



E **88TH** AVE  
8800 N

**I-76 NB RAMPS TO HIGHWAY 2**



# BIOLOGICAL RESOURCES TECHNICAL REPORT

May 2021

*Prepared for:*  
City of Commerce City



ENVIRONMENTAL ASSESSMENT



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## Acronyms and Abbreviations

BGEPA	Bald and Golden Eagle Protection Act
BNSF	BNSF Railway
CDOA	Colorado Department of Agriculture
CDOT	Colorado Department of Transportation
CDOT	Colorado Department of Transportation
CNHP	Colorado Natural Heritage Program
CPW	Colorado Parks and Wildlife
E. 88th Avenue	East 88th Avenue
EA	Environmental Assessment
ESA	Endangered Species Act
FHWA	Federal Highway Administration
I-25	Interstate 25
I-76	Interstate 76
IPaC	Information, Planning and Conservation System
MBTA	Migratory Bird Treaty Act
NB	northbound
NEPA	National Environmental Policy Act
PBA	Programmatic Biological Assessment
SB 40	Senate Bill 40
U.S.	United States
UPRR	Union Pacific Railroad
USFWS	U.S. Fish and Wildlife Service

# Contents

	Page No.
1.0 Introduction .....	1
2.0 Regulatory .....	2
3.0 Biological Resources .....	3
3.1 Methods .....	3
3.2 Vegetation and Habitat .....	3
3.3 Noxious Weeds .....	4
3.4 Threatened and Endangered Species .....	5
3.5 State-listed Species .....	7
3.5.1 Bald Eagle .....	7
3.5.2 Western Burrowing Owl .....	8
3.5.3 Ferruginous Hawk .....	8
3.5.4 Black-tailed Prairie Dog .....	8
3.5.5 Common Garter Snake and Northern Leopard Frog .....	9
3.5.6 Raptors and Migratory Birds .....	9
3.5.7 Terrestrial Mammals .....	9
3.5.8 Fish, Reptiles and Amphibians .....	10
3.6 Senate Bill 40 Riparian Resources .....	10
4.0 Impacts Evaluation .....	10
4.1 No-Action Alternative .....	11
4.2 Proposed Action .....	11
4.2.1 Vegetation and Noxious Weeds .....	11
4.2.2 Federally Listed Species .....	12
4.2.3 State-listed Species .....	13
4.2.4 Bald Eagle .....	13
4.2.5 Western Burrowing Owl .....	13
4.2.6 Ferruginous Hawk .....	13
4.2.7 Black-tailed Prairie Dog .....	14
4.2.8 Common Garter Snake and Northern Leopard Frog .....	14
4.2.9 Raptors and Migratory Birds .....	14
4.2.10 Terrestrial Mammals .....	15
4.2.11 Senate Bill 40 Riparian Resources .....	15
5.0 Agency Coordination .....	15
6.0 Mitigation .....	16
7.0 References .....	20

## Appendix

Appendix A. USFWS online IPaC System

## Figures

	Page No.
Figure 1. E. 88th Avenue Location Map.....	1
Figure 2. Project Study Area .....	1
Figure 3. Prairie Dog Colony and Raptor Nest .....	8
Figure 4. Proposed Action Design Elements .....	12

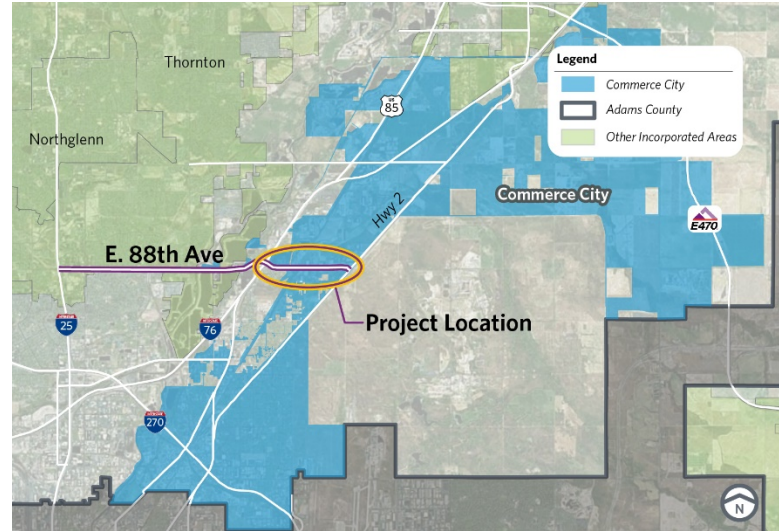
## Tables

Table 1. Noxious Weed Species Observed in the Project Study Area .....	4
Table 2. Federal and State-Listed Species and their Potential to Occur in the Project Study Area.....	5
Table 3. Summary of Impacts and Mitigation .....	16

## 1.0 INTRODUCTION

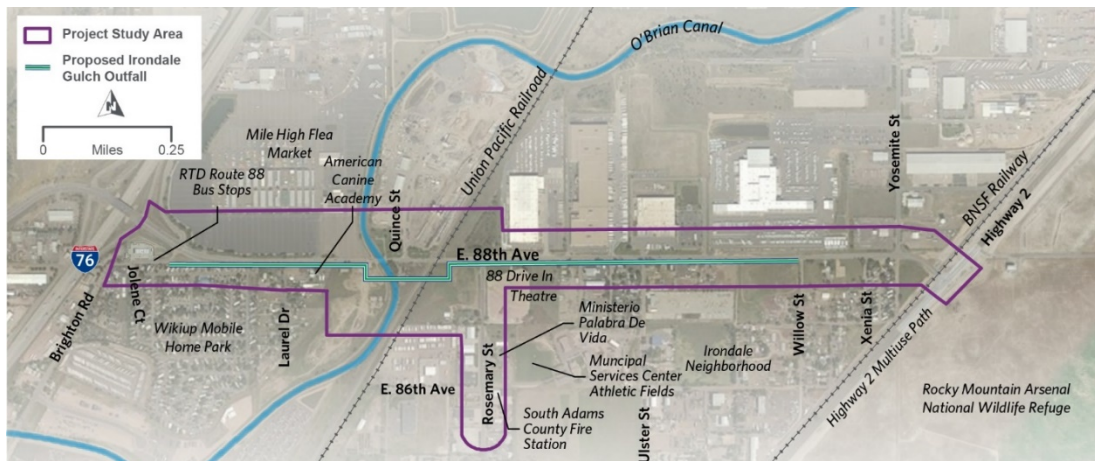
The City of Commerce City, in consultation with the Federal Highway Administration (FHWA) and the Colorado Department of Transportation (CDOT), is proposing to improve approximately 1.6 miles of East 88th Avenue (E. 88th Avenue) between Interstate 76 (I-76) and Highway 2, and on Rosemary Street between E. 88th Avenue and East 86th Avenue (E. 86th Avenue). The Environmental Assessment (EA) describes the Purpose and Need, alternatives considered, the Proposed Action, environmental effects and mitigation, and the public and agency involvement process for the E. 88th Avenue (I-76 to Highway 2) Project (project).

