

Biological Assessment and Wildlife Plan

EASTERN HILLS SOUTH LATERAL **City of Aurora, Arapahoe County, Colorado**

July 22, 2021

Prepared for:

Crestone Peak Resources

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Apex Job No.: 125.1803.05.0062

1.0 INTRODUCTION

Apex Companies, LLC (Apex) completed an environmental review and site inspection for the Eastern Hills South Lateral, located in Section 17 of Township 4 South Range 65 West in Arapahoe County, Colorado (Appendix B - Figure 1). The purpose of this review is to provide Crestone Peak Resources, LLC (CPR) with information regarding potential environmental constraints at the site in order to comply with the Bald and Golden Eagle Protection Act (BGEPA), Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), U.S. Clean Water Act Section 404, and Colorado Parks and Wildlife (CPW) guidelines.

2.0 METHODS

The Eastern Hills South Lateral will lie within a 50-foot wide permanent easement, with a 25-foot temporary easement on its west side. This 75-foot wide total easement (Project Area) will be subject to construction disturbances. The Project Area was surveyed to determine the presence of sensitive resources that might be subject to direct impact by construction (Appendix B – Figure 2). A Survey Area extending as far as ½-mile beyond the Project Area was surveyed for the presence of sensitive wildlife species or their habitats potentially subject to indirect impacts from project disturbances (Appendix B – Figure 1).

Apex conducted a desktop review to identify federally and state listed threatened and endangered (T&E), sensitive species and habitat, and any other potential natural resource constraints possibly occurring within the Project Area. Resources referenced for the desktop review included, the U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Mapper, the USFWS Information for Planning and Consultation (IPaC) system, CPW High Priority Habitat (HPH) and Species Activity Mapping (SAM) data, a proprietary database of over 1,500 mapped raptor nests throughout the Denver-Julesburg (DJ) Basin, and aerial imagery.

The desktop review was followed by a site survey to confirm the presence of any sensitive resources identified during the desktop review and to search for others not previously identified within the Project Area. The field site survey was conducted on July 19, 2021 and included a pedestrian and windshield survey of the Project and Survey Areas. Photographs depicting the Project are provided in Appendix A.

3.0 RESULTS & RECOMMENDATIONS

3.1 Wetlands and Waters of the U.S.

There are no wetlands or other potential waters of the U.S. within the Project. The nearest surface water is Coal Creek 0.45 mile to the south of the Project (Appendix B - Figure 1).

No Clean Water Act Section 404 permit will be necessary for pipeline construction. Stormwater control measures within the Project may be subject to Colorado Department of Public Health and Environment (CDPHE) regulations.

3.2 100-Year Floodplain

No part of the Project is within a Federal Emergency Management Agency (FEMA)-mapped 100-year floodplain. The FEMA 100-year floodplain for Coal Creek is approximately 0.44 mile south of the southern terminus of the Project (Appendix B – Figure 1).

No further action required.

3.3 Eagles and Other Raptors

There are no known eagle or non-eagle raptor nests within the Project Area, and no eagle or non-eagle raptor nests were observed in suitable trees for nesting along Coal Creek to the south of the Project (Appendix B - Figure 1).

CPW recommends eagle nesting surveys approximately one week prior to the start of construction if it is scheduled to begin between December 1 and July 31. If construction is scheduled to begin between February 1 and July 31, Apex recommends non-eagle raptor nesting surveys approximately one week prior to the start of construction if construction.

3.4 Burrowing Owls

There is suitable potential burrowing owl habitat within 1,320 feet (¼ mile) of the Project. A prairie dog colony (BUOW_A494) is present and surrounds the northern terminus of the Project (Appendix B - Figure 2), with the nearest open burrow approximately 55 feet east of the northern terminus of the Project (Appendix A – Photo 6).

If construction is anticipated to begin between March 15 and October 31, Apex recommends, in accordance with CPW guidelines, that burrowing owl surveys be conducted beginning approximately 3 weeks prior to the construction start date and consisting of 3 negative surveys spaced approximately 1 week apart.

