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**APPENDIX 3L**

**Biological Resources Evaluation Report**

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# **Biological Resources Evaluation**

## **I-15 Environmental Impact Statement Farmington to Salt Lake City**

Lead agency:  
Utah Department of Transportation

**September 12, 2023**

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## Attachments

### Attachment A. Species Lists

## Acronyms and Abbreviations

BCC	Birds of Conservation Concern
CCA	Candidate Conservation Agreement
ECOS	Environmental Conservation Online System
EIS	Environmental Impact Statement
ESA	Endangered Species Act
I-15	Interstate 15
IPaC	Information, Planning, and Conservation System
spp.	various subspecies
U.S. 89	U.S. Highway 89
UDOT	Utah Department of Transportation
UDWR	Utah Division of Wildlife Resources
USC	United States Code
USFWS	United States Fish and Wildlife Service

## **1.0 Introduction**

The Utah Department of Transportation (UDOT) is preparing an Environmental Impact Statement (EIS) for the Interstate 15 (I-15) Farmington to Salt Lake City Project. The purpose of the I-15 project is to improve safety, replace aging infrastructure, provide better mobility for all users, strengthen the state and local economy, and better connect communities along I-15 from Farmington to Salt Lake City.

This report summarizes the existing biological resources that could be affected by the proposed project.

## **2.0 Regulatory Setting**

### **2.1 Threatened and Endangered Species**

The Endangered Species Act (ESA) (16 United States Code [USC] Sections 1531–1544) provides for the conservation of threatened and endangered species and the ecosystems on which they depend. Section 3 of the ESA prohibits the “take” of any endangered species, and it defines a “take” broadly to include actions that are not necessarily intended to cause harm to the species (an “incidental take”).

Section 7 of the ESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) before taking any action that could affect a federally listed threatened or endangered species or designated critical habitat for an endangered species. In addition, federal agencies must ensure that their actions are not likely to jeopardize the continued existence of any listed species or to destroy or adversely modify any designated critical habitat.

### **2.2 Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (16 USC Sections 703–712) makes it unlawful to take, import, export, possess, sell, purchase, or barter any migratory bird, with the exception of the “take” of game birds during established hunting seasons. The law also applies to feathers, eggs, nests, and products made from migratory birds. Executive Order 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* (January 10, 2001), directs federal agencies taking actions likely to affect migratory birds to support the implementation of the Migratory Bird Treaty Act.

### **2.3 Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act (16 USC Sections 668–668d) makes it unlawful to take, import, export, sell, purchase, transport, or barter any bald or golden eagle or their parts, products, nests, or eggs. “Take” includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing eagles.

## 2.4 Candidate Conservation Agreements

USFWS considers candidate species to be those plants and animals that are candidates for listing under the ESA. These are species for which there is enough information regarding their biological status and threats to propose them as threatened or endangered, but listing is currently precluded by higher-priority listing activities. Candidate species are not subject to the legal protections of the ESA.

A Candidate Conservation Agreement (CCA) is a formal, voluntary agreement between USFWS and one or more parties to address the conservation needs of candidate species or species that could become candidates in the near future. Participants voluntarily commit to implement specific actions designed to remove or reduce threats to the covered species. Developing a CCA is one of the primary ways of identifying appropriate conservation efforts. Proactive conservation efforts for candidate species can, in some cases, eliminate the need to list them under the ESA.

## 3.0 Methodology

### 3.1 Study Area

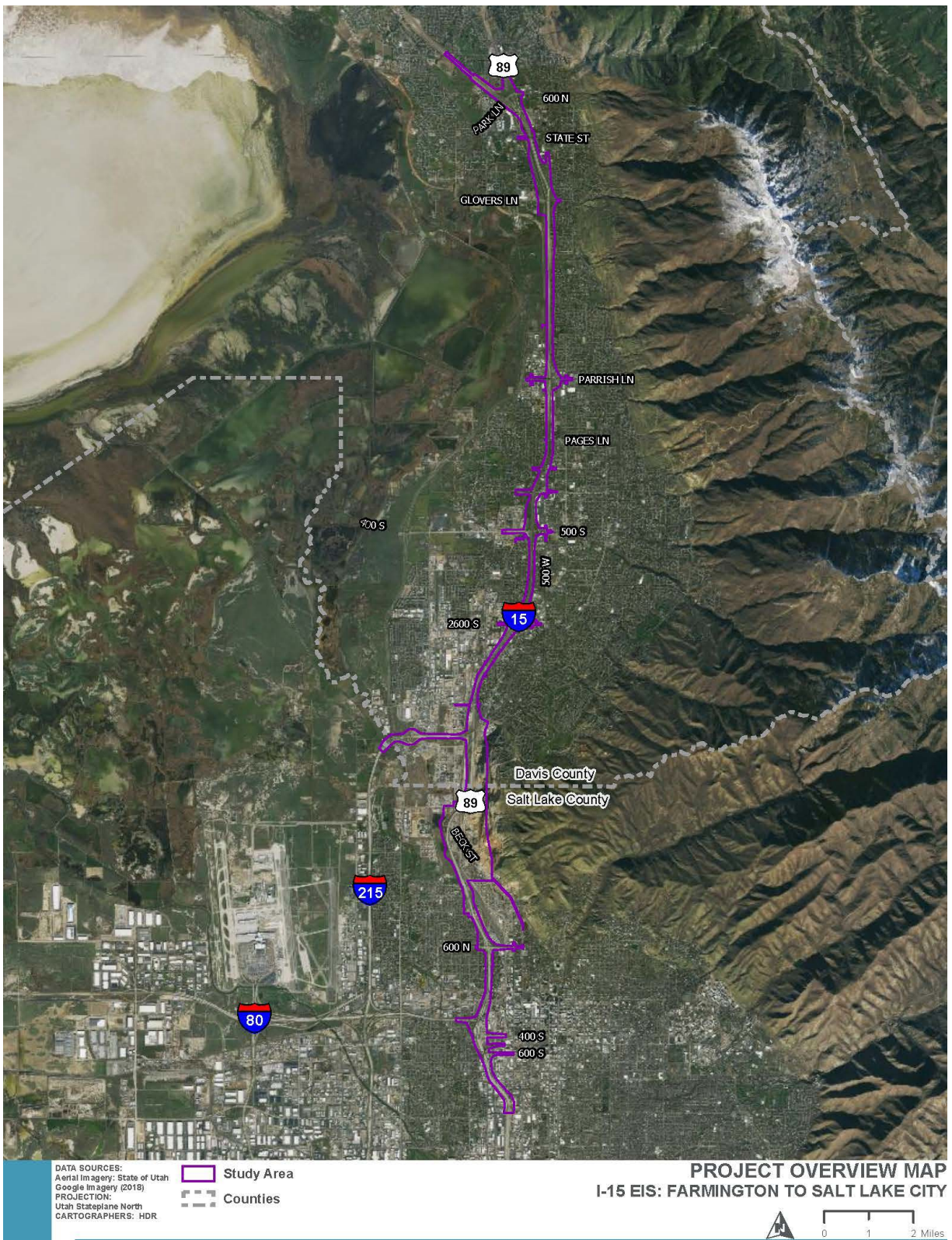
The study area for the I-15 project is located in Salt Lake and Davis Counties. It measures about 18 miles north-south from just north of the U.S. Highway 89/Legacy Parkway/Park Lane interchange in Farmington to 1300 South in Salt Lake City. It covers about 2,826 acres and ranges in elevation from about 4,210 to 4,710 feet. Figure 1 provides an overview of the study area.

