grass prairie on the upper slopes north of the Creek, and in the forested northernmost part of the Site where there appeared to have been no recent cattle grazing.

3.5.3 Noxious Weed Management Plan

All of the List B species on the Site are designated for suppression (CCR, 2018). The Colorado Noxious Weed Act defines suppression as “*reducing the vigor of noxious weed populations within an infested region, decreasing the propensity of noxious weed species to spread to surrounding lands, and mitigating the negative effects of noxious weed populations on infested lands.*” Suppression efforts may employ a wide variety of integrated management techniques. Per the El Paso County Noxious Weed and Control

Methods document (El Paso County, 2018a): *“The most effective way to control noxious weeds is through Integrated Pest Management (IPM). IPM incorporates weed biology, environmental information, and available management techniques to create a management plan that prevents unacceptable damage from pests, such as weeds, and poses the least risk to people and the environment. IPM is a combination of treatment options that, when used together, provide optimum control for noxious weeds; however, IPM does not necessarily imply that multiple control techniques have to be used or that chemical control options should be avoided.*

- *Prevention: The most effective, economical, and ecologically sound management technique. The spread of noxious weeds can be prevented by cleaning equipment, vehicles, clothing, and shoes before moving to weed free areas; using weed-free sand, soil, and gravel; and using certified weed free seed and feed.*
- *Cultural: Promoting and maintaining healthy native or other desirable vegetation. Methods include proper grazing management (prevention of overgrazing), re-vegetating or re-seeding, fertilizing, and irrigation.*
- *Biological: The use of an organism such as insects, diseases, and grazing animals to control noxious weeds; useful for large, heavily infested areas. Not an effective method when eradication is the objective but can be used to reduce the impact and dominance of noxious weeds.*
- *Mechanical: Manual or mechanical means to remove, kill, injure, or alter growing conditions of unwanted plants. Methods include mowing, hand pulling, tilling, mulching, cutting, and clipping seed heads.*
- *Chemical: The use of herbicides to suppress or kill noxious weeds by disrupting biochemical processes unique to plants.”*

The areas to be preserved as open space (i.e., the uplands adjacent to the Creek and the large southern tributary) are the weediest portions of the Site. Knapweed is the most abundant noxious weed in these areas. Common mullein is also prevalent, albeit at lower densities. If possible, weed control efforts in Open Space areas should begin prior to construction.

The following information provides general measures to prevent introducing new weeds and spreading existing weeds during construction:

Prior to Construction:

1. Create a native habitat restoration and weed control plan for the Open Space areas. Since there is such dense knapweed mixed with other weeds along the Creek, total re-vegetation of some areas may be necessary. One option in the weediest areas would be to remove the top three to six inches of topsoil and replace it with topsoil from the non-weedy short grass prairie north of the Creek that will be developed. If topsoil can be transferred directly, or is only briefly stockpiled, then re-seeding may not be needed. Planning topsoil management

ahead of construction may decrease costs for weed control, restoration, and grading.

2. Biological control is a low cost and non-invasive way to begin controlling weeds. Optimum results take 3-5 years. Contact the Colorado Department of Agriculture Request-A-Bug program at 970-464-7916 to reserve insects, determine the species/quantity needed, and discuss release schedules (CDA, 2018b). At a minimum, species should be introduced to control the knapweed. Biological control may also be available for yellow toadflax, musk thistle, and Canada thistle; with the dense patches of yellow toadflax in the northwest corner of the Site being the highest priority of these three.
3. Reduce grazing overall. Eliminate cattle grazing in knapweed-infested areas, unless using grazing for weed control. Cattle will eat young knapweed prior to bolting but avoid it once the plant matures and develops spines. Thus, targeted grazing can reduce knapweed, but prolonged heavy grazing increases it. Cattle grazing in areas of diffuse knapweed twice in spring may decrease seed by 50%. If cattle are being used for weed control, grazing should consist of two, 10-day intervals in the spring when diffuse knapweed is bolting and about 6 to 12 inches tall (see CSU, 2013). Grazing may reduce the efficacy of biological control.
4. Develop a mowing program to control weeds. This will be most effective for the large areas of common mullein, but may also be used for Canada thistle, musk thistle, and cheatgrass. Mowing in the knapweed areas may reduce the efficacy of biological control for this species.

During construction staging:

1. Fence off all the open space areas to prevent vehicles from driving through them and spreading knapweed, etc. to new areas (Note: fencing will also prevent unpermitted wetland impacts and likely be required by the stormwater management plan).
2. Designate a minimal number of vehicle crossings of the Open Space areas. Construct crossings with weed free soil so that noxious weed seeds are not tracked into new areas.

During construction:

1. Prior to any grading of the non-weedy areas on the slopes north of the Creek, salvage the top six inches of topsoil so that it can be used to construct vehicle crossings and for re-vegetation of natural areas. If possible, immediately move soil to re-vegetation areas. If soil must be stockpiled, minimize the time in order to maintain native seed viability. Excess topsoil may be used for development areas.
2. Do not move weedy soil to new areas within the Site or import weedy soil from other Sites.

3. Control weeds within staging areas and along construction access roads on an ongoing basis.
4. Noxious weeds are most likely to become established in areas where the native vegetation and soil have been disturbed by construction. Thus, maintaining and then quickly re-establishing desirable vegetation post-construction will minimize weed infestations. Desirable vegetation may consist of native plant communities or landscaped areas.

The Site development plan should include measures to prevent introducing new weeds and spreading existing weeds during construction (including prevention measures above). Following construction, the Homeowner's Association (HOA) will be responsible for weed control. Weed management recommendations for the species observed on the Site are summarized in Table 2. Refer to the El Paso County "Noxious Weed and Control Methods" booklet for additional detail (El Paso County, 2018a).

TABLE 2 – NOXIOUS WEED MANAGEMENT SUMMARY		
Species	Occurrence	Management ^{1,2,3}
LIST B ⁴		
Canada thistle (<i>Cirsium arvense</i>)	Uncommon. Two patches noted, both in uplands near the Creek. Likely present in additional areas.	Mowing combined with herbicide treatment. Mow every 10 to 21 days during the growing season to prevent seeding. Spot treatment with herbicide will likely be needed in open space areas.
knapweeds (<i>Centaurea diffusa</i> , <i>C. stoebe</i> , and <i>C. x psammagena</i>)	Abundant. Many large patches throughout, generally in relatively moist areas along the Creek. Approximately 20 acres where cover exceeds 20%, plus additional areas with lower cover.	Biological control is available; this takes 3 to 5 years but is recommended as an initial step due to the abundance of these species in future open space. Reduce or eliminate cattle grazing, unless it is being specifically used to reduce flowering prior to plants bolting. Mowing may reduce production but is not recommended in conjunction with biological control. Some herbicide treatment is typically required for total control. Native seeding may be necessary in areas with dense knapweed.

TABLE 2 – NOXIOUS WEED MANAGEMENT SUMMARY

Species	Occurrence	Management^{1,2,3}
Musk thistle (<i>Carduus nutans</i>)	Uncommon. Individual plants are scattered throughout areas disturbed by heavy grazing or plowing. Mostly south of the Creek. Cover is less than 1%.	Severing the root below the soil surface is effective. Mowing is most effective at full bloom, but flowering plant parts must be disposed of properly to prevent seed development. Spring herbicide treatment is also effective and may be necessary in open space.
Yellow toadflax (<i>Linaria vulgaris</i>)	Common in the forest in the northwest corner of the Site where there are multiple dense patches (~2% cover over 23 acres). Uncommon along the Creek where there are scattered individuals (less than 1% cover).	Difficult to control; control when infestations are small. Biological control is available and recommended, particularly in the northwest corner where this species is most abundant. Spot treatment with herbicide will likely be needed in open space areas.
LIST C		
Common mullein (<i>Verbascum thapsus</i>)	Common. Present along the Creek, in almost every drainage swale, in the northwest and southeast forested areas, and scattered throughout much of the southern fields. Cover is typically 5% or less, but the species is present on at least 200 acres.	Reduce grazing to increase density of other vegetation. Mow in the bolting to early flowering stage to reduce seed production. Use herbicide to kill existing rosettes. Hand-pulling is effective, but likely not feasible for such large areas. Establish other vegetation and minimize disturbance to prevent existing seeds from sprouting in bare soil.
Downy brome (cheatgrass) (<i>Bromus tectorum</i>)	Uncommon. Only observed in low, sandy area near the Creek on the east edge of the Site.	The key to control is to prevent seed production and/or spread of this annual plant. Grazing two times in early in spring may reduce populations. Hand-pulling and bagging the seeds is effective for managing small patches. Herbicide treatment is also effective.

TABLE 2 – NOXIOUS WEED MANAGEMENT SUMMARY		
Species	Occurrence	Management ^{1,2,3}
Field bindweed (<i>Convolvulus arvensis</i>)	Uncommon. Only observed in one location; in the northernmost parcel, east of the plowed field, and 100 feet southwest of the large trees in trees in the drainage swale.	Do not spread soils where this species occurs to other parts of the Site. Herbicide treatment after full bloom and/or in fall. Early and aggressive control is recommended to prevent this tenacious species from spreading.

¹Refer to the El Paso County “Noxious Weed and Control Methods” booklet for additional detail (CDA, 2018a).

²When using herbicides, always read and follow the product label to ensure proper use and application.

³If near water or wetlands, only use herbicides and formulations approved for use near water.

⁴All of the List B species on the Site are designated for suppression (CCR, 2018).

3.6 Wildfire Hazard

The following sections are based on the information available at the drafting of this Report based on the current stage of development planning and design (i.e., road and lot layout plan, no landscape plan, no CCRs, and no layout plan for home or ancillary structure locations within each lot). Once design and CCRs have progressed, the information in these sections may be incorporated into a “Wildland Fire and Hazard Mitigation Plan” that will be updated and “tailored to the stage of development application and the stage of subdivision-related construction” (per County Code). It is expected that individual lot owners/home builders would be responsible for completing their own “Wildland Fire Risk and Hazard Severity Analysis”. Section 3.6.1 generally meets the requirements for a Fire Protection Report per County Code.

The stated purpose and intent of the 2018 El Paso County Development Standards” for “Fire Protection and Wildfire Mitigation” is to ensure that proposed development is reviewed for wildfire risks and adequate fire protection. No permit or approval associated with development, construction or occupancy shall be approved or issued until the provisions of these standards are satisfied.

Fire hazard was evaluated using two resources, the Colorado State Forest Service (CSFS) online Wildfire Risk Assessment Portal (WRAP) (CSFS, 2018) and the El Paso County Wildfire Hazard Map (El Paso County, 2007) (Figure 8).

The CSFS WRAP estimates potential wildfire intensity based on a 2-mile buffer and classifies potential fire intensity on most of the Site as being moderate to high.

- Moderate: Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective.
- High: Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective.

The El Paso County Wildfire Hazard Map is based only on the existing vegetation and classifies the forested areas and scattered trees on the Site as High Hazard. Most of the Site consists of grassland areas that are classified as low wildfire hazard. [Note: the Vegetation Map required to be referenced in the current Land Development Code is not available.] "Wildland areas" include land shown as forested (high hazard) or areas identified as such in the "Wildland Fire Risk and Hazard Mitigation Plan." Since the Site includes forested (high hazard) areas, it is subject to the wildland areas requirements. Additionally, once the "Wildland Fire and Hazard Mitigation Plan" is completed for the Project; additional areas may be identified that must comply with the wildland area requirements.

3.6.1 Fire Protection

The Site is located within the jurisdiction and boundaries of the Falcon Fire Protection District (FFPD). The Falcon Fire Department (Fire Department) has provided a letter dated September 20, 2018 to confirm its commitment to provide fire suppression, fire prevention, emergency rescue, ambulance, hazardous materials and emergency medical services (collectively, "Emergency Services") to the property, subject to the following conditions:

- All new construction, renovations or developments within the Fire Department's jurisdiction must comply with the applicable fire code and nationally recognized life-safety standards adopted by the El Paso County Board of County Commissioners and the FFPD's Board of Directors, as amended from time to time;
- All development, water and construction plans must be reviewed and approved by the Fire Department for compliance with the applicable fire code and nationally recognized life-safety standards prior to final plat or construction permit being issued; and,
- All development or construction projects shall meet the fire code and nationally recognized standards' pertaining to fire protection water. Please note that approved and inspected fire cisterns are permitted by the Fire Department in an attempt to help the property owner/developer meet these requirements (Appendix B).

The three staffed FFPD stations are:

- Station 1, 12072 Royal County Down Road, Peyton (7.6 miles from Site)
- Station 3, 7030 Old Meridian Road, Peyton (9.7 miles from Site)
- Station 4, 2710 Capital Drive, Colorado Springs, CO (17 miles from Site)

The closest station to the Site entrance is Station 2 located at 14450 Meridian Road and 2.6 miles south of the Site. Since Station 2 is unstaffed, response usually comes from Station 1 and the estimated response time is 12 minutes (per phone conversation with Fire Chief T. Harwig on September 28, 2018). Equipment at Station 1 includes an engine, a water tender (water truck), a brush truck, an AMR ambulance, a utility truck, and a command vehicle (FFPD, 2018). Equipment at Station 2 includes a 4-wheel drive engine, a water tender, and a brush truck.

In a developed area, firefighting water supplies are typically available through hydrant systems. However, rural areas are dependent on cisterns. The project would construct a 30,000 gallon cistern to serve the Site. The cistern would be operated and maintained by Fire Department staff. All residential properties within 5 road miles of any FFPD station have an ISO insurance rating of Class 3.

3.6.2 General Design Standards

The 2018 County Development Standards for Fire Protection and Wildfire Mitigation must be followed for the common areas and all newly constructed buildings. Common area standards include water supply, roads, bridges, and access gates. Lot development standards include those for buildings, driveways, propane tanks, and gates.

