

IPaC Information for Planning and Consultation U.S. Fish & Wildlife Service

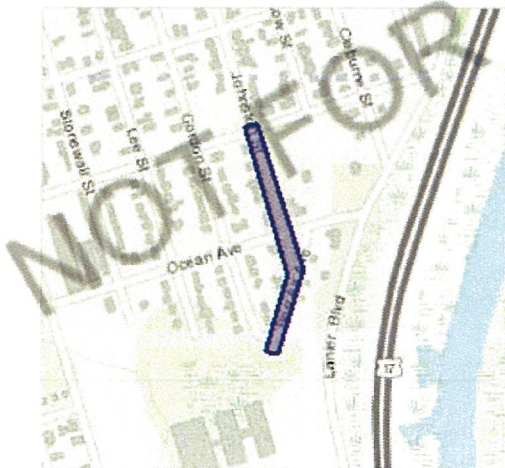
IPaC resource list

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

Glynn County, Georgia



Local office

Georgia Ecological Services Field Office

☎ (706) 613-9493

📠 (706) 613-6059

105 Westpark Drive

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Westpark Center Suite D
Athens, GA 30606-3175

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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 are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service.

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.

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

Mammals

NAME

STATUS

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North Atlantic Right Whale *Eubalaena glacialis* Endangered
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/159>

West Indian Manatee *Trichechus manatus* Threatened
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/4469>

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Great Lakes, watershed in States of IL, IN, MI, MN, NY, OH, PA, and WI and Canada (Ont.) There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039	Endangered

Piping Plover <i>Charadrius melodus</i> Except Great Lakes watershed There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
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Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1864	Threatened
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Wood Stork <i>Mycteria americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8477	Threatened
--	------------

Reptiles

NAME	STATUS
Eastern Indigo Snake <i>Drymarchon corais couperi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/646	Threatened

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Gopher Tortoise *Gopherus polyphemus* Candidate
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/6994>

Green Sea Turtle *Chelonia mydas* Threatened
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/6199>

Leatherback Sea Turtle *Dermochelys coriacea* Endangered
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/1493>

Loggerhead Sea Turtle *Caretta caretta* Threatened
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/1110>

Fishes

NAME	STATUS
Atlantic Sturgeon <i>Acipenser oxyrinchus oxyrinchus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3252	Endangered
Shortnose Sturgeon <i>Acipenser brevirostrum</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6635	Endangered

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

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

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service³. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and 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)

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>

The birds listed below are USFWS Birds of Conservation Concern that might be affected by activities in this location. The list does not contain every bird you may find in this location, nor is it guaranteed that all of the birds on the list will be found on or near this location. To get a better idea of the specific locations where certain species have been reported and their level of occurrence, please refer to resources such as the E-bird data mapping tool (year-round bird sightings by birders and the general public) and Breeding Bird Survey (relative abundance maps for breeding birds). Although it is important to try to avoid and minimize impacts to all birds, special attention should be given to the birds on the list below. To get a list of all birds potentially present in your project area, visit the E-bird Explore Data Tool.

NAME	BREEDING SEASON
American Oystercatcher <i>Haematopus palliatus</i> https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31
Black Rail <i>Laterallus jamaicensis</i> https://ecos.fws.gov/ecp/species/7717	Breeds Mar 1 to Sep 15
Black Skimmer <i>Rynchops niger</i> https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15

