



**Natural Features, Wetland, Wildfire, Noxious Weeds & Wildlife  
Report  
for  
North Bay at Lake Woodmoor in El Paso County, Colorado**

REVISED

June 1, 2022

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Project Number: 2021-13-1



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## LIST OF ACROYNMS AND ABBREVIATIONS

AMSL	above mean sea level
CDA	Colorado Department of Agriculture
CNHP	Colorado Natural Heritage Program
COGCC	Colorado Oil and Gas Conservation Commission
CPW	Colorado Parks and Wildlife
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
Project	North Bay (formerly The Cove at Woodmoor)
Report	Natural Features and Wetland Report
Site	Project site
NRCS	Natural Resource Conservation Service
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

## 1.0 INTRODUCTION

Ecosystem Services, LLC (Ecos or ecos) was retained by Lake Woodmoor Development, Inc. in 2016 to perform a natural resource assessment for the North Bay at Lake Woodmoor project (Project), a proposed development at the north end of Woodmoor Lake, and to prepare this Natural Features, Wetland, Wildfire, Noxious Weeds and Wildlife Report (Report). This 2021 Report is being prepared to update and revise only those aspects of the 2016 Report that may be affected by the Revised Site Plan (as indicated in red text). The remainder of the information in the Report remains accurate (as presented in 2016).

The contact information for the Woodmoor Lake Development, Inc. and ecos representatives for this Report is provided below:

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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 Project site (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.
- Noxious Weeds;
- Wildfire Hazard;
- Wildlife;
- Federal and State Listed Candidate, Threatened and Endangered Species; and
- Raptors and Migratory Birds.

## 1.2 Site Location

The Site is located approximately 0.7-mile northeast of Monument in El Paso County, Colorado. It is situated east of I-25, south of Deer Creek Road, west of Autumn Way, and it abuts the northern end of Woodmoor Lake. The Site is bounded on the north by Deer Creek Road, on the south by Deer Creek Road, and on the west by the Waterfront Townhomes. The Site is specifically located

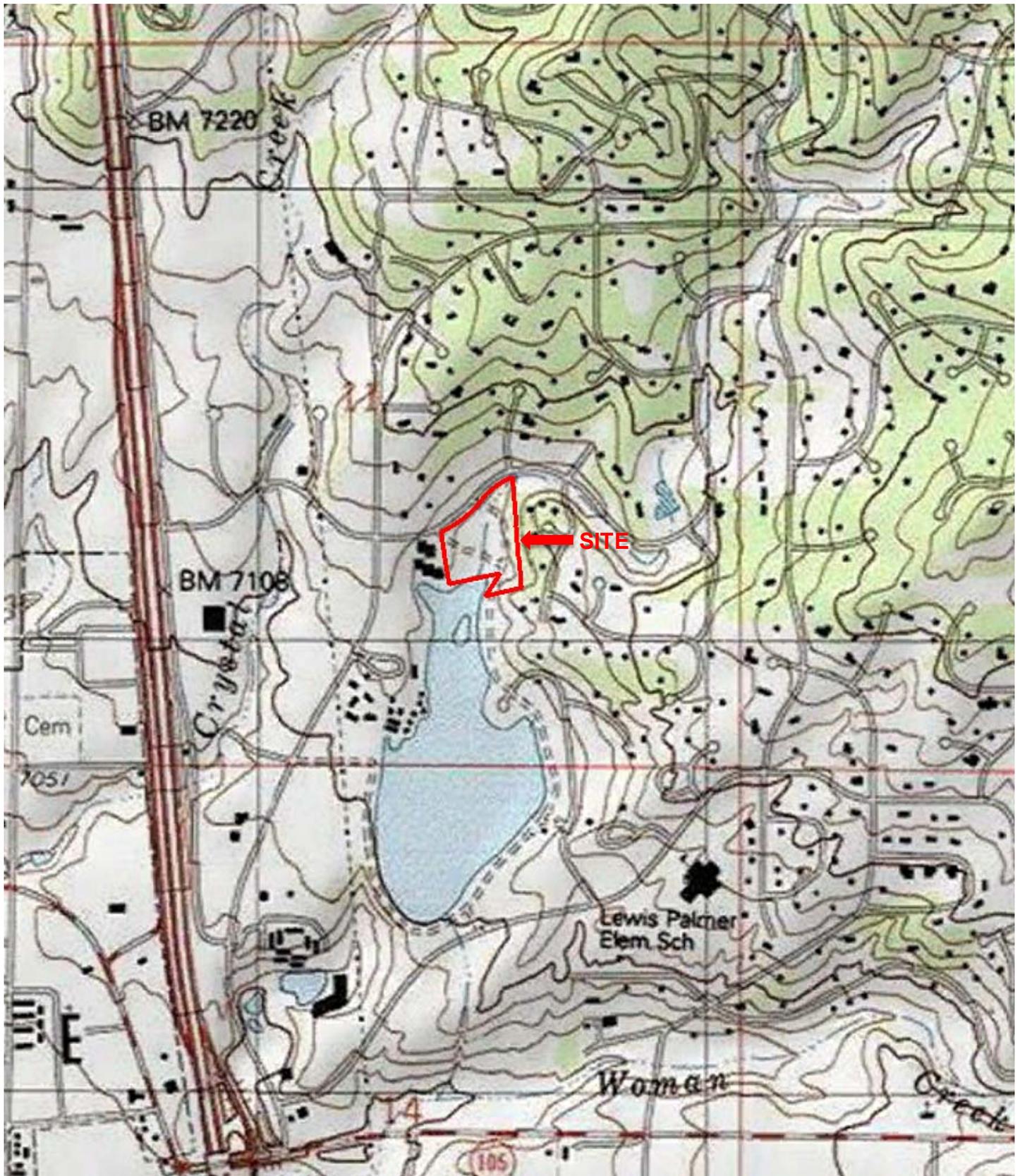
within Section 11, Township 11 South, Range 67 West in El Paso County, Colorado. Refer to Figure 1, USGS Site Location Map.

### **1.3 Project Description**

The Applicant proposes to develop the Site as a planned community of 35 new townhomes units on individually owned lots that recognize and respect the character of the existing community, natural terrain, vegetation, and a tranquil setting of Woodmoor Lake. Please refer to Figure 2, Site Plan provided by the Applicant dated May 2, 2022 for the latest site layout and the development application for specific details and descriptions of the Project.

**Figure 1**

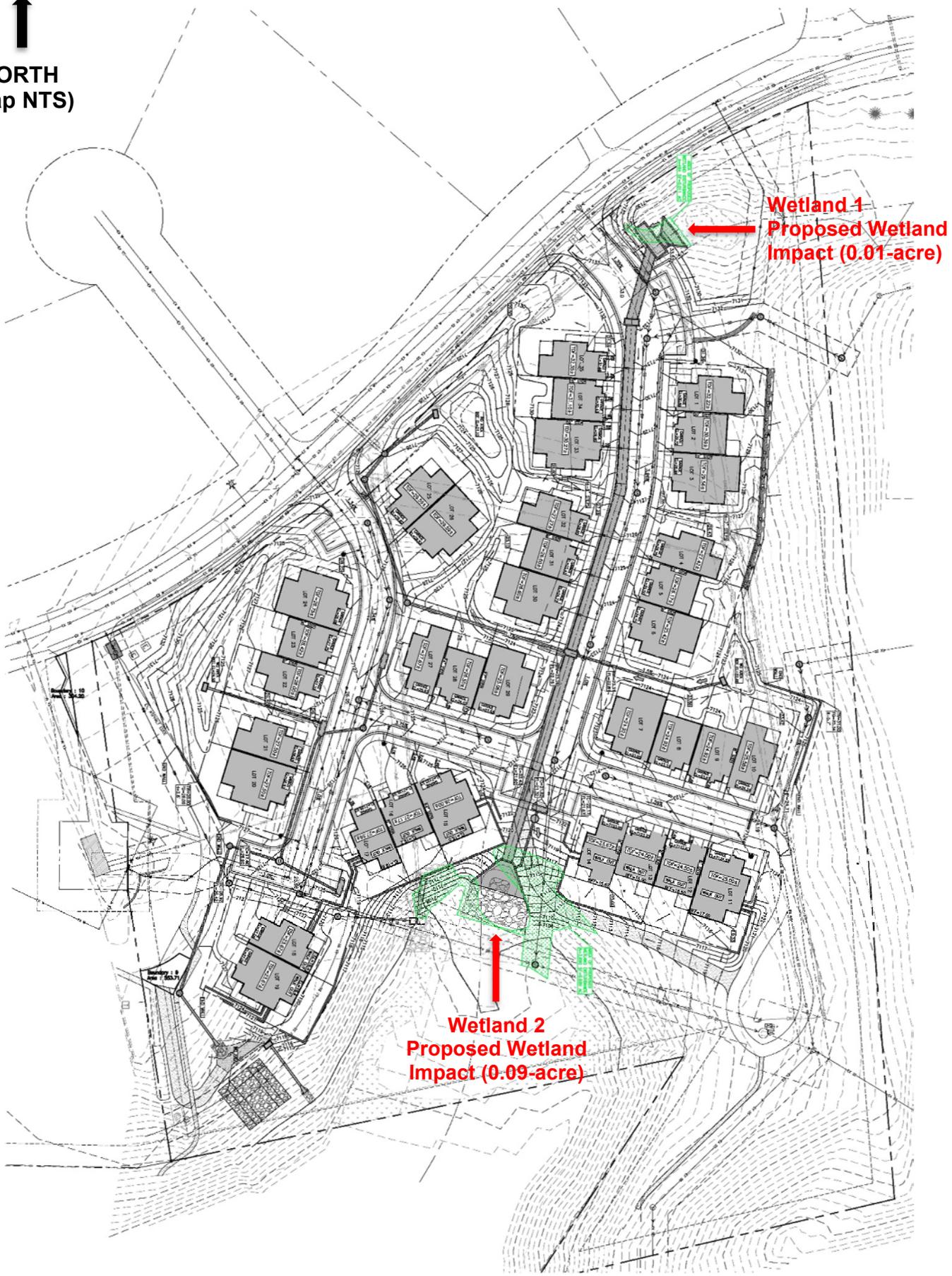
USGS SITE LOCATION MAP



USGS 7.5 min. Quad: Monument  
Section 11, Township 11 South, Range 67 West  
Latitude: 39.104922° N, Longitude: -104.856074° W

**Figure 2**  
Site Plan

**↑**  
**NORTH**  
**(Map NTS)**



Source: NES, Inc. and Kiowa Engineering, Site Plan dated 5/16/22

## 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 2000 Tri-Lakes Comprehensive Plan;
- Google Earth current and historic aerial imagery;
- Survey of Critical Biological Resources, El Paso County, Colorado;
- Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties, Colorado;
- U.S. Army Corps of Engineers (USACE) 1987 Corps of Engineers Wetlands Delineation Manual;
- USACE 2008 Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region;
- U.S. Fish and Wildlife Service (USFWS) Region 6;
- USFWS National Wetland Inventory (NWI);
- U.S. Geological Survey (USGS);
- Other pertinent references (refer to Section 8.0).

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

- 1) El Paso County Land Development Code Chapter 5 - Section 5.3, Standards for Review, Approval, and Administration of Uses,
- 2) El Paso County Land Development Code, Chapter 6 - General Development Standards, 6.3 – Environmental Standards:
  - a. Section 6.3.3 – Fire Protection and Wildfire Mitigation;
  - b. Section 6.3.7 - Noxious Weeds;
  - c. Section 6.3.8 – Wetlands; and
  - d. Section 6.3.9 – Wildlife.
- 3) El Paso County Land Development Code, Chapter 8 - Subdivision Design, Improvements and Dedications, 8.4 – Design Considerations and Standards:
  - a. Section 8.4.2 Environmental Considerations:
    - i. (A)(4) – Threatened and Endangered Species Compliance.