The study area is part of the Moist Wasatch Front Foothills subregion in the Central Basin and Range Ecoregion (Woods and others 2001). The Moist Wasatch Front Foothills region supports the majority of Utah's population and commercial activity, and it is fed by perennial streams and aqueducts that originate in the adjacent Wasatch Range. The study area is located in two watersheds—the Lower Weber to the north (hydrologic code 16020102) and the Jordan to the south (hydrologic unit 16020204)—and the waters in the area eventually drain to the Great Salt Lake.

In general, the study area consists primarily of roads and road shoulders; commercial, industrial, and residential development; and disturbed uplands. There are several wet meadows in the study area consisting primarily of saltgrass (*Distichlis spicata*), Utah swampfire (*Sarcocornia utahensis*), and burningbush (*Bassia scoparia*) with some standing water. There are also several emergent marshes consisting primarily of common reed (*Phragmites australis*) and saltgrass. Several open-water ponds, canals, and perennial streams were present at the time of the field surveys.



Figure 1. Study Area



## 3.2 Data Collection

UDOT used several methods to collect data regarding the biological resources that could be affected by the I-15 project. These methods included conducting literature reviews, interpreting aerial photographs, and conducting reconnaissance-level field surveys in the fall of 2021.

UDOT obtained a species list from USFWS's Information, Planning, and Conservation System (IPaC) website for federally threatened, endangered, or candidate species that might occur in the study area and/or might be affected by the project (USFWS 2022a). UDOT also consulted the USFWS Environmental Conservation Online System (ECOS) for a list of species under conservation agreement that are known to occur in Salt Lake and Davis Counties (USFWS 2022b). Additionally, UDOT obtained a species list from the Utah Natural Heritage Program online data request website to determine whether there are records of any of the federally listed threatened, endangered, and candidate species or species listed under conservation agreement in the vicinity of the study area (UDWR 2022). Reports from IPaC and the Utah Natural Heritage Program are provided in Attachment A, *Species Lists*.

The Utah Species Field Guide (UDWR, no date), NatureServe (no date), Audubon (no date), and Cornell Lab's All About Birds website (Cornell Lab of Ornithology 2019) were referenced for species habitat descriptions.

## 4.0 Results

### 4.1 Special-status Plant Species

**Threatened, Endangered, and Candidate Species.** The IPaC report identified one federally listed plant species, Ute ladies'-tresses (*Spiranthes diluvialis*), that might occur in the study area and/or might be affected by the project. The study area does not include designated or proposed critical habitat for this species. Table 1 describes the preferred habitat for this species. Potentially suitable habitat does not exist in the study area for this species.

**Table 1. Federally Listed Plant Species That Might Occur in the Study Area and/or Might Be Affected by the Project**

Common Name <sup>a</sup>	Scientific Name	Federal Status	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	Threatened	This white-flowered orchid is found below 7,000 feet in elevation in moist to very wet meadows, along streams, in abandoned stream meanders, and near springs, seeps, and lake shores where competition for light, space, water, and other resources is normally kept low by periodic or recent disturbance. Ute ladies'-tresses are also known to occur in seasonally flooded river terraces, subirrigated or spring-fed abandoned stream channels and valleys, and lake shores. Populations have also been observed along irrigation canals, berms, levees, irrigated meadows, excavated gravel pits, roadside barrow pits, reservoirs, and other human-modified wetlands.	There is no potentially suitable habitat in the study area.

<sup>a</sup> Source: Species list from USFWS 2022a

<sup>b</sup> Source: Fertig and others 2005



## 4.2 Special-status Wildlife Species

**Threatened, Endangered, and Candidate Species.** The IPaC report identified one federally listed bird species, yellow-billed cuckoo (*Coccyzus americanus*), and one insect species, monarch butterfly (*Danaus plexippus*), that might occur in the study area and/or might be affected by the project. The study area does not include designated or proposed critical habitat for these species. Table 2 describes the preferred habitat for each species. Potentially suitable habitat does not exist in the study area for yellow-billed cuckoos. Potentially suitable habitat could exist in the study area for monarch butterflies; however, no milkweed plants (*Asclepias* spp.) were observed during the field survey.

Table 2. Federally Listed Wildlife Species That Might Occur in the Study Area and/or Might Be Affected by the Project

Common Name <sup>a</sup>	Scientific Name	Federal Status	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
<b>Birds</b>				
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Threatened	Yellow-billed cuckoos prefer to nest in tall cottonwood and willow riparian woodland with dense understory foliage. They prefer patches of at least 25 acres of dense riparian forest with a canopy cover of at least 50% in both the understory and overstory. USFWS's suitable habitat guidelines for this species for Utah require patches of multilayered vegetation that are at least 12 acres in extent and at least 100 meters (328 feet) wide by 100 meters long (USFWS 2017).	There is proposed critical habitat for this species, but the study area is outside the critical habitat. There is no potentially suitable habitat in the study area. There are historic records of individuals within ½-mile and 2-mile radii of the study area (UDWR 2022).
<b>Insects</b>				
Monarch butterfly	<i>Danaus plexippus</i>	Candidate	In the spring, summer, and early fall, monarch butterflies can be found wherever there are milkweeds in fields, meadows, and parks. They overwinter in the cool, high mountains of central Mexico and woodlands in central and southern California. Milkweed ( <i>Asclepias</i> spp.) is an essential feature of quality monarch habitat. Female monarch butterflies lay their eggs on the underside of young leaves or flower buds of milkweed. Common places where milkweed grows include short- and tall-grass prairies, livestock pastures, agricultural margins, roadsides, wetland and riparian areas, sandy areas, and gardens. In addition to milkweed, other nectar sources, trees for roosting, and close proximity to water are key components of monarch habitat (Western Association of Fish and Wildlife Agencies 2019).	Potentially suitable habitat could exist in the study area; however, no milkweed plants ( <i>Asclepias</i> spp.) were observed during the field surveys.

<sup>a</sup> Source: Species list from USFWS 2022a

<sup>b</sup> Sources: Audubon, no date; Cornell Lab of Ornithology 2019; NatureServe, no date; UDWR, no date

**Species Listed under Conservation Agreements.** HDR consulted the USFWS ECOS for a list of species listed under conservation agreements that are known to occur in Salt Lake and Davis Counties. One amphibian species and two fish species were identified. Table 3 describes the preferred habitat for each species. There is no suitable habitat in the study area for any of the species.