Figure 1. E. 88th Avenue Location Map



E. 88th Avenue is a continuous east-west roadway that runs through Adams County, Colorado, from Interstate 25 (I-25) to Highway 2 (Figure 1). The land uses along the corridor are residential, commercial, and industrial. The residential land uses primarily occur at the east and west ends of the project study limits. The Mile High Flea Market and 88 Drive-In Theatre commercial properties generate considerable event traffic, and the industrial properties generate heavy truck traffic. The project study area extends approximately north and south 200 to 700 feet from the center of E. 88th Avenue, and approximately east and west 230 feet from the center of Rosemary Street and 650 feet south of E. 86th Avenue (Figure 2). Within the project study area, E. 88th Avenue crosses over the O'Brian Canal on a bridge, crosses a Union Pacific Railroad (UPRR) track at grade west of Rosemary Street, and crosses BNSF Railway (BNSF) tracks at grade west of Highway 2.

Figure 2. Project Study Area



This document discusses the regulatory setting and describes the affected environment and the impacts of the Proposed Action on biological resources (including vegetation, weeds, wildlife, and special status species) within the project study area. This document also identifies mitigation measures, including applicable measures to reduce impacts during construction and operation.

## 2.0 REGULATORY

This report was prepared to ensure impacts to biological resources are determined in accordance with the following federal and state regulations:

- ◆ Endangered Species Act (ESA)—The ESA is administered by the U.S. Fish and Wildlife Service (USFWS) and protects plant and wildlife species threatened with extinction with the goal of ensuring their long-term survival.
- ◆ Migratory Bird Treaty Act (MBTA)—The MBTA (16 U.S.C. 703-712) protects migratory birds, and their nests, eggs, young, and parts from possession, sale, purchase, barter, transport, import, and export, and take. Bald and Golden Eagle Protection Act (BGEPA)—The BGEPA prohibits individuals and companies from knowingly, or with wanton disregard for the consequences of the Act, taking any bald or golden eagles or their body parts, nests, chicks, or eggs, which includes collection, molestation, disturbance, or killing.
- ◆ Colorado Non-game, Endangered, and Threatened Species Conservation Act—Colorado Parks and Wildlife (CPW) is responsible for listing species of concern, threatened, and endangered within the state. This act provides some protection for state listed wildlife.
- ◆ Black-tailed Prairie Dog Protection—Based on municipal and agency policies and the most stringent policy for a given area must be followed. In CDOT right-of-way, the applicable policies that will be followed are the CDOT Impacted Black-tailed Prairie Dog Policy (CDOT, 2009) and the Black-tailed Prairie Dog Relocation Guidelines (CDOT, 2002).
- ◆ Short-Grass Prairie Initiative (SGPI) – This CDOT initiative covers a little more than a third of the state, extending out to the eastern border. It goes from the northern to southern most points of the state and protects up to 50,000 acres of the short-grass prairie in eastern Colorado. This allows for CDOT projects that impact short-grass prairie to offset the project’s impacts against the areas that have been created through the SGPI.
- ◆ Colorado Senate Bill 40 (SB 40)—CDOT is required to obtain certification from CPW when the agency plans construction in any stream, tributary, or stream bank. The certification identifies mitigation measures for working in these areas.
- ◆ Noxious Weeds—The Colorado Department of Agriculture (CDOA) Noxious Weed Act of 2003 (CRS 35-5-101; CRS 35-5.5-101; and Executive order D-00699) identifies state designated noxious weeds and provides recommendations for managing noxious weeds.
- ◆ Waters of the U.S. including Wetlands—Are regulated under Section 404 of the Clean Water Act by the U.S. Army Corps of Engineers, and are addressed under a separate technical report (Waters of the United States Technical Report; Commerce City 2019).

## 3.0 BIOLOGICAL RESOURCES

### 3.1 Methods

Sirena Brownlee, HDR Senior Biologist and Alex Nelson, CDOT R1 Biologist conducted a biological resource survey in the project study area on February 4, 2019. The survey area included a 0.25-mile buffer from the edge of 88th Avenue for federally listed species and raptors. HDR collected biological resource data using ESRI ArcCollector software. Prior to conducting biological surveys, a desktop review of all available data for biological resources was conducted. The desktop review and field surveys identified the following biological resources in the project study area:

- ◆ Federal candidate, threatened, and endangered species, as identified by the USFWS Information, Planning and Conservation System (IPaC) System (USFWS, 2020).
- ◆ Colorado sensitive, threatened, and endangered species as identified on the CPW (CPW, 2019a) and Colorado Natural Heritage Program (CNHP) websites (CNHP, 2019).
- ◆ Raptor nests and other migratory bird nests protected under the Migratory Bird Treaty and Bald and Golden Protection Act.
- ◆ Black-tailed prairie dog colonies.
- ◆ Noxious weeds based on CDOT Noxious Weed Mapping (CDOT, 2019a) and biological resources surveys.

### 3.2 Vegetation and Habitat

The project study area is located in an industrial and commercial area with some residential areas on the south side of E. 88th Avenue. The right-of-way crosses a few parcels that are not developed and primarily dominated by non-native species. The project study area occurs at an elevation of approximately 5,150 feet. The general habitat types within the project study area include disturbed grassy/weedy roadside habitat and landscaped areas. The area has an average annual precipitation of approximately 16 inches, an annual max temperature of 63 degrees, and an average minimum temperate of 35 degrees Fahrenheit (Western Regional Climate Center, 2015). The project study area falls within the South Platte River Basin, which covers approximately 24,300 square miles.

Disturbed/developed lands are the most dominant habitat type in the project study area. The Proposed Action would generally be located within existing disturbed roadway right-of-way that does not provide suitable habitat for most native wildlife species. Dominant species along much of the disturbed roadside upland habitats included: smooth brome (*Bromus inermis*), Canada thistle (*Cirsium arvense*), downy brome (*Bromus tectorum*), kochia (*Kochia scoparia* L.), puncturevine (*Tribulus terrestris*), Russian thistle (*Salsola tragus* L.), soapweed yucca (*Yucca angustifolia*), common mullein (*Verbascum thapsus*), diffuse knapweed (*Centaurea diffusa*), and a variety of landscape grasses. Kochia was observed throughout the project study area, sometimes forming dense stands in disturbed areas. Scattered shrubs and trees in the project study area included rabbitbrush (*Chrysothamnus nauseosus*), Siberian elm (*Ulmus pumila*), Russian olive (*Elaeagnus angustifolia*), and plains cottonwood (*Populus deltoides*).

The Rocky Mountain Arsenal National Wildlife Refuge (Refuge) is located adjacent to the project study area on the east side (Figure 1). The Refuge provides habitat for a variety of raptors, migrating songbirds,



wintering ducks and geese and habitat for many mammal species including American bison (*Bison bison*), coyotes (*Canis latrans*), prairie dogs (*Cynomys ludovicianus*) and deer (*Odocoileus* spp.).

The O’Brian Canal bisects the project study area just west of the railroad crossing of E. 88th Avenue. Riparian habitat along the O’Brian Canal included plains cottonwood, smooth brome, kochia, and other seasonally unidentifiable forbs and grasses. One detention pond is located adjacent to the project study area on the north side of E. 88th Avenue just east of the railroad crossing. Wetland and open water habitat within the project study area included plains cottonwood, Siberian elm, cattail (*Typha* spp.), and rushes (*Schoenoplectus* sp.).