Following the collection and review of existing data and background information, ecos conducted a field assessment of the Site on May 3, 2016 and again on

October 13, 2021. The purpose of the assessment was to compare background information with present-day conditions, ascertain the physical/ecological characteristics and conditions of the Site, identify potential environmental constraints associated with development improvements, and determine the presence/absence and approximate extent of the following features:

- Wildfire hazards pursuant to County and State definitions;
- Wetland habitat and other waters of the U.S. (i.e., lakes, ponds, streams) regulated under the Clean Water Act;
- Wildlife habitat:
  - CPW wildlife and sensitive wildlife habitat; and
  - USFWS listed threatened and endangered species habitat regulated under the Endangered Species Act;
- Significant topographic features;
- Noxious weed stands; and
- Vegetation Communities.

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 Kari Parsons) were used in the preparation of the Report.

### **3.0 ENVIRONMENTAL SETTING**

A review of the El Paso County 2000 Tri-Lakes Comprehensive Plan (El Paso County, 2000) revealed that the Site is within the Woodmoor Planning Area (Sub-Area #7). The Site contains no Colorado Natural Heritage Conservation Areas or Potential Conservation Areas according to the CNHP (CNHP, 2021), no Preservation Areas designated in the El Paso County 2000 Tri-Lakes Comprehensive Plan (El Paso County, 2000), and no Critical Habitat, Wildlife Refuges or Hatcheries according to the USFWS IPaC Trust Resources Report (USFWS, 2022a).

#### **3.1 Topography**

The topography of the Site trends is formed by two gentle ridges along the east and west sides of the Site, which forma natural drainage depression in the central portion of the Site that drains southward to Woodmoor Lake. It ranges from a high elevation of 7,140 feet above mean sea level (AMSL) in the southeastern corner to a low elevation of 7,098 AMSL along the south-central border of the Site.

#### **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 Appendix A.

The Site is comprised of the following soil types:

Map Unit Symbol & Name

- 1 – Alamosa loam, 1 to 3 percent slopes
- 41 - Kettle gravelly loamy sand, 8 to 40 percent slopes
- 71 - Pring coarse sandy loam, 3 to 8 percent slopes
- 111 - Water

Pursuant to the 2015 National Hydric Soil List for Colorado (USDA, NRCS, 2015) the Alamosa loam is listed by as a hydric soil; and the Kettle gravelly loamy sand and Pring coarse sandy loam contain hydric components that are frequently ponded for long duration or very long duration during the growing season that:

- a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or;
- b. Show evidence that the soil meets the definition of a hydric soil.

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).

### **3.3 Vegetation**

The Site is located in a transitional area on west facing slopes between the ponderosa pine (*Pinus ponderosa*) woodlands of the Black Forest to the east and more grassland dominated communities in lower areas to the west along I-25. The Black Forest region includes 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). This hilly region supports pine- Gambel oak (*Quercus gambelii*) woodlands interspersed with native grasslands. 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.

The Site has been almost entirely disturbed by previous development with remnant patches of native vegetation along the edges of the otherwise open,

non-native grassland. Therefore, many of the species native to the region are absent or present in remnant stands.

### 3.3.1 Non-native Grassland Community

The majority of the Site is comprised of weedy non-native grassland. This area appears to have been cleared of native vegetation, disturbed by installation of infrastructure (culvert, utilities, access road, etc.), and re-vegetated. Vegetation appears to have been mowed at least once since the past growing season. The dominant species is smooth brome (*Bromus inermis*), a non-native grass commonly used for re-vegetation. Diffuse knapweed (*Centaurea diffusa*), a noxious weed, is abundant. Two other common noxious weeds are leafy spurge (*Euphorbia esula*) and common mullein (*Verbascum thapsus*). All noxious weed species observed onsite are discussed in more detail in the relevant section below. Other non-native species include alyssum (*Alyssum simplex*), clover (*Trifolium* sp.), and dandelion (*Taraxacum officinale*). Native species cover is less than five percent and includes curlycup gumweed (*Grindelia squarrosa*) and pussytoes (*Antennaria* sp.). There are small (10 to 15 feet tall) ponderosa pines scattered throughout the grassy area that appear to have been planted.

### 3.3.2 Native Foothills Ponderosa Pine Scrub

The eastern edge of the Site is vegetated with native Foothills Ponderosa Pine Scrub (pine-oak woodland). These dense, brushy areas are good habitat for wildlife. Woody overstory vegetation consists of ponderosa pine (~40% cover) and Gambel's oak (~30% cover). The herbaceous understory is dominated by a variety of native species including kinnikinnick (*Arctostaphylos uva-ursi*), field sagewort (*Oligosporus pacificus* (formerly *Artemisia campestris*)), vetch (*Astragalus* sp.), and several species of grasses and asters. Smooth brome, a non-native grass, appears to be spreading from the adjacent grassland area and is common (~ 10% cover).

### 3.3.3 CNHP Vegetation Communities

Ecos reviewed the CNHP database and sorted the data for the Monument, Colorado 7.5-minute quadrangle, as that quadrangle includes the Site. We reviewed the Monument 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 and summarized them in Table 1 below. Based on this data and our onsite assessment, and 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.

<b>TABLE 1 – CNHP VEGETATION COMMUNITIES POTENTIALLY IMPACTED BY THE PROJECT</b>
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Species	Status	Presence and Location	Probability of Impact by Project
<b>PLANT COMMUNITIES</b>			
Montane Riparian Shrubland: Alnus incana / Mesic Graminoids Shrubland	State Rank: S2 (State imperiled)	This plant community does not occur within the Site	This plant community will not be impacted by the Project.
Xeric tallgrass prairie: Andropogon gerardii - Sporobolus heterolepis Western Foothills Herbaceous Vegetation	State Rank: S1 (State critically imperiled)	This plant community does not occur within the Site	This plant community will not be impacted by the Project.
Foothills Ponderosa Pine Savannas: Pinus ponderosa/ Carex inops ssp. heliophila Woodland	State Rank: S1 (State critically imperiled)	This plant community does not occur within the Site	This plant community will not be impacted by the Project.
Foothills Ponderosa Pine Scrub Woodlands: Pinus ponderosa /Quercus gambelii Woodland	State Rank: S5 (State demonstrably secure)	Occurs along the north and northeastern fringes of the Site.	Certain Ponderosa pine trees and Gambel oak shrubs will likely be impacted by the Project.

<b>TABLE 1 – CNHP VEGETATION COMMUNITIES POTENTIALLY IMPACTED BY THE PROJECT</b>			
<b>Species</b>	<b>Status</b>	<b>Presence and Location</b>	<b>Probability of Impact by Project</b>
Mixed Mountain Shrublands: Quercus gambelii - Cercocarpus montanus / (Carex geyeri) Shrubland	State Rank: S3 (State rare or uncommon)	This plant community does not occur within the Site	This plant community will not be impacted by the Project.
Mesic Oak Thickets: Quercus gambelii / Carex inops Shrubland	State Rank: SU (Unrankable; status cannot be determined at this time)	This plant community does not occur within the Site	This plant community will not be impacted by the Project.
Coyote Willow/Mesic Graminoid: Salix exigua / Mesic Graminoids Shrubland	State Rank: S5 (State demonstrably secure)	Jurisdictional wetland/waters dominated by Salix exigua occur along the southern side of the Site adjacent to Woodmoor Lake (refer to Figure 5).	The jurisdictional wetland/waters along the southern side of the Site adjacent to Woodmoor Lake have been delineated and impacts will be minimized.
Snowberry Shrubland: Symphoricarpos occidentalis Shrubland	State Rank: S4 (State apparently secure)	This plant community does not occur within the Site	This plant community will not be impacted by the Project.

### **3.4 Wetland Habitat and Waters of the U.S.**

#### **3.4.1 Methodology**

Ecoss utilized the National Wetland Inventory (NWI), Wetlands Mapper (USFWS 2021c), the Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties, Colorado (CNHP, 2001), the El Paso County Wetland Map (El Paso County 2016), historic and current Google Earth aerial photography, the 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.

Refer to Figure 3, County Wetland Map and Figure 4, National Wetland Inventory Map.

The mapping data above were compiled onto the base topographic map for the Site (i.e., all potential wetland habitat and waters were located via their topographic signature and outlined), then proofed during the filed assessment to determine the presence/absence of potential wetland habitat and waters of the U.S. Once a feature was verified to be present, ecos determined whether it is a jurisdictional wetland/waters under the Clean Water Act (CWA) and delineated the jurisdictional boundaries. Refer to Figure 5, Wetland Survey Map and Figure 2, Site Plan that shows the wetland survey relative the site layout. The 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: Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region* (USACE, 2008).

### **3.4.2 Office Assessment Findings**

A review of the above data revealed that the Site contains no Wetland and Riparian Conservation Areas or Potential Wetland and Riparian Conservation Areas according to the CNHP (CNHP, 2001). The CNHP Wetlands Mapper (CNHP, 2022a) which relies upon the USFWS National Wetland Inventory identifies Lake Woodmoor as a permanently flooded, open water (limnetic) lacustrine (lake) feature with an unconsolidated bottom formed upstream of a dike/impoundment (i.e., a L1UBHh feature); and an intermittent, seasonally flooded riverine (river or stream) streambed through the center of the site (i.e., a R4SBC feature). The stream is not present on site (as correctly indicated by the Figure 3, County Wetland Map and Figure 5 Wetland Survey; however, a wetland fringe around Lake Woodmoor is located within the Site boundary.

### **3.4.3 Field Assessment Findings**

The data review above and a field assessment revealed the presence of two (2) potential areas of wetland habitat (Figure 5). In 2016 ecos assessed the two areas and determined they are jurisdictional wetland habitat under the CWA as they are tributary to the jurisdictional waters of Monument Creek (via Dirty Woman Creek) on the west side of I-25. Ecos reviewed the 2016 wetland delineation using the 2016 mapping loaded into a hand-held GPS during the October 13, 2021 site visit and found that Wetland 2 (north of Lake Woodmoor) expanded further the north; and Wetland 1, the detention pond in the northeast corner of the Site changed configuration. These natural features meet the wetland indicators and criteria that the Corps uses to assert jurisdiction, as they are:

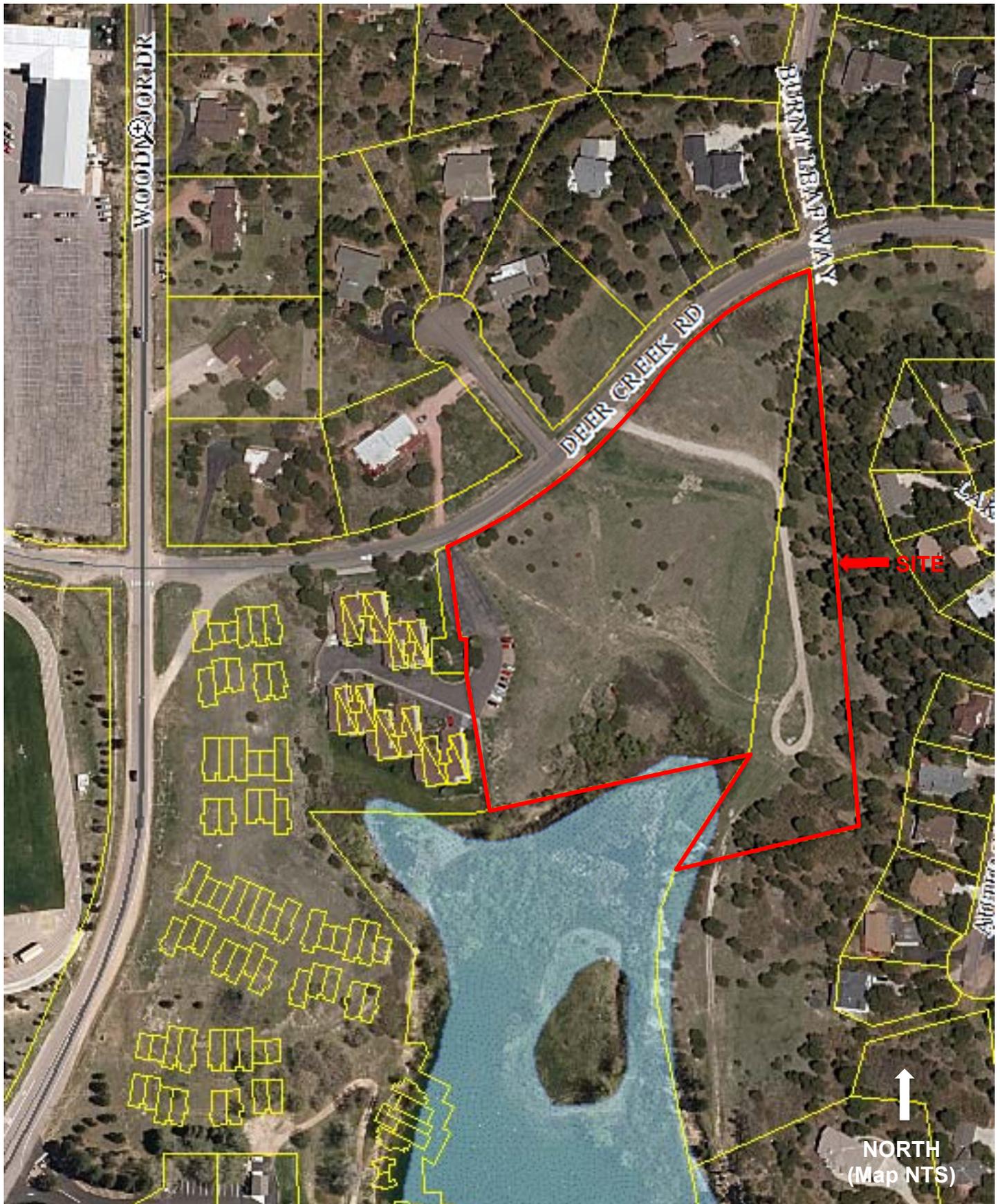
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and
- Wetlands that directly abut such tributaries.

