ConocoPhillips Company
Proposed Grande 4-65 20-19 South Phase 2 Well Pad Expansion & Access Road
Niobrara Project Area
Wildlife Assessment
September 4, 2019

INTRODUCTION

ConocoPhillips Company (COP) is developing oil and gas resources within Arapahoe County, Colorado. HWA Wildlife Consulting, LLC (HWA) conducted a desktop wildlife impact assessment for wildlife species of management concern to the Bureau of Land Management-Royal Gorge Field Office (BLM-RGFO) and Colorado Parks and Wildlife within and around the proposed Grande 4-65 20-19 South Phase 2 well pad expansion during 2019 (Figures 1 and 2). Collectively, the well pad and access road will be referred to as the proposed development.

PROJECT AREA

The proposed development is located approximately 5.4 miles southwest of Watkins, Colorado, in Section 21 T4S:R65W (Figure 1). Surface ownership is private and land use primarily is farming and agriculture around the site. The Phase 2 development is located entirely within a previously disturbed agricultural field (Figure 2).

METHODS

All spatial data described in this report were recorded in Universal Transverse Mercator (UTM) coordinates using NAD 83 Zone 13N datum. ArcGIS® 10.5 software was used to generate maps and conduct spatial analyses, and field spatial data was recorded using Juniper Mesa2® handheld tablet computers/GPS receivers installed with ArcPad® 10.2 mobile Geographic Information Systems (GIS) software. Features visible from National Agriculture Imagery Program (NAIP) imagery, such as prairie dog colonies, were heads-up digitized from the most recent imagery.

RESULTS

Raptor Nests

No raptor nests are known to occur in the vicinity of the proposed development. The closest available raptor nesting habitat would be the cottonwood trees along Coal Creek, approximately 100 meters to the west, southwest, and south from the proposed development and a lone cottonwood tree adjacent to the southwest portion of the pad. Burrowing owl nests are possible in the general area but no nests have been documented.

Black-tailed Prairie Dog

Based on aerial imagery, two black-tailed prairie dog colonies appear to be located within 0.25 miles of the proposed development, west and southeast of the proposed development (Figure 1).

Swift Fox Dens

The habitat in the vicinity of the pad appears to be unsuitable for swift fox and the presence of breeding den locations is highly unlikely. Swift fox occurrence is more likely southeast of the proposed development where prairie dogs appear to be more abundant, assuming the colonies are still occupied. No swift fox dens are known to occur in or within 0.25 miles of the proposed development.

Big Game

The proposed well pad and access road intersect mule deer winter range and severe winter habitat designated by CPW (Figure 3). No other seasonal ranges or migratory corridors, including ranges for other big game species, overlap the proposed project. See Appendix A for big game range definitions.

DISCUSSION

The potential for impacts related to the development of the proposed development are expected to be minimal. The Phase 1 pad is already existing and new surface disturbance will be limited to expanding the existing pad. The existing and proposed surface disturbance is limited to previously disturbed farming and agricultural private land. The proposed project is within 0.5 miles of potential nesting habitat for raptors, including cottonwood trees along Coal Creek and prairie dog colonies for burrowing owls. However, no raptor nests are known to occur within 0.5 miles of the proposed development, which is the maximum spatial protective buffer distance recommended by Colorado Parks and Wildlife (CPW) for the protection of raptor nests, including bald eagles (CDOW 2008). Lastly swift fox dens are highly unlikely to occur in the area of proposed surface disturbance given the location is almost exclusively within previously-disturbed cultivated habitat (i.e., agricultural field). Swift fox dens are possible in the general vicinity of the proposed development but unlikely given the limited extent and quality of native habitat. According to CPW, swift fox occupancy typically requires relatively large tracts of native prairie habitat either surrounding or directly adjacent to den locations (CPW 2012). When dens are present, CPW recommends spatial and seasonal protective buffers of 0.25 miles around breeding den locations from March 15 through June 15, respectively. Therefore development after June 15 is believed to sufficiently mitigate the potential impacts to swift fox breeding.

