



February 9, 2024

Starlight Homes North Carolina  
Attn: Mr. Bob Mishler  
900 Ridgefield Drive, Suite 335  
Raleigh, NC 27609

RE: Environmental and Cultural Resources Due Diligence Report  
Harding Drive Property  
Goldsboro, Wayne County, NC  
Sage Project #2023.164

Dear Mr. Mishler,

Sage Ecological Services, Inc. is pleased to provide you with the attached Environmental and Cultural Resources Due Diligence Report for the +/- 43.54-acre Harding Drive Property (Site) located in Goldsboro, Wayne County, NC. Please contact me via email at [SClark@SageEcological.com](mailto:SClark@SageEcological.com) or call me at (919) 559-1537 if you have any questions or require any additional information.

Respectfully submitted:

Sean Clark, PWS  
Sage Ecological Services, Inc.

Cory B. Darnell, PWS

Attachment: Environmental and Cultural Resources Due Diligence Report

# ENVIRONMENTAL AND CULTURAL RESOURCES DUE DILIGENCE REPORT

Harding Drive Property  
Wayne County, North Carolina



February 09, 2024

Sage Project Number 2023.164

Prepared for:

Starlight Homes North Carolina  
Mr. Bob Mishler  
900 Ridgefield Drive, Suite 335  
Raleigh, NC 27609

Submitted by:

Sage Ecological Services, Inc.  
3707 Swift Drive  
Raleigh, NC 27606

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## EXECUTIVE SUMMARY

Sage Ecological Services, Inc. (Sage) completed a detailed evaluation of wetlands, streams, and riparian buffers as well as a records review of Threatened and Endangered (T&E) Species and cultural resources on the +/- 43.54-acre Harding Drive Property (Site) located in Wayne County, NC. The purpose of this evaluation was to determine if "Waters of the United States" (e.g., wetlands, streams, ponds, etc.) exist on the Site, as well as to determine what potentially related federal and state environmental and cultural resources regulations will be associated with the future development of this Site. Sage completed the field evaluation on January 4, 2023. Figure 1 shows the location of the Site on the Northeast Goldsboro, NC US Geological Survey (USGS) topographical quadrangle sheet, and Figure 2 shows the Site's location on the applicable portion of the United States Department of Agriculture's Natural Resources Conservation Service (USDA NRCS) Soil Survey for Wayne County. The Site is within the Neuse River Basin.

As of the date of this report, two jurisdictional streams, one jurisdictional wetland, and three jurisdictional tributaries/agricultural ditches are located on the Site. A forested area, located on the southwestern portion of the Site, will need transect lines cut in order to fully delineate the wetland areas. Figure 3 shows the approximate location and size of the wetlands and surface waters on the Site. A field meeting with the US Army Corps of Engineers (USACE) may be required to verify the limits of the stream and wetland delineation performed by Sage prior to the USACE approving any proposed impacts.

The Site is in the Neuse River Basin which is subject to 50-foot riparian buffers on streams and surface waters regulated by the North Carolina Division of Water Resources (NCDWR). The USGS topographic map (Figure 1) depicts six surface water on-site (Features A, B, C, D, E, and Pond 1), and the Wayne County Soil Survey (Figure 2) depicts two surface waters (Features A and B). Features A, B, C, D, and E exist as surface waters on the Site and are buffered. A Site meeting with the NCDWR will be required to confirm Sage's determinations.

Four threatened and endangered (T&E), one candidate species, one proposed endangered, and the bald eagle are listed as potentially present on the property by the US Fish and Wildlife Service (USFWS). No T&E species were documented on or within 1.0 mile of the Site per the NC Natural Heritage Program (NCNHP) Database Report. If the tricolored bat is listed prior to construction completion, seasonal tree clearing restrictions could be implemented. T&E species are not likely to restrict the proposed development of the Site; however, the USACE may request additional information regarding the potential habitat of specific species during the permitting process.

The Site is not listed as a historic property or within a historic district. No historic structures were observed on the Site. Two historic properties are located within 1-mile of the Site based on a query of the North Carolina State Historic Preservation Office (NCSHPO) database. Figure 4 depicts the locations of these properties in relation to the Site. NCSHPO should not have comments during the permitting process. Sage is available to assist the client with the preparation of correspondence materials if these are needed during the permitting process.

## SECTION 1 SITE DESCRIPTION

### 1.1 Site Location

The Site is located approximately 200 feet east of the intersection of South Harding Drive and Heather Drive in Goldsboro, Wayne County, NC. The coordinates of 35.3874°N, 77.9319°W generally correspond to the center of the Site. The Site is within the coastal plain region of North Carolina and in the Neuse River Basin.

### 1.2 General Site Description

The Site consists mostly of agricultural fields, soccer fields, and undeveloped, wooded land. A structure associated with the soccer field complex was observed on the northeastern portion of the Site. The tree canopy consists of a mixture of mature pines in the upland areas and hardwoods dominate the drainages. The topography of the Site ranges from a high point of +/- 114 feet above mean sea level (msl) in the northeastern portion of the Site to +/- 106 feet below msl on the southwestern portion of the Site.

According to the US Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Soil Survey for Wayne County, NC, the Site contains typical soils for the area including the Bibb sandy loam (Bb), Dragston loamy sand (Dr), Goldsboro loamy sand (GoA), Johnston loam (Js), Lynchburg sandy loam (Ly), and Weston loamy sand (We) soils.

## 2.1 Wetland Evaluation Methodology

The wetland delineation was completed based upon the procedures specified and described in the “Corps of Engineers Wetlands Delineation Manual” (January 1987 – Final Report) and using the current *Coastal Plain Regional Guidance* (November 2010). Prior to arriving on-site, topographical maps, soil survey maps, orthophotographs, and ArcGIS generated maps of the area were reviewed to preliminarily identify areas (e.g., drainages, hydric soils areas, areas showing standing water, etc.) where wetlands would likely exist.

The Site was traversed on foot and evaluated for the presence of hydric soils indicators, evidence of wetland hydrology, and existence of hydrophytic vegetation. Data point plots were established to identify the presence or absence of wetland indicators. At each plot location, any hydrologic indicators were recorded, vegetation was identified, and a soil auger utilized to collect a soil core to stratify and classify the soil properties.

## 2.2 Wetland Determinations

One jurisdictional wetland is located on the Site (WB). A second wetland is located on the southwestern portion of the Site. However, due to thick vegetation, Sage staff were unable to fully delineate the wetland. The forested area will need transect lines cut in order to fully delineate the wetland that's adjacent to Stream SA. Table 1 and Figure 3 provide additional information as well as the locations for the identified wetland areas on the Site.