### 3.3 Noxious Weeds

As defined by the CDOA, noxious weeds are plants that reduce agricultural productivity, lower real estate values, endanger human health and well-being, and damage scenic values (CDOA, 2019). The Colorado Noxious Weed Act §§ 35-5.5-101 through 119, C.R.S. as amended, states that an organized and coordinated effort must be made to stop the spread of noxious weeds.

The CDOA maintains a noxious weed list that designates and classifies noxious weeds according to recommended control. List A species were designated by the Commissioner for eradication. List B species are species the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, developed and implemented into state noxious weed management plans designed to stop the continued spread of these species. List C species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, will develop and implement into state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands.

Adams County maintains a noxious weed list and enforces the Colorado Noxious Weed Act by providing noxious weed management plans for County land and recommendations for landowners. Adams County established a Noxious Weed Management Plan (Adams County Plan) and a Noxious Weed Enforcement Policy in May 2008. Under the Adams County Plan, Adams County has adopted the state weed list, and has added two noxious weeds as B-List species: Japanese knotweed (*Polygonum cuspidatum*) and common reed (*Phragmites australis*).

The project team reviewed preliminary noxious weed mapping data from CDOT’s Online Transportation Information System (OTIS), and there is no data available for E. 88th Avenue (CDOT, 2019b).

A total of six “List B and C” noxious weed species were identified during 2019 biological surveys in the project study area. No “List A” species were found. The noxious weeds were widespread within the road right-of-way and were the dominant species in the right-of-way. Table 1 presents the common name, scientific name, and state weed list designation.

Table 1. Noxious Weed Species Observed in the Project Study Area

Common Name	Scientific Name	State Noxious Weed List
Canada thistle	<i>Cirsium arvense</i>	List B
Common mullein	<i>Verbascum thapsus</i>	List C
Diffuse knapweed	<i>Centaurea diffusa</i>	List B
Downy brome (cheatgrass)	<i>Bromus tectorum</i>	List C

Table 1. Noxious Weed Species Observed in the Project Study Area

Common Name	Scientific Name	State Noxious Weed List
Puncturevine	<i>Tribulus terrestris</i>	List C
Russian olive	<i>Elaeagnus angustifolia</i>	List B

### 3.4 Threatened and Endangered Species

Based on the USFWS online IPaC System (Appendix A), there are nine federally listed threatened or endangered species with the potential to occur in the project study area (USFWS, 2020). None of these species are anticipated in the project study area because of a lack of suitable habitat. Five of these species can be affected by water depletions from the South Platte River downstream in other states. No critical habitat for any federally listed species occurs in the project study area. No further evaluation is deemed necessary for those species not known or suspected to occur within the project study area.

The CPW lists 74 species of amphibians, birds, fish, mammals, reptiles, and mollusks as endangered, threatened, or of special concern within the state of Colorado (CPW, 2019a). The distribution and habitat preferences of each state-listed species were identified and the potential for each of these species to occur in the project study area was analyzed. The majority of these species are not expected to occur in the project study area because it is outside of their range and/or the appropriate habitat is not present. A total of six state-listed threatened or state special concern species have potential habitat in the project study area. Table 2 lists the federal and state-listed species that may occur within the project study area and their potential for occurrence.

Table 2. Federal and State-Listed Species and their Potential to Occur in the Project Study Area

Species	Status <sup>1</sup>	Habitat	Potential for Occurrence in Project Study Area
<b>Birds</b>			
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	SC	Habitat includes reservoirs and rivers. In winter they may also occur locally in semideserts and grasslands, especially near prairie dog towns.	Low potential for occurrence due to lack of open water habitat in project study area. Bald eagle winter forage and winter range habitat is located adjacent to the project study area in the Refuge. There are no mapped nests sites near the project study area (CPW 2019b).
Burrowing Owl ( <i>Athene cunicularia</i> )	ST	Prairie dog colonies are primarily used by the owl for nesting and hunting. The owl is a migrant that can arrive in March and is typically migrating south by October.	Low potential for occurrence in project study area due to adjacent commercial and residential development. Nesting and foraging habitat is present in black-tailed prairie dog towns in the Refuge. Ebird documents Burrowing owls as common on the Refuge (Sullivan et al, 2009).
Ferruginous Hawk ( <i>Buteo regalis</i> )	SC	Open areas such as grassland or shrubsteppe. Nests in rock outcrops, buttes, large shrubs, haystacks, and low cliffs.	Low potential for foraging habitat present in prairie dog colonies in and adjacent to project study area.

Table 2. Federal and State-Listed Species and their Potential to Occur in the Project Study Area

Species	Status <sup>1</sup>	Habitat	Potential for Occurrence in Project Study Area
Least Tern* ( <i>Sterna antillarum</i> )	FE, SE	Nests along reservoirs, lakes, and rivers with bare sandy shorelines or islands along several rivers in Nebraska.	No suitable habitat in project study area; however, downstream impacts could occur.
Mexican Spotted Owl ( <i>Strix occidentalis lucida</i> )	FT, ST	Old-growth forests in western North America, where it nests in tree holes, old bird of prey nests, or rock crevices	No suitable habitat is present in the project study area.
Mountain Plover ( <i>Charadrius montanus</i> )	SC	Requires open grassland for nesting. Will use other habitats during the migration in the spring and fall.	No suitable habitat is present in the project study area.
Piping Plover* ( <i>Charadrius melodus</i> )	FT, ST	Wetlands, lakeshores, and marshes. Nesting habitat is along reservoirs, lakes, and rivers with bare sandy/pebbly areas with sparse vegetation.	No suitable habitat in project study area; however, downstream impacts could occur.
Whooping Crane* ( <i>Grus Americana</i> )	FE, SE	Mid-river sandbars, wet meadows, and reservoir edges along the Platte River in Nebraska.	No suitable habitat in project study area; however, downstream impacts could occur.
<b>Mammals</b>			
Black-tailed prairie dog ( <i>Cynomys ludovicianus</i> )	SC	Habitat consists of intermixed shrublands, sagebrush habitat, and/or shortgrass and mixed grass prairie.	Suitable habitat present in project study area. One small black-tailed prairie dog colony is present in the project study area (Figure 3).
Black-footed ferret ( <i>Mustela nigripes</i> )	FE, SE	Occurs in grasslands or shrublands in association with prairie dog colonies.	No suitable habitat in project study area. Highway 2 is likely a barrier to black-footed ferrets crossing into the study area. It is unlikely they would cross Highway 2 since there are no adjacent prairie dog colonies that would provide prey species. Managed experimental population is located in Rocky Mountain Arsenal National Wildlife Refuge.
Preble's meadow jumping mouse ( <i>Zapus hudsonius preblei</i> )	FT, ST	Occurs along Front Range of Colorado along permanent or intermittent streams in areas with herbaceous cover and adequate cover of shrubs and trees.	No suitable habitat in project study area and project study area is located within the Denver Metro Block Clearance Zone.
<b>Fish</b>			
Pallid Sturgeon* ( <i>Scaphirhynchus albus</i> )	FE	Inhabits large, silty rivers with a diversity of depths and velocities formed by braided channels, sand bars, sand flats and gravel bars.	No suitable habitat in project study area; however, downstream impacts could occur.

