

Biological Assessment and Wildlife Plan

GRANDE NORTH WELL CONNECT **City of Aurora, Arapahoe County, Colorado**

June 17, 2021

Prepared for:

Crestone Peak Resources

1801 California Street, Suite 2500

Denver, CO 80202



Prepared By:

Apex Companies, L.L.C.

1746 Cole Blvd., Suite 250

Lakewood, CO 80401

Apex Job No.: 125.2012.01.0003

1.0 INTRODUCTION

Apex Companies, LLC (Apex) completed an environmental review and site inspection for the Grande North Well Connect, located in sections 20 and 21 of township 4 south range 65 west in Arapahoe County, Colorado (Attachment A - 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 Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), Colorado Parks and Wildlife (CPW) guidelines, Colorado Oil and Gas Conservation Commission (COGCC) 1200 series rules, and U.S. Clean Water Act Section 404.

2.0 METHODS

For the purpose of identifying sensitive resources that might be impacted by the construction of the Grande North Well Connect (hereinafter referred to as the Project or Project Site) is defined as a 25-foot buffer around the pipeline (50-feet total width) to account for the construction easement and any temporary workspaces. All potential constraints were surveyed in relation to the Project Site, but all measurements are reported in relation to the pipeline.

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

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 June 17, 2021 and included a pedestrian and windshield survey of the site and surrounding areas. Photographs depicting the Project Area 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 Area. The nearest surface water is Coal Creek 575 feet to the west of the north end of the Project Site (Figure 1).

The Project Site crosses two broad swales on the west side of Powhaton Road; however, these are vegetated with uplands species and support no evidence of surface flows or ordinary high water marks 9OHWM).

No Clean Water Act Section 404 permit will be necessary for pipeline construction. Stormwater control measures within the Project Area may be subject to CDPHE regulations.

3.2 100-Year Floodplain

No part of the Project Site is within a Federal Emergency Management Agency (FEMA)-mapped 100-year floodplain (Figure 2). The FEMA 100-year floodplain for Coal Creek is as close as 570 feet from the north part of the Project.

No further action required.

3.3 Eagles and Other Raptors

There are trees suitable for nesting eagles within ½ mile of the Project Area along Coal Creek; however, no eagle nests were observed. There are no mapped bald eagle winter night roost areas within ½ mile of the Project Area.

There are two (2) known non-eagle raptor nests within one-half mile of the Project Area, as well as additional trees suitable for nesting raptors (Figure 1). Nest 4S65W_20H_RA is 550 feet west of the project and nest 4S65W_21E_RA is 230 feet east of the Project.

Apex recommends raptor nesting surveys approximately one week prior to the start of construction if construction begins between February 1 and July 31.

3.4 Burrowing Owls

There is no suitable burrowing owl habitat within 1,320 feet (1/4 mile) of the Project Area.

If the Project start is delayed through March 15, 2021, Apex recommends repeating a survey for suitable burrowing owl nesting habitat.

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 migratory birds listed in the IPaC report 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.

Apex recommends migratory bird nesting surveys within one week of the start of construction, if construction begins between April 1 and September 15.

3.6 High Priority Habitats

There are no High Priority Habitats within the Project Area or within one mile of the Project Area.

No further action is recommended.

3.7 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 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 Area; Coal Creek is ephemeral in the vicinity of the Project.	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 do 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 do 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 do 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 Area.	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 Colorado Oil and Gas Conservation Commission (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 nesting season for migratory birds (February 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 Site.