**Table 3. Species Listed under Conservation Agreements That Are Known to Occur in Salt Lake and Davis Counties**

Common Name <sup>a</sup>	Scientific Name	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
<b>Amphibians</b>			
Columbia spotted frog	<i>Rana luteiventris</i>	Columbia spotted frogs are highly aquatic and are rarely found far from permanent quiet water. They usually live at the grassy/sedgy margins of streams, lakes, ponds, springs, and marshes and use stream-side small mammal burrows as shelter. Breeding typically occurs in small pools or ponds with little or no current surrounded by dense aquatic vegetation.	Potentially suitable habitat exists in the study area. The canals, open-water ponds, perennial streams, and ditches with relatively permanent sources of water provide potentially suitable habitat.
<b>Fish</b>			
Bonneville cutthroat trout	<i>Oncorhynchus clarkii utah</i>	Habitat for Bonneville cutthroat trout ranges from high-elevation streams with coniferous and deciduous riparian trees, to low-elevation streams in sage-steppe grasslands containing herbaceous riparian zones, to lakes.	There is no suitable habitat in the study area. Additionally, there is no downstream habitat or water withdrawals that would impact downstream habitat. There are historic records of individuals within a 2-mile radius of the study area (UDWR 2022).
Least chub	<i>Lotichthys phlegethontis</i>	Least chubs are endemic to the Bonneville Basin of Utah. There are only five wild populations, three in the Snake Valley in Utah's West Desert and two in the Sevier River drainage. A refuge population has been established at the Utah State Wahweap Fish Hatchery located in Kane County. Least chubs inhabit spring-fed marshes and wetlands.	There is no suitable habitat in the study area. Additionally, there is no downstream habitat or water withdrawals that would impact downstream habitat. There are historic records of individuals within ½-mile and 2-mile radii of the study area (UDWR 2022).

<sup>a</sup> Species list from USFWS ECOS (USFWS 2022b)

<sup>b</sup> Sources: NatureServe, no date; UDWR, no date

**Migratory Birds.** Table 4 lists the migratory bird species included in the IPAC report that are birds of particular concern because they either are listed on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in the study area. The table also describes the preferred habitat for each species and states whether there is potentially suitable breeding or nesting habitat in the study area. Potentially suitable breeding or nesting habitat exists in the study area for 4 of the 20 identified species. Figure 2, Figure 3, and Figure 4 show the suitable habitat for these 4 migratory bird species. Note that Table 4 is not a list of every migratory bird species that might be present in the study area.

**Table 4. Migratory Birds of Concern That Could Occur in or near Study Area**

Common Name <sup>a</sup>	Scientific Name	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
American white pelican	<i>Pelecanus erythrorhynchos</i>	American white pelicans breed in isolated islands in shallow wetlands and lakes. Winters are spent on coastal waters, bays, estuaries, and protected bays. Pelican habitat includes rivers, lakes, reservoirs, estuaries, bays, and open marshes. Pelicans prefer to roost and nest on islands and peninsulas associated with freshwater lakes but will also breed on coastal islands. In Utah, pelicans nest on Gunnison Island, but, during spring migration, the breeding season, and fall staging and migration, they can be observed at many reservoirs throughout the state.	There is no suitable breeding or nesting habitat in the study area.
Bald eagle	<i>Haliaeetus leucocephalus</i>	Breeding habitat for bald eagles most commonly includes areas close to coastal areas, bays, rivers, lakes, reservoirs, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, or seabirds. Nests usually are in tall trees or on pinnacles or cliffs near water. Winter habitat is commonly associated with open water, though some bald eagles use montane areas if upland food resources such as rabbit or deer carrion are readily available.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Black rosy-finch	<i>Leucosticte atrata</i>	Black rosy-finches breed above the timberline in alpine tundra using barren, rocky, or grassy areas and cliffs among glaciers or at the bases of snow fields.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals within a 2-mile radius of the study area (eBird 2021).
Black tern	<i>Chlidonias niger</i>	Breeding habitat for black terns includes freshwater marshes, rivers, lakes, and wet meadows. Nests are typically placed near fresh open water with extensive marsh vegetation and sometimes in wet meadows. Tropical coasts provide winter habitat.	Potentially suitable breeding and nesting habitat exists in study area north of Park Lane between I-15 and U.S. 89 (Figure 2 and Figure 3). Freshwater marshes consisting of common reed, reed canarygrass ( <i>Phalaris arundinacea</i> ), and broadleaf cattail ( <i>Typha latifolia</i> ) occur near open water in this area. In addition, there are records of individuals in the study area as well as within 1-mile and 2-mile radii of the study area (eBird 2021).

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Table 4. Migratory Birds of Concern That Could Occur in or near Study Area

Common Name <sup>a</sup>	Scientific Name	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
Bobolink	<i>Dolichonyx oryzivorus</i>	Bobolinks breed in open spaces, preferring large fields and meadows with a mix of grasses and broad-leaved plants. Nests are often placed on the ground well-hidden in vegetation. Bobolinks do not breed in most of Utah. They occur in low abundance and in isolated patches primarily in the northern half of the state. Bobolinks' main wintering habitat is in the southern interior of South America.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals within ½-mile and 2-mile radii of the study area (eBird 2021).
Cassin's finch	<i>Haemorhous cassinii</i>	Cassin's finches breed in montane conifer forests, especially spruce and fir, and also in pine and Douglas-fir in some areas and sometimes in pinyon-juniper woods. Nests are typically placed in a large conifer tree. They winter at lower elevations throughout much of the same range and into Mexico.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Clark's grebe	<i>Aechmophorus clarkii</i>	Clarke's grebes prefer to nest on large freshwater lakes and marshes among tall, emergent vegetation on the water's edge. Winter habitat includes saltwater habitats including shores, bays, and rivers.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Evening grosbeak	<i>Coccothraustes vespertinus</i>	Evening grosbeaks breed in mature coniferous and mixed forests and nest in trees or large shrubs. Winter habitat includes coniferous and deciduous forest as well as urban and suburban areas.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Franklin's gull	<i>Leucophaeus pipixcan</i>	Franklin's gulls breed and nest in freshwater marshes with abundant emergent vegetation and patches of open water. Following breeding, Franklin's gulls will "wander" extensively throughout the prairie regions of the United States before wintering along the west coast of South America and the Gulf Coast of the United States.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Lesser yellowlegs	<i>Tringa flavipes</i>	Lesser yellowlegs nest and breed in open forest in Alaska and Canada and utilize a variety of wetland habitats including marshes, ponds, wet meadows, lakes, and mudflats from the southern United States to Argentina during migration. They are a common migrant through Utah.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).

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Table 4. Migratory Birds of Concern That Could Occur in or near Study Area

Common Name <sup>a</sup>	Scientific Name	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
Lewis's woodpecker	<i>Melanerpes lewis</i>	The preferred breeding habitat of Lewis's woodpeckers consists of open, park-like Ponderosa pine forests as well as burned-over Douglas-fir, mixed conifer, pinyon-juniper, and riparian and oak woodlands. They also live in the fringes of pine and juniper stands and deciduous forests, especially riparian cottonwoods. Areas with a good understory of grasses and shrubs to support insect prey populations are preferred. Dead trees or stumps are preferred for nesting.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Long-eared owl	<i>Asio otus</i>	Long-eared owls are found throughout Utah, especially where woodlands are bordered by open habitats. They roost and nest in deciduous and coniferous woodlands, orchards, parks, and other dense vegetation, and forage in open grasslands or shrublands. Nest sites are usually in a tree, sometimes in a giant cactus or on a cliff ledge, typically in nests abandoned by other birds.	Potentially suitable breeding and nesting habitat exists in the study area in a woodland north of Park Lane between I-15 and U.S. 89 (Figure 2 and Figure 3). The woodland is bordered by wet meadow, marsh, and upland habitats as well as the roadway. In addition, there are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Marbled godwit	<i>Limosa fedoa</i>	Marbled godwits breed in meadows, short-grass prairies, pastures, and marshes. Nest are placed on the ground, usually in a dry spot in short grass fairly close to water. Winter habitat includes coastal mudflats, estuaries, and beaches. They are common migrants in northern Utah, especially in areas around the Great Salt Lake and Utah Lake.	Potentially suitable breeding and nesting habitat exists in the study area in a wet meadow complex west of I-15 between about 1800 North and 2300 North in Salt Lake and North of Park Lane in Farmington (Figure 2 and Figure 4). The wet meadows are adjacent to open water and consist of Pursh seepweed ( <i>Suaeda calceoliformis</i> ), Utah swampfire, burningbush, and saltgrass. In addition, there are records of individuals in the study area as well as within 1-mile and 2-mile radii of the study area (eBird 2021).
Olive-sided flycatcher	<i>Contopus cooperi</i>	Olive-sided flycatchers breed in various forest and woodland habitats—taiga, subalpine coniferous forest, mixed coniferous-deciduous forest, burned-over forest, spruce or tamarack bogs and other forested wetlands—and along the forested edges of lakes, ponds, and streams. Most nesting sites contain dead standing trees, which are used as singing and feeding perches. Nests are placed most often in conifers.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).