The jurisdictional wetland area data is summarized below, with an explanation of the field indicators (parameters) of wetland habitat that were observed and documented.

- 1) Jurisdictional wetland habitat and waters of the U.S. – There are two wetland areas on Site, a small detention basin (Wetland 1); and a wetland fringe along the north shore of Woodmoor Lake (Wetland 2) as further described in 1a. and 1b. below. These features are jurisdictional, as they are tributary to Monument Creek (via Dirty Woman Creek), a documented, jurisdictional waters of the U.S.
  - a. **Wetland 1: PFO1/PEM Northeast Detention Basin** – There is a small (0.04 acre) detention basin located in the northeast corner of the Site, immediately south of Deer Creek Road. The dominant species are sandbar willow and American yellowrocket (*Barbarea orthoceras*). Most of the willows are dead, likely due to occasional prolonged flooding. Field indicators of hydric soils were observed at sampling point (SP) WD5-W as follows: 7.5 YR 4/1 clay loam with 7.5YR 5/1 depletions from 0-3 inches and 7.5 YR 3/2 sandy clay with 7.5YR 3/1 depletions and 5YR 4/6 concentrations from 3-7 inches. The predominantly clay soils have a red-parent material that does not match the mapped soil type and may have been imported for construction of the basin. The basin appears to have been constructed along an historic minor drainage (constructed prior to 1999 based on aerials reviewed). Surface flow provides the primary sustaining hydrology; and groundwater likely still flows into the basin, as evidenced by willows growing along the north bank of the detention basin. The basin drains to the west via a culvert (24" CMP) that is set in a headwall approximately 24" above the bottom of the basin. The culvert continues west, then turns south, and flows into Woodmoor Lake. During the Site visit, there was no surface water in the basin, but sustaining wetland hydrology was evident as soil saturation at 10-inches and water marks extending 24" up the headwall. This area meets all 3 parameters for jurisdictional wetland habitat.
  - b. **Wetland 2: PSS/PF01/PEM wetland complex adjacent to Woodmoor Lake** – There is a well-developed area of riparian vegetation along the north edge of Woodmoor Lake. This structurally diverse vegetation is excellent wildlife habitat, particularly for birds. The area is characterized by dense palustrine scrub-shrub vegetation with

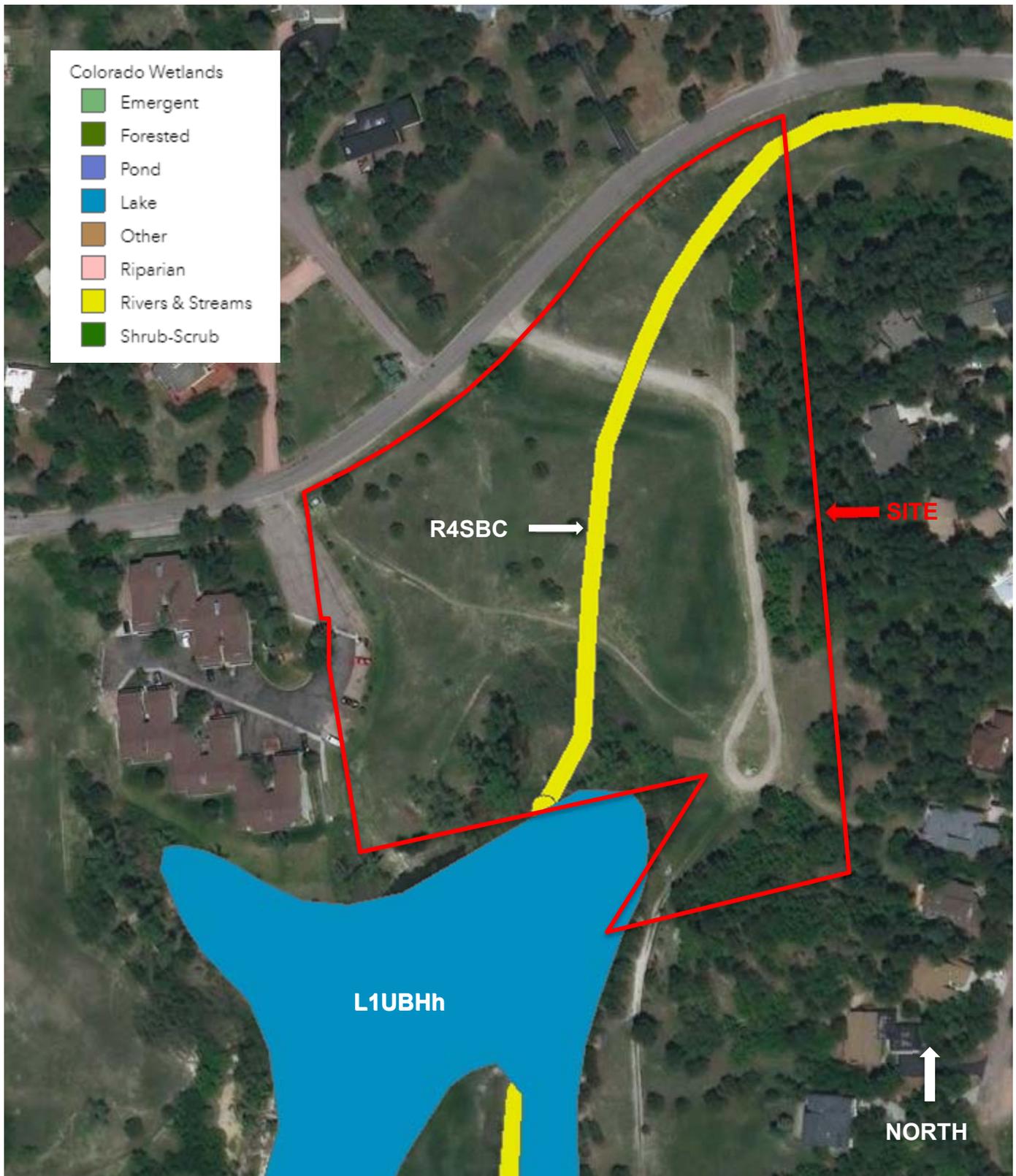
approximately 65 percent cover of sandbar willow and five percent cover of Rocky Mountain willow (*Salix monticola*). The tree canopy consists of plains cottonwood with approximately 20% cover. There are also a few ponderosa pines on the upland edges. There is a small cluster of non-native Russian olive (*Elaeagnus angustifolia*) trees on the lake shore and slightly south of the Site boundary. The dense willows limit the growth of herbaceous vegetation. The wettest areas along the shore have fewer willows and more herbaceous plants; emergent wetland species are common including cattail (*Typha latifolia*), Nebraska sedge (*Carex nebrascensis*), water sedge (*C. aquatilis*) and Emory's sedge (*C. emoryii*). Soil samples indicate the presence of field indicators of hydric soils. Observed soils at SP W1 - W were 10YR 5/1 silty sand from 0-6 inches and 10YR 6/1 silty clay with sand from 6-18 inches. Soils at SP W23-W were 10YR 3/2 silty sand from 0-10 inches and 10YR 4/1 silty sand from 10-16 inches. Sustaining hydrology for this wetland comes from Woodmoor Lake, the culvert from the northeast detention basin, and water from the slopes to the north. At SP W1-W, the lake provides sustaining hydrology and soil was saturated at a depth of six inches. At SP W23-W, the source of water is drainage from adjacent slopes and soil was saturated at a depth of 4 inches. This area meets all 3 parameters for jurisdictional wetland habitat.

**Figure 3**  
**El Paso County Wetland Map**



Source: El Paso County

**Figure 4**  
**National Wetland Inventory Map**



Source: CNHP, Wetlands Mapper / USFWS, National Wetland Inventory

**NWI Classification Key:**

L1UBHh = Lacustrine (Lake), Limnetic, Unconsolidated Bottom, Permanently Flooded, Diked/Impounded

R4SBC = Riverine, Intermittent, Streambed, Seasonally Flooded

**FIGURE 5**  
**Wetland Survey Map**



Source: Ecosystem Services LLC, Wetland Delineation dated 10/13/21

## 3.5 Noxious Weeds

### 3.5.1 Regulatory Background

The Colorado Department of Agriculture maintains a list of noxious weed species (CDA, 2021) and works with counties to manage noxious weeds. Weeds 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: Species that are designated for eradication.
- List B: Species with limited distribution that have management plans designed to stop their continued spread. Control measures vary depending on location.
- List C. Species that 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 that 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

Noxious weeds are abundant in the non-native grassland and common in the wetland areas. Refer to Figure 6, Noxious Weed Map prepared by ecos. No noxious weeds were observed in the pine-oak woodlands. Diffuse knapweed is the most abundant weed species with many large patches throughout the Site, typically in moderately moist open areas such as swales in the grassland areas and on upland slopes adjacent to wetlands. Leafy spurge occurs in similar habitat but is less common. Common mullein is the second most common noxious weed, occurring in low density throughout relatively dry areas. Canada thistle is present in the (Wetland 1) basin and at the downstream culvert outfall near Woodmoor Lake. The remaining weed species were only observed in isolated areas. Field bindweed is limited to a small area along Deer Creek Road. There is a small patch of perennial sowthistle (*Sonchus arvensis*) near the detention basin. There is a large patch of musk thistle near the center of the Site. A stand of Russian olive is present on the lake shore, along the south edge of the Site. Weeds diversity is highest in open areas in or near wetlands. Weed presence documented in 2016 remains the same with the addition of a patch of orange hawkweed, an A-list noxious weed observed during the 2021 site assessment in the willow wetlands (Wetland 2) north of Lake Woodmoor.

One (1) noxious weed species on the Colorado Department of Agriculture List A or the Watch List was observed on the Site (CDA 2021):

- orange hawkweed (*Hieracium aurantiacum*)

Five List B noxious weed species (CDA 2016) were observed on the Site (listed in order of abundance):

- diffuse knapweed (*Centaurea diffusa*);
- leafy spurge (*Euphorbia esula*)
- Canada thistle (*Cirsium arvense*);
- Russian-olive (*Elaeagnus angustifolia*); and
- musk thistle (*Carduus nutans*).