Table 2. Federal and State-Listed Species and their Potential to Occur in the Project Study Area

Species	Status <sup>1</sup>	Habitat	Potential for Occurrence in Project Study Area
<b>Amphibians and Reptiles</b>			
Northern leopard frog ( <i>Rana pipiens</i> )	SC	Suitable breeding habitat found in streams, natural lakes and ponds, glacial kettles, stock ponds and reservoirs, marshes and wetlands.	Potential suitable habitat may be present in detention pond located within project study area.
Common garter snake ( <i>Thamnophis sirtalis</i> )	SC	Wetlands, ponds, and the edges of streams	Potential suitable habitat may be present along O’Brian Canal and detention pond within project study area.
<b>Plants</b>			
Ute ladies’ tresses orchid ( <i>Spiranthes diluvialis</i> )	FT	Sub-irrigated alluvial soils along streams; open meadows on floodplains including riparian areas.	No suitable habitat in project study area.
Western prairie fringed orchid* ( <i>Platanthera praeclara</i> )	FT	Occurs in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches in Nebraska	No suitable habitat in project study area; however, downstream impacts could occur.

Source: USFWS, 2020; CPW, 2019a.

<sup>1</sup>Status Codes: FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; ST = State Threatened, SC = State Special Concern.

\* Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.

The Platte River species listed in Table 2 do not occur in the project study area but are included because they can be affected by water depletions from the South Platte River downstream in other states. These species include the Least tern, Pallid sturgeon, Piping plover, Whooping crane, and western prairie fringed orchid. The O’Brian Canal is a diversion of the South Platte River approximately 5 miles south of the project study area.

### 3.5 State-listed Species

#### 3.5.1 Bald Eagle

The Bald eagle is afforded special protections under the Bald and Golden Eagle Protection Act of 1940 and is also considered a state species of special concern. Colorado populations of Bald eagles typically nest in large cottonwood trees along rivers and reservoirs. In winter, they may also occur locally in semi-deserts and grasslands, especially near prairie dog towns. Bald eagle winter forage and winter range habitat is located adjacent to the project study area in the Refuge. There are no mapped nests sites near the project study area; however, a pair has been successfully nesting at the adjacent Refuge since 2002 (CPW, 2019b). The degree to which Bald eagles use the project study area is unknown; however, because the project study area is surrounded by development and human activity, the foraging habitat is

likely marginal. There are no rivers and reservoirs in the project study area; however, there are a few large trees that may be suitable for roosting. They may pass through the project study area as they travel between the Platte River and the Refuge.

### 3.5.2 Western Burrowing Owl

The Western burrowing owl is listed as a state threatened species, primarily from loss of prairie dogs and prairie dog towns due to development. This small owl is primarily found in grasslands and mountain parks, usually in or near prairie dog towns. The Burrowing owl also uses well-drained, steppes, deserts, prairies, and agricultural lands. There is one small prairie dog colony in the project study area surrounded by residential and commercial development. Most nesting Burrowing owls appear to avoid rights-of-way and adjacent disturbed areas, and experts consider these areas permanently lost as breeding habitat (Grunau and Lavender, 2002). Therefore, it is unlikely that burrowing owls utilize the project study area for breeding but they could use habitat in the project study area for foraging or migratory stopover habitat. The Colorado Breeding Bird Atlas documents confirmed breeding in Adams County (Wickersham, 2016). Burrowing owls have been documented breeding in the Refuge (Sullivan et al., 2009).

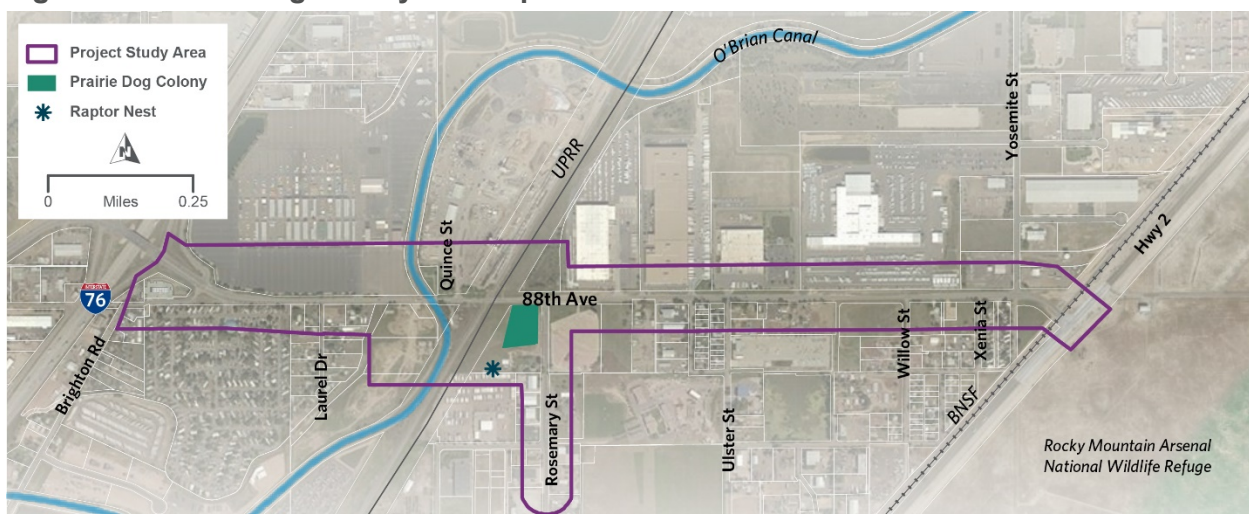
### 3.5.3 Ferruginous Hawk

Ferruginous hawks inhabit grasslands and semi-desert shrublands, and are rare in pinyon-juniper woodlands. Breeding birds nest in isolated trees, on rock outcrops, structures such as windmills and power poles, or on the ground. Winter residents forage in and around prairie dog colonies. Suitable Ferruginous hawk foraging habitat is present within the project study area due to the presence of prairie dogs in the project study area and adjacent Refuge. Ferruginous hawks are present on the Refuge during the winter months (Sullivan et al., 2009).

### 3.5.4 Black-tailed Prairie Dog

During the February 2019 field survey, one active, black-tailed prairie dog colony was documented on the south side of E 88th Avenue just west of Rosemary Street (Figure 3). Approximately 50 active burrows were located within this 2-acre colony. The entire project study area is mapped by CPW as Black-tailed prairie dog habitat (CPW, 2019c).

**Figure 3. Prairie Dog Colony and Raptor Nest**



### 3.5.5 Common Garter Snake and Northern Leopard Frog

Habitat for the common garter snake and northern leopard frog consists of wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches. Suitable habitat for the common garter snake and northern leopard frog may be present at the detention pond in the project study area.

