

October 9, 2019

Alan Toth
Avatar Equities, LLC
6800 Jericho Turnpike,
Suite 120W #204
Syosset, NY 11791

Dear Mr. Toth,

Thank you for the opportunity to perform environmental services for Avatar's proposed residential community of Riverbend Crossing. Attached is the environmental report that documents existing environmental conditions on the property and potential impacts that would occur as a result of the proposed project.

In summary, no federally listed threatened and endangered species or their habitat were identified onsite. Therefore, the project will not affect any federally listed species and no coordination with the U.S. Fish and Wildlife Service is necessary. One water of the U.S. (Fountain Creek) and one jurisdictional emergent wetland were found on the property. However, current design of the residential development show that neither would be impacted by the project. Therefore, a Section 404 permit and coordination with the U.S. Army Corps of Engineers would not be needed. Lastly, there is potential for migratory birds to use the property as nesting habitat. Therefore it is important that all clearing activities occur outside of the nesting season: November 1 to April 1.

Please let me know if you need any additional information or wish to discuss this further.

Sincerely,



Sarah Itz
Biologist, JDS Hydro Consultants, Inc.
sarahitz@JDSHydro.com

CC: Ms. Irene Shen, Level Up Properties LP

ENVIRONMENTAL REPORT

For

RIVERBEND CROSSING RESIDENTIAL COMMUNITY

**AVATAR EQUITIES, LLC
6800 JERICHO TURNPIKE,
SUITE 120W #204
SYOSSET, NY 11791**

October 2019

Prepared By:



CONSULTANTS, INC.

Riverbend Crossing Residential Community

Environmental Report

October 2019

I. Introduction

Avatar Equities, LLC proposes to develop two currently undeveloped parcels totaling approximately 52 acres in southern El Paso County, Colorado. The property lies southwest of US-85/87, west of Southmoor Drive, and west of the incorporated areas of Security/Widefield. The proposed development will consist of 225 new single family homes and a 14-acre open space area.

Environmental laws that apply to this project include the following:

- Endangered Species Act (ESA) of 1973 – this act aims to provide a framework to conserve and protect endangered and threatened species and their habitats.
- Section 404 of the Clean Water Act (CWA) – this act establishes a program to regulate the discharge or dredged and fill material into waters of the United States, including wetlands.
- Migratory Bird Treaty Act (MBTA) - this act makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit.

This environmental report will document existing environmental conditions at the property and effects on threatened and endangered species, jurisdictional waters and wetlands, and migratory birds as a result of the proposed project. Figures of the property are attached in **Appendix A**, a photo log is in **Appendix B**, wetland data forms are in **Appendix C**, and the list of threatened and endangered species is provided in **Appendix D**.

II. Threatened and Endangered Species

Desktop Review

According to the official species listed obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website accessed on September 26, 2019, there are nine threatened, endangered, or proposed threatened species that could potentially occur in the project area: North American wolverine (*Gulo gulo luscus*), Least Tern (*Sterna antillarum*), Mexican Spotted Owl (*Strix occidentalis lucida*), Piping Plover (*Charadrius melodus*), Whooping Crane (*Grus americana*), greenback cutthroat trout (*Oncorhynchus clarkia stomias*), pallid sturgeon (*Scaphirhynchus albus*), Ute ladies'-tresses (*Spiranthes diluvialis*), and western prairie fringed orchid (*Platanthera praeclara*). There are no critical habitats within the project area. The IPaC list is attached in **Appendix D**.

Recent aerial photography and field investigations indicate most of the property is open, grassy, undeveloped land. Along the southern portion of the property, there are some wooded and shrubby areas within the floodplain of Fountain Creek. To the north and east of the property, there is

commercial and residential development. To the west, it is mostly undeveloped and cropland. Fountain Creek flows eastward in a well-defined channel with steep banks south of the property. The figures in **Appendix A** show the property on various map bases.

Habitat Assessment

A habitat assessment was conducted on October 3, 2019 by JDS Hydro personnel to identify potential threatened and endangered species habitat within the subject property. Loose transects were walked throughout the entire property. Site photographs are provided in **Appendix B**.

Fountain Creek is a perennial stream that runs eastward along the southern tip of the property. There is a wide floodplain associated with Fountain Creek. The floodplain contains mature Great Plains cottonwood (*Populus deltoides*), narrowleaf cottonwood (*Populus angustifolia*), black locust (*Robinia pseudoacacia*), and narrowleaf willow (*Salix exigua*) trees with very little understory. Much of the floodplain contains bare sand with scattered areas of herbs and grass (**Appendix B, Photos 4-6**).