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Black-throated Green Warbler <i>Dendroica virens</i>	Breeds May 1 to Aug 15
Clapper Rail <i>Rallus longirostris</i> https://ecos.fws.gov/ecp/species/8937	Breeds Apr 10 to Oct 31
Common Ground-dove <i>Columbina passerina exigua</i>	Breeds Feb 1 to Dec 31
Common Tern <i>Sterna hirundo</i> https://ecos.fws.gov/ecp/species/4963	Breeds May 1 to Aug 31
Dunlin <i>Calidris alpina arctica</i>	Breeds elsewhere
Eastern Whip-poor-will <i>Caprimulgus vociferus</i>	Breeds May 1 to Aug 20
Gull-billed Tern <i>Gelochelidon nilotica</i> https://ecos.fws.gov/ecp/species/9501	Breeds May 1 to Jul 31
Henslow's Sparrow <i>Ammodramus henslowii</i> https://ecos.fws.gov/ecp/species/3941	Breeds May 1 to Aug 31
Kentucky Warbler <i>Oporornis formosus</i>	Breeds Apr 20 to Aug 20
King Rail <i>Rallus elegans</i> https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Le Conte's Sparrow <i>Ammodramus leconteii</i>	Breeds elsewhere
Least Tern <i>Sterna antillarum</i>	Breeds Apr 20 to Sep 10
Lesser Yellowlegs <i>Tringa flavipes</i> https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Marbled Godwit <i>Limosa fedoa</i> https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nelson's Sparrow <i>Ammodramus nelsoni</i>	Breeds elsewhere
Prairie Warbler <i>Dendroica discolor</i>	Breeds May 1 to Jul 31

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Prothonotary Warbler <i>Protonotaria citrea</i>	Breeds Apr 1 to Jul 31
Purple Sandpiper <i>Calidris maritima</i>	Breeds elsewhere
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>	Breeds May 10 to Sep 10
Red-throated Loon <i>Gavia stellata</i>	Breeds elsewhere
Rusty Blackbird <i>Euphagus carolinus</i>	Breeds elsewhere
Saltmarsh Sparrow <i>Ammodramus caudacutus</i>	Breeds elsewhere
Seaside Sparrow <i>Ammodramus maritimus</i>	Breeds May 10 to Aug 20
Semipalmated Sandpiper <i>Calidris pusilla</i>	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Snowy Plover <i>Charadrius alexandrinus</i>	Breeds Mar 5 to Sep 15
Southeastern American Kestrel <i>Falco sparverius paulus</i> https://ecos.fws.gov/ecp/species/4076	Breeds Apr 1 to Aug 31
Swallow-tailed Kite <i>Elanoides forficatus</i> https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Whimbrel <i>Numenius phaeopus</i> https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Wilson's Plover <i>Charadrius wilsonia</i>	Breeds Apr 1 to Aug 20
Wood Thrush <i>Hylocichla mustelina</i>	Breeds May 10 to Aug 31

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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.

Probability of Presence (■)

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

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

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

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote when the bird breeds in the Bird Conservation Region(s) in which your project lies. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the counties of your project area. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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

No Data (—)

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

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information.