Three List C noxious weed species (CDA 2016) were observed on Site (listed in order of abundance):

- common mullein (*Verbascum thapsus*);
- perennial sowthistle (*Sonchus arvensis*); and
- field bindweed (*Convolvulus arvensis*).

### **3.5.2 Noxious Weed Management Plan**

Per the El Paso County Noxious Weed and Control Methods document (El Paso County, 2015b): *“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, handpulling, tilling, mulching, cutting, and clipping seedheads.*
- *Chemical: The use of herbicides to suppress or kill noxious weeds by disrupting biochemical processes unique to plants.”*

The majority of the Site will be disturbed during construction and then landscaped. This includes areas where weeds are most abundant (the non-native grassland and northeast detention pond) (Figure 6). Native pine-oak woodland would be preserved along the eastern edge and riparian vegetation would be preserved along the southern edge. The Site development plan should include measures to prevent introducing new weeds and spreading existing weeds during construction (see prevention measures above). Soil from areas with existing weeds, such as the grassy uplands and the detention basin, should not be pushed into the natural areas along the Site perimeter.

Noxious weeds are most likely to become established in areas where the native vegetation and soil have been disturbed by construction. Thus, restoring and maintaining desirable vegetation should always be a priority for weed control. Desirable vegetation may consist of native plant communities or landscaped areas. Within the preservation areas, all areas of noxious weeds and other non-native species should be removed, these areas should then be seeded or planted with native species. Repeated mowing/cutting and applications of herbicide may be needed to eliminate weeds prior to planting. Re-vegetation and landscaping should be completed as soon as possible following construction so that weeds do not become established. 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, 2015b).

<b>TABLE 2 – NOXIOUS WEED MANAGEMENT SUMMARY</b>		
<b>Species</b>	<b>Occurrence</b>	<b>Management<sup>1,2</sup></b>
<b>LIST A</b>		
orange hawkweed ( <i>Hieracium aurantiacum</i> )	Uncommon. Present in Wetland 2 willow patch.	Use herbicide to kill existing rosettes and establish other vegetation to increase competition.

**TABLE 2 – NOXIOUS WEED MANAGEMENT SUMMARY**

Species	Occurrence	Management <sup>1,2</sup>
<b>LIST B</b>		
Canada thistle ( <i>Cirsium arvense</i> )	Uncommon. Present in two moderately wet habitats, the detention basin and below the downstream outflow culvert near Woodmoor Lake.	Mowing combined with herbicide treatment. Mow every 10 to 21 days during the growing season to prevent seeding. Only use herbicides and formulations approved for use near water.
Diffuse knapweed ( <i>Centaurea diffusa</i> )	Abundant. Many large patches throughout, generally in relatively moist areas.	Mowing can reduce seed production, and revegetation with other species can reduce knapweed. Some herbicide treatment is typically required for total control. Only use herbicides and formulations approved for use near water. Biological control is available but takes 3 to 5 years.
Leafy spurge ( <i>Euphorbia esula</i> )	Common. Scattered throughout in relatively low-lying, moist areas.	Herbicide treatment is most effective. Only use herbicides and formulations approved for use near water. Mowing can reduce seed production. Biological control using flea beetles is available.
Musk thistle ( <i>Carduus nutans</i> )	Uncommon. One moderate sized patch observed in the northeast portion of the Site.	This species may be totally removed by construction. 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.
Russian-olive ( <i>Elaeagnus angustifolia</i> )	Uncommon. One small cluster of trees on the bank of Woodmoor Lake, may not extend onto the Site.	Cut any trees within the Site boundaries, then immediately treat stumps with herbicide to prevent re-sprouting. Only use herbicides and formulations approved for use near water.
<b>LIST C</b>		

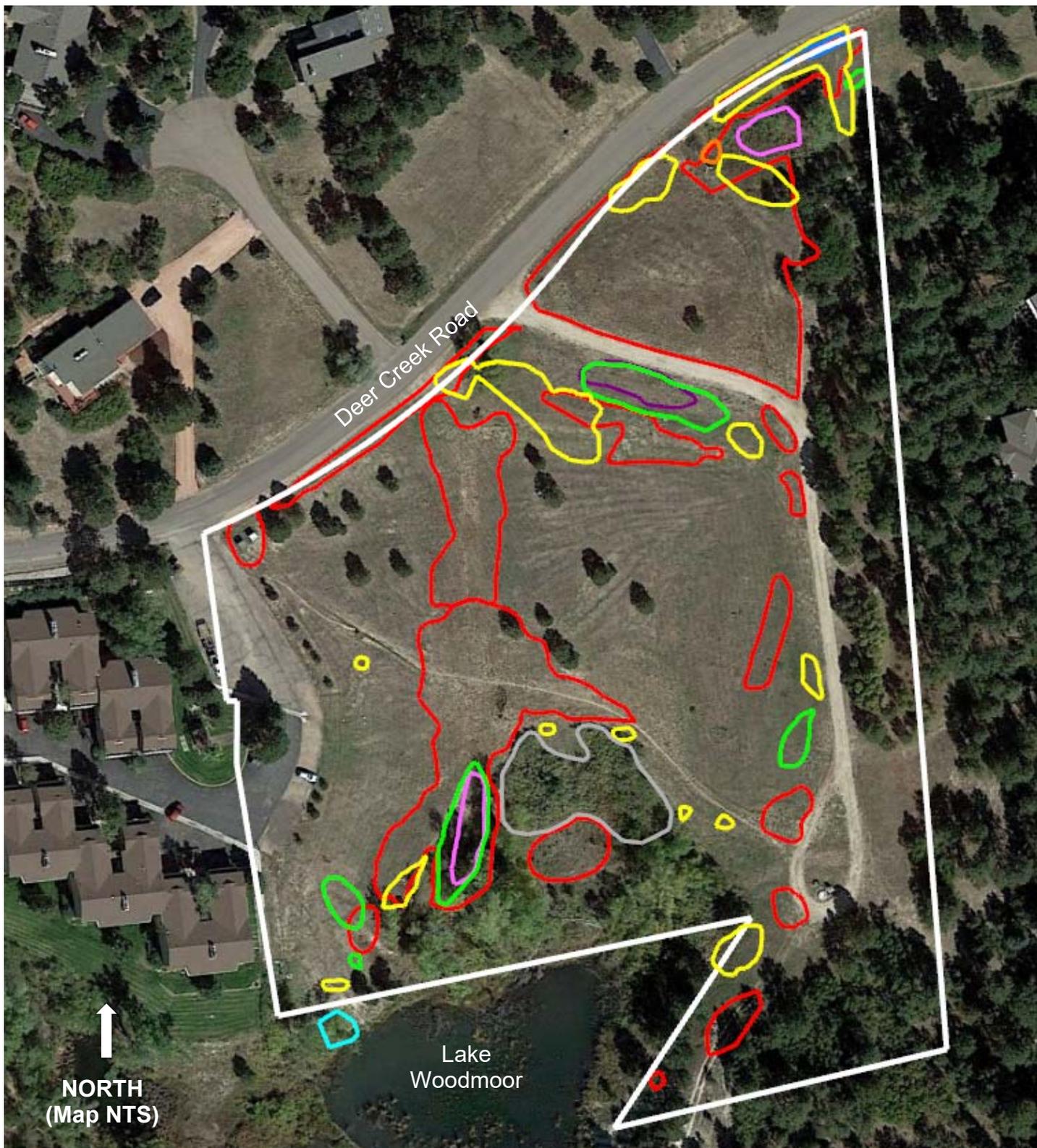
**TABLE 2 – NOXIOUS WEED MANAGEMENT SUMMARY**

<b>Species</b>	<b>Occurrence</b>	<b>Management<sup>1,2</sup></b>
Common mullein ( <i>Verbascum thapsus</i> )	Common. Scattered throughout, generally in low density and in drier areas.	Establish other vegetation and minimize disturbance to prevent existing seeds from sprouting in bare soil. Mow to prevent bolting and flowering. Use herbicide to kill existing rosettes.
Field bindweed ( <i>Convolvulus arvensis</i> )	Uncommon. Only observed in one area along Deer Creek Drive.	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.
Perennial sowthistle ( <i>Sonchus arvensis</i> )	Uncommon. One small patch observed near the detention pond.	Mowing to prevent seeding combined with herbicide treatment to kill existing plants. Only use herbicides and formulations approved for use near water.

<sup>1</sup>Refer to the El Paso County “Noxious Weed and Control Methods” booklet for additional detail (CDA, 2015b).

<sup>1</sup>When using herbicides, always read and follow the product label to ensure proper use and application.

**Figure 6**  
**Noxious Weed Map**



**LEGEND:**

- |  |  |
|--|--|
| <span style="color: magenta;">█</span> Canada thistle ( <i>Cirsium arvense</i> )     | <span style="color: cyan;">█</span> Russian olive ( <i>Elaeagnus angustifolia</i> )    |
| <span style="color: red;">█</span> Diffuse knapweed ( <i>Centaurea diffusa</i> )     | <span style="color: yellow;">█</span> Common mullein ( <i>Verbascum thapsus</i> )      |
| <span style="color: limegreen;">█</span> Leafy spurge ( <i>Euphorbia esula</i> )     | <span style="color: blue;">█</span> Field bindweed ( <i>Convolvulus arvensis</i> )     |
| <span style="color: purple;">█</span> Musk thistle ( <i>Carduus nutans</i> )         | <span style="color: orange;">█</span> Perennial sowthistle ( <i>Sonchus arvensis</i> ) |
| <span style="color: grey;">█</span> Orange hawkweed ( <i>Hieracium aurantiacum</i> ) |  |

### 3.6 Wildfire Hazard

The Site was evaluated for wildfire hazards based on observed vegetation and the El Paso County Fire Hazard Classification Map (El Paso County, 2007) (Figure 7) which is based on the Colorado Vegetation Classification Project data. The two fire hazard classifications are:

- a. “Low Hazard – Non Forested (No vegetation, Grass and Brush)”; and
- b. “High Hazard – (Deciduous and Conifer/Evergreen).”

Most of the Site consists of non-native weedy grassland that is mapped as Low Hazard. The forested areas along the east and south sides of the Site are mapped as High Hazard. The mapping is general and does not correspond exactly with the current Site conditions. Refer to Figure 7, County Fire Hazard Classification Map.

Per the “El Paso County Development Standards” revised in 2018, a wildland fire and hazard mitigation plan prepared by a qualified professional is required because forested portions of the Site are classified as a “wildland fire area” (El Paso County, 2018). Ecos made the following general recommendations based on the 2016 Development Standards and existing vegetation cover with the goal to maximize natural resource conservation while meeting the wildfire safety recommendations. Ecos has updated the following sections based on the most current Site Plan (Figure 2), however additional adjustments and recommendations prepared by a certified wildfire and hazard specialist may be necessary in order to comply with all of the current and very specific Development Standards that ecos is not qualified to make.

“Wildfire Mitigation” protects homes from wildfire based on three zones. The 2016 County recommendations for each zone are summarized below, followed by Site-specific information. The initial landscaping plan generally complies with the zone requirements.

- *Zone 1 is the area nearest the home and requires the greatest hazard reduction. Most flammable vegetation should be removed a minimum of 15 to 30 feet from the structure.*

Most of the proposed new buildings would be constructed in grassy, landscaped areas. Buildings along the east side of the property would be in proximity to pine-oak woodland. The northeastern-most group of buildings (Lots 1 – 3) and Lot 10 would be adjacent to the pine-oak woodland area, but the area immediately surrounding the rear of these lots would likely be cleared and graded. Zone 1 in front of each building typically consists of paved areas (sidewalk and road). Unit owners would be responsible for landscaping and maintaining their own back- and side-yards which extend up to 30 feet from the buildings. The Zone 1 fire hazard requirements should be included in the Home Owners Association (HOA) covenant. Maintenance of common areas of the Site would be the responsibility of a property management company.