Regarding big game, the proposed project overlaps mule deer severe winter habitat, however the impacts to mule deer are expected to be mitigated by several factors. First, the proposed pad is well outside the riparian habitat along Coal Creek which is where the deer are most likely to occur. Second, the proposed pad location is an expansion of an already existing pad which is

also located directly adjacent to an existing county road where deer are inherently far less likely to concentrate. Third, the densities of mule deer in this area are low given the extensive residential development and limited habitat. No other crucial big game ranges or migration corridors occur in the area of the proposed development.

CPW is responsible for management of big game populations and designations of big game ranges and migratory corridors and restrictions for the protection of big game typically apply only to crucial ranges, including winter concentration areas, severe winter range, and/or production areas (i.e., parturition areas for fawning/calving/lambing). In the case of oil and gas permitting, Colorado Oil and Gas Conservation Commission (COGCC) defines those three types of big game ranges as "Sensitive Wildlife Habitat" but only for areas west of Interstate 25 (COGCC Rules 100-13; As of February 14, 2019). Therefore, COGCC currently does not apply restrictions to oil and gas development for the protection of big game habitat east of Interstate 25. Finally, in addition to existing rules and stipulations protecting winter habitat and parturition areas, a recent executive order (Colorado Governor Executive Order #D 2019 011) directed state agencies in Colorado to prioritize migration corridors (SOC 2019). However no big game migration corridors are known to occur within the region of the proposed well pad and access road and, moreover, significant migration corridors would be highly unlikely in this region of Colorado given the topography and availability of habitat.

No other federal or state listed rare or sensitive wildlife species are likely to occur in the area of proposed development.

REFERENCES CITED

Colorado Division of Wildlife (CDOW; *currently Colorado Parks and Wildlife*). 2008. Recommended buffer zones and seasonal restrictions for Colorado raptors. Revised February 2008.

Colorado Parks and Wildlife (CPW). 2012. Monitoring swift fox using remote cameras in eastern Colorado. March 2012. 31pp.

State of Colorado (SOC). 2019. Governor's Office Executive Order: Conserving Colorado's big game winter range and migration corridors. Executive order #D 2019 011.