### 3.5.6 Raptors and Migratory Birds

Migratory birds, as well as their eggs and nests, are protected under the MBTA. With the exception of House Sparrow, Rock Dove (Common or Feral Pigeon), European Starling, and resident game birds such as Pheasant and Grouse, all wild birds commonly found in the U.S. are protected by the MBTA. All active nests are protected, including cavity nests (e.g., Flicker), ground nests (e.g., Killdeer), and subterranean nests (e.g., Burrowing Owl).

There is no prohibition that applies to the destruction of a bird nest alone (without birds or eggs), as long as possession does not occur during the destruction. For projects with a potential to impact migratory bird nests, CDOT requires Project Special Specification 240 limits construction activity around nests between April 1 to August 31 for migratory birds and February 1 to August 31 for raptors (CDOT, 2019c).

A survey for raptor nests was completed during biological resources field work conducted in February 2019. One raptor nest was documented within the project study area. The nest is located about 620 feet south of E. 88th Avenue in a large cottonwood tree on private property (Figure 3). The nest was inactive; however, several red-tailed hawks (*Buteo jamaicensis*) were observed nearby. The adjacent Refuge provides habitat for an abundance of prairie dogs which is a source of prey for many raptors. Raptors observed within the project study area during biological surveys include Red-tailed hawk, Northern harrier (*Circus cyaneus*), and Bald eagle (*Haliaeetus leucocephalus*).

One black-billed magpie (*Pica hudsonia*) nest and several American robin (*Turdus migratorius*) nests were observed within the project study area. All were inactive at the time of the survey. No other migratory bird nests were documented and habitat for most migratory songbirds is limited due to the lack of suitable habitat and commercial and urban development in the corridor. No swallow nests or migratory bird nests were observed on the O'Brian Canal bridge.

The project study area is mapped as Canada goose (*Branta Canadensis*) foraging and winter range habitat (CPW, 2019d).

### 3.5.7 Terrestrial Mammals

Most of the terrestrial mammal species likely to be found in the project study area are well-adapted to human-modified environments and human disturbance. There is limited habitat in the immediate project study area, but mammals may move through the project study area to get to the Refuge or the Platte River riparian area. Common terrestrial mammals that may be found in the project study area include mule deer (*Odocoileus hemionus*), coyote, red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), cottontail rabbit (*Sylvilagus audubonii*), and striped skunk (*Mephitis mephitis*). CPW identifies the entire project study area as mule deer and white-tailed deer overall range (CPW, 2019e). The adjacent Refuge is mapped as a mule deer concentration area and resident population area. Several mule deer were observed in the Refuge east of where E. 88th Avenue ends during the February 2019 site visit.

There are several rodent species that are likely to occur in the project study area, including black-tailed prairie dog, fox squirrel (*Sciurus niger*), various mice and voles, woodrats (*Neotoma* spp.), and common porcupine (*Erethizon dorsatum*).

### 3.5.8 Fish, Reptiles and Amphibians

The lack of riparian vegetation along O’Brian Canal reduces the habitat for most reptiles and amphibians. The detention pond on the north side of E. 88th Avenue may provide limited habitat for reptiles and amphibians. Reptiles that may occur within the project study area include prairie rattlesnake (*Crotalus viridis*), bullsnake (*Pituophis catenifer*), lined snake (*Tropidoclonion lineatum*), western terrestrial garter snake (*Thamnophis elegans*), common lesser earless lizard (*Holbrookia maculate*) and common garter snake. Amphibians that may occur in the project study area include northern leopard frog and chorus frog (*Pseudacris triseriata*). There is no habitat for fish in the project study area.

## 3.6 Senate Bill 40 Riparian Resources

Colorado SB 40 (33-5-101-107, CRS 1973 as amended) requires any agency of the state to obtain wildlife certification from the CPW when the agency plans construction in “...any stream or its bank or tributaries...” Although SB 40 emphasizes the protection of fishing waters, it acknowledges the need to protect and preserve all fish and wildlife resources associated with streams in Colorado. In July 2013, CDOT and CPW signed a new Memorandum of Agreement that identifies some changes to the SB 40 process (CDOT, 2013) that will be implemented for the Proposed Action. Streams that meet one or more of the following criteria fall under the jurisdiction of SB 40, as follows:

- ◆ All perennial streams represented by solid blue lines on U.S Geological Survey 7.5-foot Quadrangle maps.
- ◆ Segments of ephemeral and intermittent streams providing live water beneficial to fish and wildlife.
- ◆ Segments of streams at which 25 percent or more of the vegetation comprises riparian vegetation, such as cottonwood, willow, alder, sedges, or other plants dependent on groundwater (such segments shall be within 300 feet upstream or downstream of the Refined Selected Alternative and the 300-foot distance shall be measured along the length of the stream).
- ◆ Segments of streams having wetlands present within 600 feet upstream and downstream of the Refined Selected Alternative (the 600-foot distance shall be measured along the length of the stream).

CPW does not recognize canals or ditches as SB 40 jurisdictional resources; therefore, the project study area does not contain any SB 40 resources.

## 4.0 IMPACTS EVALUATION

This section describes the impacts of the Proposed Action on the biological resources identified in the project study area. Permanent impacts from the Proposed Action were determined based on the Proposed Action design footprint and included the areas of ground disturbance for permanent Proposed Action elements. Temporary impacts were determined based on the areas of ground disturbance that will be reseeded and revegetated following construction.

## 4.1 No-Action Alternative

Under the No-Action Alternative, the project study area would remain largely the same as its existing condition, with the exception of future implementation of the Irondale Gulch Outfall project, which will require reconstructing a portion of E. 88th Avenue from Brighton Road to Willow Street to construct the regional storm sewer underneath the roadway. No impacts to vegetation, listed or sensitive species, or other wildlife would occur.

## 4.2 Proposed Action

The Proposed Action and the No-Action Alternative evaluated in this report are described in detail in the *E. 88th Avenue (I-76 NB Ramps to Highway 2) Environmental Assessment*. The Proposed Action would reconstruct E. 88th Avenue just east of the I-76 northbound ramps between Brighton Road and Highway 2 to improve traffic operations and accommodate all users. The design elements that comprise the Proposed Action are numbered from west to east and described in Figure 4.

### 4.2.1 Vegetation and Noxious Weeds

Construction of the Proposed Action would result in minimal direct impacts to vegetation. The roadway widening and other improvements would occur within the right-of-way or previously disturbed areas only. Minor removal of landscape upland trees will likely be required adjacent to 88th Avenue. Construction of the Proposed Action would result in the permanent disturbance of approximately 3.5 acres, of which 2.0 acres would be permanent right-of-way acquisition and 1.5 acres would be permanent easement. Temporary construction impacts include approximately 5.0 acres of disturbed habitat. The habitat that is converted provides little habitat value to wildlife. Short-term, negligible to moderate adverse impacts are expected during construction activities; however, no significant, long-term impacts on vegetation resources would be expected.

As required by CDOT's SGPI, permanent impacts to SGPI vegetation comprises approximately 3.0 acres within the project area. Temporary impacts to SGPI include approximately 2.5 acres of vegetated areas that will be impacted during construction but will be revegetated following construction.