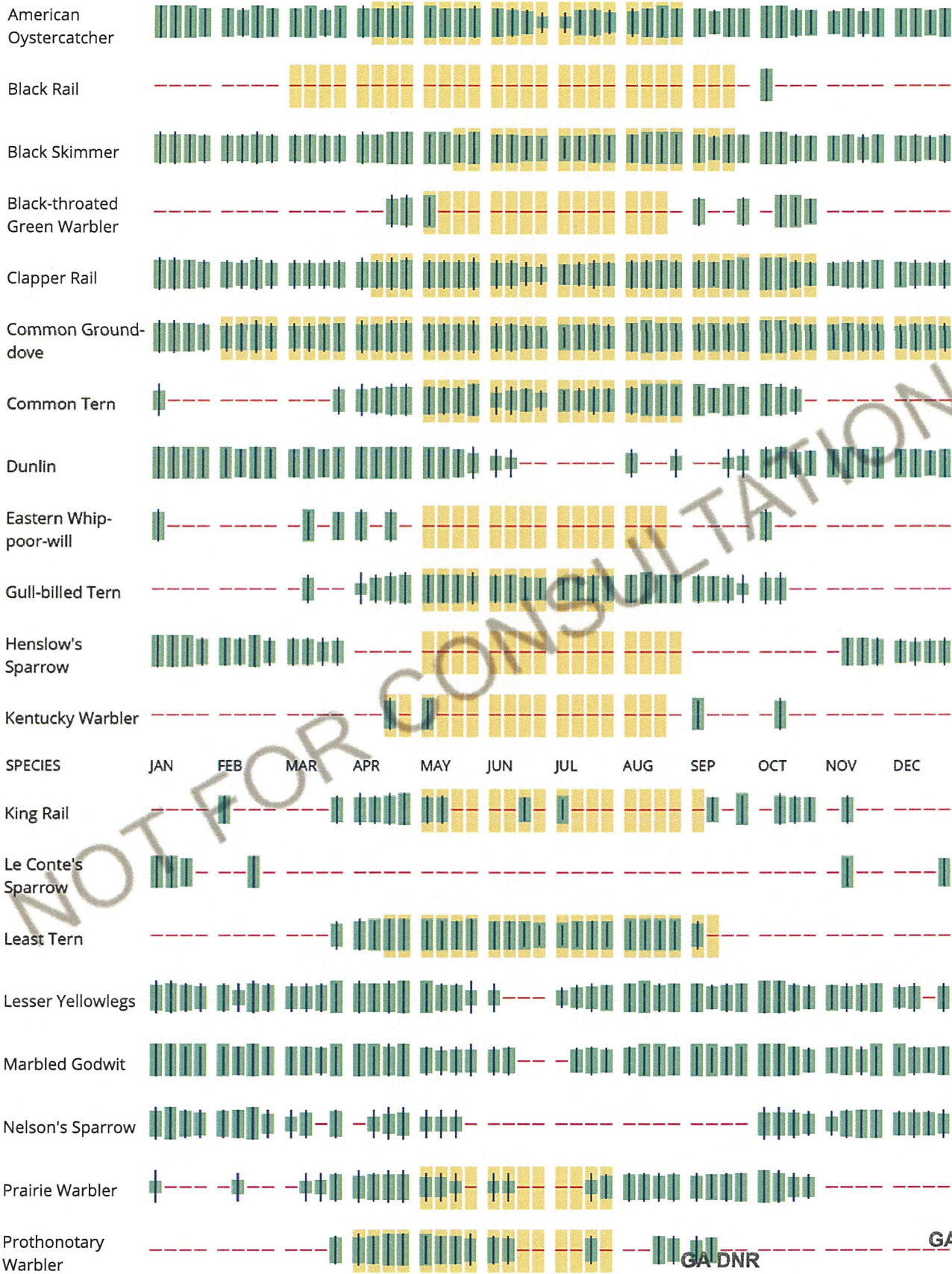
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■ probability of presence ■ breeding season | survey effort — no data

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC



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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. Such measures are particularly important when birds are most likely to occur in the project area. To see when birds are most likely to occur in your project area, view the Probability of Presence Summary. Special attention should be made to look for nests and avoid nest destruction during the breeding season. The best information about when birds are breeding can be found in [Birds of North America \(BNA\) Online](#) under the "Breeding Phenology" section of each species profile. Note that accessing this information may require a [subscription](#). [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.

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What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) that might be affected by activities in your project location. These birds are of priority concern because it has been determined that without additional conservation actions, they are likely to become candidates for listing under the [Endangered Species Act \(ESA\)](#).

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](#). The AKN list represents all birds reported to be occurring at some level throughout the year in the counties in which your project lies. That list is then narrowed to only the Birds of Conservation Concern for your project area.

Again, the Migratory Bird Resource list only includes species of particular priority concern, and is not representative of all birds that may occur in your project area. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data 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.

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 [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 entry on your migratory bird species list indicates a breeding season, it is probable the bird breeds in your project's counties at some point within the time-frame specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Facilities

Wildlife refuges

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

THERE ARE NO REFUGES AT THIS LOCATION.

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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](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

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

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

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

Data exclusions

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

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies.

Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory

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programs and proprietary jurisdictions that may affect such activities.