3.6.3 Wildfire Hazard Reduction

Based on information provided by the previous property owners, wildfire hazard reduction was completed for 62 acres of the Site between 2013 and 2015 (Appendix C). Although approximately 100 acres of the Site is forested, tree density is low in many areas (which would explain why only 62 acres were mitigated). Wildfire hazards were reduced by reducing tree densities, removing ladder fuels and modifying stand structure. Additionally, overall forest health was improved by removing trees that were suppressed, poorly formed, insect and disease infested, or storm damaged in order to reduce competition and improve growing space for residual trees. Additional wildfire hazard reduction may be necessary to meet County standards; however, this will be largely dependent on the location of new buildings.

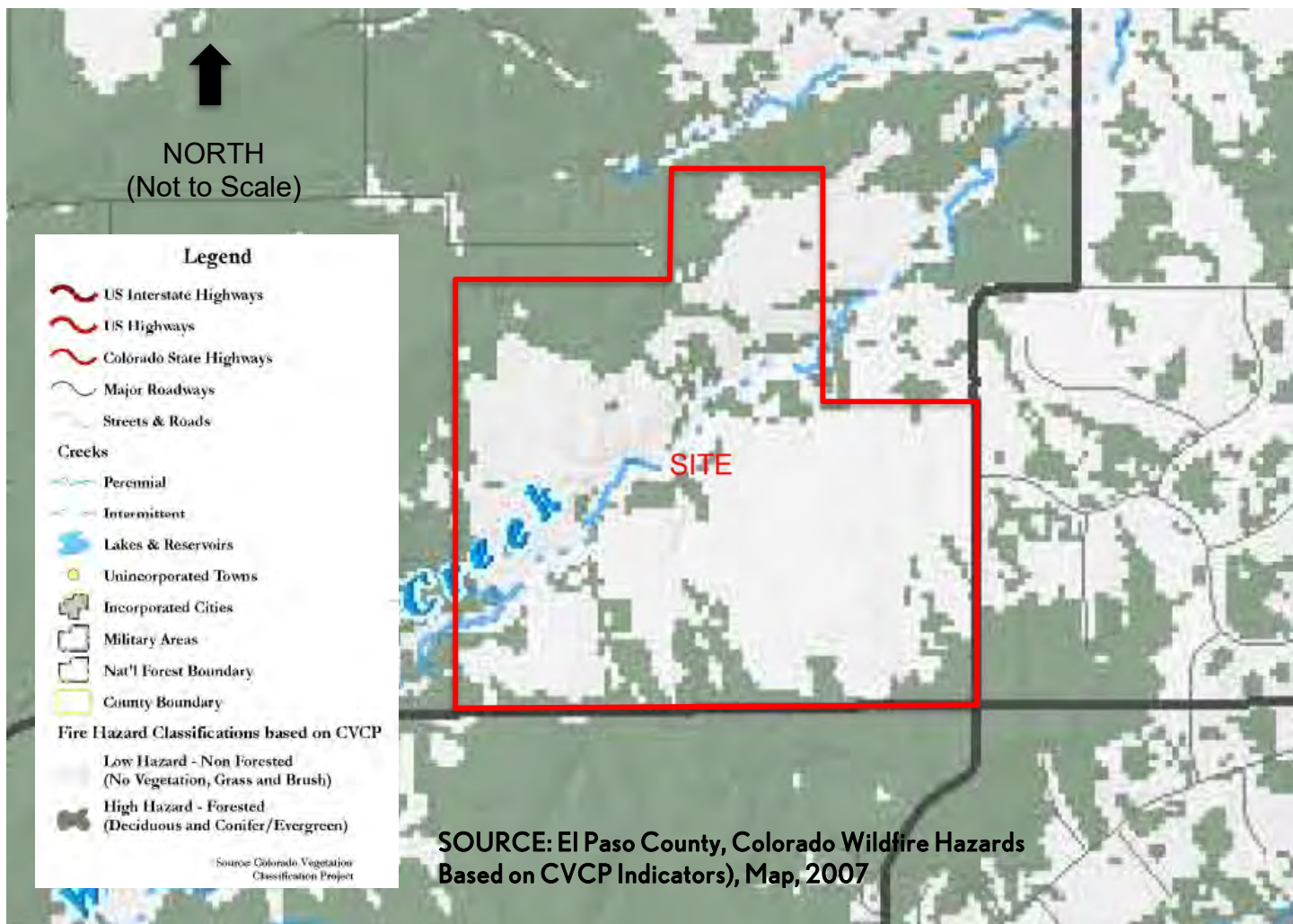
3.6.4 Construction in Wildland Fire Areas

Since the Site includes high hazard areas, a “Wildland Fire Risk and Hazard Mitigation Plan” must be prepared by a qualified professional and shall be tailored to the stage of development application and the stage of subdivision-related construction. A higher level of plan may be submitted at any stage of the process so long as it is implemented at the final stage of development. Plans shall utilize the Colorado State University (CSU)

Guidelines and National Fire Protection (NFPA) standards, as applicable. Additional fire precaution measures may be required because of fire hazard in the following areas:

- Forested areas;
- Areas rated as fire hazards by the CSFS;
- Where slopes in or adjacent to proposed development are in excess of 20%; or
- Where the local fire protection agency identifies a specific fire danger.

All structures potentially threatened by wildland fire shall be designed, located, constructed, and maintained per the County Development Code for Construction in Wildland Fire Areas. The wildland fire area requirements should be incorporated into the Covenants, Conditions, and Restrictions (CC&R). Prior to building permit authorization in high hazard areas, a "Risk and Hazard Rating Analysis" shall be performed to determine the level of the wildland fire threat, unless completed as part of the "Wildland Fire and Hazard Mitigation Plan."



Colorado Vegetation Classification Project (CVCP) Indicator Groupings

Low Hazard - Non Forested

No Vegetation:

- (1) Urban/Built Up
- (6) Barren Land
- (8) Riparian
- (9) Water
- (11) Residential
- (12) Commercial
- (61) Rock
- (6101) Talus Slopes & Rock Outcroppings
- (62) Soil

Grass:

- (21) Dryland Agriculture
- (22) Irrigated Agriculture
- (3102) Grassland
- (3104) Grass/Forb Mix
- (3111) Sparse Grass/Blowouts
- (3304) Grass/Misc. Cactus Mix
- (3307) Grass/Yucca Mix
- (7102) Alpine Grass Dominated
- (7103) Alpine Grass/Forb Mix
- (7401) Subalpine Grass/Forb Mix
- (83) Herbaceous Riparian

Brush:

- (3201) Sagebrush Community
- (3202) Slatbrush Community
- (3203) Greasewood
- (33) Shrub/Grass/Forb Mix
- (3301) Sagebrush/Grass Mix
- (3302) Rabbitbrush/Grass Mix
- (4202) Xeric Mountain Shrub Mix
- (4203) Mesic Mountain Shrub Mix
- (4205) Upland Willow/Shrub Mix
- (72) Subalpine Shrub Community
- (82) Shrub Riparian
- (8201) Willow

High Hazard - Forested

Deciduous:

- (4201) Gambel Oak
- (5101) Aspen
- (5102) Aspen/Mesic Mountain Shrub Mix
- (81) Forested Riparian
- (8101) Cottonwood

Conifer/Evergreen:

- (4101) Piñon-Juniper
- (4102) Juniper
- (4301) FJ-Oak Mix
- (4303) FJ-MINT Shrub Mix
- (4304) Sparse FJ/Shrub/Rock Mix
- (4305) Sparse Juniper/Shrub/Rock Mix
- (5201) Ponderosa Pine
- (5202) Engelmann Spruce/Fir Mix
- (5203) Douglas Fir
- (5204) Lodgepole Pine
- (5207) Spruce/Lodgepole Pine Mix
- (5208) Bristlecone Pine
- (5209) Ponderosa Pine/Douglas Fir Mix
- (5211) Limber Pine
- (5213) Lodgepole/Spruce/Fir Mix
- (5214) Fir/Lodgepole Pine Mix
- (5215) Douglas Fir/Engelmann Spruce Mix
- (5301) Spruce/Fir/Aspen Mix
- (5302) P. Pine/Gambel Oak Mix
- (5303) Ponderosa Pine/Aspen Mix
- (5304) Douglas Fir/Aspen Mix
- (5306) Lodgepole Pine/Aspen Mix
- (5307) Spruce/Fir/Lodgepole/Aspen Mix
- (5308) P. Pine/Mountain Shrub Mix
- (5309) P. Pine/Aspen/Mesic Mountain Shrub Mix

3.7 Wildlife Communities

The stated purpose and intent of the “El Paso County Development Standards” section on wildlife is to ensure that proposed development is reviewed in consideration of the impacts on wildlife and wildlife habitat, and to implement the provisions of the Master Plan (El Paso County, 2018b). Ecos has determined that the wildlife impact potential for development of the Site is expected to be low to moderate.

The Site currently provides good habitat for wildlife. There are multiple vegetation types, including shortgrass prairie, ponderosa pine woodland, and wetlands along West Kiowa Creek. Portions of the Site along the Creek and to the south have been heavily impacted by grazing. This is most significant along the Creek where most of the adjacent uplands are dominated by knapweed and woody vegetation along the channel is limited to scattered large trees and small willow saplings. Overall, there is high diversity of plants within all of the vegetation communities. The northern portion of the Site is more lightly grazed; most of the short grass prairie and pine forest here are in good to excellent condition.

The project would develop all of the woodlands and most of the shortgrass prairie. The Creek, one main tributary, and some steep short grass prairie would be preserved as Open Space. Wide upland buffers would be preserved along the Creek and the tributary. Eliminating cattle grazing from the Site would allow for more woody vegetation to grow along the Creek, thus improving habitat for many wildlife species. A noxious weed management plan will be implemented per State and County requirements to improve wildlife habitat; and a native plant re-vegetation plan for the Open Space is recommended to provide additional benefit to wildlife habitat.

Birds were the most common wildlife observed by ecos during the Site visit. The habitat preferences of the observed species are reflective of the habitat types on Site. Three species of birds were observed that typically occur in open habitats, such as short-grassed prairie: western bluebirds (*Sialia mexicana*), vesper sparrows (*Pooecetes gramineus*), and a red-tailed hawk (*Buteo jamaicensis*). Five species were observed that are typically associated with coniferous forests: Steller's jays (*Cyanocitta stelleri*), mountain chickadees (*Poecile gambeli*), yellow-rumped warblers (*Setophaga coronata*), ruby-crowned kinglets (*Regulus calendula*), and pygmy nuthatches (*Sitta pygmaea*). The remaining species are considered generalists and included mourning doves (*Zenaidura macroura*), American crows (*Corvus brachyrhynchos*) and American robins (*Turdus migratorius*). The Site provides potential nesting habitat for raptors; however, no existing nest sites for any raptors were noted during the Site visit.

The Site provides habitat for mammals including rodents, deer, and carnivores. Two Abert's squirrels (*Sciurus aberti*), ponderosa pine specialists, were seen in northwest corner of the Site. The area is suitable year-round range for mule deer (*Odocoileus hemionus*) and one was seen grazing in a forest opening. The site also provides foraging and breeding habitat for predators such as coyote and fox. Two coyotes were observed resting together in one of the small ravines to be preserved on the north side of the

Creek; both appeared to have severe mange. An abandoned den was observed near the crest of the hill in the northeast corner of the Site. This is a potential swift fox (*Vulpes velox*) den, based on the surrounding short grass prairie habitat, location near the hillcrest, entrance width (~8"), and proximity to a farm.

The Site also provides good habitat for reptiles and amphibians. Numerous leopard frogs (*Rana pipiens*) were seen along the Creek. No other species were observed by ecos during our field assessment.

4.0 STATE, CNHP AND FEDERAL LISTED SPECIES

A number of species that occur in El Paso County are listed as candidate, threatened or endangered by the USFWS (USFWS, 2018) and the CPW (CPW, 2018). Ecos compiled the special status species for the Site in Table 2 based on the data sources listed above, as well as the Site-specific, USFWS IPaC Trust Resources Report we ran for the Project (Appendix A); the CNHP data we compiled for the Eastonville, Colorado 7.5-minute quadrangle (CNHP, 2018); and our onsite assessment. Ecos has provided our professional opinion regarding the probability that these species may occur within the Site and their probability of being impacted by the Project.

The likelihood that the Project would impact any of the species listed below is low to none. Most are not expected occur in the project area and no downstream impacts are expected. The Preble's mouse is discussed in more detail below because there is USFWS designated Critical Habitat in the County.

TABLE 2 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT			
Species	Status	Habitat Requirements and Presence	Probability of Impact by Project
FISH			
Greenback cutthroat trout (<i>Oncorhynchus clarki stomias</i>)	Federal: Threatened State: Threatened	Cold, clear, gravely headwater streams and mountain lakes that provide an abundant food supply of insects.	None. Suitable habitat does not exist on the Site.
Pallid sturgeon (<i>Scaphirhynchus albus</i>)	Federal: Endangered	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.	None. The proposed project is not in the watershed for any of the listed river basins.
REPTILES AND AMPHIBIANS			

TABLE 2 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT

Species	Status	Habitat Requirements and Presence	Probability of Impact by Project
Northern leopard frog (<i>Rana pipiens</i>)	State: Special concern State Rank: Vulnerable to Extirpation (S3)	Wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches. Observed on Site, abundant along West Kiowa Creek.	Moderate. The proposed project would avoid direct impacts to most of Kiowa Creek. However, residential development is likely to have a negative impact on water quality by increasing stormwater runoff and the use herbicides and pesticides.
BIRDS			
Least tern (<i>Sternula antillarum</i>)	Federal: Endangered State: Endangered	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.	None. The proposed project is not in the watershed for any of the listed river basins.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Federal: Threatened State: Threatened	Mature, old-growth forests of white pine, Douglas fir, and ponderosa pine; steep slopes and canyons with rocky cliffs. The closest USFWS designated Critical habitat is over 15 miles southwest of the Site in mountainous terrain (USFWS, 2018).	None. Suitable habitat does not exist on the Site.
Piping plover (<i>Charadrius melodus</i>)	Federal: Threatened State: Threatened	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.	None. The proposed project is not in the watershed for any of the listed river basins.