North of the Fountain Creek floodplain is an upland terrace that slopes gently towards the south. A mix of native and introduced grass and herbaceous species was observed, including lambs quarters (*Chenopodium album*), western ragweed (*Ambrosia psilostachya*), sunflower (*Helianthus* sp.), aster (*Aster* sp.), needle-and-thread grass (*Hesperostipa comata*), prickly pear (*Opuntia polyacantha*), Indian grass (*Sorghastrum nutans*), western wheatgrass (*Pascopyrum smithii*), and various bluestem and grama grasses (**Appendix B, Photos 1-3, 9**).

Effects to Threatened and Endangered Species

The table below shows the species the USFWS considers as potentially occurring on the property or surrounding areas, their federal status, and their habitat requirements. While there is a riparian corridor along Fountain Creek that extends into the property, the soils found on site are sandy and would not be expected to support Ute ladies'-tresses. No suitable habitat for any of these listed or proposed listed species was identified on the subject property. Therefore, the project will not affect federally listed species.

Table 1. Listed Species of Potential Occurrence in the Project Area

Species	Federal Status	Suitable Habitat	Habitat within Project Area?
North American Wolverine (<i>Gulo gulo luscus</i>)	Proposed Threatened	High, alpine environments	No
Least Tern (<i>Sterna antillarum</i>)*	Endangered	Sandy or pebbly beaches, well above the water line, around lakes and reservoirs or on sandy soil sandbars in river channels	No
Mexican Spotted Owl (<i>Strix occidentalis lucida</i>)	Threatened	Mixed conifer forests, Madrean pine-oak forests, and rocky canyons	No
Piping Plover (<i>Charadrius melodus</i>)*	Threatened	Sandy lakeshore beaches, sandbars within riverbeds or even sandy wetland pastures. An important aspect of this habitat is that of sparse vegetation	No

Table 1. Listed Species of Potential Occurrence in the Project Area

Species	Federal Status	Suitable Habitat	Habitat within Project Area?
Whooping Crane (<i>Grus americana</i>)*	Endangered	Mudflats around reservoirs and in agricultural areas. While wintering, they live on salt flats that are dominated by coastal salt grass. Their nesting grounds are wetland communities dominated by bulrush	No
Greenback Cutthroat Trout (<i>Oncorhynchus clarkia stomias</i>)	Threatened	Cold, clear, gravelly headwater streams and mountain lakes which provide an abundant food supply of insects	No
Pallid Sturgeon (<i>Scaphirhynchus albus</i>)*	Endangered	Pallid sturgeons evolved and adapted to living close to the bottom of large, silty rivers with natural a hydrograph. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats and gravel bars	No
Ute Ladies'-tresses (<i>Spiranthes diluvialis</i>)	Threatened	Occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. It typically occurs in stable wetland and seepy areas associated with old landscape features within historical floodplains of major rivers. Found in loamy calcareous wetland soils with gley features, generally high in micronutrients and organic matter	No
Western Prairie Fringed Orchid (<i>Platanthera praeclara</i>)*	Threatened	Moist tallgrass prairies and sedge meadows	No

*These species only need to be considered under the following conditions: Water-related activities/use in the N. Platte, S. Platte, and Laramie River Basins may affect listed species in Nebraska.

III. Waters and Wetlands

Regulatory Overview

Section 404 of the CWA established programs to regulate the discharge of dredged or fill material and other work in waters of the U.S., including wetlands and other special aquatic sites. The CWA is administered by the U.S. Army Corps of Engineers (USACE), with U.S. Environmental Protection Agency (EPA) oversight. Under Section 404 of the CWA, regulated waters of the U.S. are broadly categorized to include the territorial seas, tidal waters, and non-tidal waters of the U.S., including inland features such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds (33 Code of Federal Regulations [CFR] §323 and 328).

The “discharge” of dredged and fill material is defined as follows:

- Discharge of Dredged Material – Any addition of dredged material (including the redeposit of dredged or excavated material other than incidental fallback) into a water of the U.S. The USACE and EPA regard the use of mechanized earth-moving equipment to conduct land clearing, ditching, channelization, in-stream mining, side-casting, temporary stockpiling, and other ground-disturbing activities within a water of the U.S. as resulting in a discharge of dredged material.
- Discharge of Fill Material – Any addition of fill material into a water of the U.S. An example of a discharge of fill material would be the placement of clean soil into a wetland to create dry land so that a road could be built on the site. Another example would be placing or extending a culvert within a streambed.