- *The Zone 2 wildfire mitigation area reduces potential fire hazards for a distance of 30 to 100 feet from any structures. In this zone any stressed, diseased, dead or dying trees and shrubs should be removed. Trees should be thinned to a distance of at least 10 feet apart (average) from one another (crown to crown). All tree branches should be pruned 10 feet above the ground. Grasses should be mowed to a height of 6 inches or less during the fire season and in the fall.*

The native forested areas along the east and south edges of the Site are valuable habitat for native wildlife and plants and have been preserved as much as possible to maintain habitat value. Thus, thinning these areas would negatively impact native plant and wildlife species. Additionally, much of the vegetation in Zone 2 will be removed by grading. Thus Zone 2 mitigation should primarily be addressed by limiting new plantings and removing non-native species. Removal of native vegetation should be limited.

Most of the native forested habitat along the east side of the Site will be separated from buildings with open space and rear-lot landscaping. However, Zone 2 mitigation should be completed between the eastern lots (Lots 1-10) and forested areas to a minimum distance of 55 feet. This may however be counterproductive to preserving forest values and visual separation between the development and existing neighbors to the east. Thinning and clearing should be carefully planned in order meet fire mitigation requirements while preserving as many native trees and shrubs as possible. Periodic cutting of native herbaceous species prior to fire season is recommended for the pine-oak woodland. This will mimic the natural removal of vegetation by wildfires and can be beneficial to native plants. This should be done on an annual basis around the eastern lots that abut forested areas and every two to three years in other areas. Any dead shrubs or trees should be removed at this time.

Zone 2 mitigation along the south edge of the Site should be implemented on any of the drier sloped areas south of the buildings to a distance of 85 feet. Within flat, riparian or wetland areas, the Zone 2 mitigation should be reduced to the minimum distance of 30 feet.

- *Zone 3 is the gradual transition from defensible space to natural forested area that extends from Zone 2 to the property lines. Trees of various ages, sizes, and species should be cultivated with varying density. Ladder fuels such as logs, branches, wood chips, pine needles, leaves and grasses should be minimized under tree canopies. It is not necessary to mow grasses in Zone 3. Dead trees, or snags, can be left either standing or fallen to provide habitat for wildlife.*

This type of area occurs only in the southern-most portion of the Site, in the riparian vegetation and wetlands adjacent to Woodmoor Lake. Non-native species such as Russian olive, smooth brome, and diffuse knapweed, should be eliminated and replaced with native species to prevent establishment of more weeds. Removal of ladder fuels in this

area should be limited to removal of non-native vegetation and any highly flammable brush piles or debris.

A second purpose of the Fire Protection and Wildfire Mitigation standards is to ensure that adequate fire protection in new development (El Paso County, 2018). The North Bay at Lake Woodmoor development will be provided fire protection services by the Tri-Lakes Monument Fire Protection District (TLMFPD). TLMFPD provides fire, rescue and emergency medical services, and public education to the Tri-Lakes and Monument regions of Northern El Paso County. The TLMFPD is career fire department and has approximately 50 firefighter/emergency medical technicians (EMTs)/paramedics. Fire Marshal Jamey Bumgarner Vincent of the TLMFPD provided a *Commitment Letter to Provide Fire and Emergency Services* to the Project. to Appendix B).

The TLMFPD stations include:

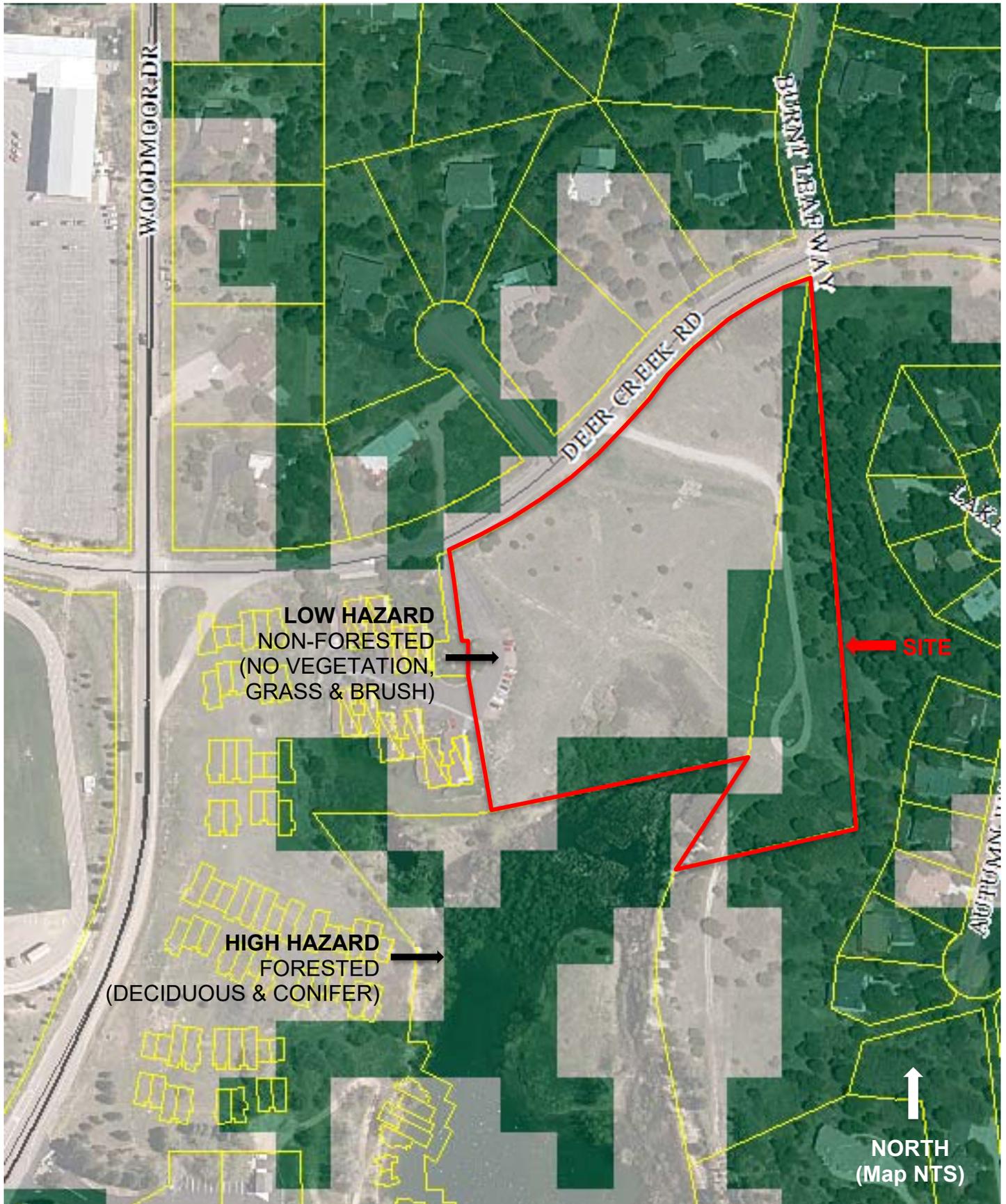
- Station 1, 18650 Highway 105, Monument, CO 80132
- Station 2, 18460 Roller Coaster Road, Monument, CO 80132
- Station 3 1855 Woodmoor Dr., Monument, CO 80132

The Project is located less than ½ mile from Station 3.

TLMFPD has an ISO insurance rating of 3 for all hydrant community properties located within 5 miles from one of their Stations and within 1,000 feet of a fire hydrant. Cistern-supported areas with fire hydrants can qualify for a Class 3 rating provided there is a minimum of 30,000 gallons of water in the cistern. All other properties are insurance rating Class 3Y. TLMFPD is supported by a levy on local property tax bills.

TLMFPD also participates in the “North Group.” The North Group is a collection of fire departments within and around El Paso County, dedicated to assisting each other and providing resources during large incidents such as wildland fires, structure fires, hazardous material incidents etc.

**Figure 7**  
**El Paso County Fire Hazard Classification Map**



Source: El Paso County

### 3.7 Wildlife Communities

The stated purpose and intent of the “El Paso County Development Standards” wildlife section is to ensure that proposed development is reviewed with consideration of the impacts to wildlife and wildlife habitat, and to implement the provisions of the Master Plan (El Paso County, 2015a). Based on the GIS mapping provided by El Paso County, the “Wildlife Impact Potential” for the southern portion of the Site near Woodmoor Lake is classified as high. Refer to Figure 8, County Wildlife Impact Potential Map. This includes all of the wetland and riparian habitat and most of the pine-oak woodland on the Site. This classification is generally consistent with the current Site conditions except that it extends farther north and west than the existing high quality wildlife habitat. Excluded from the mapping is a strip of high to moderate quality pine-oak woodland habitat along the east edge of the Site. “Wildlife Impact Potential” for the northern portion of the Site near Deer Creek Road is classified as low. This includes all of the open, weedy grassland habitat on the Site.

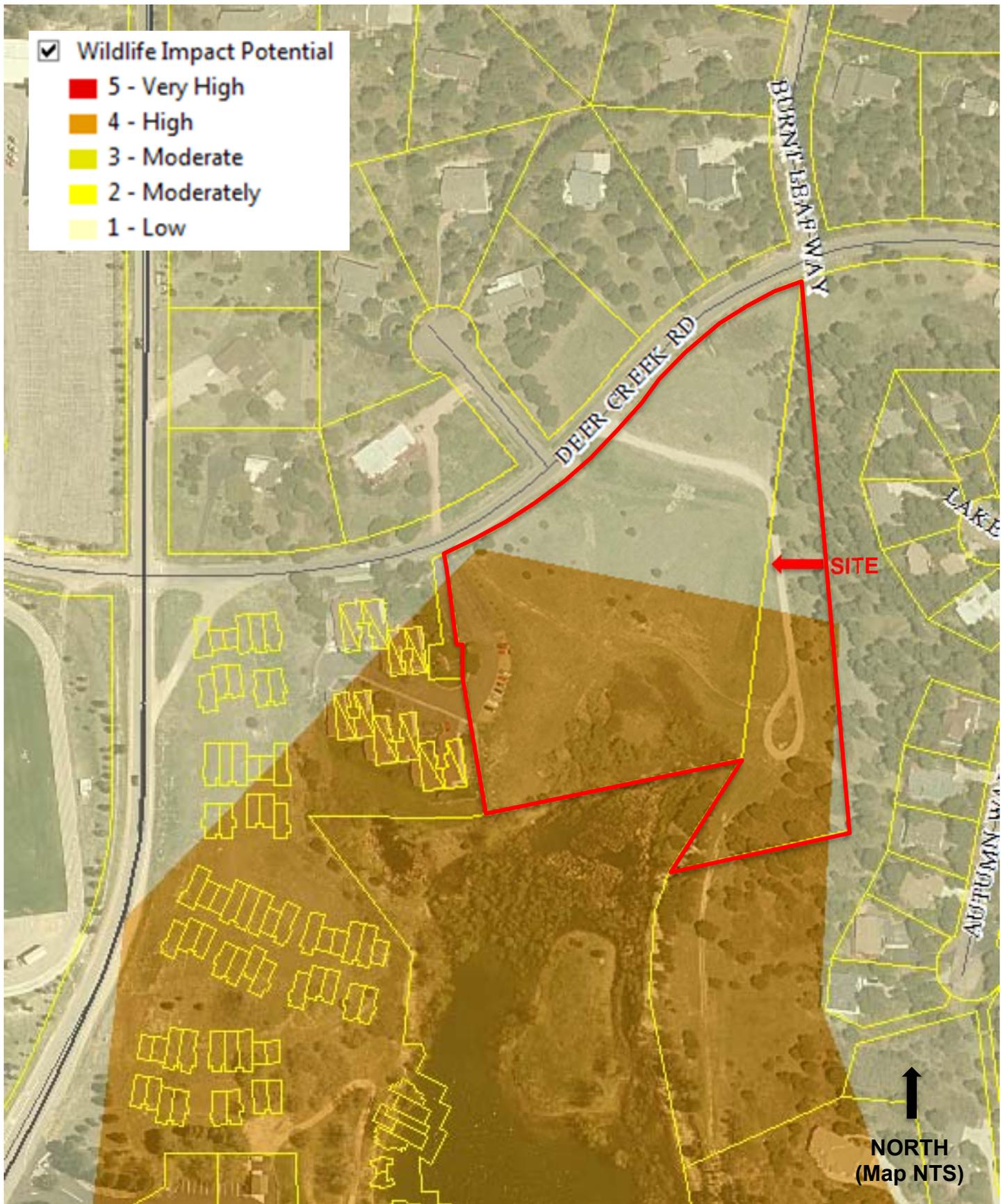
The pine-oak woodlands and riparian habitat are high quality habitat for birds. The Site also provides habitat for mammals including rodents, deer, and carnivores. The area is suitable year-round range for mule deer. The Site also provides habitat for predators such as coyote and red fox.