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Table 4. Migratory Birds of Concern That Could Occur in or near Study Area

Common Name <sup>a</sup>	Scientific Name	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>	Pinyon-juniper forests are the preferred habitat for pinyon jays. Their diet consists primarily of pinyon and other pine seeds, and the timing and location of breeding is tied to pine seed availability. Nests are located in trees, usually conifers, 5 to 30 feet off the ground.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Rufous hummingbird	<i>Selasphorus rufus</i>	The typical breeding habitat for rufous hummingbirds includes coniferous forests, second-growth forests, thickets, and brushy hillsides, with foraging extending into adjacent scrubby areas and meadows with abundant nectar flowers. Nest sites are usually well-concealed in the lower part of coniferous trees, deciduous shrubs, or vines.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Sage thrasher	<i>Oreoscoptes montanus</i>	Sagebrush communities are the preferred breeding habitat for sage thrashers. They require relatively dense ground cover for concealment, but also some bare ground for foraging since they spend a majority of their time on the ground. Nest sites are located in sagebrush or other low shrubs. Sage thrashers use arid or semi-arid open country with scattered bushes, grasslands, and open pinyon-juniper woodlands during migration and wintering.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Virginia's warbler	<i>Leiothlypis virginiae</i>	The preferred breeding habitat for Virginia's warblers is in low, brushy areas on dry mountainsides where an herbaceous or woody understory is well-developed. Lower mountain habitats with dense stands of Gambel oak and a relatively high slope are preferred for breeding, although mountain mahogany woodlands, riparian areas, Ponderosa pine forests, and pinyon-juniper woodlands, all with shrubby understories, are also used for breeding. Breeding occasionally occurs in Douglas-fir and aspen habitats with the required shrubby understory. Nests are often placed under grass tufts on ground covered by dense brush.	There is no suitable breeding or nesting habitat in the study area. There are records of individuals in the study area as well as within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).
Western grebe	<i>Aechmophorus occidentalis</i>	Western grebes' preferred habitat includes freshwater lakes, reservoirs, and marshes during breeding season. In the winter nesting season, western grebes prefer coastal marine areas with emergent vegetation.	There is no suitable breeding or nesting habitat in the study area.

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Table 4. Migratory Birds of Concern That Could Occur in or near Study Area

Common Name <sup>a</sup>	Scientific Name	Preferred Habitat <sup>b</sup>	Potentially Suitable Habitat Present?
Willet	<i>Tringa semipalmata</i>	Willetts prefer to inhabit shorelines of marshes, wet meadows, mudflats, coastal beaches, and lakes. Birds nest in salt marshes, barrier islands, and beaches in eastern North America and near marshes, wet meadows, and wet fields in western North America. Nests are built on the ground in marshy areas or in grassland habitat near water. Large expanses of grasslands are required for nesting and foraging.	Potentially suitable breeding and nesting habitat exists in the study area in a wet meadow complex west of I-15 between about 1800 North and 2300 North in Salt Lake and North of Park Lane in Farmington (Figure 2 and Figure 4). The wet meadows are adjacent to open water and consist of Pursh seepweed, Utah swampfire, burningbush, and saltgrass. There are records of individuals within ½-mile, 1-mile, and 2-mile radii of the study area (eBird 2021).

<sup>a</sup> Source: Species list from USFWS 2022

<sup>b</sup> Sources: Audubon, no date; Cornell Lab of Ornithology 2019; NatureServe, no date; UDWR, no date

Figure 2. Migratory Bird Potentially Suitable Habitat (1 of 3)