Discharges of dredged or fill material may be permanent or temporary. Permanent discharges include those that will permanently affect a water of the U.S. by filling, flooding, excavation, or drainage. Permanent effects to waters of the U.S. are considered a “loss of waters of the U.S.” if the discharges change an aquatic area to dry land, increase the bottom elevation of a water of the U.S., or change the use of a water body. In addition to losses of physical areas of waters of the U.S. as a result of discharges, the USACE regulates the loss of functions or values of waters of the U.S. in some circumstances when actual permanent discharges are not involved, such as clearing a forested wetland or changing the hydrology of a water of the U.S. upstream or downstream of a permitted activity.

Examples of temporary discharges include the placement of fill within waters of the U.S. for temporary project components such as cofferdams or temporary access roads (including crane paths), where the fill will be removed in its entirety and the area will be restored to its pre-construction contours upon project completion. Note that, in some cases, the USACE considers temporary project components as causing a permanent loss to waters of the U.S. An example is when fill for a temporary access road will remain within a wetland for such a long period of time that it impacts the potential for the wetland to reestablish after the fill is removed.

Discharges of dredged or fill material and other work in waters subject to regulation under Section 404 of the CWA typically require permit authorization before the discharges occur, unless the activity is exempt from regulation. Section 404 permits that are commonly issued by the USACE include Standard Individual Permits and General Permits, including Nationwide Permits (NWP) and Regional General Permits. NWPs are a type of general permit designed to regulate, with little to no delay or paperwork, certain activities having minimal impacts. The use of a NWP requires compliance with the General Conditions (GCs) for NWPs. Key GCs crucial to project development include addressing impacts to federally-listed threatened and endangered species and cultural resources within the permit area at each waters of the U.S. crossing.

Field investigations and delineations for the Riverbend Crossing project relied on methods outlined in the USACE’s 1987 Wetland Delineation Manual and the 2010 Regional Supplement to the Wetland Delineation Manual for the Western Mountains, Valleys, and Coast Region (Version 2.0).

Field Investigations

A field investigation on the property was performed by JDS staff on October 3, 2019. Loose transects were walked to identify all waters and wetlands onsite. Fountain Creek extends into the southern tip of the property and flows towards the east (**Appendix B, Photos 5-6**). One emergent wetland was observed on the property. Duckweed (*Lemna minor*), flatsedge (*Cyperus odoratus*), narrowleaf willow (*Salix exigua*), and Great Plains cottonwood (*Populus deltoides*) were the dominant species observed in the wetland. Gley soils were observed at a depth of six inches and met hydric soils indicator F2. The following are primary hydrology indicators that were observed: surface water, high water table, water marks, and sparsely vegetated concave surface (**Appendix B, Photo 7-8**). The wetland is approximately 0.03 acre in size. Fountain Creek and the wetland are shown on **Figure 4 in Appendix A**. No other wetlands, creeks, tributaries, or other potential waters of the U.S. were observed on the property.

Impacts to Waters and Wetlands

The Fountain Creek stream channel will not be altered as part of this proposed development. It will remain as open space and serve as a natural corridor for riparian and wildlife environments and recreational opportunities. Additionally, according to current design (August 2019), no impacts to the wetland would result from the project. The proposed retaining wall and water quality detention pond are approximately 85 to 110 feet, respectively, northeast of the wetland. The limits of disturbance extend approximately 5 feet north of the wetland, according to staking completed at the site (**Appendix B, Photo 8**). Therefore, no impacts to the wetland are anticipated.

Since no waters of the U.S. or wetlands would be dredged, filled, or otherwise impacted, no Section 404 permit would be required. No coordination would be necessary with the USACE.

IV. Migratory Birds

The MBTA makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit.

A migratory bird and nest survey was conducted on the property. The wooded area within the Fountain Creek floodplain contains suitable nesting sites for migratory birds. However, no nests were observed in this area. Prairie dog holes were observed in the northwestern portion of the property that Burrowing Owls (*Athene cunicularia*) and Ferruginous Hawks (*Buteo regalis*) may utilize for burrowing/nesting habitat (**Figure 4 in Appendix A**, and **Photo 3 in Appendix B**). However, field observations found that the holes appear to be abandoned. Intact spider webs were found on many of the entrances to the holes. No evidence of owls or hawks was observed in this area. Though no nests or migratory birds were observed during the field investigation in October 2019, all clearing/grubbing activities must be completed between November 1st and April 1st to avoid impacts to migratory birds that may use the property as habitat in the coming year.