Construction activities could introduce new noxious weeds into the project study area or increase the abundance of existing noxious weed species. Soil disturbance from construction equipment could create favorable conditions for noxious weeds to establish or further spread. Construction equipment can carry weed seeds in residual mud or soil on the equipment from one location to another. Noxious weed species that occur in the disturbed areas of the project study area have the potential to spread into areas that are currently weed-free.



Figure 4. Proposed Action Design Elements



- 1) Two lanes each direction, with raised median and a multiuse path on the north and sidewalk on the south, west of Rosemary Street.
- 2) Access changes between Brighton Road and the O'Brian Canal:
  - Improved Jolene Court approach to Brighton Road.
  - Permitted U-turn at E. 88th Avenue and Brighton Road.
  - Improved access at the Mile High Flea Market with a signalized intersection, dedicated left-turn and U-turn movements, and dynamic lane (left-turn lane during events and travel lane during normal roadway operations).
- 3) New single-span bridge over the O'Brian Canal and improved at-grade crossing of UPRR to accommodate wider roadway and bicycle and pedestrian facilities.
- 4) Widened Rosemary Street with sidewalks on both sides and reconfigured intersection with E. 88th Avenue.
- 5) One lane in each direction, with a two-way left-turn lane and a buffer-separated multiuse path on the north and sidewalk on the south, east of Rosemary Street.
- 6) Multiuse path and sidewalk extended across the BNSF railroad tracks and Highway 2.

Stormwater Drainage and Water Quality Treatment – Section of Irondale Gulch Outfall would detain stormwater and water would be treated within the proposed right-of-way.

## 4.2.2 Federally Listed Species

There is no potential habitat for any federally listed species in the project study area. Therefore, the Proposed Action would have no effect on the federally listed threatened and endangered species listed in Table 2. No critical habitat for any federally listed species occurs in the project study area.

Water depletions can occur during certain construction activities that require water use, including compaction, cement mixing, detention ponds, dust control, and dewatering of wetlands and riparian areas. The evaluation of impacts to the Platte River species was addressed in a Programmatic Biological Assessment (PBA) and Biological Opinion jointly prepared by CDOT and FHWA to evaluate water depletions to the Platte River from 2012 to 2019 (USFWS, 2012). The PBA has since been extended through 2032 and addresses the following species: Least Tern (interior population), pallid sturgeon,

Piping Plover, western prairie fringed orchid, and the Whooping Crane. On 04/04/2012, the USFWS signed a Biological Opinion which concurs with this approach and requires a yearly reporting of water usage. The extension, which has the same reporting requirements, was signed by the USFWS on March 29, 2019. The water used for this Proposed Action will be reported to the USFWS at the year's end after the completion of the project as per the aforementioned consultation. Effects to species not addressed in the PBA or affected by causes other than water depletions to the South Platte, will be analyzed separately.

### 4.2.3 State-listed Species

Six state-listed threatened or state special concern species have potential habitat in the project study area (Table 2). An evaluation of the anticipated impacts from the Proposed Action is described below for state-listed species with potential to occur in the project study area.

### 4.2.4 Bald Eagle

In Colorado, Bald eagles rely upon prairie dogs for prey during the winter. Therefore, any loss of prairie dog colonies results in a slight loss of foraging habitat. The degree to which Bald eagles use the project study area during winter and for foraging is unknown; however, because the project study area is surrounded by development and human activity, the foraging habitat is likely marginal. Construction activities could temporarily reduce the availability of prey in the area, which would temporarily impact foraging Bald eagles. Indirect impacts to Bald eagles could occur from temporary auditory disturbance caused by construction of the Proposed Action. No riparian tree removal would be required, and there are no rivers or reservoirs in the project study area and no nesting habitat. Removal of a few large trees along 88th Avenue would have no measurable impact to Bald eagles. The closest mapped nesting habitat is located approximately 2 miles north of the project study area along the Platte River greenbelt (CPW, 2019b).

### 4.2.5 Western Burrowing Owl

While no Western Burrowing Owls were observed during surveys conducted in 2019, there is potential habitat associated with the prairie dog colony within the project study area, and Burrowing owls have been reported in the adjacent Refuge (Sullivan et al., 2009). Construction of the Proposed Action would result in the direct destruction or disturbance of 0.24 acre of prairie dog colonies that are located in the project study area. Construction activities would result in temporary auditory disturbance that could displace burrowing owls if they are present in the project study area. The removal of the .24 acres of prairie dog colonies would remove a minor amount of potential foraging habitat for the Burrowing owl.

### 4.2.6 Ferruginous Hawk

There would be no direct impacts to Ferruginous hawk nesting habitat as a result of construction activities. Minor removal of vegetation along the roadside and removal of 0.24 acre of prairie dog colonies may result in a slight reduction of available habitat for prey species, such as prairie dogs, which would result in a reduction of foraging habitat for Ferruginous hawks. Construction noise and increased human disturbance may temporarily impact Ferruginous hawks should they occupy the project study area.

#### **4.2.7 Black-tailed Prairie Dog**

Construction activities would impact 0.24 acre of prairie dog mapped colonies within the project area. Human activities and noise during construction could temporarily displace prairie dogs near active construction areas. Construction could result in soil compaction and vegetation removal that may negatively impact prairie dogs. The prairie dog colony is located in a highly developed transportation corridor and, therefore, these impacts are considered minor to negligible.

#### **4.2.8 Common Garter Snake and Northern Leopard Frog**

The Proposed Action would not result in any direct impacts to common garter snake or northern leopard frog habitat. Impacts to O'Brian Canal (0.18 acre permanent impact) would not result in loss of habitat for these species since the canal does not provide riparian or wetland habitat. The use of heavy equipment during construction may cause common garter snakes and northern leopard frogs to temporarily avoid wetland areas adjacent to construction activity. No direct impacts would occur to riparian or wetland habitat.

Indirect impacts, such as short-term, localized sedimentation increases, could occur when constructing the new E. 88th Avenue bridge over the O'Brian Canal.

#### **4.2.9 Raptors and Migratory Birds**

Direct impacts on migratory bird and raptor habitat would include a minor loss of roadside disturbed habitat that would be converted to transportation use. The permanent loss of approximately 3.5 acres, of which 2.0 acres would be permanent right-of-way acquisition and 1.5 acres would be permanent easement, and approximately 5.0 acres of temporary construction impacts would slightly reduce habitat availability for migratory birds in the project study area. However, the habitat that would be converted is mainly disturbed roadside habitat that has already been degraded and provides marginal habitat value. Construction of the Proposed Action could result in displacement of birds from habitat near construction areas and temporary auditory disturbance caused by construction activities. Construction activities could temporarily reduce the availability of prey in the area, which would temporarily impact foraging raptors.

One raptor nest and one black-billed magpie nest was observed within the project study area during the 2019 biological survey. Based on raptors that have been observed in the area, the nest is likely a red-tailed hawk nest. Red-tailed hawks are habitat generalists and may be tolerant of human habituation near their nests. Tolerance may vary by individual breeding pair and depends on activity and many other variables. The raptor nest would not be directly impacted by construction; however, indirect impacts such as disturbance by construction workers and noise from equipment, may be significant enough to cause stress to nesting birds and result in abandonment and/or predation of nests. Construction of the Proposed Action would occur year-round during the construction duration. Some ornamental and native trees adjacent to E. 88th Avenue would be removed to accommodate construction.