Table 1. Wetland Characteristics

Feature ID	Latitude	Longitude	Estimated amount of aquatic resource in review area
WB	35.3896°N	77.9305°W	2.32 Ac.

## SECTION 3 STREAMS AND SURFACE WATERS

### 3.1 Stream and Surface Water Evaluation Methodology

Topographical maps, soil survey maps, and aerial maps of the Site were reviewed to preliminarily identify drainages where potential streams may exist. Drainages within the Site were evaluated using the current “NC-DWQ Stream Identification Form (Version 4.11).” This form is used to identify the stream's flow regime (i.e., ephemeral, intermittent, or perennial) as well as to identify if a drainage is subject to riparian buffers (where applicable).

The USACE generally considers a drainage to contain a jurisdictional stream if there is an Ordinary High-Water Mark (OHWM) or evidence of periodic concentrated flow. The NC Division of Water Resources' (NCDWR) terms and the USACE's terms are not always synonymous and interchangeable. The stream designations from both the USACE and NCDWR hold more significance if impacts (e.g., road or utility crossings or general fill) are required. The NCDWR will require mitigation for impacts to perennial streams. The USACE typically requires mitigation for impacts to streams that are “important to aquatic function.”

### 3.2 Stream and Surface Water Determinations

Two jurisdictional streams are present on the Site (SA and SD). Stream SA is a perennial stream located along the southwestern boundary of the Site. The stream has well-defined bed and banks, contained an ordinary high-water mark, and had moderate baseflow at the time of the Site reconnaissance. Stream SD is a perennial stream located along the southern boundary of the Site. It also had well defined bed and banks and had moderate to strong baseflow during the Site reconnaissance. Additionally, three jurisdictional tributaries/ agricultural ditches are present on the Site (JDB, JDC, and JDE). Table 2 below and Figure 3 provide additional information and the approximate location for the surface waters on the Site.

Table 2. Stream and Surface Water Characteristics

Feature ID	Latitude	Longitude	Flow Regime	Stream Width	Estimated amount of aquatic resource in review area
SA (Billy Branch)	35.6932°N	77.9343°W	Perennial	8-10'	1,030 LF
SD	35.3855°N	77.9312°W	Perennial	4-6'	953 LF
JDB	35.3882°N	77.9302°W	Seasonal	10-12'	1,696 LF
JDC	35.3873°N	77.9344°W	Seasonal	4'	882 LF
JDE	35.3870°N	77.9359°W	Seasonal	6-8'	511 LF

The Site is in the Outlet Stoney Creek Watershed (HUC 030202020102) of the Neuse River Basin and drains to Billy Branch. Billy Branch is classified as class "C; Nutrient Sensitive Waters" (C, NSW). These classifications are generated by the NC Division of Environmental Quality's (NCDEQ) "Classifications and Water Quality Standards Applicable to Surface Water and Wetlands of North Carolina." Please note that the jurisdictional status of site drainages needs to be confirmed by the USACE to be valid.

## SECTION 4 RIPARIAN BUFFERS

### 4.1 Riparian Buffer Evaluation Methodology

In the Neuse River Basin, drainage features depicted on the most recently published USGS topographical maps and/or the most recently published NRCS soil survey maps are subject to 50-foot riparian buffer rules. These maps were reviewed prior to conducting the fieldwork to preliminarily identify potentially buffered surface waters. A cumulative score of 19 on the previously mentioned "NC-DWQ Stream Identification Form Version 4.11" is required for the stream to be subject to the rules. A score of less than 19 typically means that the stream is ephemeral and is therefore not subject.

### 4.2 Riparian Buffer Determinations

Six surface waters are depicted on the Northeast Goldsboro, NC USGS Quad map (Features A, B, C, D, E, and Pond 1). Two surface waters (Features A and B) are depicted on the Wayne County Soil Survey Map. Features SA, SD, JDB, JDC, and JDE are present on the Site and subject to riparian buffers. A Site meeting with NCDWR staff will be required to verify Sage's buffer determinations. Table 3 and Figure 3 provide additional information for the applicable riparian buffers on the Site.

Table 3. Riparian Buffer Determinations

Feature ID	Depicted on USGS	Depicted on Soil Survey	Subject to NCDWR Buffers	Stream Start Point	Stream Stop Point
Feature A	Yes	Yes	Yes <sup>1</sup>	Off-Site	Off-Site
Feature B	Yes	Yes	Yes <sup>1</sup>	SB-01	Confluence of Feature D
Feature C	Yes	No	Yes <sup>1</sup>	Off-Site	Confluence of Feature E
Feature D	Yes	No	Yes <sup>1</sup>	Off-Site	Confluence of Feature A
Feature E	Yes	No	Yes <sup>1</sup>	Off-Site	Confluence of Feature A
Pond 1	Yes	No	NP <sup>2</sup>	NA	NA

<sup>1</sup> NCDWR requirements are 50 feet for perennial and intermittent streams as depicted on the most recent USGS Topographic Map and/or Soil Survey.

<sup>2</sup> Not Present. Feature was not located in the field.

## SECTION 5

### THREATENED AND ENDANGERED SPECIES

Two online datasets were queried to assess known federally listed species in North Carolina. These included the NC Natural Heritage Program (NCNHP) Data Explorer (Appendix C) and US Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) web portal specific to the Site. (Appendix D & Table 4). These were reviewed prior to conducting the fieldwork. The review also included candidate species and species proposed for listing under the Endangered Species Act (ESA).

According to the NCNHP Report dated January 15, 2023, no federally listed T&E species were documented on or within 1.0 mile of the Site. Although not optimal, habitat for the aquatic species listed below may exist within the perennial stream on the Site. The USACE/USF&WS may require additional habitat and/or survey information if impacts to perennial streams are proposed.

The bald eagle is protected in every county in North Carolina under the Bald and Golden Eagle Protection Act. Small ponds are in the vicinity of the Site but do not provide suitable habitat. Sage did not observe evidence of bald eagles on the Site.

The tricolored bat is expected to be federally listed as Endangered soon. This could result in tree clearing moratoriums for certain times of the year if construction has not been completed at the time of species listing. Currently, no final guidance on potential construction constraints exists; however, Sage can provide additional information and updates once it is provided by the USFWS.

Table 4. USFWS Threatened & Endangered Species IPaC results.