V. Conclusion

No federally listed species or their habitat were observed on the property; therefore, the project will not affect any federally listed species. No coordination with the USFWS would be required.

Fountain Creek and one emergent wetland were identified on the property. No impacts to either of these jurisdictional waters would occur as a result of the project. Therefore, no Section 404 permit is necessary and no coordination with the USACE would be required.

In order to avoid impacts to migratory birds, clearing and grubbing activities should be performed between November 1st and April 1st when migratory birds are absent.

Appendix A
Figures

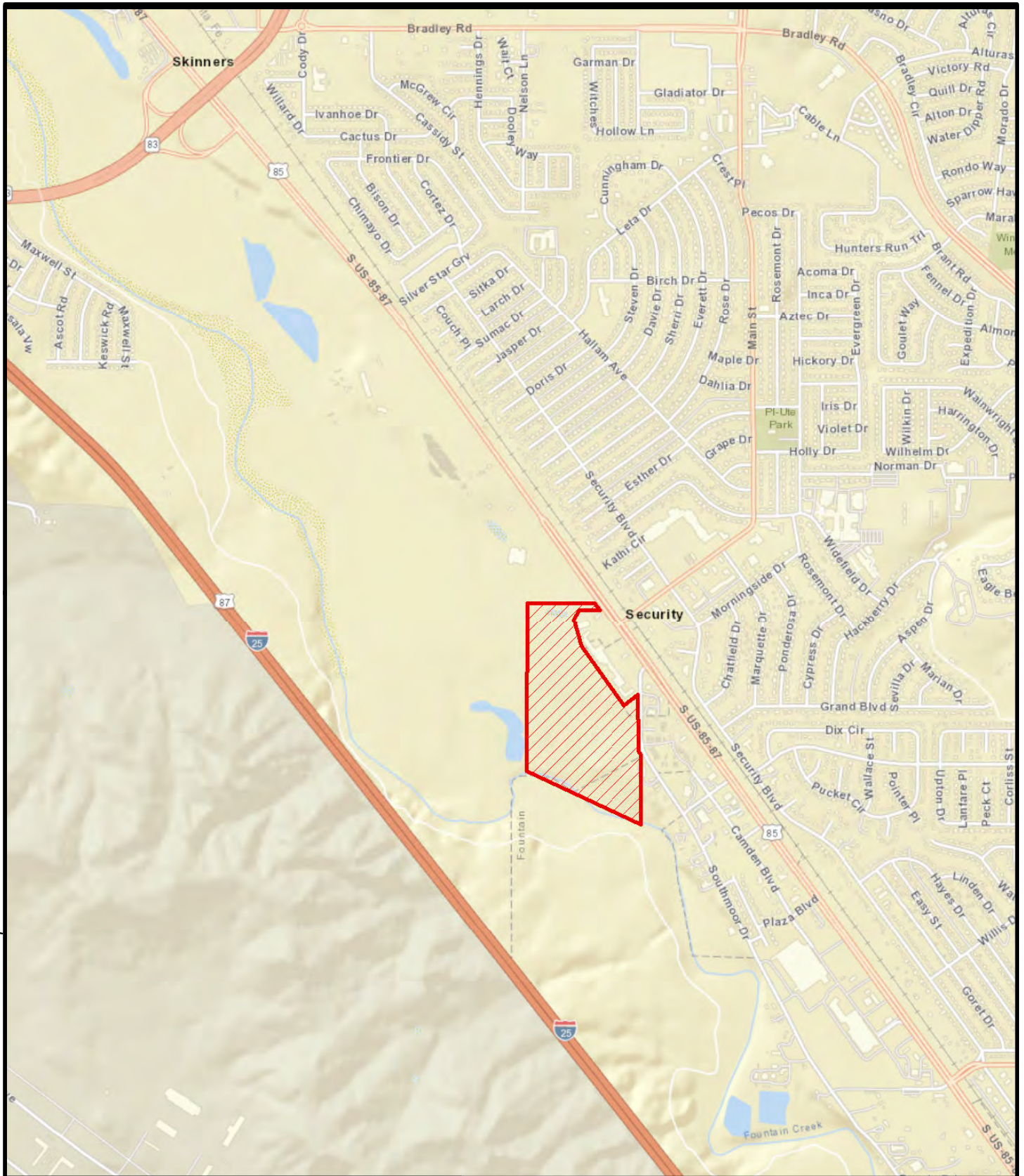


FIGURE 1 Project Location Map

Riverbend Crossing Residential Development
Avatar Equities, LLC



Project Area



0 1,000 2,000
Feet



Source: ESRI World Imagery

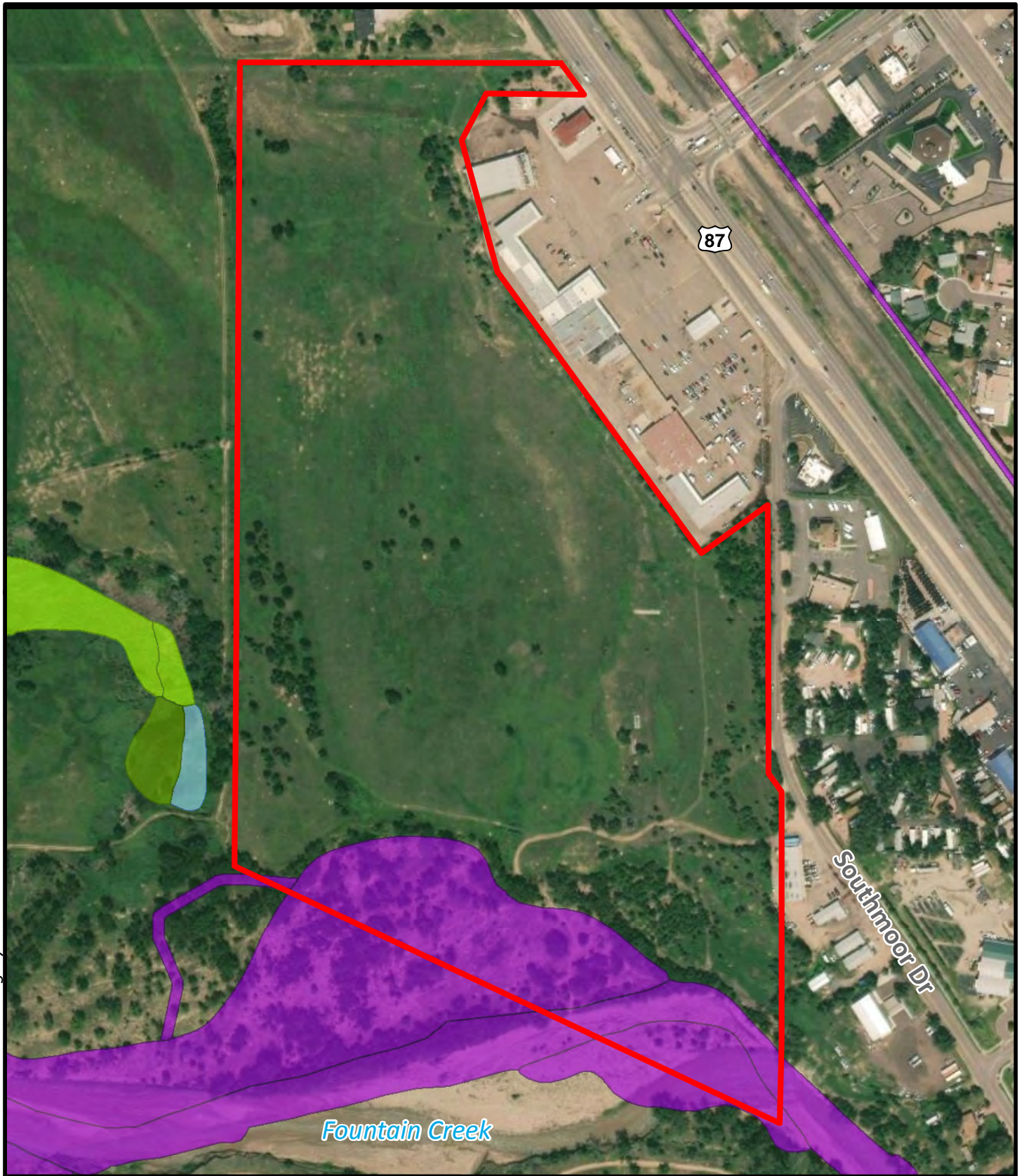





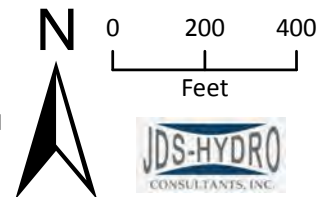


FIGURE 2

Aerial Map with NWI Data

Riverbend Crossing Residential Development
Avatar Equities, LLC

-  Project Area
- NWI Wetland Type**
-  Freshwater Emergent Wetland
 -  Freshwater Forested/Shrub Wetland
 -  Freshwater Pond
 -  Riverine



JDS-HYDRO
CONSULTANTS, INC.