TABLE 2 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT			
Species	Status	Habitat Requirements and Presence	Probability of Impact by Project
Whooping crane (<i>Grus americana</i>)	Federal: Endangered State: Endangered	Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.	None. The proposed project is not in the watershed for any of the listed river basins.
MAMMALS			
North American Wolverine (<i>Gulo gulo luscus</i>)	Proposed Threatened	Occur in select high elevation areas that are cold and receive enough winter precipitation to reliably maintain deep persistent snow late into the warm season.	None. Suitable habitat does not exist on the Site.
Preble's meadow jumping mouse (<i>Zapus hudsonius prebleii</i>)	Federal: Threatened State: Threatened State Rank: Critically Imperiled (S1)	Inhabits well-developed riparian habitat with adjacent, relatively undisturbed grassland communities, and a nearby water source. Well-developed 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. The Site is 6.5 northeast of the nearest critical habitat and 7.5 miles northeast of the closest occupied habitat, both along Black Squirrel Creek.	Very low. Unlikely to occur on Site due to distance from known populations. The closest mapped Occupied Habitat is 2.5 miles northwest of the Site
PLANTS			
Crawe sedge (<i>Carex crawei</i>)	State Rank: S1 (Critically imperiled)	Found in high quality, wet calcareous areas; usually associated with flat limestone outcrops or gravels.	Low. Suitable habitat is not present and wetland impacts would be minimal.
Gay-feather or Rocky mountain blazing star (<i>Liatris ligulistylis</i>)	State Rank: Imperiled (S2)	Wet meadows. The wetlands on Site are suitable habitat.	Low. May occur, but habitat impacts will be minimal.

TABLE 2 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT

Species	Status	Habitat Requirements and Presence	Probability of Impact by Project
Hall's milkweed (<i>Asclepias hallii</i>)	State Rank: S3 (Vulnerable)	Sloping creek banks on the plains. Suitable habitat is present but degraded by knapweed.	Low. Unlikely to occur and impacts to suitable habitat would be limited.
Lesser bladderpod (<i>Utricularia minor</i>)	State Rank: S1 (Critically imperiled)	This species typically occurs in shallow standing water in acid habitats in peat bogs, peaty swamps, mountain lakes, pond edges and occasionally in swampy pastures.	Low. Unlikely to occur and impacts to suitable habitat would be limited.
Plains frostweed (<i>Crocianthemum bicknellii</i>)	State Rank: Critically Imperiled (S1)	Infrequent or rare at the base of the outer foothills of the Front Range and Black Forest. Dry pine forests and open meadows, sometimes in hotly burned areas that are no longer forested. Soil texture is generally rocky, gravelly, and sandy. Not seen and habitat does not appear to be suitable.	Low. Unlikely to occur due to absence of suitable habitat.
Prairie goldenrod (<i>Oligoneuron album</i>)	State Rank: Critically Imperiled (S1)	Wet to dry, open prairies, forest clearings, or montane meadows. Elevation 5,558 - 9,967 feet. Not seen, but suitable habitat is present.	Moderate due to impacts to suitable habitat.
Prairie violet (<i>Viola pedatifida</i>)	State Rank: Imperiled (S2)	Prairies, open woodlands, and forest openings; rocky sites, outwash mesas. Elevation 5800-8800 feet. Not seen, but suitable habitat is present.	Moderate due to impacts to suitable habitat.
Richardson's alum-root (<i>Heuchera richardsonii</i>)	State Rank: S1 (Critically imperiled)	In Colorado, found only in the ponderosa pine woodlands of the Black Forest. Elevation 6942 - 7611 feet. Not seen, but suitable habitat is present.	Moderate due to impacts to suitable habitat.
Small-headed rush (<i>Juncus brachycephalus</i>)	State Rank: Critically Imperiled (S1)	Wetlands within relict tall grass prairie communities in the Black Forest region. Not seen, but suitable habitat is present.	Low. Unlikely to occur and suitable habitat would not be impacted.

TABLE 2 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT			
Species	Status	Habitat Requirements and Presence	Probability of Impact by Project
Two flowered dwarf dandelion (<i>Krigia biflora</i>)	State Rank: Critically Imperiled (S1)	Very rare, occurs in moist meadows in the Black Forest. Not seen, but suitable habitat is present.	Low. Unlikely to occur and suitable habitat would not be impacted.
Ute ladies'-tresses orchid (<i>Spiranthes diluvialis</i>)	Federal: Threatened	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. All of the wetlands on Site are suitable habitat, but this species is not known to occur in the Black Forest area.	Low. Unlikely to occur and wetland impacts will be minimal. However, ULTO surveys should be implemented during the blooming period (i.e., August) for all wetland areas to be impacted by road crossings.
Yellow stargrass (<i>Hypoxis hirsuta</i>)	State Rank: Critically Imperiled (S1)	Wetlands within relict tall grass prairie communities.	Low. Unlikely to occur and suitable habitat would not be impacted.
Western prairie fringed orchid (<i>Platanthera praeclara</i>)	Federal: Threatened	Occurs in tallgrass prairie in Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and Oklahoma. Upstream depletions to the Platte River system in Colorado and Wyoming may affect the species in Nebraska.	None. The proposed project will not alter or deplete flows to the South Platte.

4.1 Preble's meadow jumping mouse

4.1.1 Natural History

The Preble's meadow jumping mouse (PMJM) is a small mammal approximately 9-inches in length with large hind feet adapted for jumping, a long bicolor tail (which accounts for 60% of its length), and a distinct dark stripe down the middle of its back, bordered on either side by gray to orange-brown fur (USFWS, 2016d). This largely nocturnal mouse lives primarily in the foothills of southeastern Wyoming, and south to Colorado Springs, along the eastern edge of the Front Range of Colorado. PMJM are true

hibernators. They usually enter into hibernation in September or October and emerge in May of the following spring.

The preferred habitat of the PMJM is well-developed plains riparian vegetation with a nearby water source. These riparian areas include a relatively dense combination of grasses, forbs, and shrubs. PMJM regularly range into adjacent uplands to feed, hibernate, and avoid flooding. Therefore, the riparian habitat needs to be in close proximity to relatively undisturbed upland communities. PMJM typically prefers grassy upland habitats with scattered trees and shrubs.

4.1.2 Threats

Threats to PMJM and their habitat include habitat alteration, degradation, loss, and fragmentation resulting from human land uses including urban development, flood control, water development, and agriculture. Habitat destruction may impact individual PMJM directly or by destroying nest sites, food resources, and hibernation sites; by disrupting behavior; or by forming a barrier to movement. Invasive non-native and noxious weeds can alter habitat and decrease its value.

4.1.3 Critical Habitat

Critical habitat is specific areas identified by the USFWS as being essential to the conservation of PMJM (USFWS, 2016d). In determining which areas to designate as critical habitat, the USFWS must use the best scientific and commercial data available and consider physical and biological features (primary, constituent elements) that are essential to conservation of the species, and that may require special management consideration and protection. The primary constituent elements for the PMJM include those habitat components essential for the biological needs of reproducing, rearing of young, foraging, sheltering, hibernation, dispersal, and genetic exchange. Thus, critical habitat includes riparian areas located within grassland, shrub land, forest, and mixed vegetation types where dense herbaceous or woody vegetation occurs near the ground level, where available open water exists during their active season, and where there are ample upland habitats of sufficient width and quality for foraging, hibernation, and refugia from catastrophic flooding events. Section 7 of the Endangered Species Act prohibits destruction or adverse modification of a critical habitat by any activity funded, authorized, or carried out by any Federal agency, and Federal Agencies proposing actions affecting areas designated as critical habitat must consult with the USFWS on the effects of their proposed actions, pursuant to Section 7(a)(2) of the Act.

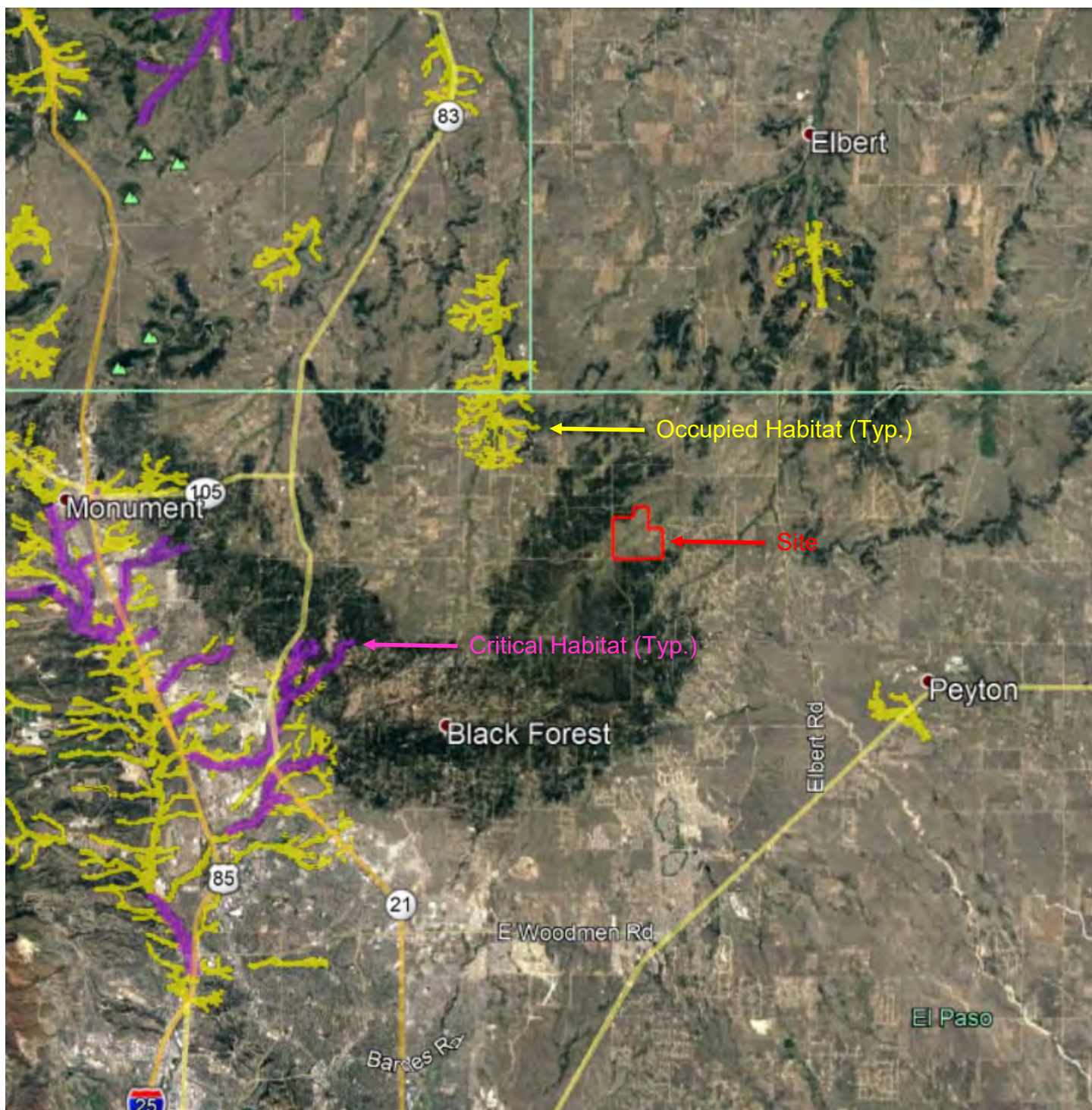
The closest Critical Habitat is 6.5 miles southwest of the Site along Black Squirrel Creek in Colorado Springs, a completely separate watershed, and therefore is not a factor or Project constraint. Refer to Figure 9, PMJM Habitat Map.

4.1.4 Occupied Range

In addition to the USFWS Critical Habitat, Colorado Parks and Wildlife (CPW) mapped areas of PMJM occupied range (CPW, 2005). The occupied range mapping is based on

known occurrences of PMJM (i.e., trapping data) and mapped riparian vegetation (i.e., potential habitat that was not necessarily trapped or verified). For each known PMJM location, a one-mile buffer is applied to riparian areas both upstream and downstream. This includes both the main channel and side channels. Additionally, a 100-meter lateral buffer is applied which, in general, represents foraging and hibernaculum habitat. This buffer serves as a general guideline. Site specific topographic and vegetative features may increase or decrease the area considered locally as foraging and hibernaculum habitat. Where riparian vegetation maps don't exist, the stream centerline is buffered laterally by 100 meters.

The closest Occupied Habitat is 2.5 miles northwest of the Site along East Cherry Creek, a completely separate watershed which drains in to Douglas County and therefore is not a factor or Project constraint. Refer to Figure 9, PMJM Habitat Map.



SOURCE: USFWS & CPW Google Earth PMJM Critical Habitat & Occupied Range Data, 2005 and 2007

5.0 RAPTORS AND MIGRATORY BIRDS

Raptors and most birds are protected by the Colorado Nongame Wildlife Regulations, as well as by the federal Migratory Bird Treaty Act. No raptor nests have been mapped within one mile of the Site (COGCC, 2018). No raptor nests were observed during the site visit. The ponderosa pine forests, short grass prairie, riparian, and wetlands habitats are all valuable nesting habitat for birds.

6.0 SUMMARY OF IMPACTS

6.1 Mineral and Natural Resource Extraction

The El Paso County Master Plan for Mineral Extraction (El Paso County, 1996) shows, Floodplain Deposits with sand and gravel with minor amounts of silt and clay deposited in the floodplain; Valley Fill with sand and gravel with silt and clay deposited in valleys; and Upland Deposits with sand and gravel with silt and clay on topographic high points south of West Kiowa Creek.

Proterra Properties, LLC researched the records of the El Paso County Clerk and Recorder and established that there is not a mineral estate owner on the Site (Appendix D). As such, Mineral or Natural Resource Extraction will not occur as a part of this Project.