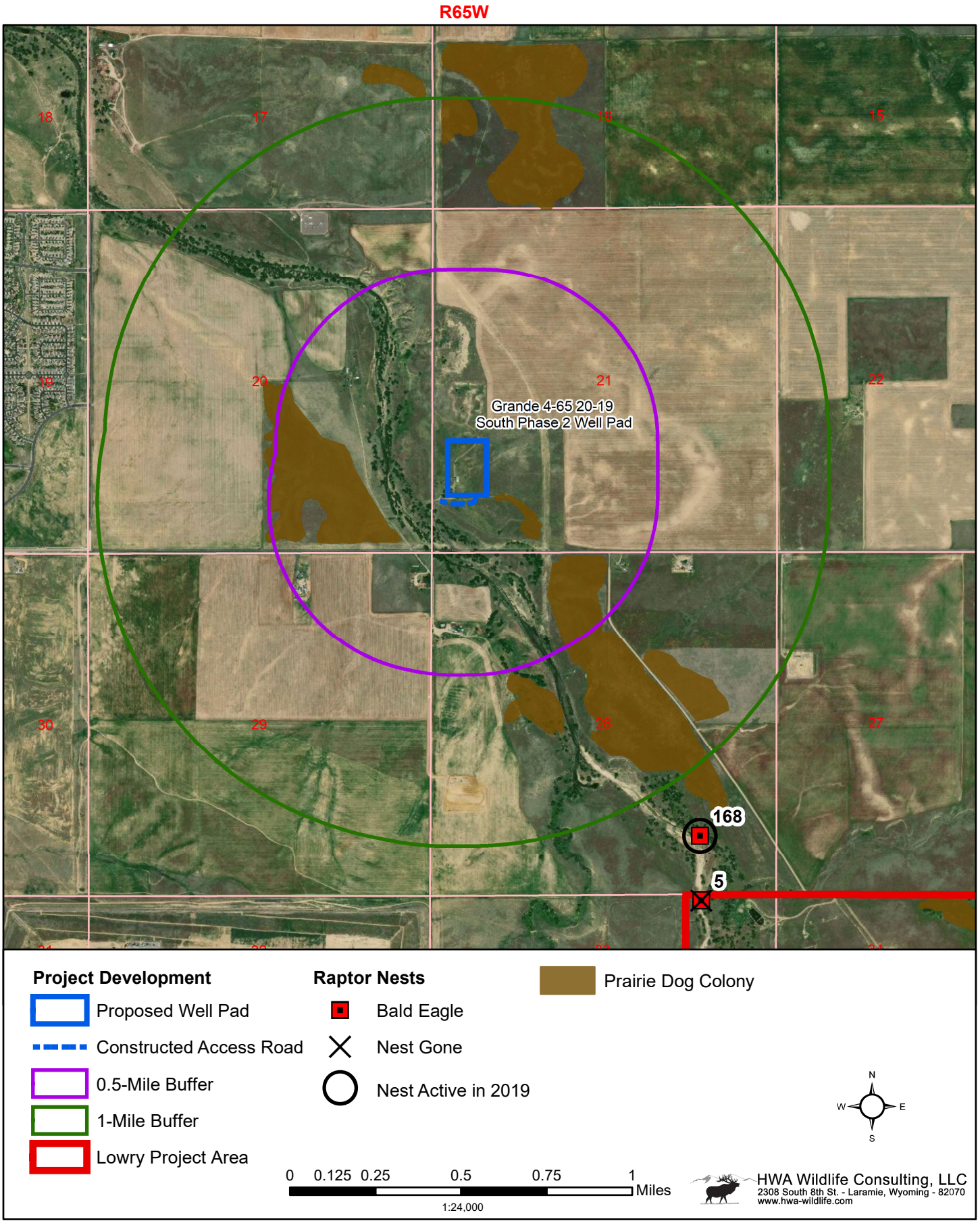

Figure 1. Known wildlife resources relative to the Grande 4-65 20-19 South Phase 2 well pad and access road, in Arapahoe County, Colorado.