A large beaver lodge is located in Woodmoor Lake near the southern edge of the Site and there were signs of beavers feeding near Woodmoor Lake. Since 2016, beavers have cut down approximately half of the large trees and many small trees in the Site and are actively cutting down more large trees. Ecos attributes this behavior to the lowering of Lake Woodmoor normal operating level for maintenance which is driving beaver into the upstream riparian areas where water and food sources are available since they cannot swim to other food sources around the lake. Beavers appear to have slightly raised the local water level and table in the upstream reach of Lake Woodmoor. This in combination with higher average annual precipitation since 2015 (i.e., 5.42 inches in 2015 and 10.52 inches in 2021) appear to have affected the expansion of the willow wetland noted above.

Ecos recommends that the landowner protect the remaining large trees in around the northern fringe of Lake Woodmoor as soon as possible using beaver caging or sand paint, leaving cottonwood saplings and willow as an alternative food supply.

**Figure 8**

**El Paso County Wildlife Impact Potential Map**



Source: El Paso County

#### 4.0 STATE, CNHP AND FEDERAL LISTED SPECIES

A number of species that occur in El Paso County are listed as threatened or endangered by the USFWS (USFWS 2022a and 2021b) and the CPW (CPW, 2021). Ecos compiled the updated data regarding special status species for the Site in Table 3 based on the data sources listed above, as well as the Site-specific, the 2022 USFWS IPaC Trust Resources Report we ran for the Project (Appendix C); the CNHP data we compiled for the Monument, Colorado 7.5-minute quadrangle (CNHP, 2021); 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 nearby. Since there is low potential for the project to impact CNHP-listed plants, this group of species is also discussed in more detail.

<b>TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT</b>			
<b>Species</b>	<b>Status</b>	<b>Habitat Requirements and Presence</b>	<b>Probability of Impact by Project</b>
<b>FISH</b>			
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.
<b>REPTILES AND AMPHIBIANS</b>			

<b>TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT</b>			
<b>Species</b>	<b>Status</b>	<b>Habitat Requirements and Presence</b>	<b>Probability of Impact by Project</b>
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.	Low. The proposed project would mostly avoid impacts to onsite wetland habitat.
<b>BIRDS</b>			
Eastern Black Rail  Laterallus jamaicensis ssp. jamaicensis	Federal: Threatened	Habitat includes tidally or non-tidally influenced marshes which range in salinity from salt to brackish to fresh. It requires dense overhead perennial herbaceous cover with underlying soils that are moist to saturated (occasionally dry) interspersed with or adjacent to very shallow water (typically ≤ 3 cm). Eastern black rails depend on this dense cover throughout their life cycle and is their primary strategy to avoid predation.	None. Suitable habitat does not exist on the Site.
Peregrine falcon ( <i>Falco peregrinus anatum</i> )	State: Special Concern	Breed in open landscapes with cliffs (or skyscrapers) for nest sites. During migration and in winter they occur in nearly any open habitat, but with a greater likelihood closer to the mountains or water bodies.	None. No suitable nesting habitat on 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.

<b>TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT</b>			
<b>Species</b>	<b>Status</b>	<b>Habitat Requirements and Presence</b>	<b>Probability of Impact by Project</b>
Western burrowing owl ( <i>Athene cunicularia</i> )	State: Threatened	Occurs in grasslands in, or near, prairie dog towns.	None. Suitable habitat does not exist on the Site.
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.
<b>MAMMALS</b>			
Black-tailed prairie dog ( <i>Cynomys ludovicianus</i> )	State: Special Concern	Form large colonies or "towns" in shortgrass or mixed prairie.	None. No prairie dogs were observed on the Site.

**TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT**

<b>Species</b>	<b>Status</b>	<b>Habitat Requirements and Presence</b>	<b>Probability of Impact by Project</b>
<p>Gray Wolf (<i>Canus lupis</i>)</p>	<p>Federal: Endangered State: Threatened State Rank: Critically Imperiled (S1)</p>	<p>Inhabits a wide range of habitats including temperate forests, mountains, tundra, taiga, and grasslands. Lone, dispersing gray wolves may be present throughout the state of Colorado.</p>	<p>None. USFWS Critical Habitat has been established by the USFWS, but the location is unavailable. Packs or lone, dispersing wolves do not inhabit urban areas. This species only needs to be considered if the following condition applies:  If your activity includes a predator management program.</p>

**TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT**

Species	Status	Habitat Requirements and Presence	Probability of Impact by Project
Preble's meadow jumping mouse <i>(Zapus hudsonius preblei)</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.	Very low. No USFWS Critical Habitat or CPW mapped occupied range on the Site. The Site is physically separated from Critical Habitat along Dirty Woman Creek by existing development, and there are no viable travel corridors to the Site. This species is unlikely to occur on the Site.
Swift fox <i>(Vulpes velox)</i>	State: Special Concern	Shortgrass and midgrass prairies over most of the Great Plains. In northeastern Colorado, the swift fox appears to be most numerous in areas with relatively flat to gently rolling topography.	Very Low. Unlikely to occur on the Site due to lack of habitat and development.
<b>INSECTS</b>			

**TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT**

Species	Status	Habitat Requirements and Presence	Probability of Impact by Project
Monarch butterfly <i>(Danaus plexippus)</i>	Federal: Candidate	Multigenerational migrant that breeds throughout North America and overwinters in dense congregations in Mexican montane fir forests. The larval hostplant is milkweed ( <i>Asclepias</i> spp.). Habitat includes areas with nectar for feeding and/or milkweed for laying eggs, especially grasslands and wetlands. Breeding habitat threats are widespread native grassland loss and herbicide use. In Colorado, they are present in low numbers from May to September. Onsite, the wetland and riparian area adjacent to the Lake is moderate quality habitat. Milkweed may be present on site but is probably not sufficient to support reproduction.	Insignificant. Project impacts are miniscule/ undetectable relative to threats across this species' huge range. Impacts could be mitigated by limiting herbicide use and planting native flowering species, especially milkweed.
<b>PLANTS</b>			
Dwarf false indigo <i>(Amorpha nana)</i>	State Rank: Imperiled (S2)	Dry prairies and rocky hillsides on rocky and sandy soils. Scattered populations from Boulder to the Black Forest.	Very low. Unlikely to occur on the Site due to lack of habitat and past disturbance.
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.	Low. Unlikely to occur onsite due to degraded native vegetation.

**TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT**

<b>Species</b>	<b>Status</b>	<b>Habitat Requirements and Presence</b>	<b>Probability of Impact by Project</b>
Gay-feather or Rocky mountain blazing star ( <i>Liatris ligulistylis</i> )	State Rank: Imperiled (S2)	Wet meadows.	Low. Unlikely to occur on the Site due to degraded native vegetation.
New England aster ( <i>Virgulus novae-angliae</i> )	State Rank: Critically Imperiled (S1)	Prairie habitat in Boulder-Denver area. Known from Roxborough State Park. Relict population or introduced.	Low. Unlikely to occur on Site due to distance from known populations and degraded vegetation.
Prairie violet ( <i>Viola pedatifida</i> )	State Rank: Imperiled (S2)	Prairies, open woodlands, and forest openings; rocky sites, outwash mesas. Elevation 5800-8800	Very low. Unlikely to occur on the Site due to lack of habitat and past disturbance.
Small-headed rush ( <i>Juncus brachycephalus</i> )	State Rank: Critically Imperiled (S1)	Wetlands within relict tall grass prairie communities in the Black Forest region.	Very low. Unlikely to occur on the Site due to lack of habitat and past disturbance.
Southern Rocky Mountain cinquefoil ( <i>Potentilla ambigens</i> )	State Rank: Imperiled (S2)	Open meadows or grasslands. Often near, but not in, forests dominated by ponderosa pine. Soils are typically alluvial or colluvial, coarse-textured, and often gravelly.	Very low. Unlikely to occur onsite due to degraded native vegetation.

<b>TABLE 3 - STATE AND FEDERAL PROTECTED SPECIES POTENTIALLY IMPACTED BY THE PROJECT</b>			
<b>Species</b>	<b>Status</b>	<b>Habitat Requirements and Presence</b>	<b>Probability of Impact by Project</b>
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.	None. Wetland areas on Site are poor quality habitat for this species and will not be impacted.
Yellow stargrass ( <i>Hypoxis hirsuta</i> )	State Rank: Critically Imperiled (S1)	Wetlands within relict tall grass prairie communities.	Very 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**

##### **4.1.2 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 PMJM Critical Habitat is 0.7 mile south of the Site (USFWS, 2016d). Refer to Figure 9, USFWS 2010 PMJM Critical Habitat Map. This is part of Critical Habitat Unit 11 (established in 2010) includes the portions of Dirty Woman Creek south of 2<sup>nd</sup> Street/Highway 105. Woodmoor Lake and a developed area along Lake Woodmoor Drive are between the Site and the Critical Habitat. Most of the area around Woodmoor Lake is residential development or mowed grass, therefore native riparian vegetation and shrub vegetation are sparse and discontinuous. Thus, it is unlikely that PMJM would disperse from Dirty Woman Creek to the Site (refer to Appendix E for the *PMJM Clearance Letter*).

#### 4.1.4 Occupied Range

In addition to the USFWS Critical Habitat, Colorado Parks and Wildlife (CPW) has designated areas of PMJM “occupied range” (CPW, 2005). The occupied range is based on known occurrences of PMJM (i.e., trapping data) and historic 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.

It should be noted that the CPW “mapped riparian vegetation” data upon which a significant portion of this “occupied range” mapping is based was not necessarily verified in the field. As such it should only be used for planning purposes and must be field verified.