6.2 Vegetation

There are three main types of vegetation on Site; wetlands, short-grass prairie, and ponderosa pine forest. Heavy cattle grazing has degraded vegetation by increasing weeds in many areas and severely reducing woody riparian vegetation along the Creek. Direct negative impacts to vegetation will result from the construction of roads, trails, and homes. However, since the development is low density, most negative impacts will be indirect such as spreading weeds to new areas, overgrazing of limited areas by horses, or alteration of wetland hydrology. Since the project will preserve a large area as open space and properties will be kept in a mostly natural condition (per pending CCRs), there is also the potential to improve vegetation, particularly in the Open Space areas. The following recommendations are intended to minimize negative impacts and increase positive impacts:

1. Create a habitat restoration and management plan for the Open Space areas that begins as soon as possible, continues through construction, and is taken over and implemented by the Metropolitan District following construction.
2. Increase native vegetation in the plowed fields and disturbed shortgrass prairie areas by seeding with native species. Another option would be to spread ~1" of salvaged topsoil obtained/stockpiled from any non-weedy shortgrass prairie that

would be impacted by infrastructure construction, such as roads and associated disturbances.

3. Minimize trail impacts to the non-weedy shortgrass prairie northwest of the Creek by locating trails on this side of the Creek either in the weedy shortgrass prairie areas or near roads.
4. The ponderosa pine forest in the northernmost portion of the Site includes diverse herbaceous vegetation. Protect as much of this habitat as possible by designating specific building envelopes in the three overlapping lots and designating the remainder of these lots as non-buildable.
5. Include requirements in the CCRs to preserve native vegetation and minimize non-native landscaping and irrigation.
6. Include requirements in the CCRs to minimize tree removal by siting homes, ancillary structures and defensible space buffers in non-forested portions of the lot. Based on the preliminary development plan, most of the lots have non-forested areas located near planned roads. Clearing limitations could be specified for groups of lots, with more tree removal permitted on the few heavily forested lots. Limiting tree clearing could be incentivized in the CCRs by requiring landowners to plant trees of the same species to replace any they remove.
7. Implement a stormwater management system that does not significantly increase flows into wetlands and the Creek.

6.3 Wetland Habitat and Waters of the U.S.

West Kiowa Creek and associated and connected wetlands and intermittent tributaries are jurisdictional WOUS, including wetlands. Lot layout has been planned to avoid wetlands and waters to the extent feasible. A majority of the wetlands and waters on Site will be set aside and included in Open Space. Site-wide over-lot grading is not proposed. Any site grading necessary to prepare a lot for home construction will be the responsibility of the lot owner where impacts to wetlands or waters will be prohibited without a Clean Water Act (CWA) Section 404 Permit. Any proposed impacts to wetlands or waters resulting from road or utility crossings and associated grading operations implemented by the Developer will be avoided or minimized to the extent possible. If impacts cannot be avoided or minimized, the Developer will obtain authorization from the U.S. Army Corps of Engineers (USACE) prior to construction. Any wetlands or waters that occur within private lots will be protected by easements, codes, covenants and restrictions (CCR's) and therefore impacts by private land owners will be prohibited.

An isolated, non-jurisdictional wetland area (to be confirmed by the USACE) in the southwest corner of the Site will be impacted by development. Refer to Figure 6. If deemed non-jurisdictional, no CWA 404 Permit will be required.

6.4 Weeds

Weeds observed on Site included five List B noxious weed species and three List C noxious weed species (CDA, 2018a). Suppression is required for all List B species. Knapweed is the most problematic weed on the Site, and two species and a hybrid between tend to occur altogether in dense patches within the proposed Open Space area. Site development typically causes weeds to increase due to increased earth disturbance and new weeds being brought in (on vehicles, on shoes, in fill material, in landscaping supplies, etc.). The following recommendations are intended to minimize negative impacts and increase positive impacts:

1. Introduce biological control agents for weed control as soon as possible.
2. Implement an integrated noxious weed management plan that begins as soon as possible, continues through construction, and is taken over and implemented by the Metropolitan District following construction. Control of List B species should be the highest priority, particularly knapweed.
3. Include requirements in the CCRs that landowners manage weeds on their property per the Colorado Noxious Weed Act and El Paso County guidelines.
4. Include requirements in the CCRs to minimize livestock grazing impacts, such as requiring weed free hay and limiting the number of animals per acre of fenced pasture to a sustainable level.
5. Prohibit importation of fill dirt and landscaping material from other locations unless it is certified as weed free.

6.5 Wildfire Hazard

The forested areas and scattered trees on the Site are mapped as High Hazard (El Paso County, 2007) (Figure 8). Since the Site includes high hazard areas, a “Wildland Fire Risk and Hazard Mitigation Plan” must be prepared and will more accurately map the areas of high wildfire hazard on the Site. Wildfire hazard reduction was recently completed for much of the forested portions of the Site and should reduce the overall wildfire risk. The site development plan must conform to County Development Standards for Fire Protection. Construction on each lot must comply with the County Development Standards and this should be referenced in the CCRs. Buildings should be sited away from trees in order to reduce fire risk and minimize clearing.

6.6 Wildlife Communities

The impact to wildlife is similar to that for vegetation. Species that occur in wetland and riparian habitat are expected to benefit from Open Space protection and an expected increase in woody riparian vegetation once cattle are removed. Implementation of the stormwater management plan will assist in protecting water quality in the Creek, to ameliorate development impacts on aquatic wildlife species, such as leopard frogs. Minor impacts to forest species are expected due to tree clearing for home construction and wildfire hazard reduction. Many shortgrass prairie specialist species avoid areas with buildings, overhead powerlines, and trees; thus, the project is expected to have the

most significant negative impact on these species. The following, additional recommendations are intended to reduce impacts to wildlife:

1. Limit the use of herbicides, pesticides, and fertilizers as they can negatively impact aquatic wildlife species.
2. Minimize the installation of fencing. When fencing is needed, use wildlife friendly fences or include specific wildlife crossings along fence lines. Pronghorn are of particular concern because they do not jump over fences and can be injured by barbed-wire fences.
3. Road crossings over the Creek should be designed to enable wildlife underpass and allow use the Creek as a movement corridor to reduce collisions with vehicles.
4. Dogs should be kept in fenced pens and be leashed when on walks. At least one designated off-leash area for dogs should be provided, as this will increase compliance with leash rules in other areas.
5. Cats should no be allowed outdoors because they kill birds and native rodents. Cats may also be eaten by foxes and coyotes.

6.7 State, CNHP and Federal Listed Species

6.7.1 State T&E Species and Species of Concern

T&E species within Colorado are identified on the Colorado Parks and Wildlife's list of Threatened and Endangered Species (CPW, 2018). The CPW's T&E Species list also includes Species of Concern as summarized in Section 4.0, Table 2 of this Report. The state-listed species that may be affected by the Project are summarized in Table 2.

6.7.2 CNHP Rare Species

The Black Forest area includes many plant communities that are typically found only in prairies much farther east; and the CNHP list of rare plants reflects this. Due to the generally degraded nature of the onsite vegetation, few of these species are expected to occur. Since much of the wetlands would be preserved as Open Space, the project would have an overall positive impact on species associated with this habitat. If weeds are controlled, then the project may also have a positive impact on the shortgrass prairie species.

6.7.3 Federal T&E Species

The Site is not located within any officially designated occupied or critical habitat for federally designated threatened or endangered species, including the Preble's meadow jumping mouse. Therefore, no impacts to federally designated threatened or endangered species are expected and there is and no need to initiate consultation with the USFWS under the ESA. However, to ensure impact avoidance, Ute ladies'-tresses orchid (*Spiranthes diluvialis*) surveys should be implemented during the blooming period

(i.e., August) for all wetland areas to be impacted, including road and trail crossings, utility installation areas, and stormwater outfalls.

6.8 Raptors and Migratory Birds

The Project is expected to have mixed impacts on raptors and migratory birds. Preservation of Open Space along the Creek and an expected increase in woody riparian vegetation once cattle are removed will likely have a positive impact on the birds that use this habitat. The project is expected to have slight negative impact on forest birds and shortgrass prairie birds due to habitat alteration and increased disturbance by people, dogs, and cats. Negative impacts can be minimized by following the recommendations in the vegetation and wildlife sections.

7.0 REGULATIONS AND RECOMMENDATIONS

7.1 Clean Water Act

Section 404 of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the U.S. (including wetland habitat) protected by the Act without a valid permit. Ecos identified jurisdictional wetland habitat and WOUS along West Kiowa Creek and its connected and adjacent wetlands and tributaries. The applicant is proposing box culverts and fill at several crossings of West Kiowa Creek. It is assumed that these activities can be authorized under Nationwide Permit 14 for Linear Transportation Projects. The current site plan indicates that impacts to other jurisdictional wetlands and waters will be avoided. Refer to Figure 2. If Site plan is revised and impacts to any wetlands or waters not currently contemplated are deemed unavoidable after impact minimization efforts, a different Nationwide Permit or Individual Permit may be required depending on the total acreage and lineal footage of impacts proposed. No construction may commence without USACE authorization.

Clarification of Jurisdictional vs. Non-Jurisdictional Waters of the U.S.

The USACE and U.S. Environmental Protection Agency (EPA) prepared a guidance memorandum, *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States*. This memorandum provides guidance to EPA regions and Corps districts implementing the Supreme Court's decision in the consolidated Rapanos and Carabell cases which address the jurisdiction over waters of the United States under the Clean Water Act. The key points of the memorandum, which apply to the determinations made in the field by ecos for the Project are summarized below:

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters;
- Wetlands adjacent to traditional navigable waters;

- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

The agencies generally will not assert jurisdiction over the following features:

- Upland swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow); and
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

7.2 Endangered Species Act

The Site is not located within any officially designated occupied or critical habitat for federally designated threatened or endangered species, including the Preble's meadow jumping mouse. However, to ensure impact avoidance, Ute ladies'-tresses orchid (*Spiranthes diluvialis*) surveys should be implemented during the blooming period (i.e., August) for all wetland areas to be impacted, including road and trail crossings, utility installation areas, and stormwater outfalls.

7.3 Migratory Bird Treaty Act & Bald and Golden Eagle Protection Act

No raptor nests have been mapped within one mile of the Site (COGCC, 2018) and no migratory bird nests were observed within the Site. However, given the transitory nature of these species ecos recommends a nesting bird inventory immediately prior to construction to identify any new nests within the Site or within the CPW recommended buffers of the Site. If these species are found to be present, construction activities should be restricted during the breeding season near any newly identified nests.

7.4 Colorado Noxious Weed Act

In order to ensure Project compliance with the Act, the Noxious Weed Management Plan referenced in Section 3.5.3 of this Report should be implemented, and further site-specific weed management should be implemented on an ongoing basis, starting as soon as feasible.

8.0 REFERENCES

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Appendix A
USFWS IPaC Trust Resources Report

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

El Paso County, Colorado

 Map of project location

Local office

Colorado Ecological Services Field Office

☎ (303) 236-4773

📠 (303) 236-4005

MAILING ADDRESS

Denver Federal Center

P.O. Box 25486

Denver, CO 80225-0486

PHYSICAL ADDRESS

134 Union Boulevard, Suite 670

Lakewood, CO 80228-1807

<http://www.fws.gov/coloradoES>

<http://www.fws.gov/platteriver>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for species under their jurisdiction.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5123	Proposed Threatened
Preble's Meadow Jumping Mouse <i>Zapus hudsonius preblei</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4090	Threatened

Birds

NAME	STATUS
Least Tern <i>Sterna antillarum</i> This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8505	Endangered
Mexican Spotted Owl <i>Strix occidentalis lucida</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8196	Threatened
Piping Plover <i>Charadrius melodus</i> This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
Whooping Crane <i>Grus americana</i> This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/758	Endangered

Fishes

NAME	STATUS
------	--------

Greenback Cutthroat Trout *Oncorhynchus clarkii stomias* Threatened
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/2775>

Pallid Sturgeon *Scaphirhynchus albus* Endangered
This species only needs to be considered if the following condition applies:

- Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.

No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/7162>

Flowering Plants

NAME	STATUS
Ute Ladies'-tresses <i>Spiranthes diluvialis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2159	Threatened
Western Prairie Fringed Orchid <i>Platanthera praeclara</i> This species only needs to be considered if the following condition applies: <ul style="list-style-type: none">Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1669	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.

2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds
<http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A
BREEDING SEASON IS INDICATED
FOR A BIRD ON YOUR LIST, THE
BIRD MAY BREED IN YOUR
PROJECT AREA SOMETIME WITHIN
THE TIMEFRAME SPECIFIED,
WHICH IS A VERY LIBERAL
ESTIMATE OF THE DATES INSIDE
WHICH THE BIRD BREEDS
ACROSS ITS ENTIRE RANGE.
"BREEDS ELSEWHERE" INDICATES
THAT THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT AREA.)

Lark Bunting *Calamospiza melanocorys*

Breeds May 10 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
<https://ecos.fws.gov/ecp/species/3482>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

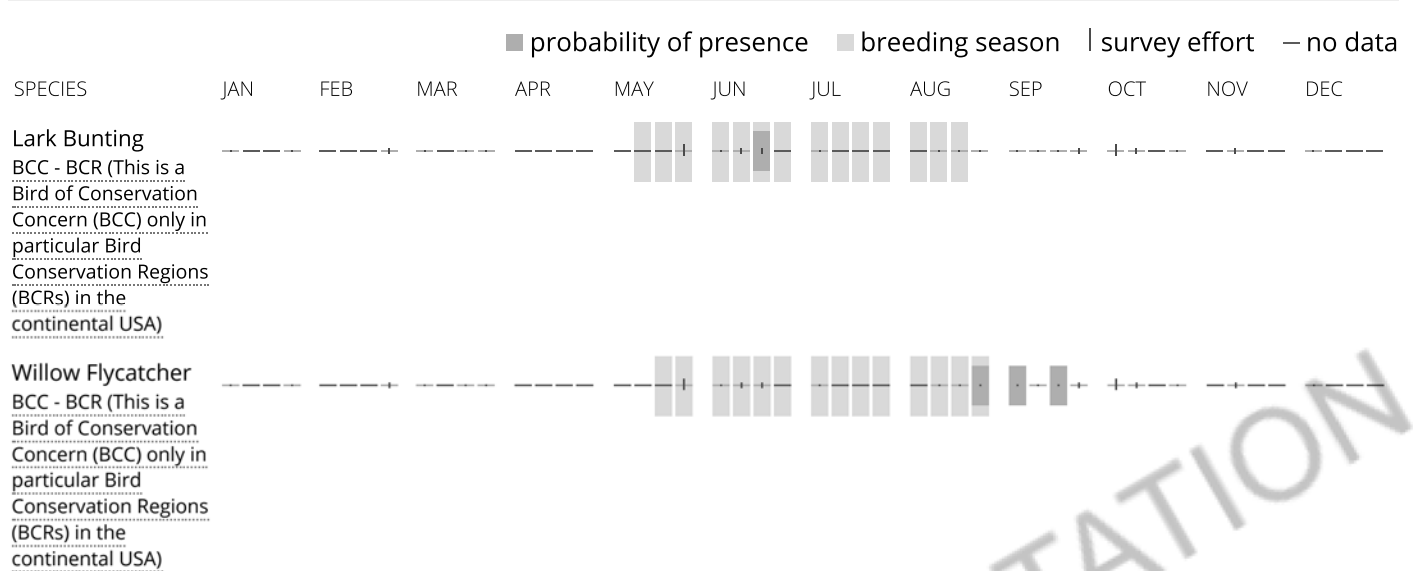
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the [Probability of Presence Summary](#). [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the [Probability of Presence Summary](#) and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1C

RIVERINE

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted.

Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix B
Commitment Letter to Provide Fire and Emergency Services

FALCON FIRE PROTECTION DISTRICT

Administration Office
7030 Old Meridian Road
Falcon, Colorado 80831
Business Number: 719-495-4050 Business Fax: 719-495-3112



September 20, 2018

Charlie Williams
Proterra Properties
1864 Woodmoor drive, suite #100
Monument, Colorado 80132

**Re: Conditional Commitment to Provide Emergency Services
Property: McCune Ranch**

Douglas,

Based upon the information you have provided, the above-referenced real property is located within the jurisdiction and boundaries of the Falcon Fire Protection District ("Fire Department"). By this letter, the Fire Department confirms its commitment to provide fire suppression, fire prevention, emergency rescue, ambulance, hazardous materials and emergency medical services (collectively, "Emergency Services") to the property, subject to the following conditions:

- ☒ All new construction, renovations or developments within the Fire Department's jurisdiction must comply with the applicable fire code and nationally recognized life-safety standards adopted by the El Paso County Board of County Commissioners and the Fire Department's Board of Directors, as amended from time to time;
- ☒ All development, water and construction plans must be reviewed and approved by the Fire Department for compliance with the applicable fire code and nationally recognized life-safety standards prior to final plat or construction permit being issued; and,
- ☒ All development or construction projects shall meet the fire code and nationally recognized standards' pertaining to fire protection water. Please note that approved and inspected fire cisterns are permitted by the Fire Department in an attempt to help the property owner/developer meet these requirements.

Please do not hesitate to call the fire administration office or me for further information between 9:00 am and 4:00 pm, Monday through Friday.

Sincerely,
Trent Harwig
Fire Chief/Administrator

Appendix C

Liss Wildfire Hazard Reduction Scope And Payment Application

Scope of Work

Liss Property EQIP_2013-2015

Purpose:

Perform Forest Stand Improvement and Forest Slash Treatments that will:

- Reduce wildfire hazards by reducing tree densities, removing ladder fuels and modifying stand structure.
- Improve overall forest health by removing suppressed, poorly formed, insect and disease infested trees and storm damaged trees. Reduce competition and improve growing space for residual trees.

Location and General Description of Work:

The Liss property is located in portions of the NE $\frac{1}{4}$, NW $\frac{1}{4}$, S $\frac{1}{2}$, SE $\frac{1}{4}$, and W $\frac{1}{2}$ of Sections 13, 19 and 24, Township 11 South, Range 65 West in El Paso County, Colorado. The project area consists of one private property parcel located off of Meridian Road and Highway 83. The Colorado State Forest Service (CSFS-Franktown District) Forester will be the Technical Service Provider (TSP) and a Service Agreement is in place with the landowner for this project.

Work involves Timber Stand Improvement and Forest Slash Treatment activities in a dominant ponderosa pine forest. Both activities will follow the EQIP requirements and standards for each activity (descriptions of both are attached to Scope of Work).

Unit Description:

The Liss Project area is one (1) management unit consisting of two blocks. The entire treatment area has a gross acreage of approximately 62 acres. Ponderosa pine trees are the dominant species in both blocks with intermittent Gambel oak throughout.

The management unit and fields (blocks) are shown on the attached maps and is described in the following table:

Unit Number	Field numbers	Land Ownership	Acreage	Treatment Period
1	1-6	Private	5 acres	Sept. 2013
		Private	34 acres	Dec. 2015
		Private	7 acres	
project.			10.5 acres	
			5.5 acres	
Total			62 acres	

Slope Distribution (Based on DEM maps)

Field numbers	0-30% (acres)	31-45% (acres)	46% +	Total Acres
1-3	62 *** majority of acres fall in the 0-8% slope range	0	0	62
Total Acres	62	0	0	62

Project Boundary Marking

Unit Number	Field Numbers:	East, West, North and South Boundary Designation
1	1, 2 and 3	fence line, natural meadows and pink flagging

Forest Management Treatments:

- The project will involve performing timber stand improvement and forest slash treatments of forested areas (ponderosa pine and Gambel oak). Thinning shall be accomplished via mechanical mastication and handwork with chainsaws
- Where possible landowner will harvest trees for firewood to help reduce depth of material on the ground. Slash disposal shall be by means mastication.
- Use of equipment that is comparable to a rubber tired Bobcat with a Fecon head mulching attachment for mastication will be used by the landowner on this project. Other equipment such as an ATV, Trailers, pruning loppers and chainsaws will also be used.
- Trees and oak will be thoroughly mulched/masticated. Chips and chunks will be well distributed across the project area with a desired average of 3-inches or less. All tops and slash must be processed on site via mechanical mastication.

Prescriptions:

- Masticate whole trees concentrating on sizes of 7 inches and less dbh to achieve 70-80ft²/acre of basal area. Goal is to treat all ponderosa pine acting as ladder fuels and that are overtopped, poorly formed (bent, broken topped, forked), damaged, diseased (bark beetle, severe mistletoe) and excessive (dense clumps). Thin all trees to create a 10-foot spacing between tree crowns.
- Trees will be thoroughly masticated to reduce the amount of large woody fuels as possible. Chips and chunks will be well-distributed across the project area with a desired average depth of 3-inches or less. Any tops or other large material left following the mulching must be less than 18" in height. ***If necessary, such material may need to be lopped with chainsaws and scattered by hand.***
- Large pockets of ponderosa pine seedlings and saplings (0-4" dbh) should be hand thinned out and whole trees masticated. Landowner should focus on retaining trees that have a full, healthy crown, straight main stem/trunk (no forks or cracks) and free of all insect and disease. Tree spacing for residual trees should be a minimum of 5-10 feet.
 - Thicker clumps growing underneath the dripline of the mature overstory trees should be all masticated to remove ladder fuels, decrease competition for water, sunlight and nutrients and increase growing space for the residual trees.
- Small, healthy widely dispersed pockets of ponderosa pine seedling/sapling trees can be retained only if they are not considered ladder fuels and will grow as single trees in the stand. If there are individual isolated trees in the 8 inch dbh and less range they can be retained if they are located at a minimum of 30 feet (stem spacing) from other remaining trees.

- Trees 7" in dbh and greater are recommended to target as harvest trees (trees removed, limbed and topped, skidded and decked to an area landowner can access). This will help to reduce the depth of woody debris on the ground and produce a wood product for the landowner to use, sale or trade for services.
- In areas where Gambel oak is present, priority will be to remove old, dead, decadent patches, especially those with significant top kill. A variety of oak heights and widths will be chosen for the remaining clumps. In areas where there are continuous oak thickets, irregular shaped openings will be cut to create a mosaic.
 - Throughout the oak there are isolated conifers or pockets of conifers (> 8"). All oak that is acting as ladder fuels underneath residual trees and within 20 feet of the dripline of those residual trees will be masticated.
 - Priority is to retain mature, healthy open clumps of oak to help maintain diversity and provide for important wildlife corridors.
- All down and dead, damaged, poor formed and wind thrown trees that are on the ground which are 8 inches and less dbh will be treated via mastication.
-
- Retain 2-3 snags per acre with a minimum diameter of 8 inches.
- All stumps will be 6 inches or less in height as measured on the uphill side.

Additional Performance Standards:

- The landowner should follow the outlined Scope of Work in this document as well as the EQIP requirement and standard sheets for Forest Stand Improvement and Forest Slash Treatment activities.
- In areas where machines have used a path repeatedly waterbars should be installed if the TSP and landowner deem necessary.
- Gates, fences, or signs damaged by the landowner will be repaired to a like or better condition, or replaced at the discretion of the Landowner.
- The TSP may recommend to landowner to suspend or limit operations if excess damage is occurring due to mud, snow, extreme fire danger, etc.
- Any soil contaminated by loss of fuel, oil, grease, hydraulic fluid, coolant or other fluids should be removed and placed in covered drums or other acceptable containers for proper disposal by the contractor.
- Areas with excessive rutting caused by the turning of tracked equipment, should be raked smooth to the original slope of the ground.
- Grasses and understory should recover nicely after treatment. Where soils slow or prohibit recovery re-seeding with native a native grass mix for the area is recommended.

PRACTICE APPROVAL AND PAYMENT APPLICATION Information is needed from the Conservation Plan Schedule of Operations to complete this form. Penalty for false statement or entries.	Participant JASON J LISS	Program and Contract Number EQIP 2008 748B05122PQ
	County and State EL PASO County, CO	Fund Code Drought 2012 All Lands (All Field Offices)
	Watershed Headwaters Kiowa Creek	Payment Application Number 1

1. CONSERVATION PRACTICES PERFORMED

Contract Item	Practice	Inspection Date	Practice Completion	Planned Amount	Applied Amount	Units	Cost Per Unit	Cost Share % Method	Payment Cap	Amount Earned
1	Forest Stand Improvement (666)	10/28/2013	Completed	34.00	10.00	ac	\$1,400.00 00	PR ¹	N/A	\$14,000.00
2	Woody Residue Treatment (384)	10/28/2013	Completed	34.00	10.00	ac	\$300.0000	PR ¹	N/A	\$3,000.00
Total Amount Earned:										\$17,000.00

Notes

¹ 1, 2 Payment Rates define the unit cost rate of compensation to be received by the participant.

Practice Certification

Practice(s) have been performed to the extent shown above and meet the program requirements. If the practice(s) does (do) not meet practice specifications, or if additional work is required, see explanation in Performance Report below.

Performance Report

CIN 1, 2 This practice meets NRCS standards and specifications.

Certification By

LANA ARMON
USDA electronic signature; manual signature not required.

Date

10/28/2013

2. PARTICIPANT CERTIFICATION AND SIGNATURE

CERTIFICATION BY PARTICIPANT(s): I certify that the above information is true and correct. I further certify that the entry in Column Practice Extent and Units shows that the practice(s) was (were) performed in accordance with the practice specifications and other program requirements. I hereby apply for payment to the extent that the NRCS Approving Official has determined that the practice(s) has (have) been performed and further certify that this payment is not a duplicate of any other earned by me through another USDA program. Any payment that has or will be received from other sources has been disclosed to the NRCS Approving Official. I agree to maintain this (these) practice(s) for at least the practice service life beginning with the date the practice was completed. I agree to refund all or part of the cost-share/incentive assistance paid to me, as determined by the NRCS Approving Official, if before expiration of the practice service life, I (a) destroy the practice installed, or (b) voluntarily relinquish control or title to the land on which the installed practice has been established and the new owner and/or operator of the land does not agree in writing to properly maintain the practice for the remainder of its specified lifespan.

Participant Name, Address, Telephone

JASON J LISS
PO BOX 36
ELBERT CO 80106

Signature

Date

3. NRCS APPROVING OFFICIAL CERTIFICATION

PRACTICE APPROVAL AND PAYMENT APPLICATION Information is needed from the Conservation Plan Schedule of Operations to complete this form. Penalty for false statement or entries.	Participant JASON J LISS	Program and Contract Number EQIP 2008 748B05122PQ
	County and State EL PASO County, CO	Fund Code Drought 2012 All Lands (All Field Offices)
	Watershed Headwaters Kiowa Creek	Payment Application Number 1

Pursuant to authority vested in me, I certify that the items listed herein are correct and hereby approved for payment from the fund designated on supporting data records

NRCS Approving Official	Date
-------------------------	------

4. PAYMENT SUMMARY

Participants with 0% payment shares are not listed.

Payees	Payee Type	SSN or Tax ID	Account	Participant Payment Share	Payment Reductions	Payment Amount
JASON J LISS	P	*****5205	***4241	100.0000%	\$0.00	\$17,000.00
Total				100.0000%	\$0.00	\$17,000.00

5. PAYMENT ASSIGNMENTS

Participants with active payment assignments on this contract are listed.

PRIVACY ACT STATEMENT

The following statements are made in accordance with the Privacy Act of 1974 (U.S.C. 522a). Furnishing this information is voluntary; however, failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other state or federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

This information collection is exempted from the Paperwork Reduction Act, as it is required for administration of the Food, Conservation, and Energy Act of 2008 (Pub.L. 110-236)

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

Appendix D
McCune Ranch Mineral Estate Owner Certification

CERTIFICATION:

I, *Erin Ganaway*, researched the records of the El Paso County Clerk and Recorder and established that there **was not** a mineral estate owner(s) on the real property known as McCune Ranch. An initial public hearing on _____, which is the subject of the hearing, is scheduled for _____, 20____.

Pursuant to §24-65.5-103(4), C.R.S., I certify that a Notice of an initial public hearing was mailed to the mineral estate owner(s) (if established above) and a copy was mailed to the El Paso County Planning Department on _____, 20____.

Dated this 25 day of September, 2018.

STATE OF COLORADO)
) s.s.
COUNTY OF EL PASO)

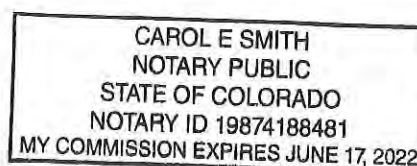
The foregoing certification was acknowledged before me this 25 day of September, 2018, by Erin Ganaway.