Construction of the Proposed Action would also result in a minor loss of shortgrass prairie, which would result in a loss of habitat for raptor and migratory birds, restrictions on wildlife movement, and the short-term temporary displacement of certain wildlife species due to the increased noise and human presence associated with construction activities (for example, construction noise).

Raptor management will be guided by CPW Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (CPW, 2020). In order to facilitate compliance with the BGEPA and the CPW

Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors, a raptor survey will be conducted prior to the start of construction. If an active raptor nest is observed within 0.5 mile of the project study area, the CDOT Regional Biologist and CPW will be notified to determine compliance with the CPW Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors guidance.

#### **4.2.10 Terrestrial Mammals**

Direct impacts to terrestrial mammals would include the permanent removal of approximately 3.5 acres, of which 2.0 acres would be permanent right-of-way acquisition and 1.5 acres would be permanent easement, and approximately 5.0 acres of temporary construction impacts. Most impacts would be to relatively low-quality habitat in the existing disturbed right-of-way, which provides little habitat value to terrestrial mammals. Project construction activities could temporarily displace mammals from the active construction areas because of increased noise and human activity during construction. However, wildlife that currently occupy the project study area or use the adjacent areas for foraging are likely habituated to noise and human disturbance due to the disturbed nature of the project study area and, therefore, the impacts associated with displacement are considered minor. If the Proposed Action resulted in an increase of noxious weeds in the project study area, this could indirectly impact available browse for mule and white-tailed deer in the project study area and adjacent areas.

Construction of the Proposed Action would also result in a minor loss of shortgrass prairie, which would result in a loss of habitat for terrestrial mammals, restrictions on wildlife movement, and the short-term temporary displacement of certain wildlife species due to the increased noise and human presence associated with construction activities (for example, construction noise).

The Proposed Action is not likely to increase the barrier to movement for terrestrial mammals or increase the vehicle-wildlife crashes in the project study area due to the lack of large terrestrial mammals that likely occupy the project study area.

#### **4.2.11 Senate Bill 40 Riparian Resources**

The project study area does not contain any SB 40 jurisdictional resources.

## **5.0 AGENCY COORDINATION**

A resource agency coordination meeting was held on June 10, 2019, to discuss the Proposed Action. Alison Michael from USFWS was invited to the resource agency coordination meeting.

## 6.0 MITIGATION

Table 3 contains applicable mitigation measures for biological resources in the project study area.

Table 3. Summary of Impacts and Mitigation

Mitigation Category	Impact	Mitigation	Responsible Branch	Timing/Phase that Mitigation will be Implemented
Biological Resources	Construction-related disturbance to raptors that could result in potential loss of eggs or young of nesting raptors.	A pre-construction survey for nesting raptors will be completed within a half-mile buffer of the project study area prior to construction if construction is to occur between February 1 and August 31. If any nesting raptors occur within the buffer area, then Colorado Parks and Wildlife "Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors" guidelines will be followed.	City of Commerce City, Contractor	Pre-Construction, During Construction
Biological Resources	Construction-related disturbance to migratory birds that could result in potential loss of eggs or young migratory birds.	Vegetation shall be cleared outside of the active nesting period of April 1 through August 31 for migratory birds. If construction is to commence between April 1 and August 31, to avoid impacts to nesting birds in accordance with the MBTA, a qualified biologist will conduct a nest survey prior to construction, including under the existing E. 88th Avenue bridge over the O'Brian Canal. If active nests are found, coordination with Colorado Parks and Wildlife and U.S. Fish and Wildlife Service is required to determine an appropriate course of action, which may include, but is not limited to, a delay in construction to avoid the breeding season.	City of Commerce City, Contractor	Pre-Construction, During Construction

Table 3. Summary of Impacts and Mitigation

Mitigation Category	Impact	Mitigation	Responsible Branch	Timing/Phase that Mitigation will be Implemented
Biological Resources	Construction-related disturbance to swallow nests	Surveys will comply with CDOT Section 240 - Protection of Migratory Birds During Structure Work. If swallow nests are present on the structure and work is planned for this time, nests should be removed before April 1. If swallows are trying to build nests between April 1 and August 31, the biologist should monitor the structure every three days. If the swallows are building a nest, they should be removed before the nest is complete.	City of Commerce City, Contractor	Pre-Construction, During Construction
Biological Resources	Vegetation disturbance and ground clearing during construction.	Reseed and protect temporary disturbance areas with CDOT-approved Control Measures and avoid disturbance to existing vegetation, to the maximum extent possible.	City of Commerce City, Contractor	During Construction
Biological Resources	Permanent removal of upland trees may be required.	Any disturbance to existing vegetation will be avoided and/or minimized to the maximum extent possible. Replacement plantings will be provided, per an approved landscape plan.	City of Commerce City, Contractor	Pre-construction, During Construction
Biological Resources	Introduction of noxious weeds from vegetation and ground-disturbing activities.	An Integrated Noxious Weed Management Plan will be developed by the contractor during final design and implemented during construction.	City of Commerce City, Contractor	Pre-construction, During Construction
Biological Resources	Construction-related impact to Black-Tailed Prairie Dog towns and Western Burrowing Owl.	Mitigation for impacts to black-tailed prairie dogs will follow the 2009 CDOT Impacted Black-tailed Prairie Dog Policy (CDOT, 2009). The CDOT Impacted Prairie Dog Policy prohibits earth-moving activities that result in the burying of living prairie dogs and requires management of prairie dogs to avoid and/or minimize impacts to the species.	City of Commerce City, Contractor	Pre-construction, During Construction

Table 3. Summary of Impacts and Mitigation

Mitigation Category	Impact	Mitigation	Responsible Branch	Timing/Phase that Mitigation will be Implemented
		<p>If construction will occur between March 15 and October 31 the following survey protocol applies:</p> <ul style="list-style-type: none"> <li>• Surveys will be conducted based on CPWs Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls (CPW 2007).</li> <li>• Surveys should be conducted for any activities occurring between March 15th and October 31st of the construction year to determine the presence of burrowing owls and the locations of occupied nests.</li> </ul> <p>If burrowing owls are confirmed to be present in a prairie dog town, the CDOT biologist in consultation with CPW will determine the course of action (avoid activity until after Nov. 1 or monitoring activity in areas greater than 660 feet from the burrows with little danger to the owls. Activity closer than 660 feet may endanger the owls.)</p> <p>The project shall develop a prairie dog management plan that details management methods. If prairie dogs are to be euthanized (which is not recommended) the 240 specification needs to be followed regarding contacting the following programs prior to trapping to determine final</p>		