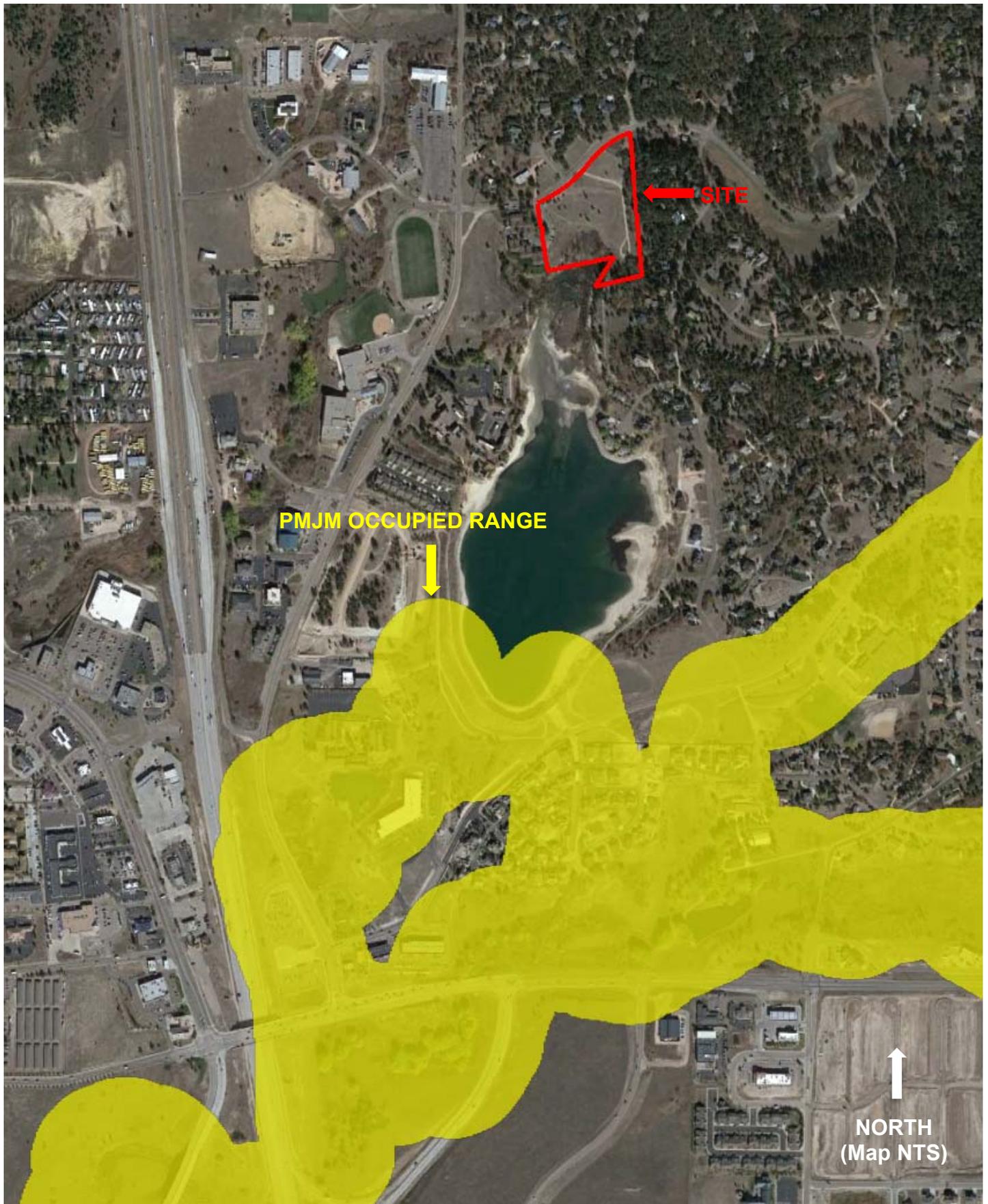
CPW has designated occupied PMJM habitat south of the Site along Dirty Woman Creek that generally corresponds with the mapped critical habitat (CPW, 2005). Refer to Figure 10, CPW 2005 PMJM Occupied Range Map. Additionally, the CPW mapped occupied range extends upstream (north and west) from Dirty Woman Creek along multiple drainages, most of which currently lack riparian vegetation due to development impacts that have occurred. This area of “occupied range” designation appears to be based on a PMJM capture within the Critical Habitat along Dirty Woman Creek. The closest CPW mapped occupied range is 0.33 mile south of the southern Site boundary, along the south shore of Woodmoor Lake. This mapping appears to be based on the historic condition of two drainages that have mostly been impacted by development such that the riparian habitat is now absent; therefore, there is no existing riparian corridor connecting Dirty Woman Creek to Woodmoor Lake to allow PMJM to disperse this far north. Therefore, ecos is confident that the CPW occupied range designation is inaccurate in this area. Thus, it is unlikely that PMJM would disperse from Dirty Woman Creek to the Site (refer to Appendix E for the *PMJM Clearance Letter*).

**Figure 9**  
**USFWS 2010 PMJM Critical Habitat Map**



Source: U.S. Fish and Wildlife Service (USFWS)

**Figure 10**  
**CPW 2005 PMJM Occupied Range Map**



Source: Colorado Parks and Wildlife (CPW)

## 4.2 CNHP-Listed Rare Plants

The CNHP-listed rare plants includes many species that are listed due to the presence of relict plant communities in the Black Forest region that typically only occur much farther east in the United States, often in tall grass prairies. Upland species include gay-feather or Rocky mountain blazing star (*Liatris ligulistylis*), prairie violet (*Viola pedatifida*), and New England aster (*Virgulus novae-angliae*). Wetland species are small-headed rush (*Juncus brachycephalus*) and yellow stargrass (*Hypoxis hirsuta*). All of these species typically occur in fairly open habitat. Most of the remnant native vegetation on Site has a dense overstory of trees and shrubs. Thus, none of the CNHP-listed plants are likely to be present and none were observed during the 2021 site assessment.

## 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 2022). The Site provides foraging and wintering habitat for raptors. The riparian habitat near Woodmoor Lake is high quality nesting habitat for raptors; however, no existing nest sites for any raptors were noted during the Site visit.

There is suitable habitat for nesting birds within the Study Area, primarily in the pine-oak woodland and riparian habitat. Birds were the most common wildlife observed by ecos during the Site visit. Species diversity was high and included some species common in developed areas along with many others that are characteristic of high quality natural habitats. Species observed that are common in suburban developed areas included mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), northern flicker (red-shafted) (*Colaptes auratus*), blue jay (*Cyanocitta cristata*), and American crow (*Corvus brachyrhynchos*). Observed species that typically occur in more natural areas were the western bluebird (*Sialia mexicana*), broad-tailed hummingbird (*Selasphorus platycercus*), downy woodpecker (*Picoides pubescens*), Stellar's jay (*Cyanocitta stelleri*), chipping sparrow (*Spizella passerina*), and spotted towhee (*Pipilo maculatus*).

Multiple species of birds were observed that are associated with wetlands. Canada geese (*Branta canadensis*) were nesting on a beaver dam just south of the Site. An American coot and a sora (*Porzana carolina*) were foraging on the north edge of the lake. A pair of snowy egrets (*Egretta thula*) flew over the Site. Songbirds included red-winged blackbirds (*Agelaius phoeniceus*) and a yellow-rumped warbler (*Setophaga coronata*).

## 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) does not identify the Site as having any significant mining resources of note nor

is there any existing mining activity on the Site. Therefore, the proposed development would not limit or impact any proposed future commercial mineral resource extraction operations.

The proposed land use does not permit the use of any area containing a commercial mineral deposit in a manner which would intentionally or unreasonably interfere with the present or future extraction of such deposit unless acknowledged by the mineral rights owner.

Lake Woodmoor Development researched the records of the El Paso County Clerk and Recorder and established that there was not a mineral estate owner on the Site (Appendix D). No Mineral or Natural Resource Extraction will occur as a part of this Project.

## **6.2 Vegetation**

The majority of the Site is vegetated with non-native grassland. Most of the Site appears to have been cleared in the past and planted with smooth brome. There are signs of subsequent disturbance to construct utilities and weeds are common throughout the grassy areas. There is also a small, weedy detention basin in the northeast corner of the Site. A grassy swale/floodway extends from the detention pond towards Lake Woodmoor. Native plant communities on Site are limited to a narrow strip of pine-oak woodland along the east side and riparian vegetation adjacent to Lake Woodmoor. The proposed Project would construct condominiums on the majority of the Site (which is already disturbed), preserving riparian and wetland habitat along Lake Woodmoor and pine-oak oak-woodland habitat along the eastern edge of the Site.

In addition to preserving the highest value existing native vegetation, in order to reduce overall direct impacts from the development, proposed landscaping should consist of native species from the same ecosystem that provide food and cover for wildlife. Fire hazard mitigation in the pine-oak woodland should mimic natural fire cycles by cutting herbaceous species during the growing season.

Detention ponds should be vegetated to the maximum extent possible utilizing wetland vegetation in the pond bottoms; and riparian and upland grasses, shrubs and trees along side-slopes, spillways and run-downs into Lake Woodmoor to create continuous riparian habitat for wildlife and to help improve water quality released to the lake.

Control of noxious weeds and non-native species in all areas (existing or landscaped) should be a priority during construction and as part of the long-term HOA maintenance of the Site. If native vegetation is preserved and weeds are managed, the loss of the existing open space would be offset by the native plantings, ongoing weed management, and long-term preservation.

## **6.3 Wetland Habitat and Waters of the U.S.**

There are two wetland areas on the Site, a small detention basin (Wetland 1) and a wetland fringe along the north shore of Woodmoor Lake (Wetland 2). Please refer to Section 3.4.2. These features are jurisdictional, as they are tributary to

Monument Creek (via Dirty Woman Creek), a documented, jurisdictional waters of the U.S.

Ecos delineated the jurisdictional boundaries of these jurisdictional wetland areas to assist the developer in Site planning. The Project Team has avoided and minimized wetland impacts to the extent possible. Based on the current Site Plan, a proposed outlet structure in the existing detention pond (Wetland 1) is required that will impact approximately 0.01-acre of existing wetland. Proposed grading and retaining wall impacts, a stormwater outlet structure and an access road are needed to perform outfall maintenance along the rear of Lots 11 - 17 will impact approximately 0.09-acre of Wetland 2, the wetland fringe along the north shore of Woodmoor Lake. Refer to Figure 2, Site Plan. If the impacts remain as proposed in the current Site Plan, the Project will require a Clean Water Act Section 404 permit, likely a Nationwide Permit 29 for Residential Developments.

#### **6.4 Noxious Weeds**

The weediest portions of the Site will mostly be graded, developed and landscaped. Weed management should be implemented for all of the remaining preserved natural areas, thus the Project will have a positive impact on the Site and nearby areas by decreasing weeds and particularly noxious weeds.

#### **6.5 Wildfire Hazard**

The El Paso County Wildfire Hazard Map (El Paso County, 2007) classifies most of the Site as having low wildfire hazard. The forested areas along the east and south sides of the Site are mapped as High Hazard.

The project would result in slight decrease in wildfire hazard potential. Developed areas would be landscaped and irrigated. Small portions of the forested areas would be removed and ladder fuels within remaining areas would be reduced per the El Paso County "Forest Health and Ecology Guide" (El Paso County, 2016) "Wildfire Mitigation" section.

#### **6.6 Wildlife Communities**

The impact to wildlife is similar to that for vegetation. Elimination of grassland areas (native or non-native alike), removal of some trees, and development of open space would have an overall negative impact on wildlife species as is the case with all development. However, the highest quality habitats (i.e., forested areas) on the Site would be preserved as open space. Weedy grassland would be replaced with non-weedy native landscaping that can benefit wildlife, especially small wildlife including insects, rodents and birds. Additional habitat areas may be enhanced or created within and adjacent to a proposed stormwater quality detention basins in the northeast and southwest corners of the Site adjacent to Lake Woodmoor. Management priorities should include weed control and enhancement of existing native vegetation in preservation areas. Altogether, the change to the landscape and management actions will help mitigate for the negative impact to wildlife communities.

## **6.7 State, CNHP and Federal Listed Species**

### **6.7.1 State T&E Species and Species of Concern**

State-listed T&E species within Colorado are identified on the Colorado Parks and Wildlife's list of Threatened and Endangered Species (CPW, 2021). The CPW's T&E Species list also includes Species of Concern as summarized in Section 4.0, Table 3 of this Report. The following state-listed species may be affected by the Project, but the impacts are considered negligible:

Northern leopard frog – The probability of impact to this species is low. The wetlands along Woodmoor Lake are good habitat for northern leopard frog. The Project would directly impact a very small area of these wetlands that is away from the open water where leopard frogs occur. Conversion of the Site to a residential development will probably result in increased use of fertilizers and herbicides that can harm amphibians. If the floodway includes check dams and naturalized areas, this could offset potential impacts to the frog by improving water quality and possibly increasing habitat.

### **6.7.2 CNHP Rare Species**

The Black Forest area includes many plant communities that are typically only found much farther east; and the CNHP list of rare plants reflects this. Due to the overall degraded nature of vegetation on the Site however, none of these species are expected to occur. Furthermore, most of the native habitat will be preserved. Thus, no impacts are expected.

### **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, there will be no impacts to federally designated threatened or endangered species and no need to initiate consultation with the USFWS under the ESA.