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ENVIRONMENTAL SERVICES, INC.
101 B Estus Drive
Savannah, GA 31404

Phone 912-236-4711 * Fax 912-236-3668

www.environmentalservicesinc.com

14 September 2017

US Army Corps of Engineers
Attn: CESAS-RD Ms. Sherelle Reinhardt
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3640

**Subject: EMC / City of Brunswick - Glynn Middle School Sidewalk & Pedestrian Bridge
Glynn County, Georgia
Request for Delineation Review of Aquatic Resources**

ES16007.00

Dear Ms. Reinhardt:

On behalf of EMC Engineering and the City of Brunswick, Environmental Services, Inc., (ESI) is submitting the attached Request for a Delineation Review of Aquatic Resources to verify the wetland delineation associated with this ±2.241-acre project study area, located adjacent to Johnson Street, Ocean Avenue, and Gordon Street within the City of Brunswick in Liberty County, Georgia (Figure 1).

ESI visited the above-referenced site in January 2017 and conducted an investigation to assess the limits and conditions of freshwater wetlands within the site. This investigation was conducted in accordance with the criteria contained in the 1987 *Corps of Engineers Wetland Delineation Manual* and the 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region*. Attached please find Figures 1-6 depicting the: site vicinity/location map; USGS topographic site map; NRCS soils map; National Wetland Inventory map; FEMA Flood Zone map; and Approximate Wetland Sketch. A survey of the wetland boundaries is also attached, and titled Saltwater Wetland Exhibit: Glynn Middle School Sidewalk Connector, and dated August 26, 2017. Also attached is Appendix 1 (Request for Delineation Review of Aquatic Resources Form), Dataset Forms, and Photo Sheets 1.

At your earliest convenience, we respectfully request a delineation review of the subject property. Please contact us to schedule a field visit if deemed necessary. In advance, we thank you for your timely review of this project. If you have any questions or require additional information, please do not hesitate to call.

Sincerely yours,

ENVIRONMENTAL SERVICES, INC.



Michael DeMell
Sr. Vice President II & Technical Director



Kristen Deason
Senior Scientist

MD/kd
ES16007.00/GlynnMiddle_Del Rev_Cvr_Ltr.doc
Xc: Kip Goodbread, EMC
Garraw Alberson, City of Brunswick

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US Army Corps
of Engineers
Savannah District

SAS APPENDIX 1: Request for Corps of Engineers Jurisdictional Determination (JD) and/or Delineation Review

I. Reason for request: (check as many as applicable)

- I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all aquatic resources.
- I intend to construct/develop a project or perform activities on this parcel which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps, and the JD would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- I intend to construct/develop a project or perform activities on this parcel which may require authorization from the Corps; this request is accompanied by my permit application and the JD is to be used in the permitting process.
- I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is included on the district Section 10 list and/or is subject to the ebb and flow of the tide.
- A Corps JD is required in order to obtain my local/state authorization.
- I intend to contest jurisdiction over a particular aquatic resource and request the Corps confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- I believe that the site may be comprised entirely of dry land.
- Other: _____

II. I am requesting that the U.S. Army Corps of Engineers, Savannah District, provide me with the following:

- Delineation Review of Aquatic Resources** - Concurrence with an aquatic resource delineation is a written notification from the Corps concurring, not concurring, or commenting on the aquatic resource boundaries, or limits, delineated on a property.
- Preliminary Jurisdictional Determination** - (PJD). A PJD is defined in Corps regulations at 33 CFR 331.2, as "written indications that there may be waters of the United States on a parcel". When the Corps provides a PJD, the Corps is making no legally binding determination of any type regarding whether jurisdiction exists over the particular aquatic resource in question.
- Approved Jurisdictional Determination** - (AJD) An AJD is defined in Corps regulations at 33 CFR 331.2. A definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a parcel.
- I am unclear as to what I would like to request and require additional information to inform my decision. GA DNR

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III. Property/Owner Information. Please complete ALL the following property under review:

SECTION 1

Parcel Number of Property:		
Lat. 31.141046	Long. - 81.480971	(in decimal degrees)
Parcel Address: Bon Air Avenue		
Parcel City : Brunswick	Parcel County: Glynn	Zip: 31520
Size of Review Area: 2.241	Acre(s)	Linear feet