3.5 Migratory Birds

The IPaC query listed six (6) migratory birds that are either of conservation concern or warrant special attention that may occur in the Project Area. Three of the listed birds include the bald and golden eagle and the burrowing owl, all of which are discussed above (see Sections 3.3 and 3.4, respectively). The remaining three are the lark bunting (*Calamospiza melanocorys*), lesser yellowlegs (*Tringa flavipes*), and willet (*Tringa semipalmata*), all of which are ground nesting birds. In addition to these USFWS-listed birds of special concern, additional MBTA-protected migratory birds may also be impacted if construction activities occur during the migratory bird nesting season. No non-raptor migratory bird nests were observed during the field site survey.

Apex recommends migratory bird nesting surveys within one week of the start of construction if it is planned to begin between March 15 and September 15.

3.6 Other Threatened, Endangered, and Sensitive Species

The IPaC query listed six (6) threatened and endangered species with potential to occur in the Project Area. No habitat for any of these six species is present within the Project or Project Area. These species are discussed in greater detail in Table 1.

Table 1. USFWS T&E Species within the Project Area

Species & Status	Habitat Assessment Results	Recommendations
Mammals		
Preble's meadow jumping mouse (<i>Zapus hudsonius preblei</i>) Threatened	This species typically inhabits heavily vegetated riparian habitats with perennial surface waters and adjacent grassy uplands (USFWS 2014). This species is not found in highly disturbed areas, landscaped, and maintained lawns, irrigation ditches with no vegetation, channels where water is diverted underground, or sites that are maintained as cropland (USFWS 1998). There is no habitat suitable for this species within the Project. Additionally, the Project is located within the Preble's meadow jumping mouse Block Clearance Zone – Aurora Expansion Area.	No further action is recommended at this time.
Birds		
Piping plover (<i>Charadrius melodus</i>) Threatened	This species only requires consideration if the project includes water-related activities or use in the N. Platte, S. Platte, and Laramie River Basins that may affect listed species in Nebraska (USFWS 2018).	If proposed construction activities have no consumptive use of surface waters tributary to the Platte River, no further action is necessary.
Whooping crane (<i>Grus americana</i>) Endangered	This species only requires consideration if the project includes water-related activities or use in the N. Platte, S. Platte, and Laramie River Basins that may affect listed species in Nebraska (USFWS 2018).	If proposed construction activities have no consumptive use of surface waters tributary to the Platte River, no further action is necessary.
Fishes		
Pallid sturgeon (<i>Scaphirhynchus albus</i>) Endangered	This species only requires consideration if the project includes water-related activities or use in the N. Platte, S. Platte, and Laramie River Basins that may affect listed species in Nebraska (USFWS 2018).	If proposed construction activities have no consumptive use of surface waters tributary to the Platte River, no further action is necessary.

Plants		
Ute ladies'-tresses (<i>Spiranthes diluvialis</i>) Threatened	This species is typically found in wet meadows, floodplains, stream beds, lakeshores, and other similar moist habitats (Fertig et al. 2005). There is no habitat suitable for this species within the Project.	No further action is recommended at this time.
Western prairie fringed orchid (<i>Platanthera praeclara</i>) Threatened	This species only needs to be considered if the project includes water-related activities or use in the N. Platte, S. Platte, and Laramie River Basins that may affect listed species in Nebraska (USFWS 2018).	If proposed construction activities do not include water-related activities or use of other nearby waters, no further action is recommended at this time.

4.0 Site Specific Measures for Mitigating Impacts to Wildlife Consistent with Rule 1202.a. and 1202.b. Operating Requirements

While no COGCC regulatory driver exists to direct implementation of COGCC Rule 1202.1 and 1202.b operating requirements for midstream projects, mitigation measures are described here that are consistent with those requirements.

- Rule 1202.a.(5): wildlife escape ramps will be installed for trenches that are left open for more than 5 consecutive days: CPR will comply with this directive.
- Rule 1202.a.(6): CPW-recommended seed mixes will be used for reclamation.
- Rule 1202.a.(8): Vegetation removal not performed outside the [CPW-defined] nesting season for migratory birds (April 1 to August 31) will be preceded by pre-construction nesting migratory bird surveys within the approved disturbance area.

5.0 Other Site-Specific BMPs

The following site-specific wildlife BMPs will be implemented at the Project.