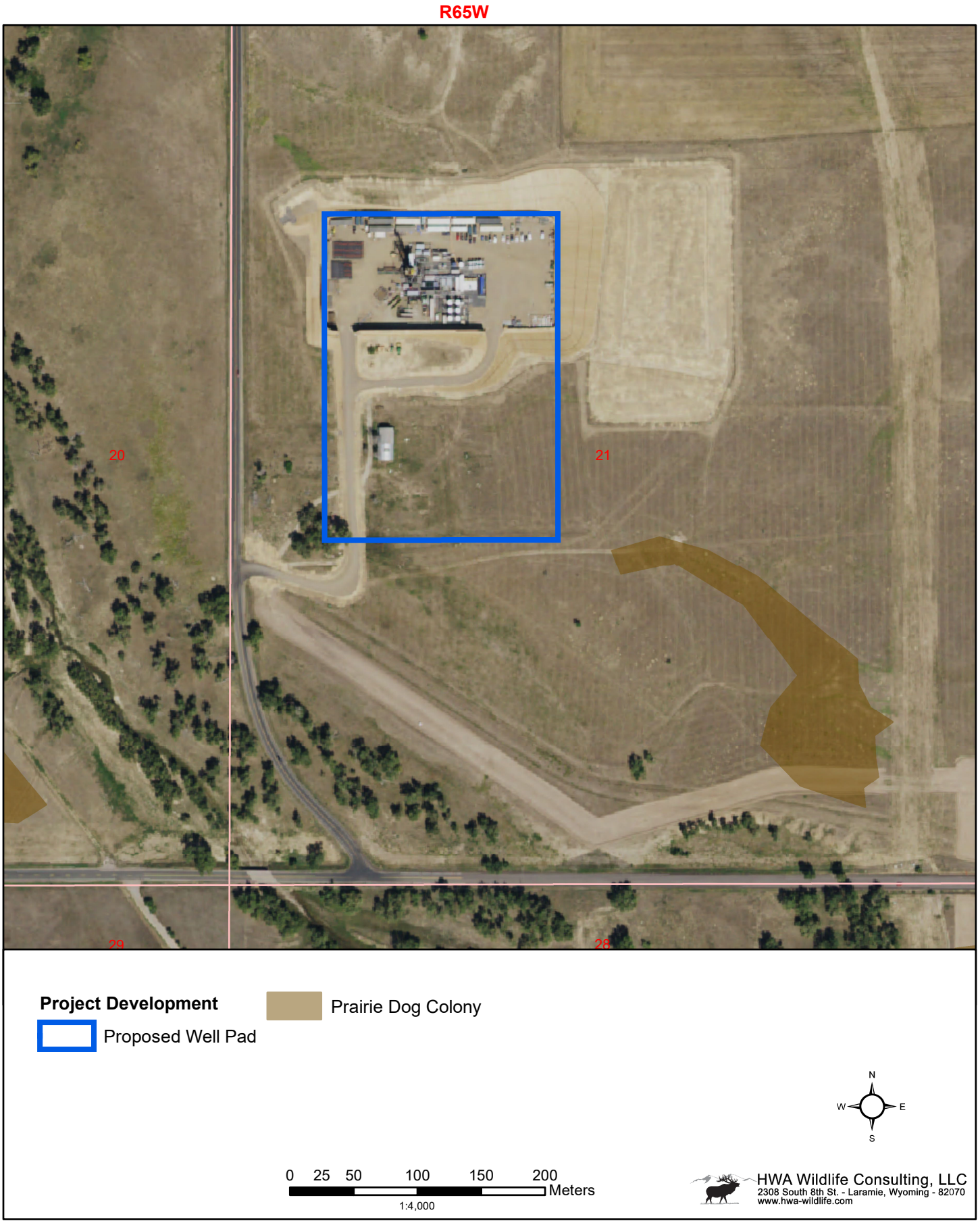

Figure 2. Close-up of the Grande 4-65 20-19 South Phase 2 well pad, in Arapahoe County, Colorado.

