



## SMITH ENVIRONMENTAL & ENGINEERING

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June 6, 2022

Ronda Jo Ackerman Alford  
City and County of Broomfield  
One Descombes Drive  
Broomfield, CO 80020

### Subject: 20-Day Letter – Broomfield Tanks Project

Dear Ms. Ackerman Alford,

SMITH conducted a review of pertinent environmental resource information and conducted a pedestrian survey for several proposed boring locations in the City and County of Broomfield on June 6, 2022. SMITH assessed environmental resources including wetlands and aquatic features, threatened and endangered species, and other wildlife including migratory birds, raptors, and black-tailed prairie dogs (*Cynomys ludovicianus*). This report provides guidance for further actions, if needed, to comply with City, State, and Federal regulations or policy.

### STUDY AREA LOCATION

The Study Area consists of two small areas that total approximately 4.5 acres east of Lowell Boulevard, north of W 152<sup>nd</sup> Avenue, and south of Sheridan Parkway (Figure 1). The Study Area is located in Section 8, Township 1 South, Range 68 West on the Lafayette US Geological Survey (USGS) quadrangle. The Study Area is located at 39.974330 degrees north, 105.032188 degrees west, at an approximate elevation of 5,470 feet. The Study Area occurs within City and County of Broomfield open space. There are residential developments to the north and south of the Study Area, and Broomfield-owned open lands extend to the west across Lowell Boulevard.

### LANDFORM, HYDROLOGY, SOILS AND VEGETATION

The two Study Area locations are both generally flat, but the northern site is significantly elevated as compared to the southern site. No natural drainage features, agricultural ditches, or wetlands are present. Soils are mapped within the Study Area as Platner loam, 3 to 5 percent slopes, and Gravelly land-Shale outcrop complex (NRCS 2022). These soils occur on hillslopes and side slopes, and generally do not support wetlands.

The southern portion of the Study Area is undergoing active revegetation. There are planted trees, irrigation, and other planting areas with signage about natural vegetation. Weed growth was substantial in much of this area, with field bindweed (*Convolvulus arvensis*) being especially prevalent. East of the trail, there was more established grass cover, but also several state-listed noxious weeds including common mullein (*Verbascum thapsus*) and dalmatian toadflax (*Linaria dalmatica*).



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AND ENGINEERING**

250 Perry Lane  
Dacono, Colorado 80514  
(720) 887-4928, (720) 887-4680 (fax)



**BROOMFIELD TANKS  
PROJECT**

0 200 400  
Feet

Figure 1  
Study Area  
Broomfield, CO  
May 2022

The northern portion of the Study Area exhibited less disturbed vegetation, with a mix of native and nonnative grasses interspersed with mostly weedy forb species. Yucca (*Yucca glauca*) was a common subshrub throughout this area. There were no trees in this area.

## SURVEY RESULTS

### Wetlands and Aquatic Features

Dredge and fill activities in Waters of the United States (WOTUS) are regulated under federal regulations at 33 CFR parts 320 through 330, pursuant to Section 404 of the Clean Water Act (CWA), and Executive Order 11990. The US Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) are responsible for implementing the CWA and have defined which aquatic features fall under the jurisdiction of the CWA. In general, water features, including wetlands, are considered to be WOTUS if they have a surface water or groundwater connection to traditionally navigable waters, though many exclusions exist for ditches, wastewater treatment systems, converted cropland, etc. No wetlands or aquatic features were identified in the Study Area.

### Threatened and Endangered Species

Ten federally listed threatened and endangered species are identified by the US Fish and Wildlife Service (USFWS 2022) as potentially being affected by projects occurring in Broomfield. Habitat for three of these species (Piping Plover, Whooping Crane, pallid sturgeon, and western prairie fringed orchid) does not occur in Broomfield; however, water-related activities or use in the North Platte, South Platte and Laramie River Basins may affect downstream habitats for these species in Nebraska. The remaining species are discussed in Table 1 below.