SECTION 2

LANDOWNER NAME		AUTHORIZED AGENT'S NAME	
First: Garrow	Last: Alberson	First: Kristen	Last: Deason
Company: City of Brunswick		Company: Environmental Services, Inc.	
Email Address: galberson@cityofbrunswick-ga.ga		Email Address: kdeason@esinc.cc	
Address: 601 Gloucester Street		Address: 101 B Estus Drive	
City: Brunswick		City: Savanna	
State: GA	Zip: 31520	State: GA	Zip: 31404
Phone: 912-267-5540		Phone: 912-236-4711	

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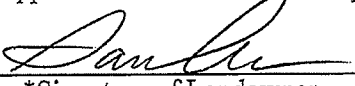
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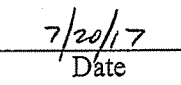
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PROPERTY ACCESS PERMISSION, ACKNOWLEDGEMENT OF 18 U.S.C. SECTION 10001 AND STATEMENT OF AGENT AUTHORIZATION

By signing below, you are indicating that you have the authority, or are acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant Corps personnel right of entry to legally access the site if needed to perform the delineation and/or JD. Your signature shall be an affirmation that you possess the requisite property rights to request a delineation and/or JD on the subject property.

Further, I, the undersigned, do authorize the agency/consultant listed above to act in my behalf in the processing of this request and to furnish supplemental information in support of this request.


 *Signature of Landowner


 Date

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
 Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
 Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
 Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an AJD cannot be evaluated nor can an AJD be issued.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glynn Middle Sidewalk & Pedestrian Bridge City/County: Glynn Sampling Date: _____
 Applicant/Owner: City of Brunswick State: GA Sampling Point: Upland
 Investigator(s): Environmental Services, Inc. (KS) Section, Township, Range: Brunswick
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 31.141049 Long: -81.480957 Datum: _____
 Soil Map Unit Name: Mandarin-Urban Land Complex (somewhat poorly drained) 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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: The 30' radius mostly consisted of pavement and mowed/maintained roadside, with a small percentage of the upland woods within the project boundary.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <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"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: Upland

Tree Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus virginiana</u>	<u>8</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
<u>8</u> = Total Cover			
50% of total cover: <u>4</u> 20% of total cover: <u>1.6</u>			

Sapling Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus virginiana</u>	<u>4</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
<u>4</u> = Total Cover			
50% of total cover: <u>2</u> 20% of total cover: <u>0.8</u>			

Shrub Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus virginiana</u>	<u>6</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Baccharis halimifolia</u>	<u>4</u>	<u>Yes</u>	<u>FACW</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
<u>10</u> = Total Cover			
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>			

Herb Stratum (Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cyndon dactylon</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Serenoa repens</u>	<u>6</u>	<u>Yes</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
<u>26</u> = Total Cover			
50% of total cover: <u>13</u> 20% of total cover: <u>5.2</u>			

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
<u>0</u> = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Remarks: (If observed, list morphological adaptations below).

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 16% (A/B)

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: 0 (A) 0 (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

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Hydrophytic Vegetation Present?

Yes No

SOIL

Sampling Point: Upland

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	10 YR 3/1	60					LS	40% uncoated sand grains
4-14+	10 YR 4/1	100					LS	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> (MLRA 153B) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Soil sample taken from within the forested portion of the uplands. Unable to pull a soil sample outside of the forested portion due to the highly disturbed and compacted soil within the Right of Way.

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WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Glynn Middle Sidewalk & Pedestrian Bridge City/County: Glynn Sampling Date: _____
 Applicant/Owner: City of Brunswick State: GA Sampling Point: Salt Marsh
 Investigator(s): Environmental Services, Inc. (KS) Section, Township, Range: Brunswick
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA): LRR T Lat: 31.141104 Long: -81.480921 Datum: _____
 Soil Map Unit Name: Mandarin-Urban Land Complex (somewhat poorly drained) 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input checked="" type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

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