Common Name	Scientific name	Federal Status	Habitat Type
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGPA <sup>1</sup>	Terrestrial
Tricolored Bat	<i>Perimyotis subflavus</i>	Proposed Endangered	Terrestrial
Red-cockaded Woodpecker	<i>Picoides borealis</i>	Endangered	Terrestrial
Neuse River Waterdog	<i>Necturus lewisi</i>	Threatened	Aquatic
Carolina Madtom	<i>Noturus furiosus</i>	Endangered	Aquatic
Atlantic Pigtoe	<i>Fusconaia masoni</i>	Threatened	Aquatic
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	Terrestrial

<sup>1</sup> – Bald and Golden Eagle Protection Act

## SECTION 6 CULTURAL RESOURCES

### 6.1 State Historic Preservation Office Properties

A review of the NCSHPO HPOWEB GIS Service website was completed prior to initiating the fieldwork to query for the presence or absence of records indicating historically significant sites (e.g., structures, sites, properties, etc.) on or near the Site. A GIS database version of the HPOWEB records was also reviewed.

The Site is not listed as a historic property or within a historic district. No historic structures were observed on the Site. Two historic properties Grain Elevators (Gone) – WY0361 and Best House and Store – WY0984 are located within 1-mile of the Site based on a query of the North Carolina State Historic Preservation Office (NCSHPO) database. NCSHPO should not have comments during the permitting process; however, Sage is available to assist the client with the preparation of correspondence materials if needed.

### 6.2 State Archaeological Sites

Archeological records are not typically included in the NCSHPO database and to date there is no publicly available comprehensive listing of archeological sites in North Carolina available from the Office of State Archeology (OSA). This agency compiles data **on the state's legacy of artifacts** through application of state and federal archaeology laws and regulations, and by maintaining inventories of site data and collections. Currently, two regulations may apply to the project if remains or artifacts are encountered during construction. These include the Unmarked Human Burial and Human Skeletal Remains Protection Act of NC (UHBHSR), and Section 106 of the National Historic Preservation Act (NHPA). The UHBHSR applies even in the absence of a required stream and wetland permit. The latter regulation is a requirement of a general condition to Nationwide Permit 29 (NWP 29) which states that any previously unknown historic, cultural, or archeological remains or artifacts which are encountered during permitted activities require immediate notification and coordination with the applicable agency.

## CONCLUSIONS AND RECOMMENDATIONS

Sage Ecological Services, Inc. (Sage) completed a detailed evaluation of wetlands, streams, and riparian buffers as well as a records review of T&E species and listed state historical properties on the +/- 43.54-acre Site.

As of the date of this report, two jurisdictional streams, one jurisdictional wetland, and three jurisdictional tributaries/agricultural ditches are located on the Site. A forested area, located on the southwestern portion of the Site, will need transect lines cut in order to fully delineate the wetland areas. A field verification meeting with the USACE may be necessary to obtain approval of the stream and wetland delineation. The attached Agent Authorization Form found in Appendix E will need to be completed and signed by the current property owner(s) for Sage to initiate correspondence with the USACE for the Site. Features determined to be jurisdictional should be located by a licensed surveyor to produce a survey for the approval as well as for final planning purposes.

The Site is in the Neuse River Basin which requires a 50-foot riparian buffer be placed on each side of mapped surface waters as regulated by the NCDWR. Features SA, SD, JDB, JDC, and JDE are subject to the 50-foot NCDWR regulated riparian buffers. A site meeting with NCDWR will be **required to confirm Sage's** buffer determinations.

No T&E species are documented to occur on or within 1.0 mile of the Site. T&E species are not likely to restrict the proposed development of the Site; however, the USACE may request additional information regarding the potential habitat of specific species during the permitting process. The tricolored bat is expected to be federally listed as Endangered soon. This could result in tree clearing moratoriums for certain times of the year if construction has not been completed at the time of species listing. Currently, no final guidance on potential construction constraints exists; however, Sage can provide additional information and updates once it is provided by the USFWS.

The Site is not listed as a historic property or within a historic district. Two historic properties (Grain Elevators (Gone) – WY0361 and Best House and Store – WY0984) are located within 1-mile of the Site. NCSHPO should not have comments during the permitting process.

Depending on the final site plan, a federal wetland's permit, state water quality certification, and concurrence from NCSHPO may be required to develop this Site. Sage is available to assist with preparing the aforementioned documents for submittal and/or to conduct or coordinate any

required additional surveys. Impacts to wetlands and/or streams that result from the construction of residential development typically utilize the Nationwide Permit 29 (NWP 29) with the USACE and the corresponding Certification with the NCDWR. NWP 29 limits discharge (i.e., fill) to 0.5 acre of non-tidal waters of the United States for a single and complete project. Impacts that exceed 0.1 acre of wetlands or 0.02-ac of stream channel typically require mitigation (i.e., payment for the replacement of a wetland somewhere else). The concurrent nationwide permitting process with the USACE and the corresponding general certification process with the NCDWR should take 45 days and 60 days, respectively; however current changes to the regulations have increased the timeline in some cases and may require additional input from the US Environmental Protection Agency (EPA).

## SECTION 8

### REFERENCES

- Munsell Color. 2000. *Munsell Soil Color Charts*. Gretagmacbeth, New Windsor, NY.
- N.C. Department of Natural and Cultural Resources. North Carolina State Historic Preservation Office GIS Maps and Data. <https://www.ncdcr.gov/about/history/division-historical-resources/gis-maps-and-data>
- N.C. Division of Water Quality. 2010. Methodology for Identification of Intermittent and Perennial Streams and Their Origins, Version 4.11. North Carolina Department of Environment and Natural Resources, Division of Water Quality. Raleigh, NC.
- N.C. Division of Water Resources (NCDWR). 2017. *401 & Buffer Permitting Unit Riparian Buffers Protection Program*. <http://deg.nc.gov/about/divisions/water-resources>
- Radford, Albert E., Ahles, Harry E., and C. Ritchie Bell. 1968. *Manual of the Vascular Flora of the Carolinas*. The University of North Carolina Press, Chapel Hill, NC.
- U.S. Army Corps of Engineers Environmental Laboratory (USCOE). 1987. *Corps of Engineers Wetlands Delineation Manual*. Wetlands Research Technical Report Y-87-1, US Army Engineers Waterways Experiment Station, Vicksburg, MS.
- U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Coastal Plain Regional Supplement (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble, ERDC/EL TR-10-20. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2018. *National Wetland Plant List, version 3.4*. <http://wetland-plants.usace.army.mil/>
- U.S. Department of Agriculture. 1974. *Soil Survey of Wayne County, North Carolina*. Natural Resources Conservation Service, US Department of Agriculture, Washington, D.C.
- U.S. Geological Survey. 2023. *NE Goldsboro, NC Quadrangle, North Carolina* [map]. 1:24,000. 7.5 Minute Series. United States Department of the Interior, USGS.

APPENDIX A  
SITE PHOTOS



Photo 1: Typical view of jurisdictional ditch B (JDB), facing northeast.



Photo 2: Typical view of Wetland WB, facing southeast.



Photo 3: Typical view of Stream SD, facing west.