Table 3. Summary of Impacts and Mitigation

Mitigation Category	Impact	Mitigation	Responsible Branch	Timing/Phase that Mitigation will be Implemented
		<p>acceptance of the prairie dog management plan:</p> <ul style="list-style-type: none"> <li>▪ USFWS Black Footed Ferret (BFF) Recovery Program in Wellington, Colorado</li> <li>▪ Birds of Prey Foundation in Broomfield, Colorado</li> <li>▪ Rocky Mountain Raptor Program in Fort Collins, Colorado</li> </ul>		
Biological Resources	Water depletions due to construction activities that require water use, including compaction, cement mixing, and dust control.	Mitigation for impacts caused by water depletions on federally listed species will be addressed by Federal Highway Administration and Colorado Department of Transportation participation in the Platte River Recovery Implementation Program and South Platte Water Related Activities Program. Water used for this project will be reported to the U.S. Fish and Wildlife Service at the completion of the project. (USFWS, 2012).	CDOT, City of Commerce City, Contractor	During Construction



## 7.0 REFERENCES

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## Appendix A. USFWS online IPaC System



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Colorado Ecological Services Field Office  
Denver Federal Center  
P.O. Box 25486  
Denver, CO 80225-0486  
Phone: (303) 236-4773 Fax: (303) 236-4005  
<http://www.fws.gov/coloradoES>  
<http://www.fws.gov/platteriver>

In Reply Refer To:  
Consultation Code: 06E24000-2019-SLI-0338  
Event Code: 06E24000-2021-E-00479  
Project Name: 88th Avenue EA

November 17, 2020

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

## To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-



## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Colorado Ecological Services Field Office**

Denver Federal Center

P.O. Box 25486

Denver, CO 80225-0486

(303) 236-4773

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## Project Summary

Consultation Code: 06E24000-2019-SLI-0338

Event Code: 06E24000-2021-E-00479

Project Name: 88th Avenue EA

Project Type: TRANSPORTATION

Project Description: Widening 88th Avenue from 2 lanes to 4 lanes with appropriate turn lanes and median, as needed and other roadway improvements.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.85618987937873N104.89786863327026W>



Counties: Adams, CO

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## Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 5 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## Mammals

NAME	STATUS
<p><b>Black-footed Ferret</b> <i>Mustela nigripes</i></p> <p>Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ Special incidental take provisions pursuant to Section 7 of the ESA apply to a reintroduced population of black-footed ferrets. Contact the Colorado Ecological Services Field Office for additional details.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/6953">https://ecos.fws.gov/ecp/species/6953</a></p>	Endangered
<p><b>Preble's Meadow Jumping Mouse</b> <i>Zapus hudsonius preblei</i></p> <p>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4090">https://ecos.fws.gov/ecp/species/4090</a></p>	Threatened

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## Birds

NAME	STATUS
<p>Least Tern <i>Sterna antillarum</i></p> <p>Population: interior pop.            No critical habitat has been designated for this species.            This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/8505">https://ecos.fws.gov/ecp/species/8505</a></p>	Endangered
<p>Mexican Spotted Owl <i>Strix occidentalis lucida</i></p> <p>There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.            Species profile: <a href="https://ecos.fws.gov/ecp/species/8196">https://ecos.fws.gov/ecp/species/8196</a></p>	Threatened
<p>Piping Plover <i>Charadrius melodus</i></p> <p>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.            There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.            Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a></p>	Threatened
<p>Whooping Crane <i>Grus americana</i></p> <p>Population: Wherever found, except where listed as an experimental population            There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat.            This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a></p>	Endangered

## Fishes

NAME	STATUS
<p>Pallid Sturgeon <i>Scaphirhynchus albus</i></p> <p>No critical habitat has been designated for this species.            This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> <li>▪ Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.</li> </ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/7162">https://ecos.fws.gov/ecp/species/7162</a></p>	Endangered

## Flowering Plants

NAME	STATUS
<p>Ute Ladies'-tresses <i>Spiranthes diluvialis</i></p> <p>No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2159">https://ecos.fws.gov/ecp/species/2159</a></p>	Threatened
<p>Western Prairie Fringed Orchid <i>Platanthera praeclara</i></p> <p>No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"><li>▪ Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska.</li></ul> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/1669">https://ecos.fws.gov/ecp/species/1669</a></p>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# USFWS National Wildlife Refuge Lands And Fish Hatcheries

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.

The following FWS National Wildlife Refuge Lands and Fish Hatcheries lie fully or partially within your project area:

FACILITY NAME	ACRES
Rocky Mountain Arsenal National Wildlife Refuge <b>Rocky Mountain Arsenal National Wildlife Refuge</b> 6550 Gateway Road, Headquarters Building Commerce City, CO 80022-4327 (303) 289-0232  <a href="https://www.fws.gov/refuges/profiles/index.cfm?id=61170">https://www.fws.gov/refuges/profiles/index.cfm?id=61170</a>	16,000

# 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](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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
<b>Bald Eagle <i>Haliaeetus leucocephalus</i></b> 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. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Oct 15 to Jul 31
<b>Burrowing Owl <i>Athene cunicularia</i></b> 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/9737">https://ecos.fws.gov/ecp/species/9737</a>	Breeds Mar 15 to Aug 31

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NAME	BREEDING SEASON
<p>Cassin's Sparrow <i>Aimophila cassinii</i>  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/9512">https://ecos.fws.gov/ecp/species/9512</a></p>	Breeds Aug 1 to Oct 10
<p>Golden Eagle <i>Aquila chrysaetos</i>  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/1680">https://ecos.fws.gov/ecp/species/1680</a></p>	Breeds Jan 1 to Aug 31
<p>Lesser Yellowlegs <i>Tringa flavipes</i>  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/9679">https://ecos.fws.gov/ecp/species/9679</a></p>	Breeds elsewhere
<p>Willet <i>Tringa semipalmata</i>  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 20 to Aug 5
<p>Willow Flycatcher <i>Empidonax traillii</i>  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/3482">https://ecos.fws.gov/ecp/species/3482</a></p>	Breeds May 20 to Aug 31

## 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.

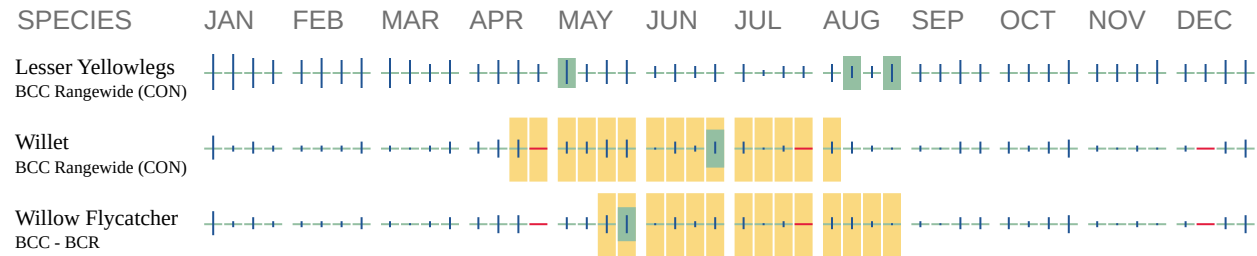
### Probability of Presence (■)

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





Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

## Migratory Birds FAQ

**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](#) and/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 to 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**

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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.

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# Wetlands

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](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

## FRESHWATER POND

- [PABG](#)
- [PUBFx](#)

## RIVERINE

- [R2UBGx](#)
  - [R4SBCx](#)
-