**Table 1. Threatened and Endangered Species with Potential to Occur in Broomfield County, Colorado.**

SPECIES	STATUS	HABITAT REQUIREMENTS
Canada lynx ( <i>Lynx canadensis</i> )	Threatened	Northern coniferous forests are the preferred habitat of the lynx. These conditions do not occur in the Project Area.
Gray wolf ( <i>Canis lupus</i> )	Endangered	The USFWS requires that the gray wolf be considered if the proposed activity includes a predator management program. Though the USFWS asserts that lone, dispersing gray wolves may be present throughout the state, the only recent sightings have occurred in northwestern Colorado, and they are not believed to have crossed into the Front Range.
Greenback cutthroat trout ( <i>Oncorhynchus clarki stomias</i> )	Threatened	The trout occurs in cold, clear, oxygenated streams of moderate gradient with overhanging branches, undercut banks and eddies behind rubble. Genetic analysis has shown that the only true population of the trout currently survives in Bear Creek west of Colorado Springs (Metcalf et al. 2012).
Monarch butterfly ( <i>Danaus plexippus</i> )	Candidate	As a Candidate, the monarch is not afforded full protection but may warrant consideration for long-term planning or large projects. As this project does not meet those criteria, no specific actions would be recommended at this time.

SPECIES	STATUS	HABITAT REQUIREMENTS
Preble's meadow jumping mouse ( <i>Zapus hudsonius preblei</i> )	Threatened	Preferred habitat for the Preble's meadow jumping mouse includes well-developed plains riparian vegetation with adjacent, undisturbed grasslands and a nearby water source. The Project Area is located within USFWS Denver Metropolitan Block Clearance Zone for the mouse (2019).
Ute ladies'-tresses orchid ( <i>Spiranthes diluvialis</i> )	Threatened	The Ute ladies'-tresses orchid is known to occur in seasonally moist soils and wet meadows between 4,500 and 6,500 ft. There are no known populations in Broomfield (Colorado Natural Heritage Program 1997+). Potentially suitable habitat is not found in the Project Area.

### Tier I Species of Greatest Conservation Need

The Colorado State Wildlife Action Plan includes a list of Species of Greatest Conservation Need, which have been identified by Colorado Parks and Wildlife (CPW). The list is divided into two tiers, with Tier I species representing the highest degree of conservation priority. Seven of these species have the potential to occur in Broomfield (Table 1).

**Table 1. CPW Tier I Species with Potential to Occur in Broomfield County, Colorado**

Amphibians	
Northern leopard frog	<i>Lithobates pipiens</i>
Birds	
Burrowing Owl	<i>Athene cunicularia</i>
Golden Eagle	<i>Aquila chrysaetos</i>
Mammals	
Fringed myotis	<i>Myotis thysanodes</i>
Little brown myotis	<i>Myotis lucifigus</i>
Olive-backed pocket mouse	<i>Perognathus fasciatus</i>
Preble's meadow jumping mouse	<i>Zapus hudsonius preblei</i>

The only Tier I species with potential to occur within the vicinity of the Study Area are the Burrowing Owl and the Golden Eagle. Golden Eagles prefer to nest in cliffs and canyon areas but will also nest in trees in more open habitats. No eagles were observed during the pedestrian survey. They may occasionally be observed, but they are unlikely to use the Study Area.

Burrowing Owls are strongly associated with prairie dog colonies and are commonly found nesting in their burrows (Wickersham 2016). The nesting season in Colorado occurs from March 15 through October 31, though migrating or over-wintering owls could potentially use prairie dog colonies between October 31 and March 15. SMITH did not identify any prairie dog burrows within the Study Area or on adjacent properties. Therefore, Burrowing Owl surveys are not recommended.

## Wildlife

Wildlife typically present in grasslands along the Front Range include perching birds, raptors, small- and medium-size herbivores (rodents and rabbits), carnivores (foxes, coyotes, raccoons, and weasels), and ungulates (deer and elk). The Study Area does provide above average wildlife habitat as compared to most developed areas throughout the City and County of Broomfield. Small birds and rodents use the Study Area, and larger species may pass through the Study Area as they move within the landscape. There is some disturbance within the Study Area, primarily from ongoing home construction north of the Study Area, and the vegetation generally lacks the structural diversity that would provide cover and forage for many species.

### **Migratory Birds**

The Migratory Bird Treaty Act (MBTA) of 1918 as amended prohibits "take" of migratory birds, their eggs, feathers or nests. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg or part thereof. The typical annual nesting period for most birds begins in mid-April and extends through August. Some raptors (eagles and owls) nest as early as February.