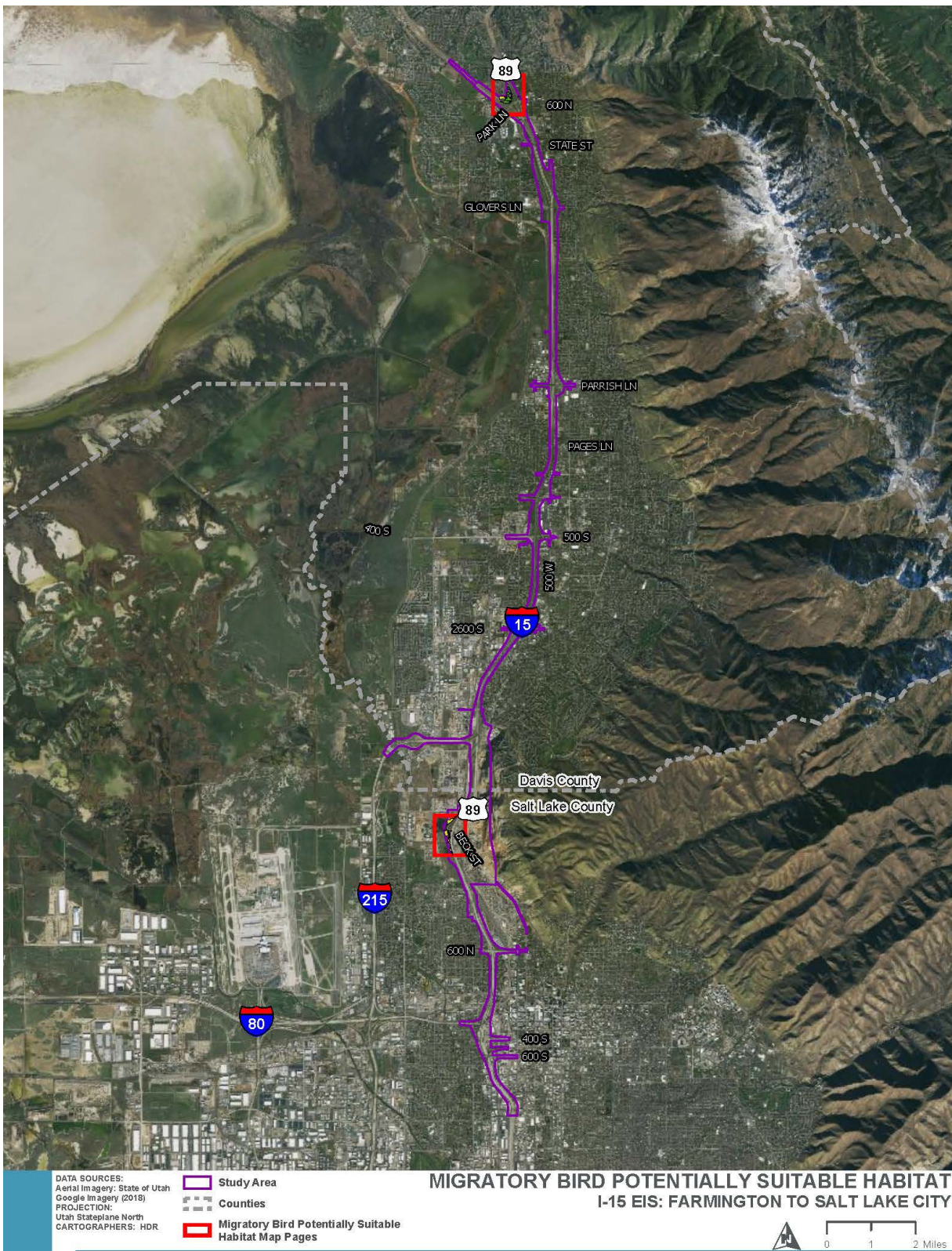




Figure 3. Migratory Bird Potentially Suitable Habitat (2 of 3)

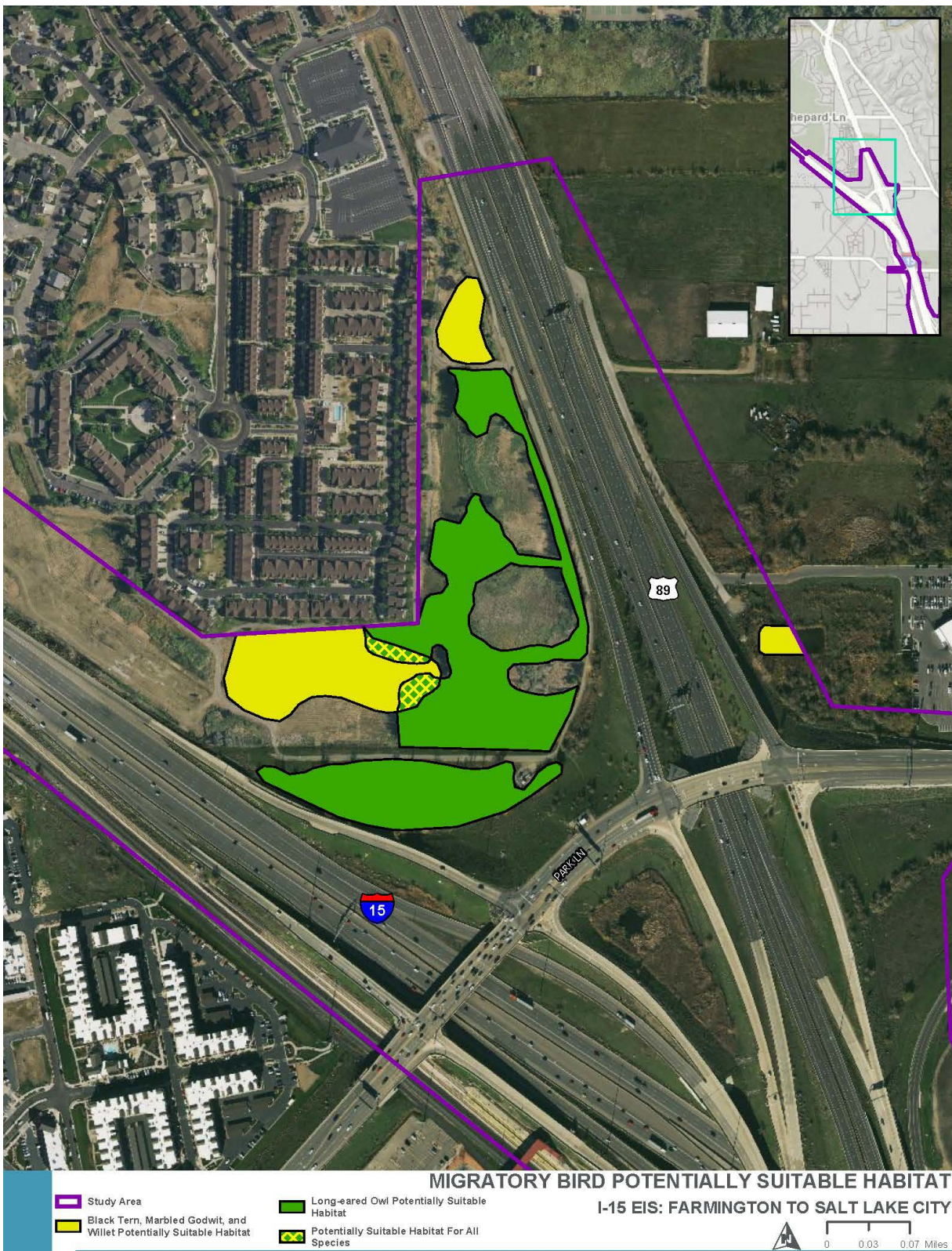
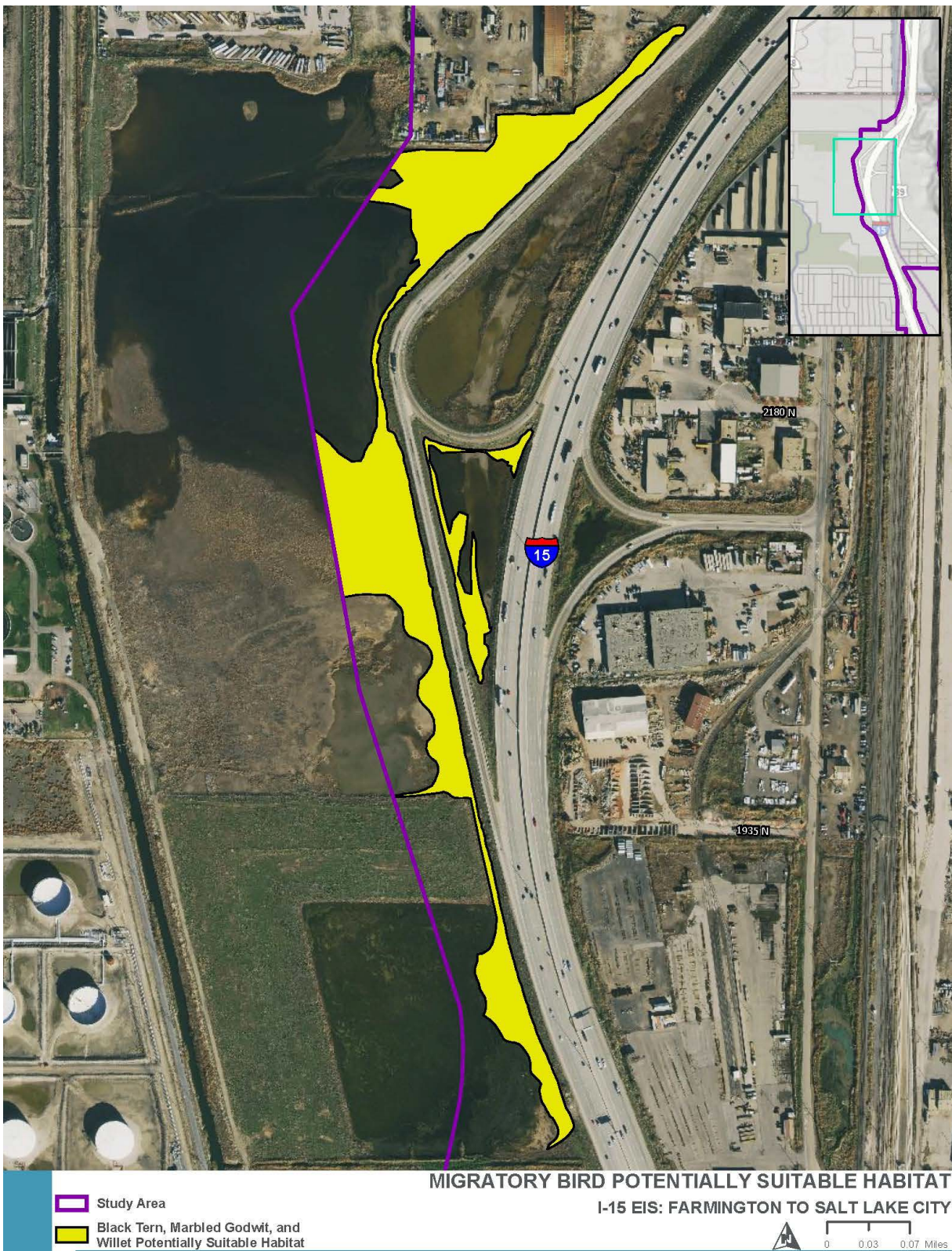