Source: USGS Topographic Map, Colorado Springs Quad, 1994

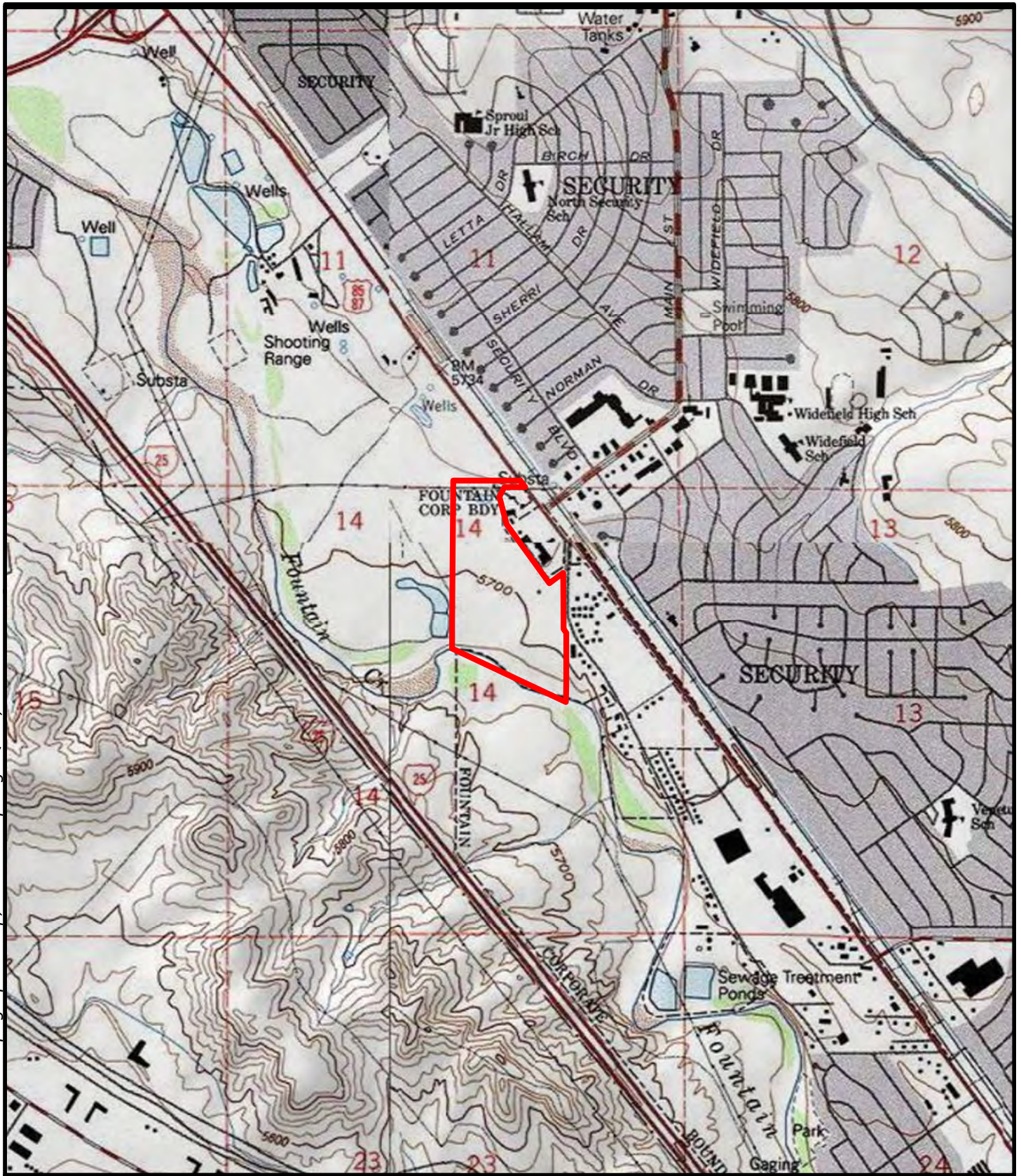


FIGURE 3 USGS Topographic Map

Riverbend Crossing Residential Development
Avatar Equities, LLC

 Project Area

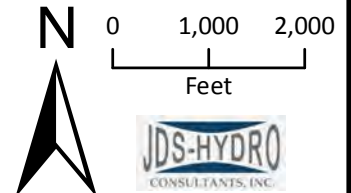




FIGURE 4

Prairie Dog Holes, Waters & Wetlands

Riverbend Crossing Residential Development
Avatar Equities, LLC

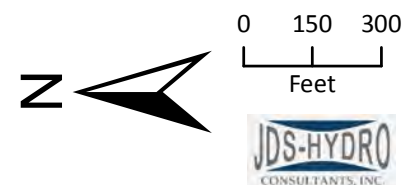
-  Project Area
-  Prairie Dog Holes
-  Water of the U.S.
-  Wetland
-  Wetland Data Point



0 150 300
Feet



**Riverbend Crossing Residential Development
Avatar Equities, LLC**



Appendix B
Photo Log



Photo 1: Overview of the property, facing west from northeastern portion of the property.



Photo 2: Facing northwest at dry basin located at northern tip of the property.



Photo 3: Prairie dog holes found in the northwest area of the property. No prairie dogs or migratory birds were observed in this area during the field investigation.



Photo 4: Sandy floodplain area adjacent to Fountain Creek in the southern tip of the property.
Facing west.



Photo 5: Fountain Creek, facing west, from southern tip of the property.



Photo 6: Fountain Creek, facing east, from the southern tip of the property. Note the tall cliffs along the creek in this area.



Photo 7: Emergent wetland observed within the property. The wetland lies within the Fountain Creek floodplain and is hydrologically connected to the creek.



Photo 8: Stake marking the limits of disturbance near the wetland. Anything beyond the stake in this photo will not be affected.



Photo 9: Upland point taken outside of the wetland. The soils here are sandy and upland vegetation was observed at this point.



Photo 10: Upland area of the property, facing north from near the dirt roads in the central portion of the property.

Appendix C
Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Riverbend Crossing City/County: Co.Springs/EI Paso Co Sampling Date: 10-03-2019
 Applicant/Owner: Avatar, LLC State: CO Sampling Point: Wet1
 Investigator(s): JDS Hydro – SI & JP Section, Township, Range: 14-15S-66W
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2-10%
 Subregion (LRR): E Lat: 38.746444 Long: -104.745615 Datum: NAD 83