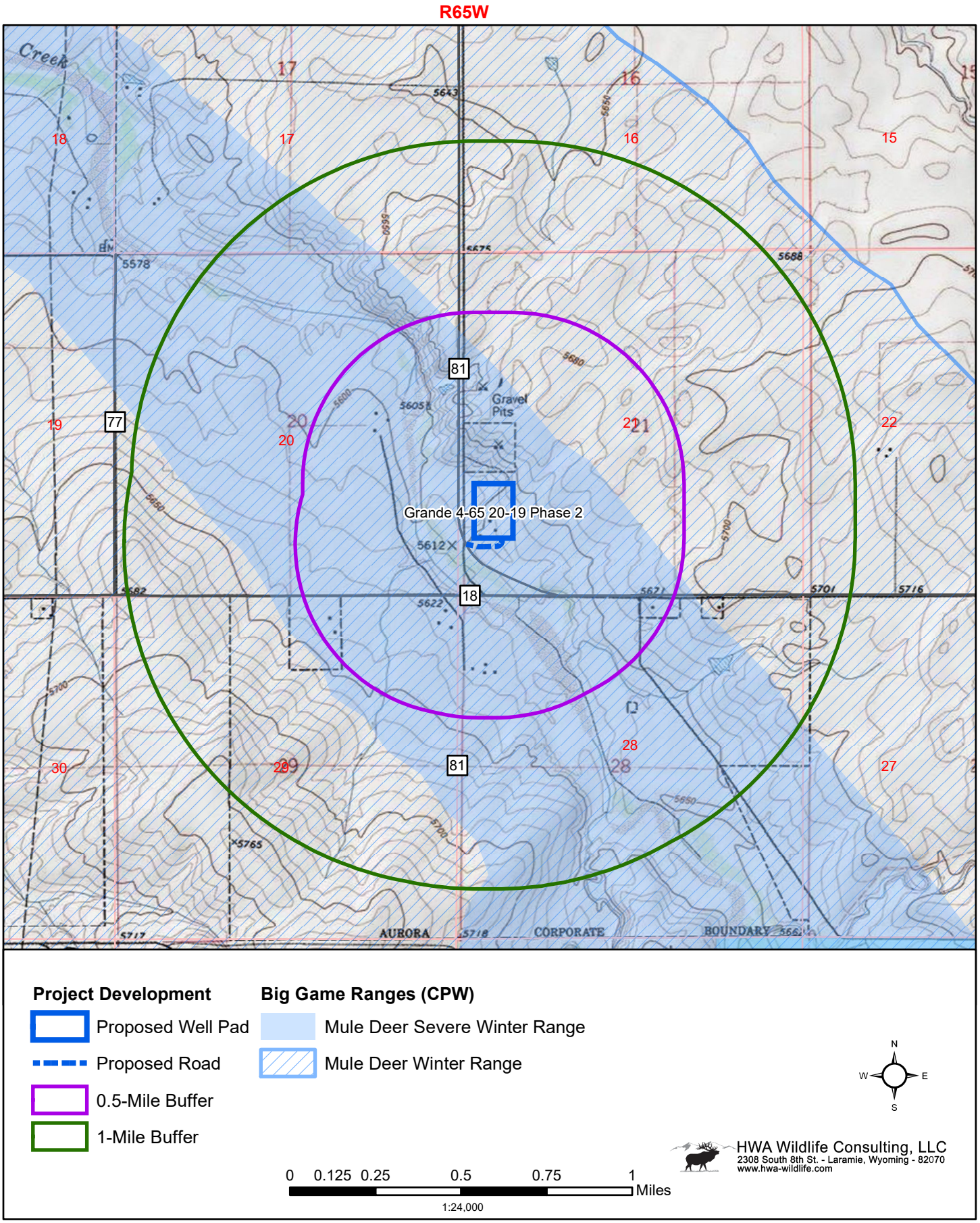

Figure 3. Big game ranges according to Colorado Parks and Wildlife relative to the Grande 4-65 19-20 South well pad and access road, in Arapahoe County, Colorado.

Appendix A:

Colorado Parks and Wildlife Big Game Range Definitions

Big Game Range Definitions – Colorado Parks and Wildlife

Activity Definitions:

MIGRATION PATTERN: A subjective indication of the general direction of the movements of migratory ungulate herds.

MIGRATION CORRIDOR: A specific mappable site through which large numbers of animals migrate and loss of which would change migration routes.

WINTER CONCENTRATION AREA: That part of the winter range of a species where densities are at least 200% greater than the surrounding winter range density during the same period used to define winter range in the average five winters out of ten.

WINTER RANGE: That part of the overall range of a species where 90 percent of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site specific period of winter as defined for each DAU.

SUMMER RANGE: That part of the overall range where 90% of the individuals are located between spring green-up and the first heavy snowfall. Summer range is not necessarily exclusive of winter range; in some areas winter range and summer range may overlap.

RESIDENT POPULATION AREA: An area used year-round by a population of animals. Individuals could be found in any part of the area at any time of the year; the area cannot be subdivided into seasonal ranges. It is most likely included within the overall range of the larger population.

OVERALL RANGE: The area which encompasses all known seasonal activity areas within the observed range of an animal population.