Photo 4: Typical view of the agricultural fields on Site, facing south.



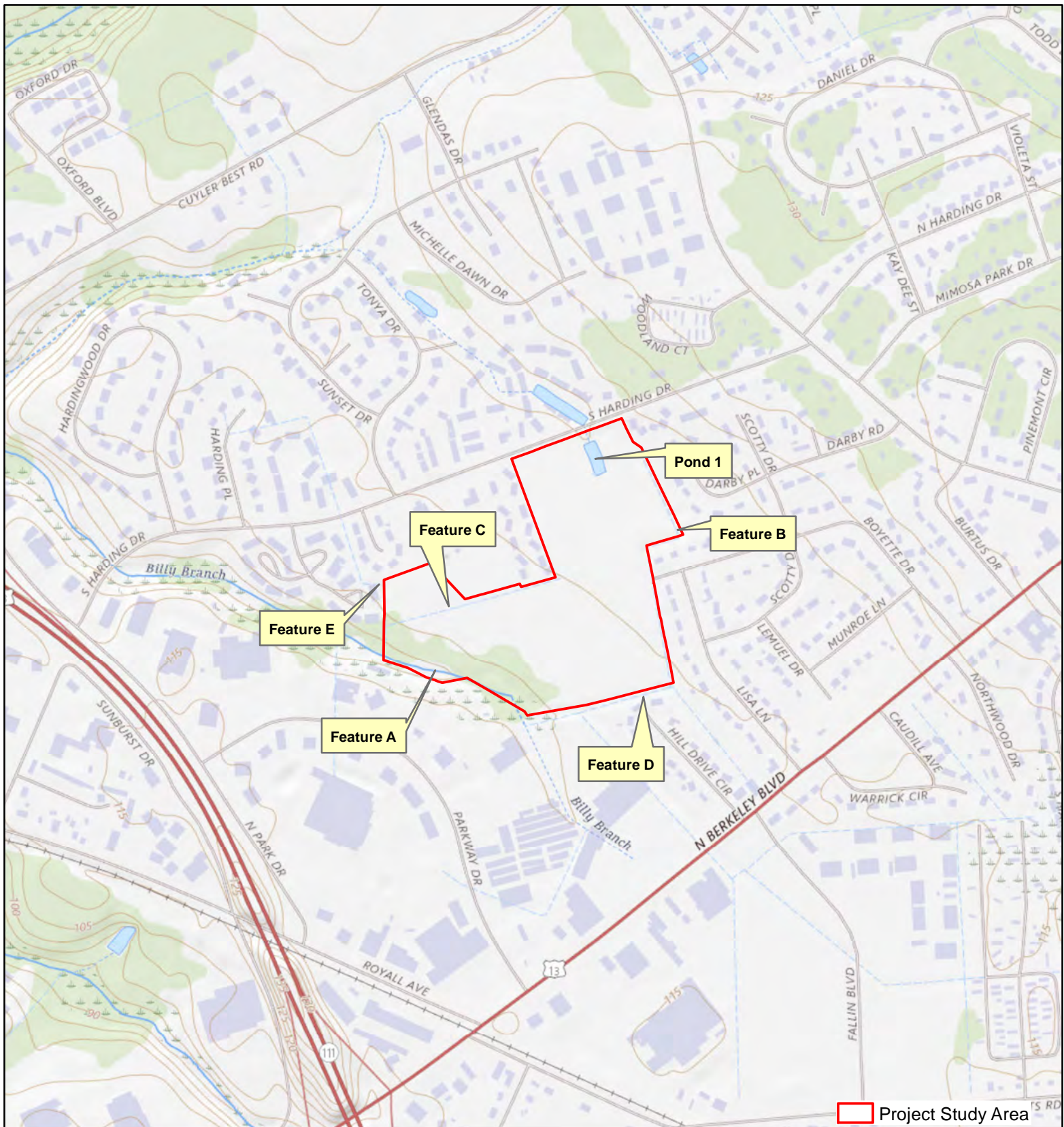
Photo 5: Typical view of jurisdictional ditch (JDC), facing east.



Photo 6: Typical view of the thick vegetation on SE corner of Site that needs cut, facing north.

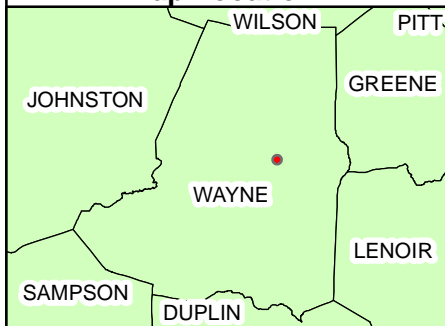
## APPENDIX B

### FIGURES



  Project Study Area

### Map Location



### USGS Topo Map

Harding Drive Property  
Sage Project # 2023.164

USGS TopoMapserver 2023  
NE Goldsboro, NC Quadrangle  
Prepared by: P. Beach  
December 20, 2023