Figure 4. Migratory Bird Potentially Suitable Habitat (3 of 3)



## 5.0 Summary

UDOT's review identified 1 federally listed plant species, 1 federally listed bird species, and 1 federally listed insect species that might occur in the study area and/or might be affected by the proposed project; 3 species listed under conservation agreements that are known to occur in Salt Lake and Davis Counties; and 20 migratory bird species of concern that occur on the USFWS BCC list or warrant special attention in the study area. Of these species, UDOT identified potentially suitable habitat for one federally listed wildlife species (monarch butterfly), one species listed under conservation agreement (Columbia spotted frog), and 4 migratory birds (black tern, long-eared owl, marbled godwit, and willet).

**Monarch Butterfly.** Milkweed is an essential feature of quality monarch habitat. Although no milkweed plants were observed during the field survey, it could occur in the study area. If possible, milkweed plants should be avoided if identified prior to the proposed work.

**Columbia Spotted Frog.** Columbia spotted frogs are highly aquatic and require permanent quiet water. They usually live at the grassy/sedgy margins of streams, lakes, ponds, springs, and marshes and use stream-side small mammal burrows as shelter. Breeding typically occurs in small pools or ponds with little or no current surrounded by dense aquatic vegetation. The canals, open-water ponds, perennial streams, and ditches with relatively permanent sources of water in the study area provide potentially suitable habitat for Columbia spotted frogs. However, these resources are highly degraded and are surrounded by invasive vegetation species (common reed) and by commercial, highway, and road development. Given the degradation of these resources, the habitat is low quality and is unlikely to support Columbia spotted frog populations.

**Migratory Bird Species.** Potentially suitable habitat was identified for four migratory bird species: black tern (*Chlidonias niger*), long-eared owl (*Asio otus*), marbled godwit (*Limosa fedoa*), and willet (*Tringa semipalmata*). There is potentially suitable nesting habitat in the wet meadows and emergent marshes in the study area for black terns, marbled godwits, and willets and potentially suitable breeding and nesting habitat in trees in and around parks and residential trees for long-eared owls. Near the north end of the study area there is residential development that includes dense tree cover, and an open-water source (Figure 2) has suitable habitat for these species.

## 6.0 References

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**ATTACHMENT A**  
Species Lists

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Utah Division of Wildlife Resources  
Utah Natural Heritage Program  
1594 W. North Temple  
PO Box 146301  
Salt Lake City, UT 84116

Report Number: 13863  
November 7, 2022

# Utah Natural Heritage Program Online Species Search Report

## Project Information

### Project Name

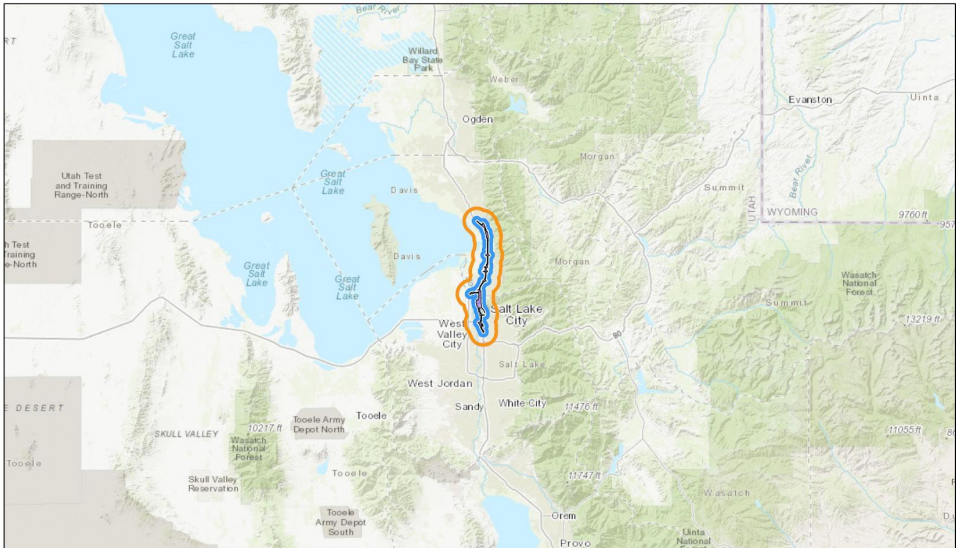
I-15; 600 N to Farmington EIS

### Project Description

I-15; 600 N to Farmington EIS

### Location Description

I-15; 600 N to Farmington EIS



November 7, 2022



## Animals within a 1/2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
American Bittern	Botaurus lentiginosus	SGCN		1902
American White Pelican	Pelecanus erythrorhynchos	SGCN		1989
Bald Eagle	Haliaeetus leucocephalus	SGCN		2000
Coarse Rams-horn	Planorbella binneyi	SGCN		1939
Ferruginous Hawk	Buteo regalis	SGCN		1988
Least Chub	lotichthys phlegethontis	SGCN		1965
Lewis's Woodpecker	Melanerpes lewis	SGCN		1998
Northern Leopard Frog	Lithobates pipiens	SGCN		1997
Peregrine Falcon	Falco peregrinus	SGCN		2006
Snowy Plover	Charadrius nivosus	SGCN		
Townsend's Big-eared Bat	Corynorhinus townsendii	SGCN		2003
Utah Physa	Physa gyrina utahensis	SGCN		1939

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
Western Pearlshell	Margaritifera falcata	SGCN		1884
Western Yellow-billed Cuckoo	Coccyzus americanus occidentalis	SGCN	LT	1992
Winged Floater	Anodonta nuttalliana	SGCN		1905