 Soil Map Unit Name: Limon clay, 0-3% slopes (47) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: Since hydrophytic vegetation, hydric soils, and wetland hydrology were all observed at this point, it is considered to be within a wetland.					

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Populus deltoides</u>		<u>60</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Salix exigua</u>		<u>5</u>	<u>N</u>	<u>FACW</u>	
3. _____					
4. _____					
		<u>65</u>	<u>= Total Cover</u>		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum	(Plot size: <u>15'</u>)				
1. <u>Populus deltoides</u>		<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Salix exigua</u>		<u>5</u>	<u>Y</u>	<u>FACW</u>	
3. _____					
4. _____					
5. _____					
		<u>10</u>	<u>= Total Cover</u>		
Herb Stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Cyperus odoratus</u>		<u>35</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Lemna minor</u>		<u>30</u>	<u>Y</u>	<u>OBL</u>	
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
		<u>65</u>	<u>= Total Cover</u>		
Woody Vine Stratum	(Plot size: <u>15'</u>)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____					
2. _____					
		<u>0</u>	<u>= Total Cover</u>		
% Bare Ground in Herb Stratum <u>35%</u>					

Remarks:

SOIL

Sampling Point: wet1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2	95	7.5YR 3/4	5	C	M	Clay loam	
4-6	10YR 2/1	100	--				Sandy loam	
6-12	GLE Y1 2.5/N	100	--				Clay loam	lots of organic material

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present): Type: <u>rock</u> Depth (inches): <u>12"</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0-3"</u> Depth (inches): <u>6"</u> Depth (inches): <u></u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Riverbend Crossing City/County: Co.Springs/EI Paso Co Sampling Date: 10-03-2019
 Applicant/Owner: Avatar, LLC State: CO Sampling Point: Up1
 Investigator(s): JDS Hydro – SI & JP Section, Township, Range: 14-15S-66W
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1-3%
 Subregion (LRR): E Lat: 38.746382 Long: -104.745571 Datum: NAD 83
 Soil Map Unit Name: Limon clay, 0-3% slopes (47) NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