1 inch = 800 feet

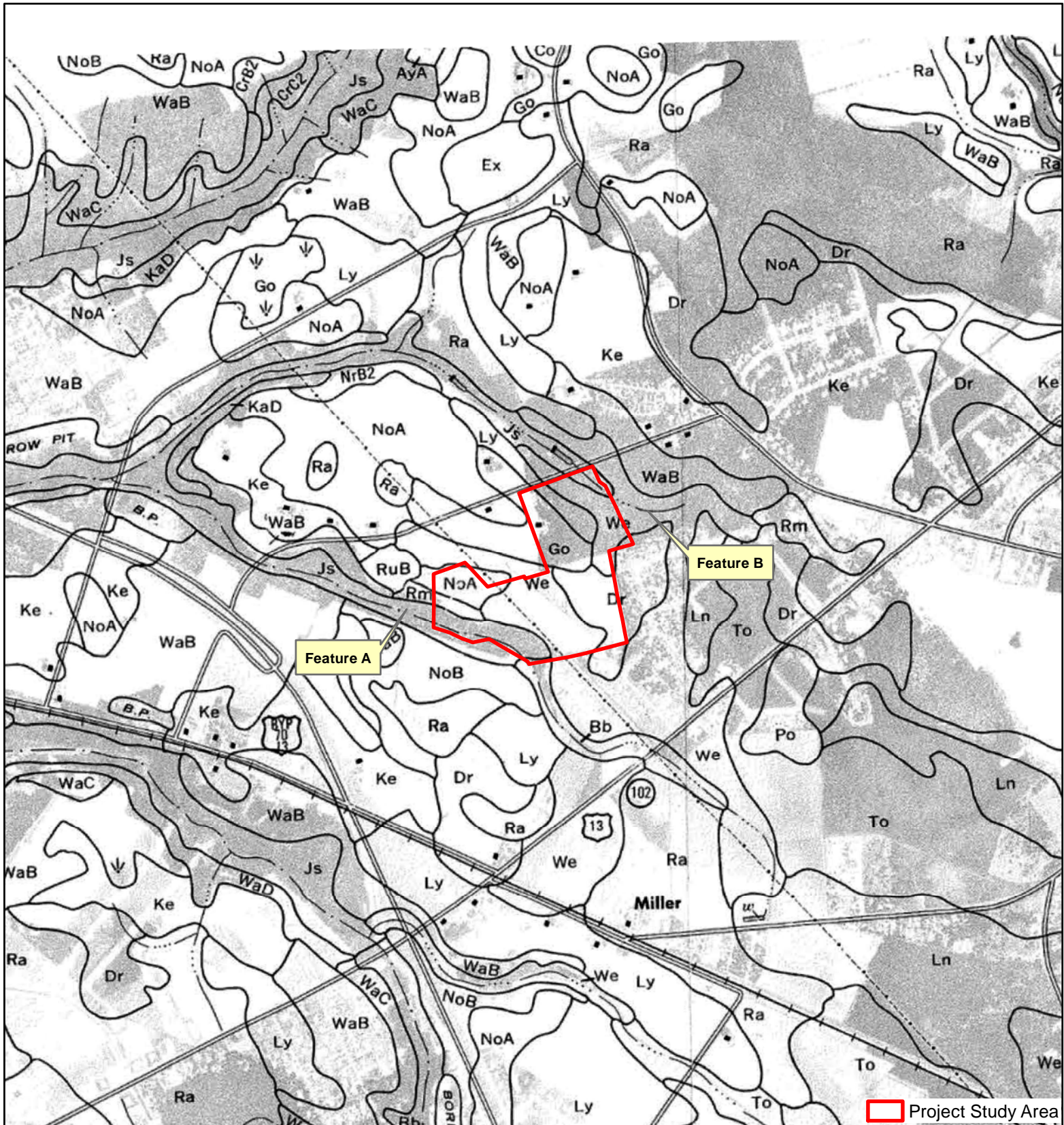
0 750 1,500 Feet



### Figure 1



Sage Ecological Services, Inc.  
Office: 919-335-6757  
Cell: 919-559-1537



### Map Location



### NRCS Soils Map

Harding Drive Property  
Sage Project # 2023.164

Wayne County, NC Soil Survey 1974  
Sheet #20  
Prepared by: P. Beach  
December 20, 2023

1 inch = 1,250 feet

0 1,000 2,000  
Feet

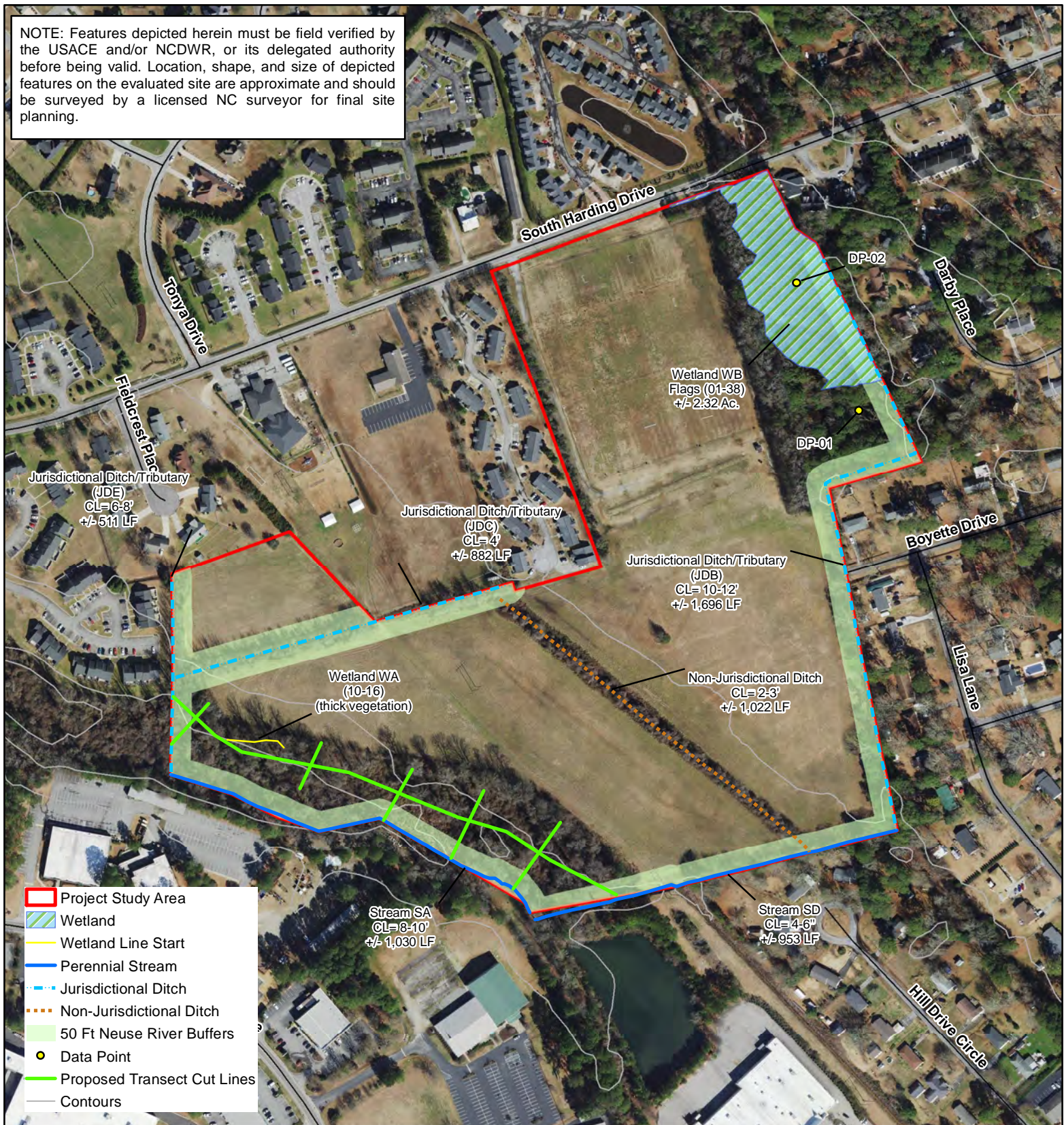


### Figure 2

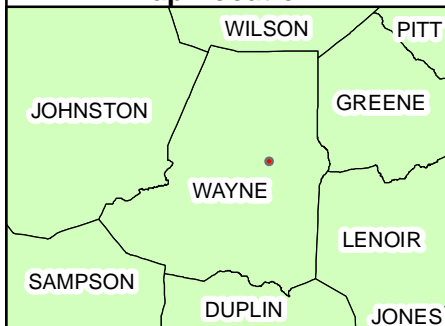


Sage Ecological Services, Inc.  
Office: 919-335-6757  
Cell: 919-559-1537

NOTE: Features depicted herein must be field verified by the USACE and/or NCDWR, or its delegated authority before being valid. Location, shape, and size of depicted features on the evaluated site are approximate and should be surveyed by a licensed NC surveyor for final site planning.