1. Inform and educate employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife;
2. Implement fugitive dust control measures;
3. To the extent practicable, share and consolidate new corridors for pipeline rights-of- way and roads to minimize surface disturbance;
4. Engineer new pipelines to reduce field fitting and reduce excessive right-of-way widths and reclamation;
5. Mow or brush hog vegetation where appropriate, leaving root structure intact, instead of scraping the surface, where allowed by the surface owner;

6. Limit access to oil and gas access roads where approved by surface owners, surface managing agencies, or local government;
7. Use wildlife-appropriate fencing where acceptable to the surface owner and any Relevant Local Government requirements;
8. Install automated emergency response systems (e.g., high tank alarms, emergency shutdown systems).
9. Wildlife assessment, including for migratory birds between February 1 and August 31, before any non-routine heavy equipment construction complying with CPW raptor buffer zones

6.0 REFERENCES

- (CPW) Colorado Parks and Wildlife. 2020. Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (2020). Available online at: <https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Raptor-Buffer-Guidelines.pdf>. (Accessed July 2021).
- Fertig, W., R. Black, and P. Wolken. 2005. Rangewide Status Review of Ute Ladies'-Tresses (*Spiranthes diluvialis*). Prepared for the U.S. Fish and Wildlife Service and Central Utah Water Conservation District. 101 pp.
- (USFWS) U.S. Fish and Wildlife Service. 1998. Endangered and Threatened Wildlife and Plants; Final Rule to List the Preble's Meadow Jumping Mouse as a Threatened Species. Federal Register 63(92):26517-26530.
- (USFWS) U.S. Fish and Wildlife Service. 2014. The Preble's Meadow Jumping Mouse 5-year Review. 15 pp.
- (USFWS) U.S. Fish and Wildlife Service. 2021. IPaC – Information Planning and Conservation System. Available online at: <http://ecos.fws.gov/ipac/>. (Accessed July 2021).
- (USFWS) U.S. Fish and Wildlife Service. 2020. National Wetlands Inventory. Available online at: <https://www.fws.gov/wetlands/>. (Accessed July 2021).
- (USGS) U.S. Geological Survey. 2021. National Hydrography Dataset Plus High Resolution. Available online at: <https://www.usgs.gov/core-science-systems/ngp/national-hydrography/nhdplus-high-resolution>. (Accessed July 2021).

Appendix A – Site Photographs



Photo 1. Facing north from southern terminus of lateral.



Photo 2. Facing south along lateral from center of route.



Photo 3. Facing north along lateral from center of route towards northern terminus.



Photo 4. Facing south along lateral from northern terminus.

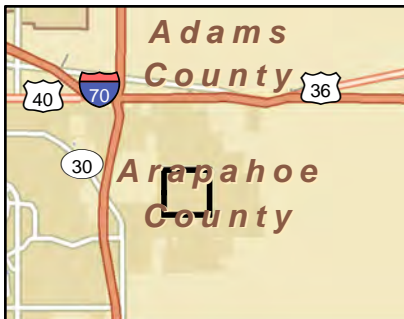


Photo 5. Northern terminus of lateral.



Photo 6. Nearest open burrow within potential burrowing owl habitat (BUOW_A494) located approximately 55 feet east of the northern terminus.

Appendix B – Figures

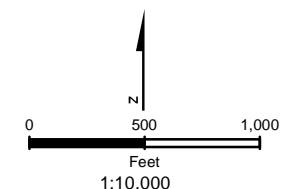


Eastern Hills South Lateral

Figure 1 - Project Area

Legend

- Pipeline
- - - Half-Mile Survey Buffer
- Planned Pad Footprint
- Potential BUOW Habitat
- NHD-Mapped Stream/River
- FEMA-Mapped 100-Year Floodplain
- Aquatic Native Species Conservation Water
- Mule Deer Severe Winter Range HPHD
- PMJM Block Clearance Zone - Aurora Expansion Area