Witness my hand and official seal.

My Commission Expires: June 17, 2022

Carol E. Smith

Notary Public





Attachments
Winsome Filing No. 3
El Paso County, Colorado

November 9, 2021

ATTACHMENT C

REQUEST FOR APPROVED JURISDICTIONAL DETERMINATION

REQUEST FOR AQUATIC RESOURCES DELINEATION VERIFICATION

OR JURISDICTIONAL DETERMINATION

A separate jurisdictional determination (JD) is not necessary to process a permit. An Approved Jurisdictional Determination (AJD) is required to definitively determine the extent of waters of the U.S. and is generally used to disclaim jurisdiction over aquatic resources that are not waters of the U.S., in cases where the review area contains no aquatic resources, and in cases when the recipient wishes to challenge the water of the U.S. determination on appeal. Either an Aquatic Resources Delineation Verification or a Preliminary Jurisdictional Determination (PJD) may be used when the recipient wishes to assume that aquatic resources are waters of the U.S. for the purposes of permitting. In some circumstances an AJD may require more information, a greater level of effort, and more time to produce. If you are unsure which product to request, please speak with your local US Army Corps of Engineer's office.

I am requesting the product indicated below from the U.S. Army Corps of Engineers, Albuquerque District, for the review area located at:

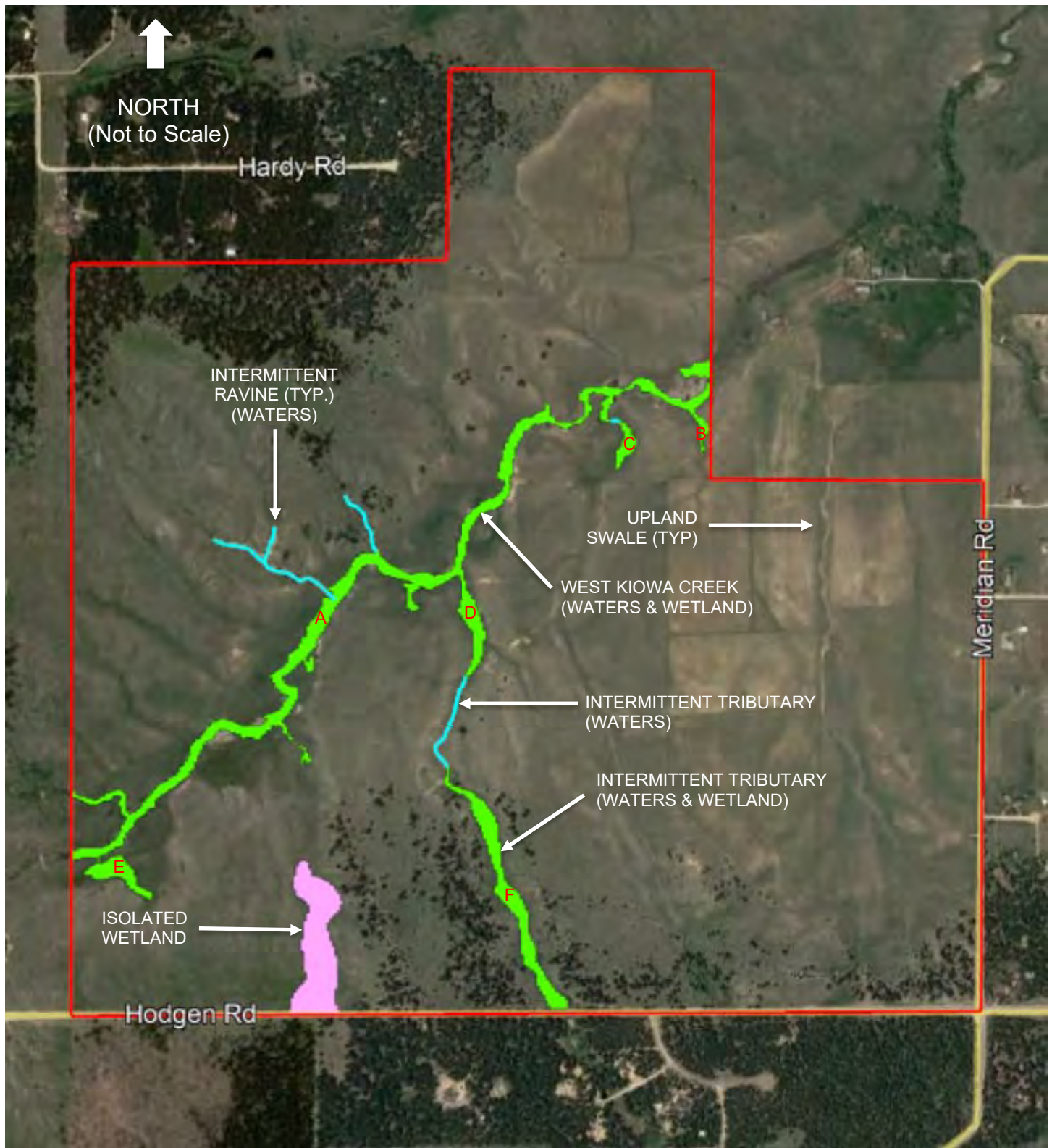
Street Address: 11669 Hodgen Road		City: N/A	County: El Paso
State: CO	Zip: 80908	Section: 24	Township: 11S Range: 65W
Latitude (decimal degrees): 39.073236°		Longitude (decimal degrees): -104.619699°	
The approximate size of the review area for the JD is 4 acres. (Please attach location map)			
Choose one: <input type="radio"/> I own the review area <input type="radio"/> I hold an easement or development rights over the review area <input type="radio"/> I lease the review area <input type="radio"/> I plan to purchase the review area <input checked="" type="radio"/> I am an agent/consultant acting on behalf of the requestor <input type="radio"/> Other:		Choose one product: <input type="radio"/> I am requesting an Aquatic Resources Delineation Verification <input checked="" type="radio"/> I am requesting an Approved JD <input type="radio"/> I am requesting a Preliminary JD <input type="radio"/> I am requesting additional information to inform my decision about which product to request	
Reason for request: (check all that apply) <input type="checkbox"/> I need information concerning aquatic resources within the review area for planning purposes. <input type="checkbox"/> I intend to construct/develop a project or perform activities in this review area which would be designed to avoid all aquatic resources. <input type="checkbox"/> I intend to construct/develop a project or perform activities in this review area which would be designed to avoid those aquatic resources determined to be waters of the U.S. <input checked="" type="checkbox"/> I intend to construct/develop a project or perform activities in this review area which may require authorization from the Corps; this request is accompanied by my permit application. <input type="checkbox"/> I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district's list of navigable waters under Section 10 of the Rivers and Harbors Act of 1899 and/or is subject to the ebb and flow of the tide. <input type="checkbox"/> My lender, insurer, investors, local unit of government, etc. has indicated that an aquatic resources delineation verification is inadequate and is requiring a jurisdictional determination. <input type="checkbox"/> I intend to contest jurisdiction over particular aquatic resources and request the Corps confirm that these aquatic resources are or are not waters of the U.S. <input type="checkbox"/> I believe that the review area may be comprised entirely of dry land. <input type="checkbox"/> Other:			
Attached Information: <input checked="" type="checkbox"/> Maps depicting the general location and aquatic resources within the review area consistent with Map and Drawing Standards for the South Pacific Division Regulatory Program (Public Notice February 2016, http://www.spd.usace.army.mil/Missions/Regulatory/Public-Notices-and-References/Article/651327/updated-map-and-drawing-standards/) <input checked="" type="checkbox"/> Aquatic Resources Delineation Report, if available.			
By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the review area. Your signature shall be an affirmation that you possess the requisite property rights for this request on the subject property.			
*Signature: Daniel Maynard		Digitally signed by Daniel Maynard Date: 2021.11.08 12:45:21 -07'00'	
Name: Daniel Maynard		Date: 11/8/2021	
Address: 2023 W Scott Place		Company name: Bristlecone Ecology	
Denver, CO 80211			
Telephone: 971-237-3906		Email: dmaynard@bristleconeecology.com	

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.



SOURCE: Google Earth Aerial, 6-9-17 and ECOS On-site Wetland and Waters Delineation.



Attachments
Winsome Filing No. 3
El Paso County, Colorado

November 9, 2021

ATTACHMENT D

WINSOME FILING NO. 3 CULVERT PLANS



Attachments
Winsome Filing No. 3
El Paso County, Colorado

November 9, 2021

ATTACHMENT E

UTE LADIES'-TRESSES ORCHID SURVEY REPORT

Technical Memorandum

To: Dan Maynard, Owner/Ecologist, Bristlecone Ecology

From: Julia Auckland, Principal

Date: September 24, 2021

Subject: Ute Ladies'-tresses Orchid (ULTO) Survey for Two Creek Crossings, Winsome Residential Development, El Paso County, Colorado

Attachment: A. Surveyor's Reference Population Photographs

Introduction

Auckland Environmental Consulting (AEC) was contracted by Bristlecone Ecology (Bristlecone) to survey for the federally-threatened Ute ladies'-tresses orchid (*Spiranthes diluvialis*) (ULTO) within the Winsome Residential Development (Winsome) (Site, Project). Since this species is generally associated with wetlands, surveys were completed for two planned road crossings of West Kiowa Creek (Creek) that are expected to impact wetlands. This memo has been prepared to document the results of the ULTO survey.

Location

Winsome is located in the Black Forest region of northern El Paso County, Colorado. The Site is bordered to the south by Hodgen Road and to the east by Meridian Road (Figure 1). West Kiowa Creek flows diagonally through the center of the Site. The Creek elevation gradually decreases to the northeast, dropping from 7,332 to 7,275 feet over 1.3 miles (an elevation change of 43 feet and an average slope of 1.4%).

Project Description

The two planned Creek crossings are along Twinkling Star Lane and Alamar Way (survey areas) (Figure 2). Both crossings would consist of triple-cell reinforced concrete box culverts. Including the abutments and concrete aprons, the crossings would be approximately 40 feet wide. The crossings lengths would be 33 feet at Twinkling Star Lane and 55 feet at Alamar Way (the crossing lengths are approximately equal to the wetland widths in each location). Soil riprap would be placed for approximately 100-150 feet downstream of the culverts.

Surveyor Qualifications

The Ute ladies'-tresses orchid survey was completed by Julia Auckland, an experienced field ecologist with a Master's of Science degree. Julia Auckland has been conducting ULTO surveys since 2005. Additional botanical survey experience includes Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*), Bell's twinpod (*Physaria bellii*), and noxious weeds. She also regularly completes wetland

delineations. In order to maintain familiarity with ULTO and CBP species, she has visited flowering populations and met with species experts multiple times, most recently in 2014 and 2015. On August 6, 2014 Julia Auckland met with ULTO expert Lynn Reidel of the City of Boulder Open Space and Mountain Parks Department to discuss ULTO habitat and identification. They also visited a flowering ULTO population located near the OSMP office (Attachment A). Lynn Reidel was contacted prior to beginning this survey to confirm that ULTO reference populations were flowering.

Ute Ladies'-tresses Orchid Habitat

Per the United States Fish and Wildlife Service's 1992 "Interim Survey Requirements for Ute Ladies'-Tresses Orchid" (USFWS Survey Requirements):

"Spiranthes diluvialis occurs in seasonally moist soils and wet meadows near springs, lakes, or perennial streams and their associated flood plains below 6,500 feet elevation in Utah, Colorado, and Nevada. Typical sites include old stream channels and alluvial terraces, sub-irrigated meadows, and other sites where the soil is saturated to within 18 inches of the surface at least temporarily during the spring or summer growing seasons. Associated vegetation typically falls into the Facultative Wet wetland vegetation classification category (from the National List of Plant Species that Occur in Wetlands developed by the Service). The species occurs primarily in areas where the vegetation is relatively open and not overly dense, overgrown, or over grazed. Although very rare now, it is estimated that it was once common in low elevation riparian areas in Colorado, Utah and Nevada.

The moist soil conditions and vegetation composition of known Spiranthes diluvialis sites suggest that wetlands regulated under the Clean Water Act qualify as potential Spiranthes diluvialis habitat. Therefore, jurisdictional wetlands, as well as other drier sites matching the description above, should be surveyed."

Methods

Survey areas were provided by Bristlecone; they included the two crossing construction easements and a buffer (Figure 2). A Ute ladies'-tresses orchid habitat assessment and survey were completed by Julia Auckland on August 20, 2021 per the USFWS Survey Requirements. Habitat conditions were recorded and representative photographs were taken. The surveys were completed by slowly walking along parallel transects spaced approximately three meters (nine feet) apart.

Results

No ULTO were observed. Habitat in the survey areas appears to be suitable for the species, but the Site is above the elevation at which this species is known to occur and for which surveys are typically required (6,500').

West Kiowa Creek is a low gradient stream similar to prairie streams typically found farther east. The mapped floodplain consists of a wide, low area along the Creek and also extends several feet up the adjacent hillsides. The flat floodplain bottom includes the Creek channel, wetlands, scattered riparian trees, and drier sandy areas (Figure 2). The small open water Creek channel meanders through sandy

alluvial soils. The floodplain bottom is sub-irrigated by shallow groundwater that supports herbaceous wetlands that are much wider than the Creek in most areas. Woody vegetation is limited; this is likely due to a combination of past grazing and natural conditions. The Creek is in good condition with low entrenchment, high floodplain connectivity, diverse wetland vegetation, and few noxious weeds. Each survey area is described in more detail below.

The hillsides along the floodplain quickly transition to uplands. Small portions of these uplands are included in the survey areas, but they are not suitable habitat for ULTO. Vegetation on the slopes includes native prairie species, non-native grasses, and weeds. Three species of knapweed were observed; diffuse knapweed (*Centaurea diffusa*), spotted knapweed (*C. stoebe*), and hybrid knapweed (a hybrid of the previous two species) (*C. x psammogena*). All three species are noxious weeds on the Colorado Department of Agriculture List B.