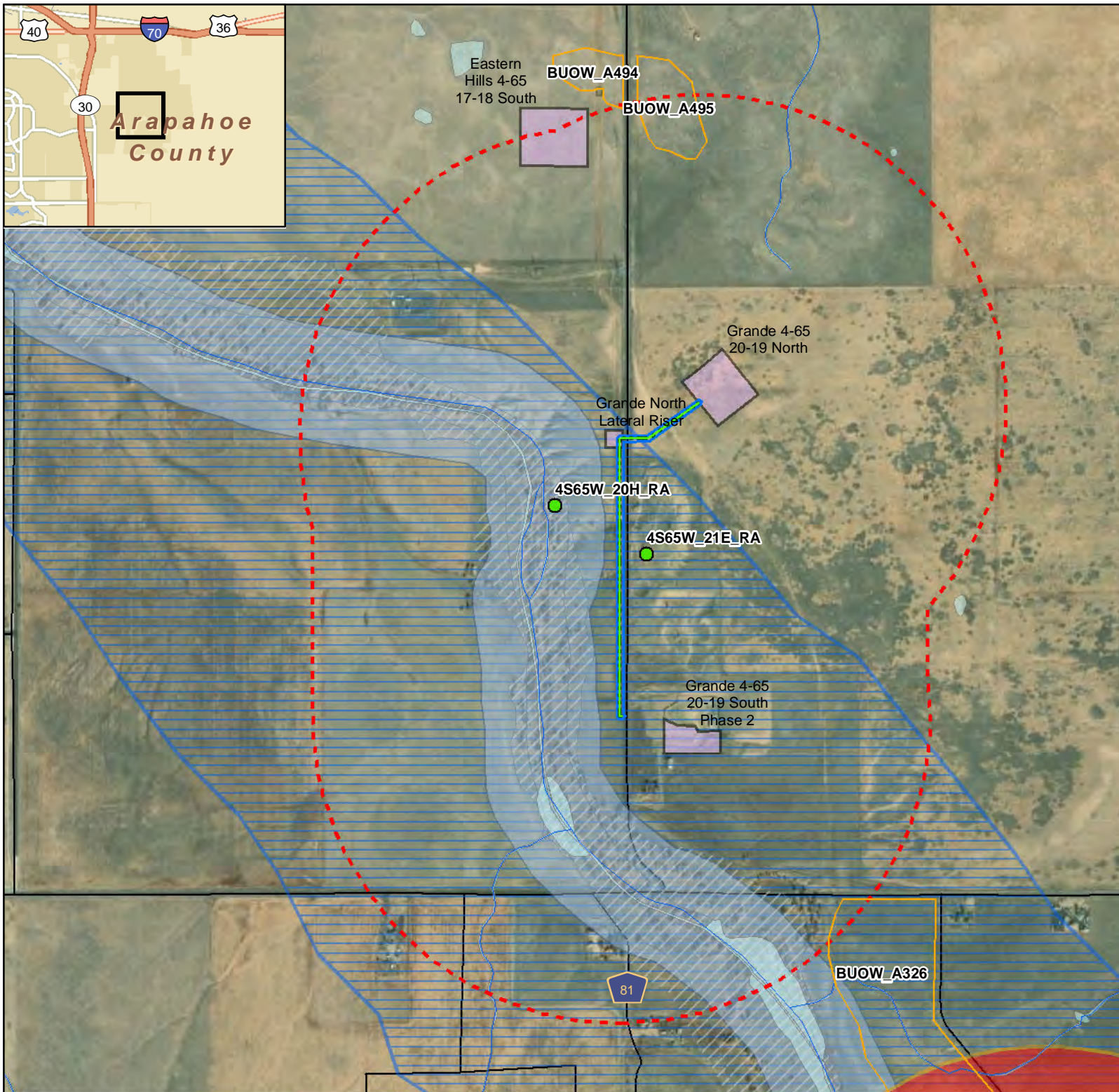
1. Inform and educate employees and contractors on wildlife conservation practices, including no harassment or feeding of wildlife;
2. Implement fugitive dust control measures;
3. To the extent practicable, share and consolidate new corridors for pipeline rights-of-way and roads to minimize surface disturbance;
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>.
- 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 June 2021)
- (USFWS) U.S. Fish and Wildlife Service. 2020. National Wetlands Inventory. Available online at: <https://www.fws.gov/wetlands/>. (Accessed June 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 June 2021)

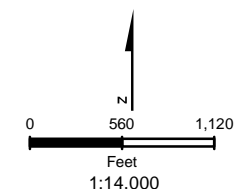
Figure



Grande North Well Connect

Legend

- Raptor Nest - Inactive
- Potential BUOW Habitat
- Grande North Lateral
- 50-Foot ROW Easement
- Half-mile Survey Buffer
- Pad Disturbance Area
- NHD-mapped Stream
- NWI Wetlands
- FEMA-mapped 100 yr. Floodplain
- ACTIVE
- Aquatic Native Species Conservation Water
- Mule Deer Severe Winter Range HPHD



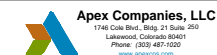
Inspector:
Inspection Date:

Site Characteristics

Legal Location: Sec 20, 21, T4S R65W
County: Arapahoe
Land Use: Rangeland
Pre-Construction Vegetation Coverage: 70%
Pre-Construction Vegetation Cover: Grassland
Topography: N/A
Run-Off Risk: N/A
Total Disturbed Area: N/A
Soil Type: N/A
Receiving Waters: Coal Creek, 600-ft W

Feature symbols not to scale

REVISED	BY	COMMENT
6/17/2021	BJB	Natural Resources Map



Site Photographs



Photograph 1. View looking north from near southern terminus. Powhaton Road to the right side of image.



Photograph 2. Looking west across southern swale on west side of Powhaton Road.



Photograph 3. Looking northwest across northern swale on west side of Powhatan Road.



Photograph 4. View looking south from northwest corner of Project.



Photograph 5. View of existing enclosure at northwest corner of Project.



Photograph 6. Looking northeast toward northern terminus of Project. Grade north 4-65 20-19 pad would be in background.