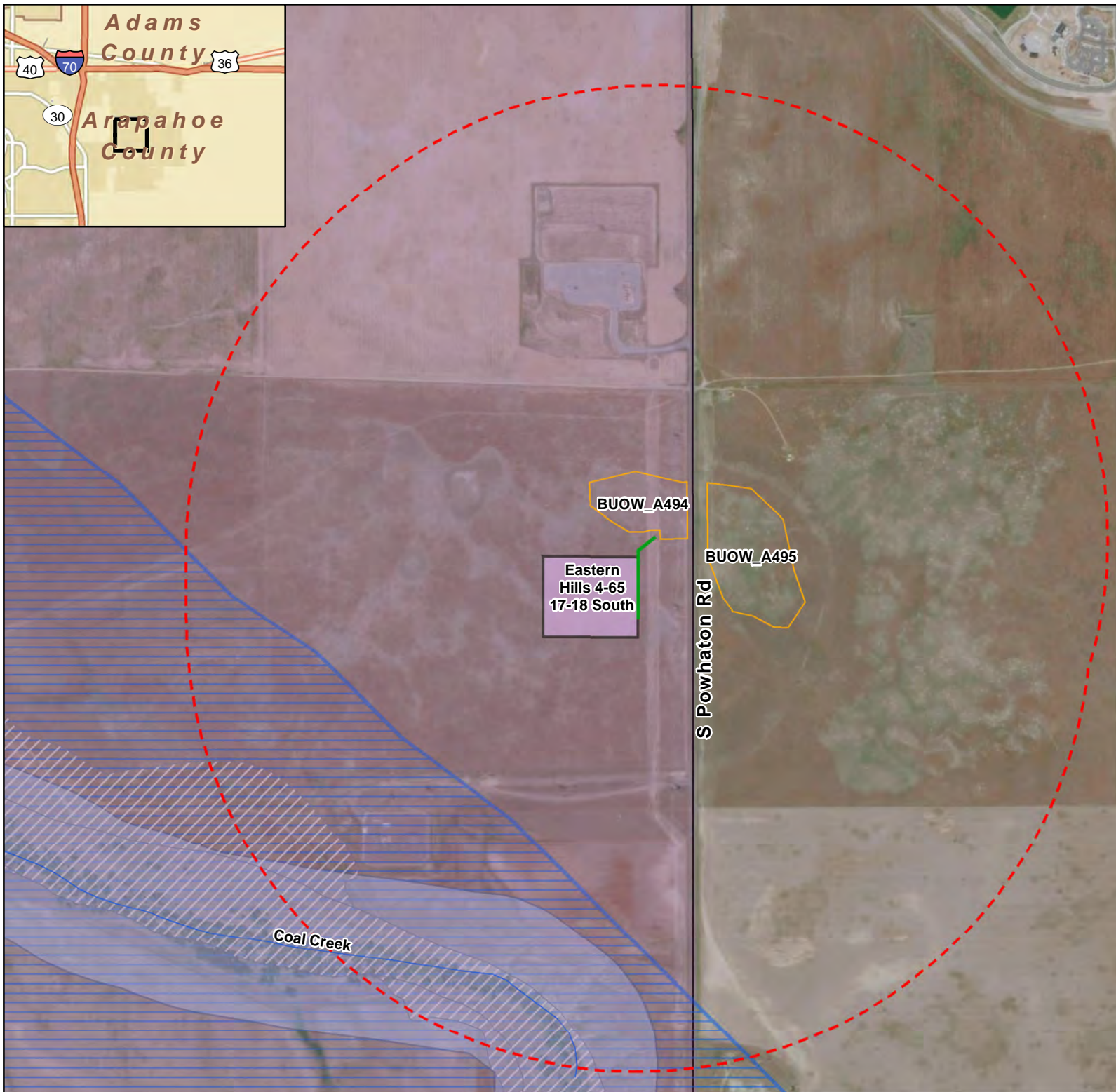
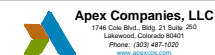
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Inspection Date: 7/19/2021