### Map Location



### Wetland Sketch Map

Harding Drive Property  
Sage Project # 2023.164

Prepared by: C. Darnell  
January 9, 2024

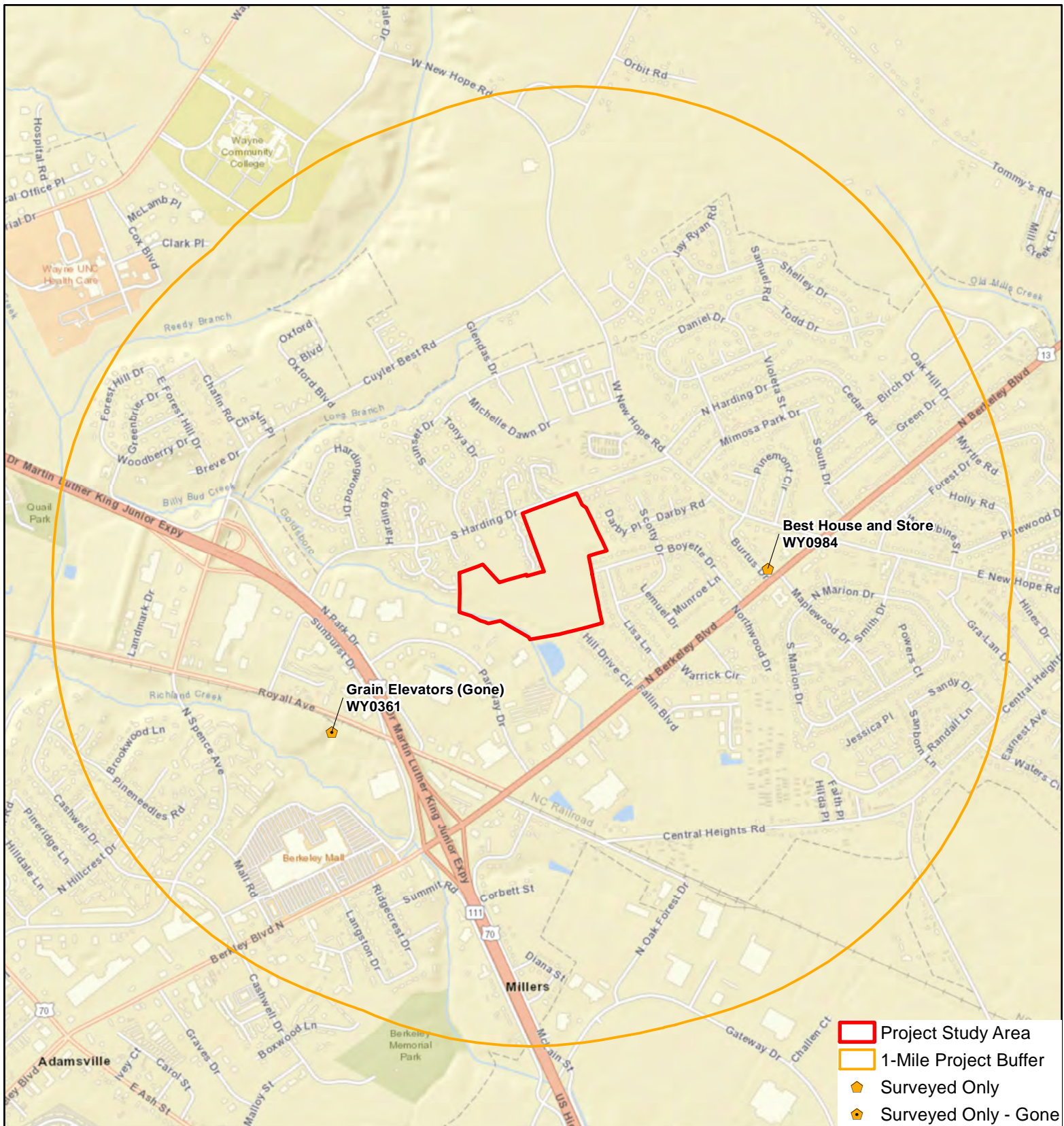
1 inch = 300 feet  
0 300 600 Feet



### Figure 3



Sage Ecological Services, Inc.  
Office: 919-335-6757  
Cell: 919-559-1537



### Map Location



### NC SHPO Map

Harding Drive Property  
Sage Project # 2023.164

NC Dept. of Cultural and Natural Resources 2023

Prepared by: P. Beach  
December 20, 2023



1 inch = 2,000 feet

0 1,500 3,000 Feet

### Figure 4



Sage Ecological Services, Inc.  
Office: 919-335-6757  
Cell: 919-559-1537

APPENDIX C  
NATURAL HERITAGE PROGRAM DATABASE REPORT



Roy Cooper, Governor

D. Reid Wilson, Secretary

Misty Buchanan  
Deputy Director, Natural Heritage Program

NCNHDE-24600

January 15, 2024

Cory Darnell  
Sage Ecological Services, Inc.  
3707 Swift Drive  
Raleigh, NC 27606  
RE: Harding Drive; 2023.164

Dear Cory Darnell:

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here:

<https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37>.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact the NCNHP at [natural.heritage@dncr.nc.gov](mailto:natural.heritage@dncr.nc.gov).