## Plants within a ½ mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
No Species Found				

## Animals within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
American Bittern	Botaurus lentiginosus	SGCN		1902
American White Pelican	Pelecanus erythrorhynchos	SGCN		2021
Bald Eagle	Haliaeetus leucocephalus	SGCN		2005
Band-tailed Pigeon	Patagioenas fasciata	SGCN		1855
Black Swift	Cypseloides niger	SGCN		1963
Bonneville Cutthroat Trout	Oncorhynchus clarkii utah	SGCN		2015
Burrowing Owl	Athene cunicularia	SGCN		1985
Caspian Tern	Hydroprogne caspia	SGCN		2000
Coarse Rams-horn	Planorbella binneyi	SGCN		1939
Deseret Mountainsnail	Oreohelix peripherica	SGCN		1939
Ferruginous Hawk	Buteo regalis	SGCN		1988
Least Chub	Iotichthys phlegethontis	SGCN		2018
Lewis's Woodpecker	Melanerpes lewis	SGCN		1999
Northern Leopard Frog	Lithobates pipiens	SGCN		1997
Peregrine Falcon	Falco peregrinus	SGCN		2017
Rustic Ambersnail	Succinea rusticana	SGCN		1942
Snowy Plover	Charadrius nivosus	SGCN		
Townsend's Big-eared Bat	Corynorhinus townsendii	SGCN		2003
Utah Physa	Physa gyrina utahensis	SGCN		1939
Western Pearlshell	Margaritifera falcata	SGCN		1884
Western Toad	Anaxyrus boreas	SGCN		1934
Western Yellow-billed Cuckoo	Coccyzus americanus occidentalis	SGCN	LT	1992
White-faced Ibis	Plegadis chihi	SGCN		2021
Winged Floater	Anodonta nuttalliana	SGCN		1928

## Plants within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
No Species Found				

# Definitions

## State Status

SGCN	Species of greatest conservation need listed in the <a href="#">Utah Wildlife Action Plan</a>
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## U.S. Endangered Species Act

LE	A taxon that is listed by the U.S. Fish and Wildlife Service as "endangered" with the probability of worldwide extinction
LT	A taxon that is listed by the U.S. Fish and Wildlife Service as "threatened" with becoming endangered
LE;XN	An "endangered" taxon that is considered by the U.S. Fish and Wildlife Service to be "experimental and nonessential" in its designated use areas in Utah
C	A taxon for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to justify it being a "candidate" for listing as endangered or threatened
PT/PE	A taxon "proposed" to be listed as "endangered" or "threatened" by the U.S. Fish and Wildlife Service

## Disclaimer

The information provided in this report is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, any given response is only appropriate for its respective request.

The UDWR provides no warranty, nor accepts any liability, occurring from any incorrect, incomplete, or misleading data, or from any incorrect, incomplete, or misleading use of these data.

The results are a query of species tracked by the Utah Natural Heritage Program, which includes all species listed under the U.S. Endangered Species Act and species on the Utah Wildlife Action Plan. Other significant wildlife values might also be present on the designated site. Please [contact](#) UDWR's regional habitat manager if you have any questions.

For additional information about species listed under the Endangered Species Act and their Critical Habitats that may be affected by activities in this area or for information about Section 7 consultation under the Endangered Species Act, please visit <https://ecos.fws.gov/ipac/> or contact the [U.S. Fish and Wildlife Service Utah Ecological Services Field Office](#) at (801) 975-3330 or [utahfieldoffice\\_esa@fws.gov](mailto:utahfieldoffice_esa@fws.gov).

Please contact our office at (801) 538-4759 or [habitat@utah.gov](mailto:habitat@utah.gov) if you require further assistance.

Your project is located in the following UDWR region(s): Central region , Northern region

---

### Report generated for:

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2825 E Cottonwood Parkway, Suite 200  
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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Utah Ecological Services Field Office

2369 West Orton Circle, Suite 50

West Valley City, UT 84119-7603

Phone: (801) 975-3330 Fax: (801) 975-3331

<https://fws.gov/office/utah-ecological-services>



In Reply Refer To:

October 25, 2022

Project Code: 2023-0008407

Project Name: I-15; 600 N to Farmington EIS

Subject: List of threatened and endangered species that may occur in your proposed project location 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>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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 Code 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

## 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:

**Utah Ecological Services Field Office**

2369 West Orton Circle, Suite 50  
West Valley City, UT 84119-7603  
(801) 975-3330

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## Project Summary

Project Code: 2023-0008407

Project Name: I-15; 600 N to Farmington EIS

Project Type: Road/Hwy - Maintenance/Modification

Project Description: I-15; 600 N to Farmington EIS

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.87163315,-111.89717372350938,14z>



Counties: Davis and Salt Lake counties, Utah

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## Endangered Species Act Species

There is a total of 3 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.

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.

### Birds

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

### Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

### Flowering Plants

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

### Critical habitats

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

# 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.

REFUGE INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  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>American White Pelican <i>pelecanus erythrorhynchos</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/6886">https://ecos.fws.gov/ecp/species/6886</a>	Breeds Apr 1 to Aug 31
<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.	Breeds Dec 1 to Aug 31

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NAME	BREEDING SEASON
<b>Black Rosy-finch <i>Leucosticte atrata</i></b> 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/9460">https://ecos.fws.gov/ecp/species/9460</a>	Breeds Jun 15 to Aug 31
<b>Black Tern <i>Chlidonias niger</i></b> 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/3093">https://ecos.fws.gov/ecp/species/3093</a>	Breeds May 15 to Aug 20
<b>Bobolink <i>Dolichonyx oryzivorus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
<b>Cassin's Finch <i>Carpodacus cassinii</i></b> 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/9462">https://ecos.fws.gov/ecp/species/9462</a>	Breeds May 15 to Jul 15
<b>Clark's Grebe <i>Aechmophorus clarkii</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
<b>Evening Grosbeak <i>Coccothraustes vespertinus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
<b>Franklin's Gull <i>Leucophaeus pipixcan</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
<b>Lesser Yellowlegs <i>Tringa flavipes</i></b> 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>	Breeds elsewhere
<b>Lewis's Woodpecker <i>Melanerpes lewis</i></b> 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/9408">https://ecos.fws.gov/ecp/species/9408</a>	Breeds Apr 20 to Sep 30
<b>Long-eared Owl <i>asio otus</i></b> 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/3631">https://ecos.fws.gov/ecp/species/3631</a>	Breeds Mar 1 to Jul 15
<b>Marbled Godwit <i>Limosa fedoa</i></b> 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/9481">https://ecos.fws.gov/ecp/species/9481</a>	Breeds elsewhere

NAME	BREEDING SEASON
<b>Olive-sided Flycatcher <i>Contopus cooperi</i></b> 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/3914">https://ecos.fws.gov/ecp/species/3914</a>	Breeds May 20 to Aug 31
<b>Pinyon Jay <i>Gymnorhinus cyanocephalus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9420">https://ecos.fws.gov/ecp/species/9420</a>	Breeds Feb 15 to Jul 15
<b>Rufous Hummingbird <i>selasphorus rufus</i></b> 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/8002">https://ecos.fws.gov/ecp/species/8002</a>	Breeds Apr 15 to Jul 15
<b>Sage Thrasher <i>Oreoscoptes montanus</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/9433">https://ecos.fws.gov/ecp/species/9433</a>	Breeds Apr 15 to Aug 10
<b>Virginia's Warbler <i>Vermivora virginiae</i></b> 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/9441">https://ecos.fws.gov/ecp/species/9441</a>	Breeds May 1 to Jul 31
<b>Western Grebe <i>aechmophorus occidentalis</i></b> 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/6743">https://ecos.fws.gov/ecp/species/6743</a>	Breeds Jun 1 to Aug 31
<b>Willet <i>Tringa semipalmata</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (I)