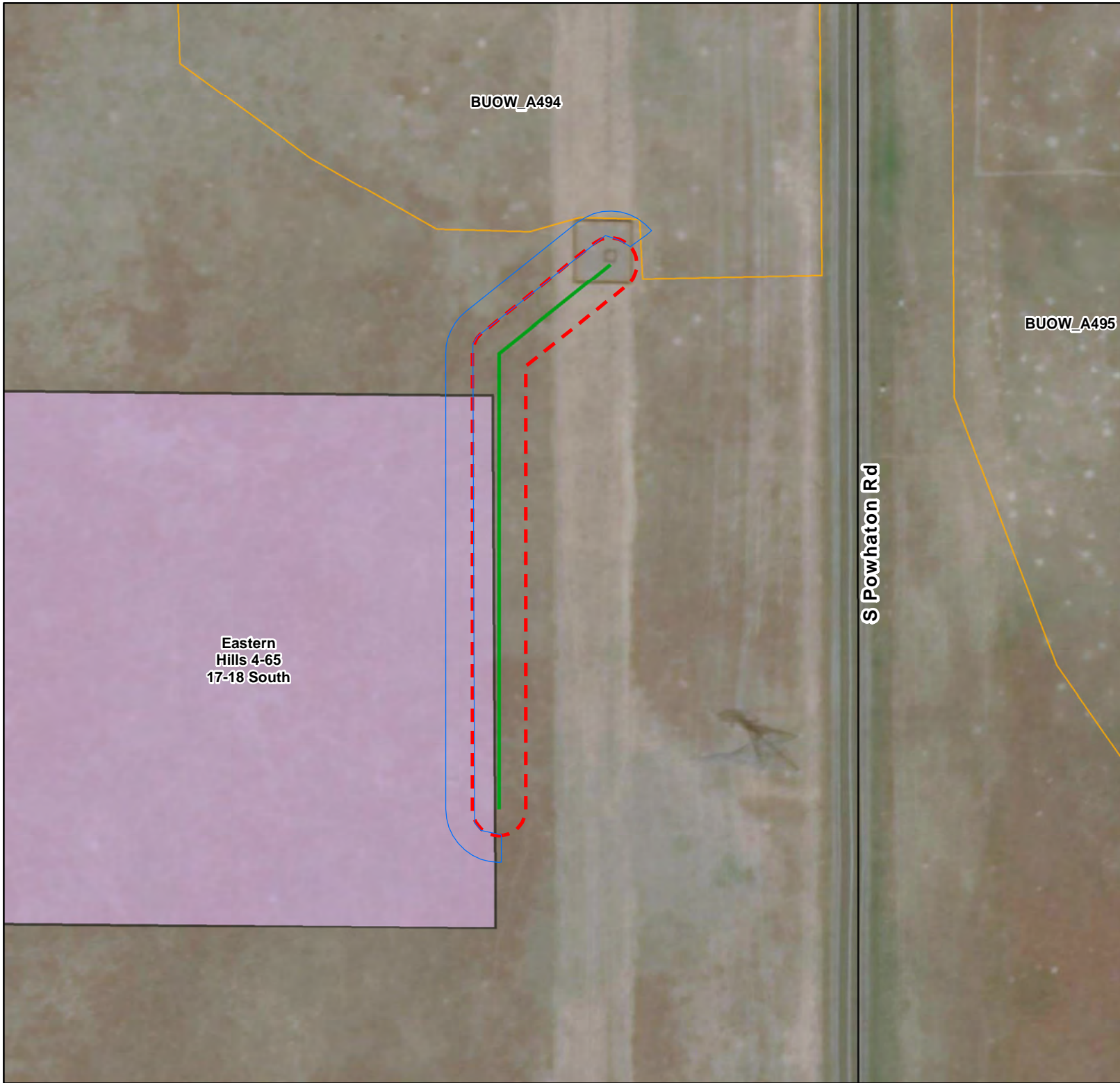
Site Characteristics

Legal Location: NESE, SESE Sec 17, T4S R65W
County: Arapahoe
Land Use: Rangeland, Oil and Gas
Pre-Construction Vegetation Cover: Rangeland
Receiving Waters: Coal Creek

Feature symbols not to scale

REVISED	BY	COMMENT
7/20/2021	AD	Natural Resources Map



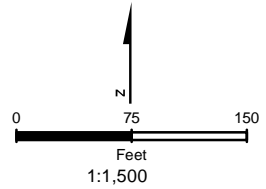


Eastern Hills South Lateral

Figure 2 - Project Location

Legend

- Pipeline
- 50-Foot Permanent Easement
- 25-Foot Temporary Construction Easement
- Potential BUOW Habitat
- Planned Pad Footprint



Inspector: AD
Inspection Date: 7/19/2021

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