Sincerely,  
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area  
Harding Drive  
Project No. 2023.164  
January 15, 2024  
NCNHDE-24600

Element Occurrences Documented Within a One-mile Radius of the Project Area

Taxonomic Group	EO ID	Scientific Name	Common Name	Last Observation Date	Element Occurrence Rank	Accuracy	Federal Status	State Status	Global Rank	State Rank
Vascular Plant	26307	Carex emmonsii	Emmons's Sedge	1957-05-03	H	3-Medium	---	Significantly Rare Other	G5T5	S2

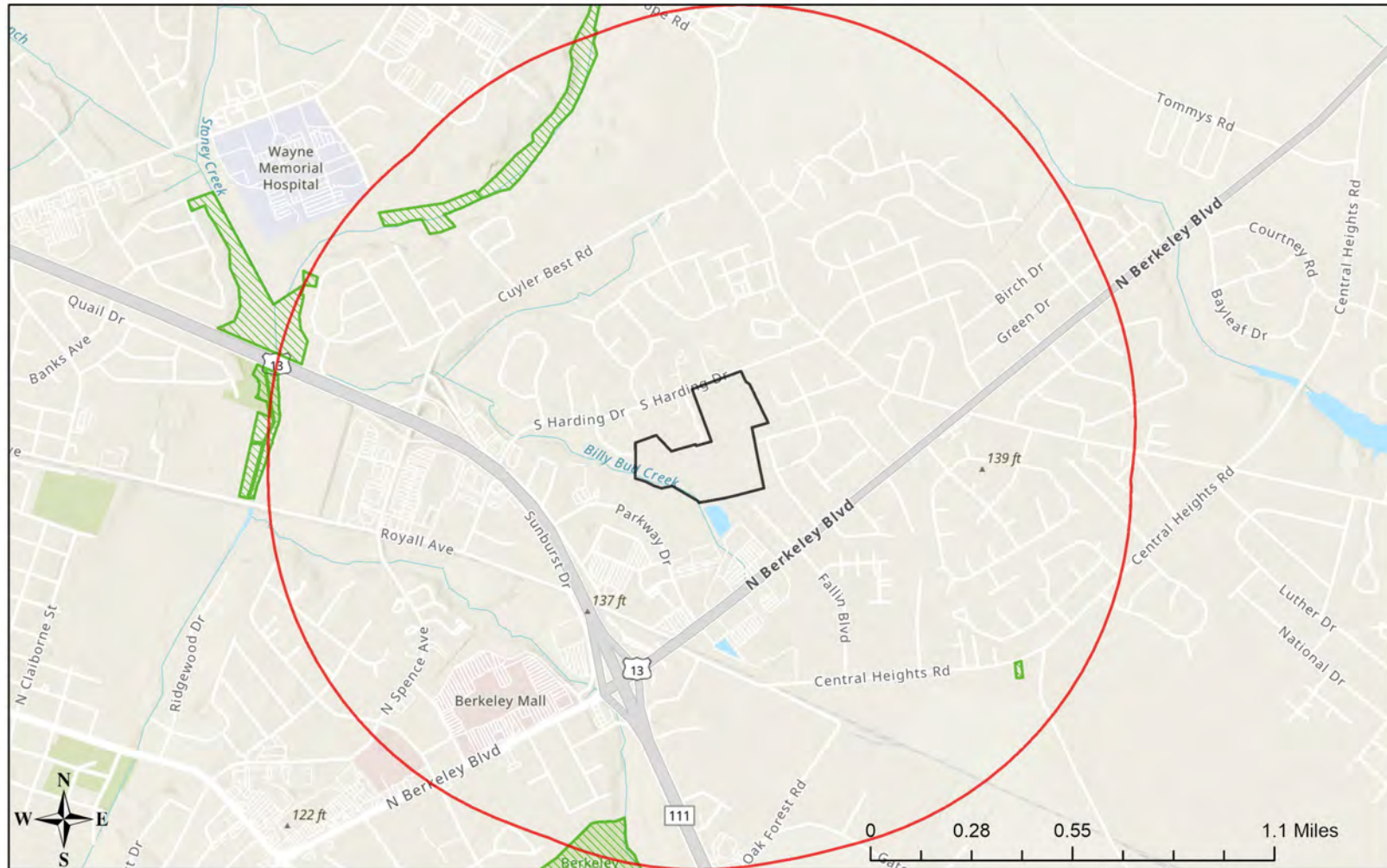
No Natural Areas are Documented Within a One-mile Radius of the Project Area

Managed Areas Documented Within a One-mile Radius of the Project Area

Managed Area Name	Owner	Owner Type
City of Goldsboro - Berkeley Memorial Park	City of Goldsboro	Local Government
City of Goldsboro Open Space	City of Goldsboro	Local Government
City of Goldsboro Open Space	City of Goldsboro	Local Government
Wayne County Open Space	Wayne County	Local Government
Wayne County Open Space	Wayne County	Local Government
NC Hazard Mitigation Buyout Property - Goldsboro	NC DPS, Division of Emergency Management	State
NC Land and Water Fund Conservation Agreement	NC DNCR, NC Land and Water Fund	State

Definitions and an explanation of status designations and codes can be found at <https://ncnhde.natureserve.org/help>. Data query generated on January 15, 2024; source: NCNHP, Fall (October) 2023. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

# NCNHDE-24600: Harding Drive



January 15, 2024

- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community  
 Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

USFWS INFORMATION FOR PLANNING & CONSULTATION REPORT

# 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

Wayne County, North Carolina



## Local office

Raleigh Ecological Services Field Office

☎ (919) 856-4520

📠 (919) 856-4556

MAILING ADDRESS

Post Office Box 33726  
Raleigh, NC 27636-3726

PHYSICAL ADDRESS

551 Pylon Drive, Suite F  
Raleigh, NC 27606-1487

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 species<sup>1</sup> 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 Fisheries<sup>2</sup>).

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](#).

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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. IPaC only shows species that are regulated by USFWS (see FAQ).
  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
<b>Tricolored Bat</b> <i>Perimyotis subflavus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	<b>Proposed Endangered</b>

## Birds

NAME	STATUS
<b>Red-cockaded Woodpecker</b> <i>Picoides borealis</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/7614">https://ecos.fws.gov/ecp/species/7614</a>	<b>Endangered</b>

## Amphibians

NAME	STATUS
<b>Neuse River Waterdog</b> <i>Necturus lewisi</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/6772">https://ecos.fws.gov/ecp/species/6772</a>	<b>Threatened</b>

## Fishes

NAME	STATUS
<b>Carolina Madtom</b> <i>Noturus furiosus</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/528">https://ecos.fws.gov/ecp/species/528</a>	<b>Endangered</b>

## Clams

NAME	STATUS
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**Atlantic Pigtoe** *Fusconaia masoni*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/5164>

## Insects

NAME

STATUS

**Monarch Butterfly** *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

## 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.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

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

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats<sup>3</sup>, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library>

[/collections/avoiding-and-minimizing-incidental-take-migratory-birds](#)

- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

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

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in

week 12 is 0.25.