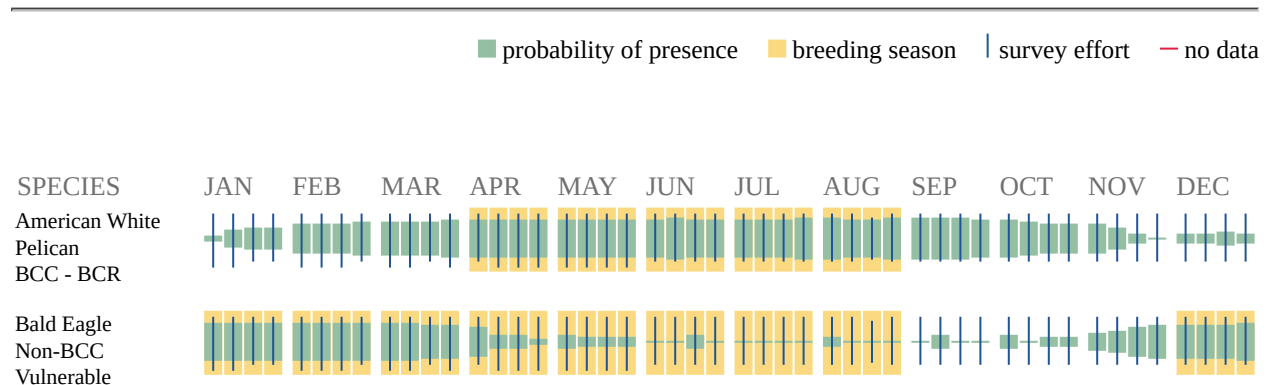
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

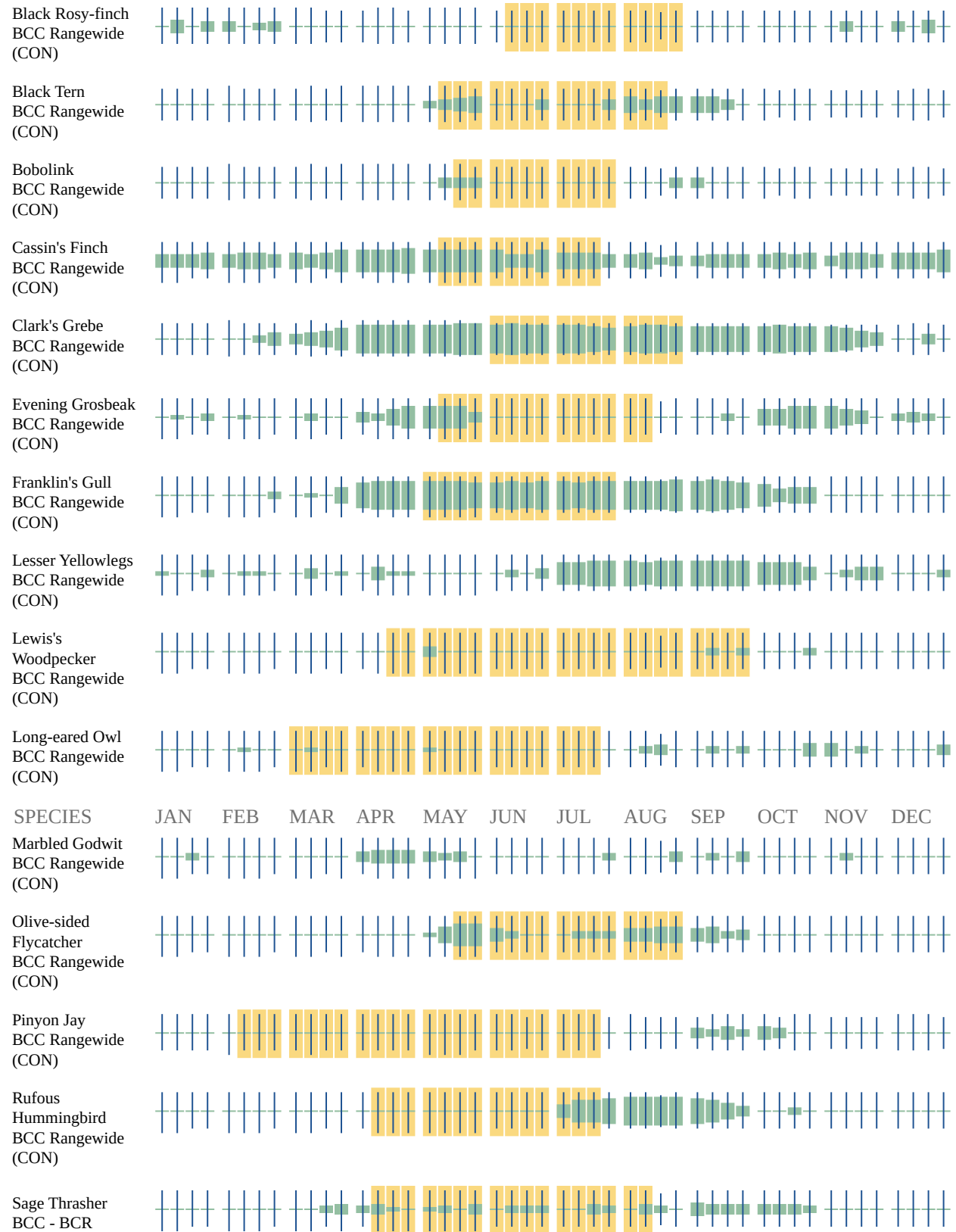
**No Data (—)**

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

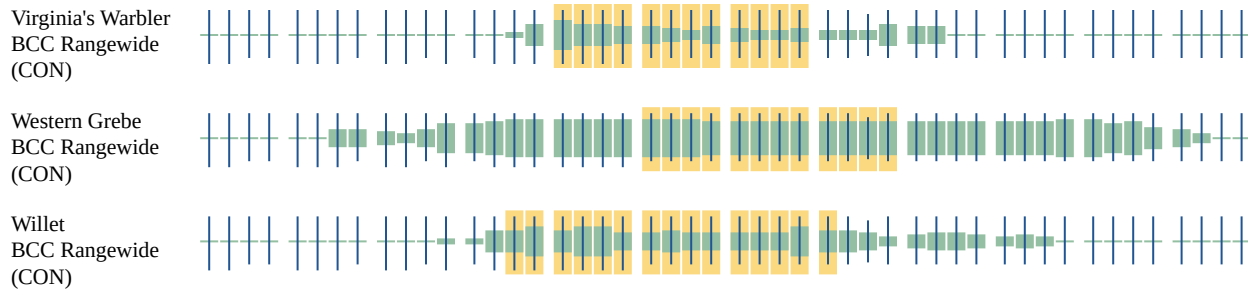
## Survey Timeframe

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









Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.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](#) 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 list of migratory birds that potentially occur 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 [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my 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 query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical](#)

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[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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