Twinkling Star Lane

The Twinkling Star Lane survey area includes several habitat types: wetlands along the Creek, a dry sandy area, a small tributary, and the upland perimeter (Photos 1-4). Most of the survey area has suitable habitat for ULTO, except for the dry sandy area and upland perimeter. These habitats are described in more detail below. The open water portion of the Creek is only two to three feet wide and approximately ten inches deep. Along the floodplain bottom, there are scattered trees including narrow-leaf cottonwood (*Populus angustifolia*) and peachleaf willow (*Salix amygdaloides*).

- Wetland vegetation along the Creek is approximately ten to twenty feet wide (Photos 1 and 3). The diverse vegetation consists mostly of herbaceous species including Nebraska sedge (*Carex nebrascensis*), redtop (black bent)(*Agrostis gigantea*), Baltic rush (*Juncus balticus*), Nuttall's sunflower (*Helianthus nutallii*), and western lined aster (*Symphyotrichum lanceolatum*). There is approximately five percent cover of small willows, predominantly narrow-leaf willow (*Salix exigua*).
- North of the Creek is a slightly elevated sandy area that was likely deposited during the last significant flooding event (Photo 2). Vegetation consists mostly of upland species including smooth brome (*Bromus inermis*) (~30%), blue grama (*Bouteloua gracilis*) (~20%), hairy false goldenaster (*Heterotheca villosa*) (~20%) and needle and thread grass (*Hesperostipa comata*) (~10%). There is also approximately five percent cover of knapweed.
- North and east of the sandy area is a slightly lower and wetter swale; it is located at the base of the adjacent upland slopes (Photo 2). The swale appears to be an abandoned overflow channel. Vegetation in this swale is a mix of upland and wetland herbaceous species including (from wet to dry) smooth brome, galleta grass (*Hilaria rigida*), horsetail (*Equisetum arvense*) and Baltic rush.
- The upland slopes on the survey area perimeter include both high quality native prairie and poor quality non-native grassland areas. Prairie vegetation is diverse and common species include blue grama, hairy false goldenaster, and fringed sage (*Artemisia frigida*). In the non-native grasslands, smooth brome is dominant and knapweed is present.
- The last portion of the survey area is a small tributary on the north slopes (Photo 4). The tributary consists of wetland vegetation in a small ravine; there is no defined channel or surface

water. Vegetation along this tributary is similar to the swale except that there are several wetter areas where sedges are dominant.

Alamar Way

Most of the Alamar Way survey area is a sedge meadow that extends across the entire flat floodplain bottom associated with West Kiowa Creek (Figure 2). There is also a small tributary to the Creek and some upland perimeter areas. The sedge meadow and tributary are suitable habitat for ULTO; the upland perimeter is not.

- This reach of the Creek is almost flat, so water moves slowly. The Creek channel lacks a defined bed and bank. During the Site visit the low flow channel was approximately two feet wide and the water was only six inches deep. There is approximately fifty percent cover of Nebraska sedge in the low flow channel (Photo 5).
- The sedge meadow has diverse vegetation that is 1.5 to two feet high (Photo 5). The dominant species are redtop and clustered field sedge (*Carex praegracilis*), with lesser amounts of Baltic rush and other wetland species. Although redtop is not native, the overall wetland quality is high due to minimal cover of other non-native species, the diversity of native species, and rarity of this habitat type. During the survey, there was little surface water, but soils were saturated at the surface throughout the meadow due to subsurface flows.
- The tributary channel on the south side of West Kiowa Creek is similar to the one at Twinkling Star Lane, but slightly drier and weedier (Photo 7). The dominant species are redtop and slender wheatgrass (*Elymus trachycaulus*) with lesser amounts of Baltic rush, Dudley's rush (*Juncus dudleyi*), and stiff goldenrod (*Solidago rigida*). There is ten percent cover of knapweed at the upper end.
- The upland slopes are much weedier than those at Twinkling Star Lane with knapweed cover ranging from ten to 60 percent (Photo 6). Other common species include non-native smooth brome and common mullein (*Verbascum thapsus*), with less cover of native species such as blue grama, green needle grass (*Nassella viridula*), and hairy false goldenaster. The uplands are of low quality due to the high cover of non-native species.

Summary

No ULTO were observed in either survey area and the site is above the elevation for which surveys are typically required. The sub-irrigated, open, herbaceous wetlands are potentially high quality ULTO habitat. However, this species is unlikely to occur because the Site is approximately 800 feet above the known elevation for this species.

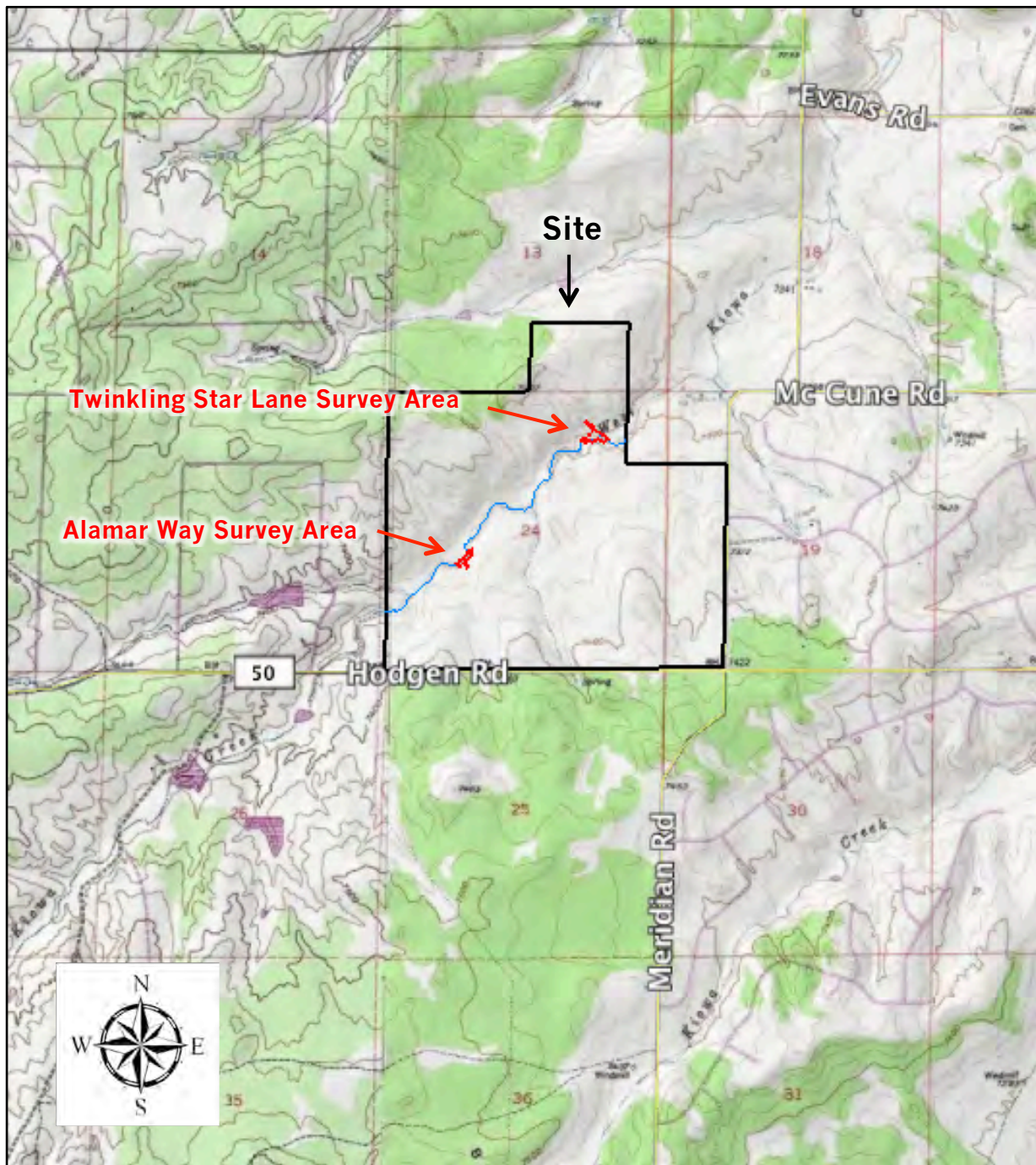


Figure 1. Site and Survey Area Location Map



Figure 2. Ute Ladies'-tresses Orchid Survey Areas

Survey Area Photographs



1. Twinkling Star Lane survey area. Photo taken from the west end and facing east (downstream) along West Kiowa Creek. The narrow Creek channel is hidden by dense wetland vegetation.



2. Twinkling Star Lane survey area. Photo taken facing east across a slightly raised sandy area within the floodplain. Along the toe of the slope (photo left, northeast), there is a slightly lower swale with patchy wetland vegetation.



3. Twinkling Star Lane survey area. Photo taken from the east end and facing west (upstream). Conditions here are similar to those shown in Photo 1; there is dense herbaceous wetland vegetation growing along the narrow channel of West Kiowa Creek.



4. Twinkling Star Lane survey area. Photo taken from north end of small tributary, facing south towards the larger trees along West Kiowa Creek.



5. Alamar Way survey area - photo taken from the southwest end and facing northeast (downstream). This reach of West Kiowa Creek is a wide, diverse, sedge meadow. Nebraska sedge (light bluish color near the photo center) is growing along the shallow low flow channel.

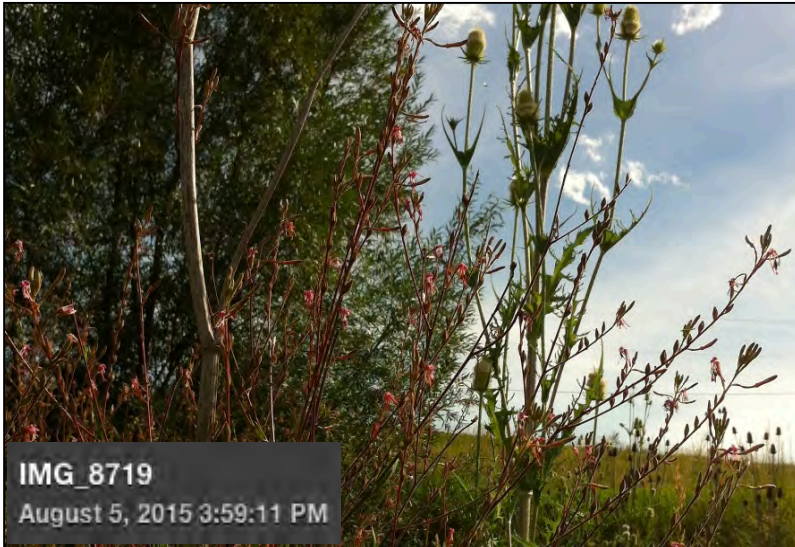


6. Alamar Way survey area: Facing southwest across an upland slope on the northwest side of the survey area. Vegetation on the slopes quickly transitions to uplands and in this area the upland vegetation is very weedy. This appears to be associated with cattle grazing in the past; weed-infested hay may have been fed to cattle in this area.



7. Alamar Way survey area: Photo taken from south end of small tributary, facing northwest towards Creek.

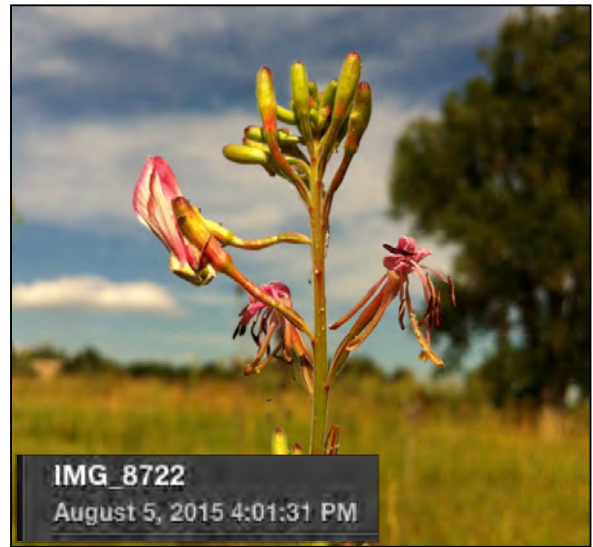
Julia Auckland Reference Population Photographs for Ute Ladies'-tresses Orchid and Colorado Butterfly Plant



1. Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*)

Cutleaf teasel is common in same area

Photos 1 and 2 taken near Walnut Creek, Westminster, CO



2. Colorado butterfly plant. Photo taken on a hot afternoon so flowers are wilted (but the moth is not).



3. Ute ladies'-tresses orchid (*Spiranthes diluvialis*).

Photo taken near City of Boulder OSMP office, Cherryvale Road, Boulder, CO.