## **6.8 Raptors and Migratory Birds**

The Project is expected to have a slightly negative impact on raptors and migratory birds since open space would be lost. However, preservation of high value wetlands and forested areas along the east edge of the Site and use of native plantings would partially mitigate this impact.

## **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 waters of the U.S. along the north side of Woodmoor Lake (Wetland 2) and within the detention basin (Wetland 1). The 2016 Site design proposed impacts to these

areas, and as such a Nationwide Permit 29 was applied for and approved on June 9, 2017. However, given a 5-year lapse in time in which the Permit expired and the proposed site plan proposes new impacts to waters or wetlands, a new Section 404 Nationwide Permit 29 will be required and must be approved by the USACE prior to construction.

## **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. Therefore, there will be no impacts to federally designated threatened or endangered species and no need to initiate consultation with the USFWS under the ESA. The USFWS issued an ESA Clearance for the Site on June 9, 2020. That determination is not affected by the proposed Site Plan revisions (i.e., it is still valid) as it was based on onsite habitat suitability and connectivity to other suitable habitat, not the Site Plan. Onsite habitat conditions and connectivity to other viable habitat have not changed since 2020.

## **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 2022) and no migratory bird nests were observed within the Site. However, ecos recommends a nesting bird survey immediately prior to construction to identify any new nests within the Site or within the CPW recommended buffers of the Site. Construction activities should be restricted during the breeding season near any newly identified migratory bird nest.

## **7.4 Colorado Noxious Weed Act**

Ecos prepared a Weed Management Plan for the Site which should ensure Project compliance with the Act.

## 8.0 REFERENCES

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**Appendix A**  
**USDA Soil Data**

Soil Map—El Paso County Area, Colorado  
(The Cove)



Map Scale: 1:1,610 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Paso County Area, Colorado  
Survey Area Data: Version 13, Sep 22, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 15, 2011—Sep 22, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

El Paso County Area, Colorado (CO625)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Alamosa loam, 1 to 3 percent slopes	5.6	68.4%
41	Kettle gravelly loamy sand, 8 to 40 percent slopes	0.4	4.5%
71	Pring coarse sandy loam, 3 to 8 percent slopes	2.2	27.0%
111	Water	0.0	0.1%
<b>Totals for Area of Interest</b>		<b>8.2</b>	<b>100.0%</b>

**Appendix B**

**Commitment Letter to Provide Fire and Emergency Services**

**TRI-LAKES MONUMENT FIRE PROTECTION DISTRICT**  
**DONALD WESCOTT FIRE PROTECTION DISTRICT**  
16055 Old Forest Point, Suite 102  
Monument, CO 80132  
Bus: (719) 484-0911 Fax (719) 481-3456



Jamey Bumgarner, Division Chief

April 28, 2022

To Whom it may Concern:

The Tri-Lakes Monument Fire Protection District currently provides fire protection and emergency medical services to 70 square miles of northern El Paso County. Our current ISO rating is 3/3Y. The North Bay Subdivision is located within our current district boundaries, and we will continue to provide services to the property and divided lots.

Our Fire Station 3 is located at 1855 Woodmoor Drive and staffed 24 hours a day, located 1.0 miles from the Northbay Subdivision, and our units will arrive within 2 minutes. The ISO rating for the property will be 3.

Please let me know if you have additional questions.

Jamey Bumgarner

Division Chief / Fire Marshal

**Appendix C**  
**USFWS IPaC Trust Resource 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



## 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 species<sup>1</sup> 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 Fisheries<sup>2</sup>).

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. IPaC only shows species that are regulated by USFWS (see FAQ).
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
------	--------

Gray Wolf *Canis lupus*

Endangered

This species only needs to be considered if the following condition applies:

- Lone, dispersing gray wolves may be present throughout the state of Colorado. If your activity includes a predator management program, please consider this species in your environmental review.

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4488>

Preble's Meadow Jumping Mouse *Zapus hudsonius preblei*

Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4090>

## Birds

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

Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/10477>

Piping Plover *Charadrius melodus*

Threatened

This species only needs to be considered if the following condition applies:

- Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska.

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/6039>

## Fishes

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

Greenback Cutthroat Trout *Oncorhynchus clarkii stomias*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2775>

Pallid Sturgeon *Scaphirhynchus albus*

Endangered

Wherever found

This species only needs to be considered if the following condition applies:

- Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska.

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7162>

## Insects

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

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

## Flowering Plants

NAME	STATUS
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Ute Ladies'-tresses <i>Spiranthes diluvialis</i>	Threatened
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Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2159>

Western Prairie Fringed Orchid <i>Platanthera praeclara</i>	Threatened
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Wherever found

This species only needs to be considered if the following condition applies:

- Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska.

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1669>

## 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 Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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 <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.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.)
<p><b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p>	Breeds Oct 15 to Jul 31
<p><b>Ferruginous Hawk</b> <i>Buteo regalis</i></p> <p>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/6038">https://ecos.fws.gov/ecp/species/6038</a></p>	Breeds Mar 15 to Aug 15
<p><b>Pinyon Jay</b> <i>Gymnorhinus cyanocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9420">https://ecos.fws.gov/ecp/species/9420</a></p>	Breeds Feb 15 to Jul 15

## 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.

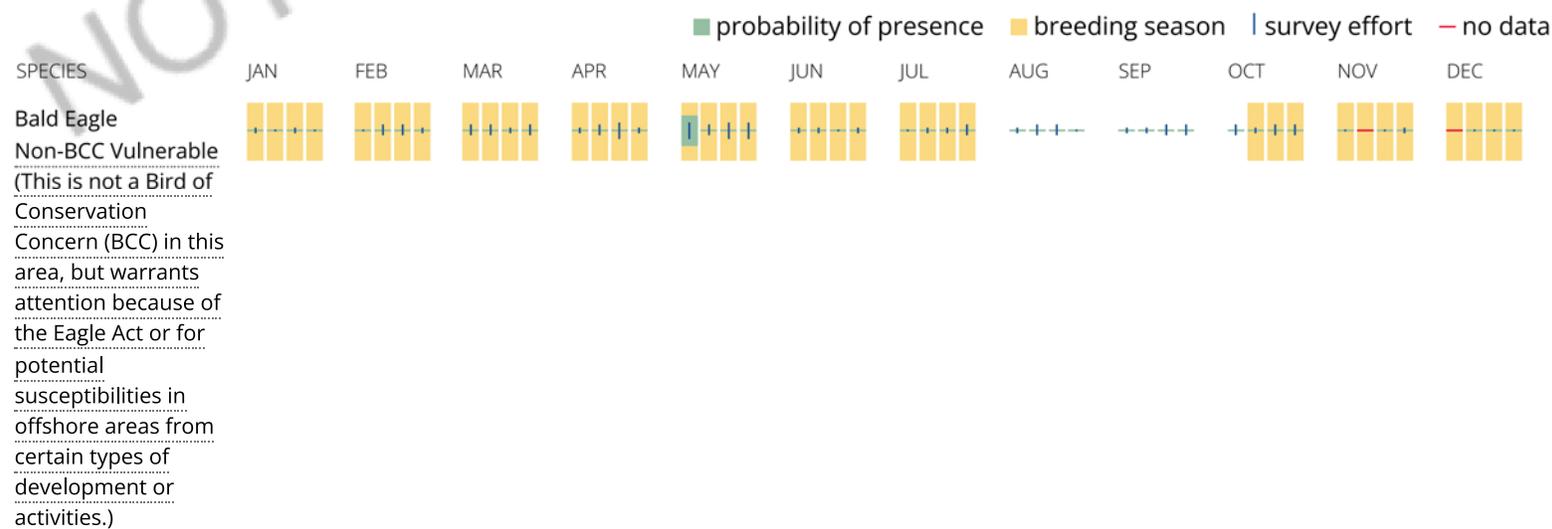
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (-)

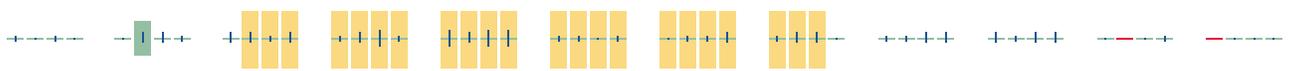
A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

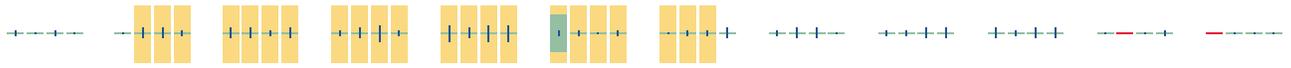
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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



Pinyon Jay  
BCC Rangewide (CON)  
(This is a Bird of  
Conservation  
Concern (BCC)  
throughout its range  
in the continental  
USA and Alaska.)



**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](#) 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 [AKN Phenology 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 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](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

### 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 D**  
**Mineral Estate Owner Certification**

CERTIFICATION:

I Brooks Swenson researched the records of the El Paso County Clerk and Recorder and established that there ~~was~~/was not a mineral estate owner(s) on the real property known as NORTH BAY AT LAKE WOODMOOR (TAX ID # 7111400007, 7111404111). 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 27 day of April, 2022.

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

The foregoing certification was acknowledged before me this 27 day of April, 2022, by Brooks Swenson.

Witness my hand and official seal.

My Commission Expires: 6/17/2022

CAROL E SMITH  
NOTARY PUBLIC  
STATE OF COLORADO  
NOTARY ID 19874188481  
MY COMMISSION EXPIRES JUNE 17, 2022

Carol E. Smith  
Notary Public

**Appendix E**  
**PMJM Clearance Letter**



## Informal Consultation Request

May 28, 2020

Mr. Drue DeBerry  
Acting Colorado Field Supervisor  
U.S. Fish and Wildlife Service  
Colorado Ecological Services Field Office  
134 Union Blvd., Suite 670  
Lakewood, Colorado 80228

**RE: Request for Technical Assistance Regarding the Likelihood of Take of Federally-listed Threatened and Endangered Species resulting from the proposed development of the North Bay at Lake Woodmoor Project in El Paso County, Colorado**

Dear Mr. DeBerry:

Ecosystem Services, LLC (ecos) has prepared the enclosed habitat evaluation on behalf of Lake Woodmoor Holdings, LLC (Applicant) to describe the physical/ecological characteristics of the 7.2-acre North Bay at Lake Woodmoor site (Site) and evaluate the potential effects of the proposed development project (Project) on the Federally-listed threatened and endangered (T&E) species protected under the Endangered Species Act (ESA).

The El Paso County Environmental Division has completed its review of the Project and has requested that the Applicant provide a "Clearance Letter" obtained from the U.S. Fish and Wildlife Service (USFWS) prior to project commencement "where the project will result in ground disturbing activity in habitat occupied or potentially occupied by threatened or endangered species and/or where development will occur within 300 feet of the centerline of a stream or within 300 feet of the 100 year floodplain, whichever is greater."

At this time there is no Federal action and no Federal agency is making a formal effects determination under Section 7 (a)(2) of the ESA. Therefore, ecos is requesting technical assistance from USFWS regarding the Applicant's (i.e., the non-federal party) responsibilities under the ESA, and specifically the likelihood of the Site development resulting in take of listed species. If the USFWS concurs with the findings presented herein we request that you issue an informal letter of concurrence for use in the El Paso County Project review process.

## 1.0 SITE LOCATION and PROJECT DESCRIPTION

The Site is located approximately 0.7-mile northeast of Monument in El Paso County, Colorado. It is situated east of I-25, south of Deer Creek Road, west of Autumn Way, and it abuts the northern end of Woodmoor Lake. The Site is bounded on the north by Deer Creek Road, on the south by Deer Creek Road, and on the west by the Waterfront Townhomes. The Site is specifically located within Section 11, Township 11 South, Range 67 West in El Paso County, Colorado (refer to Figure 1). The Applicant proposes to develop the Site as a planned community of 28 new townhome units that recognize and respect the distinctive character of the existing community and the adjacent ecosystem of Woodmoor Lake, including low density, spaciousness, open atmosphere, uncluttered environments, natural terrain and vegetation, and a tranquil setting.