The Study Area provides nesting, foraging, and shelter habitat primarily for ground-nesting birds. SMITH conducted a pedestrian survey to determine if any active nests are present. Active grassland and perching bird nests should be protected by a 50-foot buffer until chicks fledge. This is a standard buffer distance used by the Colorado Department of Transportation (CDOT). SMITH wildlife biologists concur with this recommended buffer and implement it on non-CDOT projects. SMITH did not identify any active bird nests during the site investigation.

### **Raptors**

The nesting season for raptors begins as early as February and extends through the summer. CPW has established seasonal restrictions and recommended protective buffer zones of 0.25 – 0.33 miles around non-eagle raptor nest sites (CPW 2020) (Figure 2). There are no trees in the Study Area that could support nesting raptors, and there is minimal nesting habitat in the surrounding area. SMITH assessed all potential nesting sites within the CPW buffers but did not identify any active nests.

### **Bald and Golden Eagles**

Bald (*Haliaeetus leucocephalus*) and Golden (*Aquila chrysaetos*) Eagles are protected under the Bald and Golden Eagle Protection Act. It is unlawful to "take" Bald or Golden eagles, their parts, nests, or eggs. CPW has established seasonal protective buffer zones of 0.5 miles around eagle nest sites (CPW 2020) (Figure 2). In Colorado, Bald Eagles nest primarily in large cottonwood trees, and in the Front Range, they frequently use trees on reservoir edges. They also frequently forage around streams and reservoirs in the winter (Wickersham 2016).

No eagles or their nests were observed within or adjacent to the Study Area during the pedestrian survey. The Study Area is outside CPW mapped winter range and does not contain roost sites. The closest mapped eagle nest is approximately 3.5 miles to the east of the Study Area. Eagles may occasionally be observed within the vicinity of the Study Area, but SMITH believes eagles do not use the Study Area for nesting, foraging, or roosting.



**Legend**

-  Study Area
-  Third-mile Buffer
-  Half-mile Buffer

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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250 Perry Lane  
 Dacono, Colorado 80514  
 (720) 887-4928, (720) 887-4680 (fax)



**BROOMFIELD TANKS PROJECT**

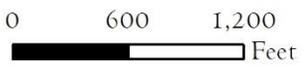


Figure 2  
 Raptor Buffers  
 Broomfield, CO  
 May 2022

## **Black-tailed prairie dogs**

There are no prairie dog colonies located within the vicinity of the Study Area. No additional actions are necessary under the City and County of Broomfield Policies for Prairie Dog Conservation and Management.

## **CONCLUSIONS AND RECOMMENDATIONS**

Based upon our review of existing information and the June 6, 2022, pedestrian survey of the Study Area, SMITH offers the following conclusions and recommendations:

1. SMITH did not identify any aquatic features in the Study Area. Permitting or pre-construction notice to the USACE is not required.
2. No suitable habitat for federally listed threatened or endangered species exists in the Study Area, and no impacts to these species will occur.
3. Burrowing Owls are the only Tier 1 Species with potential to occur in the Study Area, and Golden Eagles may occur within 0.5 miles. Burrowing Owl detection surveys are not recommended due to the absence of burrows within the Study Area
4. No active bird nests were identified on the ground or in adjacent trees. Raptor nests were not detected within the recommended CPW buffers.
5. No eagles or eagle nests were observed within 0.5 miles of the Study Area. The nearest Bald Eagle nest is located 3.5 miles to the east. Bald and Golden Eagles may forage within the vicinity of the Study Area, but they will not be affected by the proposed activities.
6. No prairie dogs or signs of their burrows were observed within or adjacent to the Study Area. If you have any questions regarding the information or recommendations presented in this report, please contact me at 303.551.7983.

Sincerely,  
Smith Environmental and Engineering



Rebecca Hannon  
Project Manager/Environmental Scientist III

## **LITERATURE CITED**

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## APPENDIX A – PHOTOGRAPHS



**Photo 1.** View looking west across the southern portion of the Study Area.



**Photo 2.** View looking west across the northern portion of the Study Area.