Attachments
Winsome Filing No. 3
El Paso County, Colorado

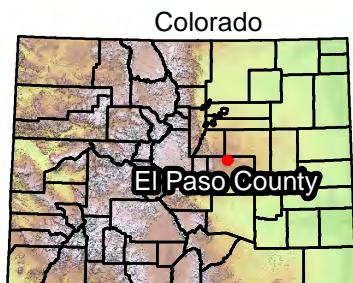
November 9, 2021

ATTACHMENT F

AQUATIC RESOURCES IMPACT MAPS



NAIP Imagery, 2019



- Engineering Road Design
- Wetlands to be Preserved
- Open Space to be Preserved
- ▨ Wetland Disturbance Area
- 5ft. Contour

0 50 100
Feet



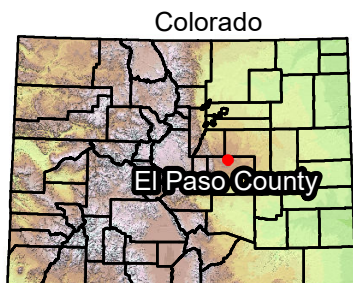
Winsome

Aquatic Resources Impact Map
Alamar Way





NAIP Imagery, 2019



- Engineering Road Design
- Wetlands to be Preserved
- Open Space to be Preserved
- Wetland Disturbance Area
- 5ft. Contour

0 50 100
Feet



Winsome

Aquatic Resources Impact Map
Twinkling Star Lane Crossing



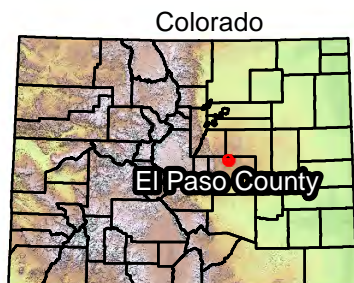
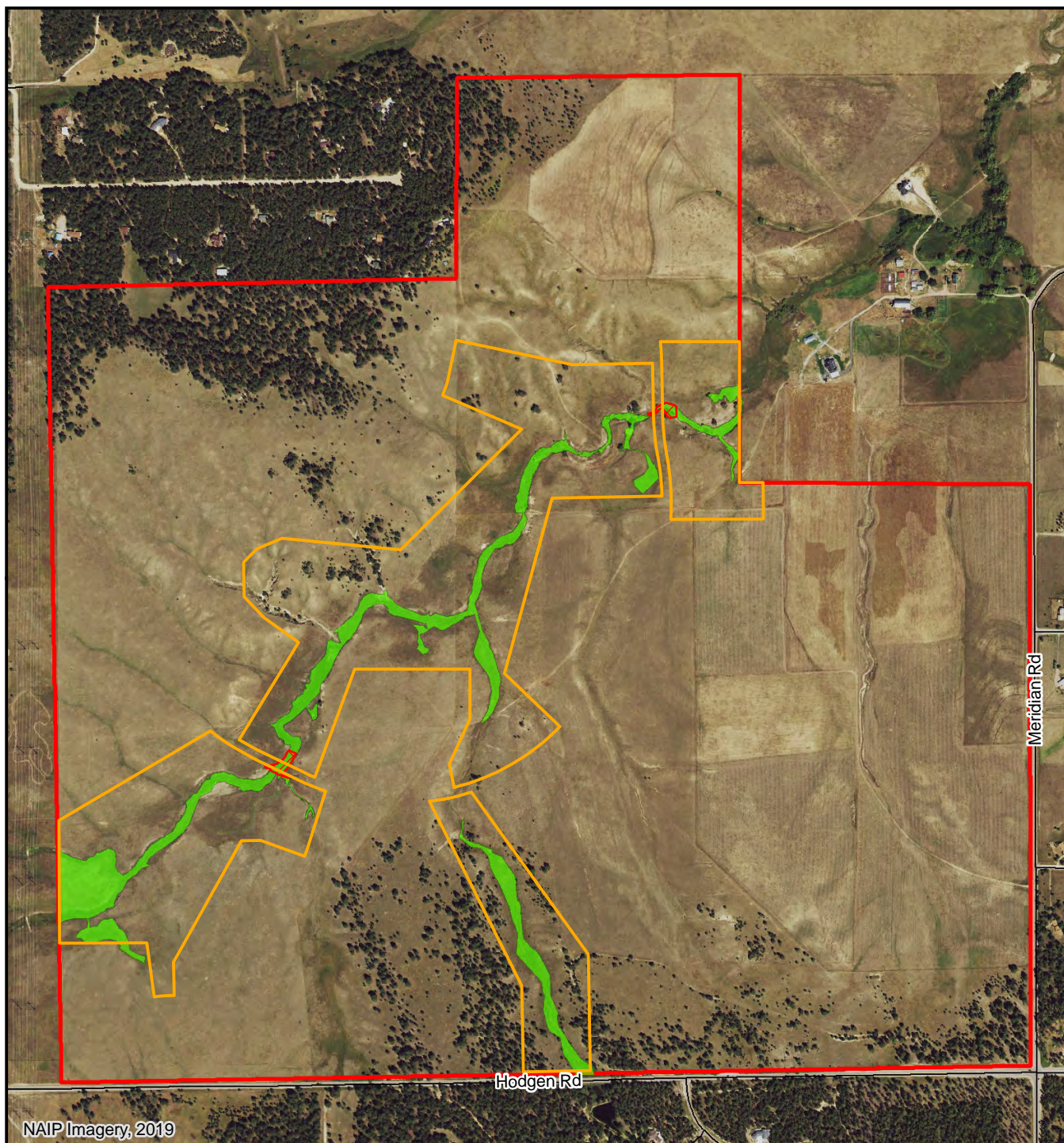


Attachments
Winsome Filing No. 3
El Paso County, Colorado

November 9, 2021

ATTACHMENT G

MITIGATION OVERVIEW MAP



- Project Area
- Wetlands to be Preserved
- Open Space to be Preserved
- Wetland Disturbance Area

Feet

0 500 1,000



Winsome

Mitigation Overview





Attachments
Winsome Filing No. 3
El Paso County, Colorado

November 9, 2021

ATTACHMENT H


LIMITED-RESULTS CULTURAL RESOURCE SURVEY FORM

History Colorado- Office of Archaeology and Historic Preservation
COLORADO CULTURAL RESOURCE SURVEY
LIMITED-RESULTS CULTURAL RESOURCE SURVEY FORM
(Page 1 of 10)

OAHP 1420
Revised 9/98

This form (#1420) is for small scale limited results projects - block surveys less than 160 acres with linear surveys under four miles. Additionally, there should be no sites and a maximum of four Isolated Finds. This form must be typed.

I. IDENTIFICATION

1. Report Title (include County: Class III Cultural Resource Inventory of 6 Acres for Winsome Residential, El Paso County, Colorado)
2. Date of Field Work: 8/27/2021
3. Form completed by: Amie Gray Date: 8/31/2021
4. Survey Organization/Agency: AK Pioneer Consulting
Principal Investigator: Amie Gray, MA
Principal Investigator's Signature: 
Other Crew: _____
Address: 1768 Bluebird Dr., Bailey, CO 80421
5. Lead Agency / Land Owner: USACE/ Winsome Residential
Contact: Joe DesJardin
Address: Winsome, LLC 1862 Woodmoor Drive, Suite 100, Monument, CO 80132
6. Client: Bristlecone Ecology
7. Permit Type and Number: Survey and Limited Testing, 79386
8. Report / Contract Number: 20210403
9. Comments: _____

II. DESCRIPTION OF UNDERTAKING / PROJECT

10. Type of Undertaking: New road construction within the residential development
11. Size of Undertaking (acres): 6 Size of Project (if different) _____
12. Nature of the Anticipated Disturbance: Construction of two arterial road crossings and the installation of two triple concrete box culverts to maintain water flows under the roadways
13. Comments: _____

III. PROJECT LOCATION

Please attach a photocopy of USGS Quad. clearly showing the project location. The Quad. should be clearly labeled with the Prime Meridian, Township, Range, Section(s), Quad. map name, size, and date. Please do not reduce or enlarge the photocopy.

14. Description: The project areas are between Goshawk Rd, to the west, and Meridian Rd., to the east. Access to the project areas is from Hodgen Rd. Roads are currently being constructed that will provide access to the inventory areas to the north of Hodgen Rd.

15. Legal Location: Quad. Map: Eastonville, CO

Date(s): 1975 Principal Meridian: 6th ☒ NM ☐ Ute ☐

NOTE: Only generalized subdivision ("quarter quarters") within each section is needed

Township:11S Range:65W Sec.:24 1/4s N1/2 SW1/4 _____ ;

Township:11S Range:65W Sec.:24 1/4s N1/2 NE1/4 _____ ;

Township:_____ Range:_____ Sec.:_____ 1/4s _____ ;

If section(s) is irregular, explain alignment method: _____

16. Total number of acres surveyed: 6

17. Comments: _____

IV. ENVIRONMENT

18. General Topographic Setting: The project areas are in the valley bottom along West Kiowa Creek.

Current Land Use: Vacant land; however, the surrounding land is under residential development

19. Flora: Wetland vegetation species and grasses

20. Soils/Geology: The soil in the western project area is Holderness loam that derives from loamy alluvium. The soil in the eastern project area is Alamosa loam that derives from alluvium parent material. Both soil types are found on alluvial fans, benches, or flood plains of intermittent streams with slopes between 0-20 percent.

21. Ground Visibility: 0-30%

22. Comments: The visibility was poor due to thick vegetation. Some areas had exposed flood deposits.

V. LITERATURE REVIEW

23. Location of File Search: OAHP Compass Database, file search number 23941

Date: 8/17/2021

24. Previous Survey Activity - In the project area: None

In the general region: No surveys have been completed within 0.5 miles of the project areas.

25. Known Cultural Resources - In the project area: None

In the general region (summarize): The Billy Paul Ranch (5EP.6711) is east of the project areas. The ranch has not been assessed for eligibility to the NRHP.

26. Expected Results: There was potential for prehistoric resources and historic ranching related resources.

VI. STATEMENT OF OBJECTIVES

27. The inventory was conducted to identify and record cultural resources older than 50 years for compliance with Section 106 of the National Historic Preservation Act.

VII. FIELD METHODS

28. Definitions: Site Fifteen or more artifacts with or without features

IF Fourteen or less artifacts or an isolated feature lacking significance

29. Describe Survey Method: Pedestrian survey with 15-meter transect spacing

VIII. RESULTS

30. List IFs if applicable. Indicate IF locations on the map completed for Part III.

A. Smithsonian Number: _____ Description: _____

B. Smithsonian Number: _____ Description: _____

C. Smithsonian Number: _____ Description: _____

D. Smithsonian Number: _____ Description: _____

31. Using your professional knowledge of the region, why are there none or very limited cultural remains in the project area? Is there subsurface potential?

No cultural material was observed in the project areas. The inventory areas were in and around West Kiowa Creek that has intermittent flooding events. The subsurface potential for artifacts or features is low.



Figure 1. Western Project area overview, facing north.



Figure 2. Western Project area overview, facing east.



Figure 3. Western Project area overview, facing southwest.



Figure 4. Western Project area overview, facing northeast.



Figure 5. Eastern Project area overview, facing northeast.



Figure 6. Eastern Project area overview, facing northwest.

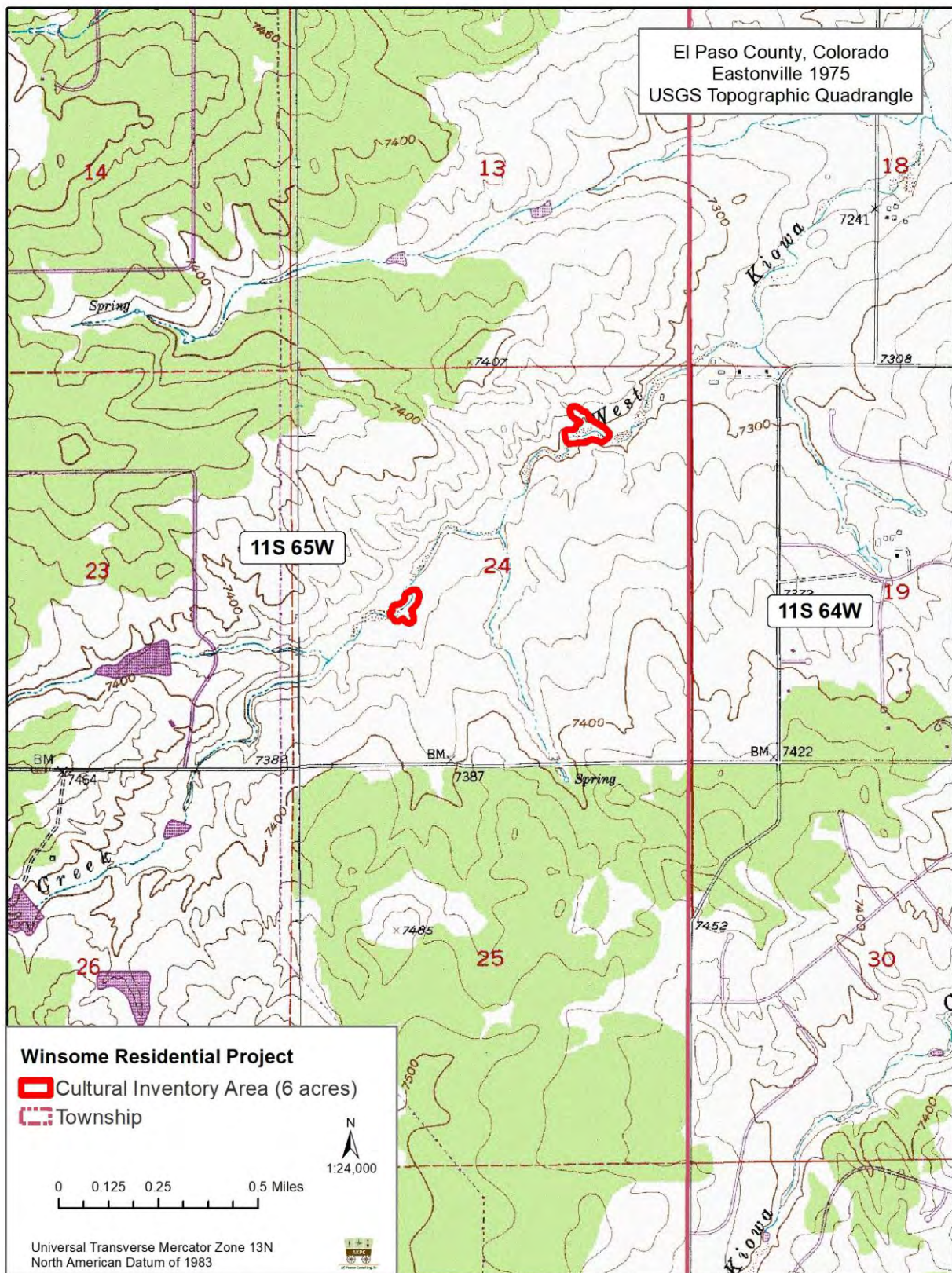


Figure 7. Eastern Project area overview, facing south.



Figure 8. Eastern Project area overview, facing west.





Service Layer Credits: USDA/NRCS - National Geospatial Center of Excellence Title: USDA-NRCS-NCGC Digital Raster Graphic MrSID Mosaic, 1939-2001. Bureau of Land Management Title: Public Land Survey System (PLSS) townships, 2011.