Remarks: Hydrophytic vegetation, hydric soils, and wetland hydrology were not observed at this point. Therefore, the point is not within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>15'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
1. <u>Populus deltoides</u>		10	Y	FAC	
2. <u>Populus angustifolia</u>		40	Y	FACW	
3. _____					
4. _____					
		50	= Total Cover		Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>2</u> x 5 = <u>10</u> Column Totals: <u>67</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.99</u>
Sapling/Shrub Stratum (Plot size: <u>15'</u>)					
1. <u>Robinia pseudoacacia</u>		5	Y	FACU	
2. _____					
3. _____					
		5	= Total Cover		
Herb Stratum (Plot size: <u>5'</u>)					Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Ambrosia psilostachya</u>		10	Y	FACU	
2. <u>Schizachyrium scoparium</u>		5	Y	FACU	
3. <u>Opuntia polycantha</u>		2	N	UPL	
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
		17	= Total Cover		
Woody Vine Stratum (Plot size: <u>15'</u>)					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____					
2. _____					
		0	= Total Cover		
% Bare Ground in Herb Stratum <u>70%</u>					

Remarks: Lots of bare sand at this point.

SOIL

Sampling Point: up1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 6/2	100	--				Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic
--	---

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)				Secondary Indicators (2 or more required)			
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) <input type="checkbox"/> Frost-Heave Hummocks (D7)					

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

Remarks: _____

Appendix D
IPaC List of Threatened and Endangered Species

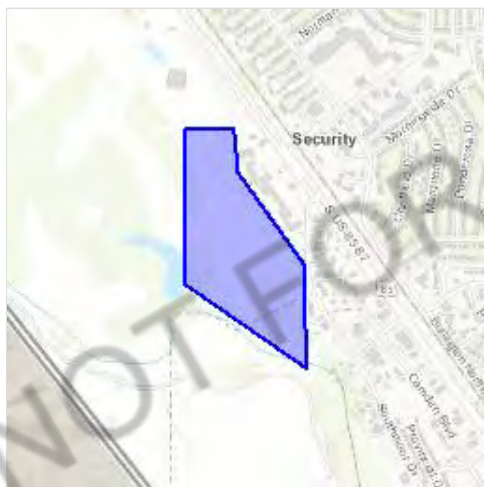
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

El Paso County, Colorado



Local office

Colorado Ecological Services Field Office

☎ (303) 236-4773

📠 (303) 236-4005

MAILING ADDRESS

Denver Federal Center

P.O. Box 25486

Denver, CO 80225-0486

PHYSICAL ADDRESS

134 Union Boulevard, Suite 670
Lakewood, CO 80228-1807

<http://www.fws.gov/coloradoES>

<http://www.fws.gov/platteriver>

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

North American Wolverine *Gulo gulo luscus*

Proposed Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/5123>

Birds

NAME

STATUS

Least Tern *Sterna antillarum*

Endangered

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

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

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8505>Mexican Spotted Owl *Strix occidentalis lucida*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.<https://ecos.fws.gov/ecp/species/8196>Piping Plover *Charadrius melodus*

Threatened

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

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

There is **final** critical habitat for this species. Your location is outside the critical habitat.<https://ecos.fws.gov/ecp/species/6039>Whooping Crane *Grus americana*

Endangered

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

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

There is **final** critical habitat for this species. Your location is outside the critical habitat.<https://ecos.fws.gov/ecp/species/758>

Fishes

NAME

STATUS

Greenback Cutthroat Trout *Oncorhynchus clarkii stomias*

Threatened

No critical habitat has been designated for this species.

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

Pallid Sturgeon *Scaphirhynchus albus***Endangered**

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

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

No critical habitat has been designated for this species.

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

Flowering Plants

NAME

STATUS

Ute Ladies'-tresses *Spiranthes diluvialis***Threatened**

No critical habitat has been designated for this species.

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

Western Prairie Fringed Orchid *Platanthera praeclara***Threatened**

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

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

No critical habitat has been designated for this species.

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

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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

1. The [Migratory Birds Treaty Act](#) of 1918.

2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <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 BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

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 the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds](#)

[guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or

minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

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.

This location overlaps the following wetlands:

RIVERINE

[R2UBG](#)

[R2USA](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.