- 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  $0.05/0.25 = 0.2$ .
- 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 a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

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

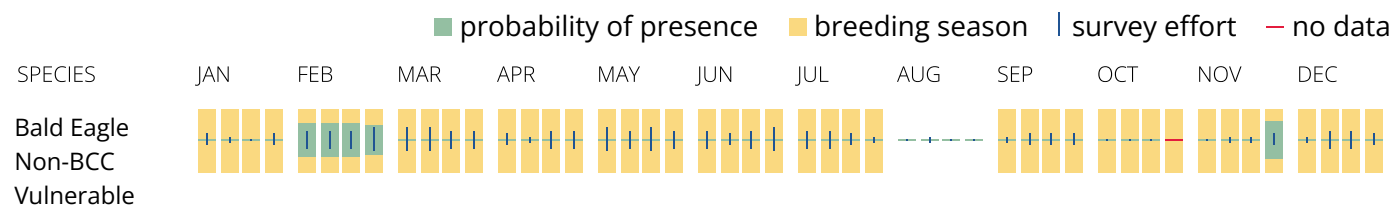
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### 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. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### What 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. Please contact your local Fish and Wildlife Service Field Office if you have questions.

## Migratory birds

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats<sup>3</sup> should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

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:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/>

[documents/nationwide-standard-conservation-measures.pdf](#)

- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
<b>American Kestrel</b> <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9587">https://ecos.fws.gov/ecp/species/9587</a>	Breeds Apr 1 to Aug 31
<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
<b>Brown-headed Nuthatch</b> <i>Sitta pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
<b>Chimney Swift</b> <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

**Lesser Yellowlegs** *Tringa flavipes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

**Prairie Warbler** *Dendroica discolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31

**Prothonotary Warbler** *Protonotaria citrea*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 1 to Jul 31

**Red-headed Woodpecker** *Melanerpes erythrocephalus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Sep 10

**Rusty Blackbird** *Euphagus carolinus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

**Wood Thrush** *Hylocichla mustelina*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

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

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

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

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

### Breeding Season (■)

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

### Survey Effort (|)

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

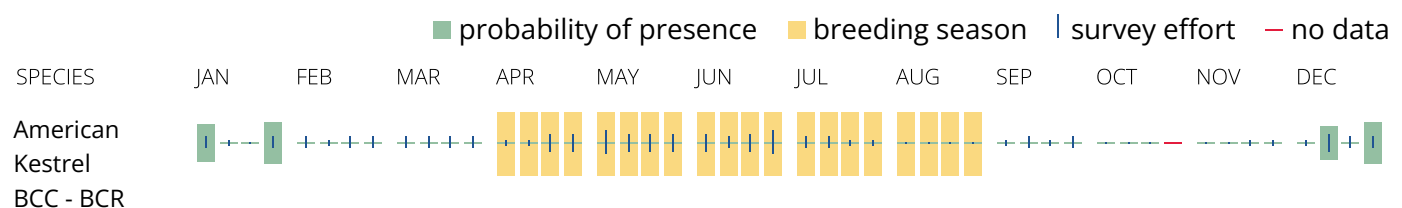
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

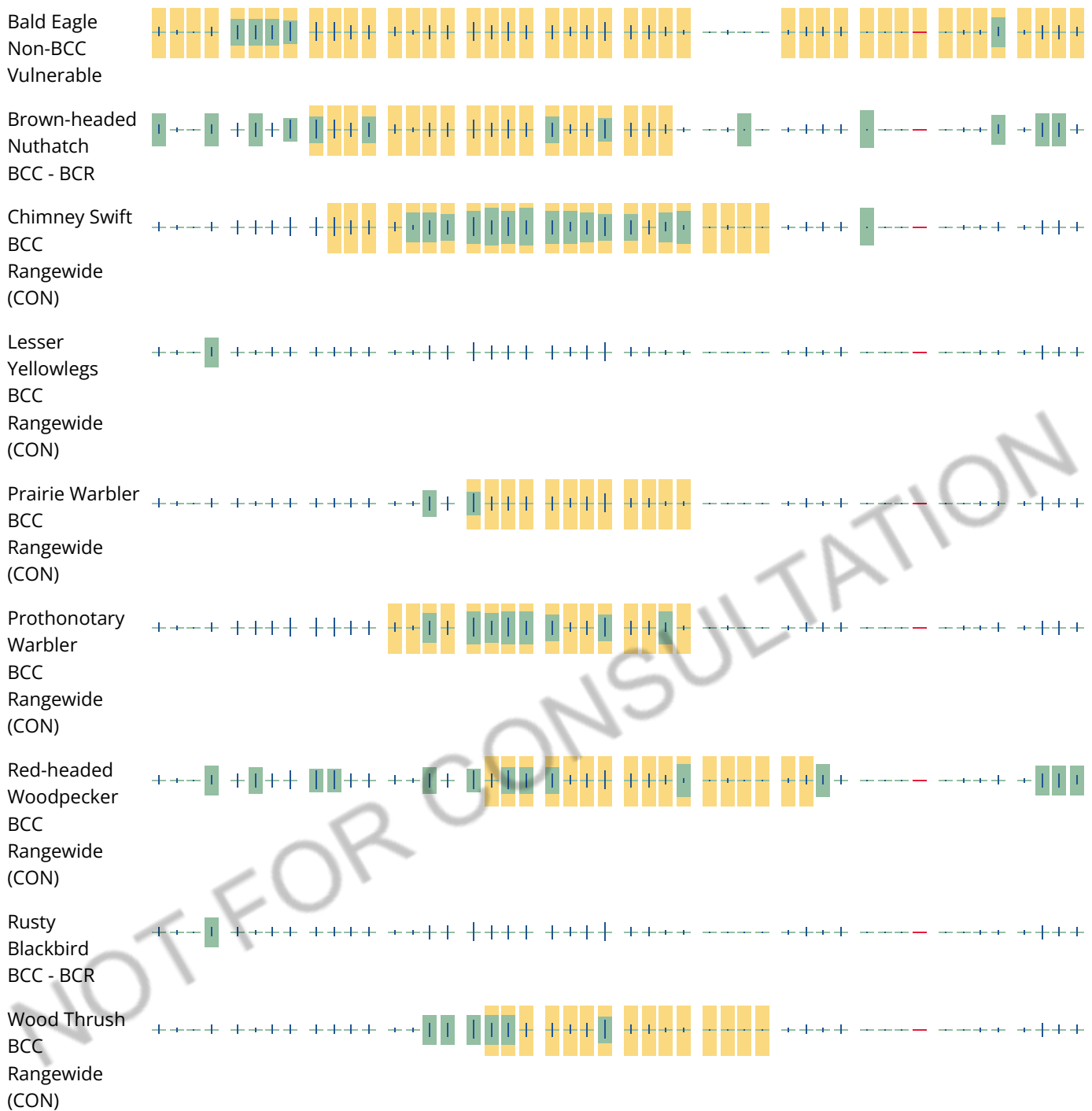
### No Data (—)

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. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

## What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

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

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

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

## How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

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

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

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

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

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

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

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](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view 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 programs and proprietary jurisdictions that may affect such activities.

APPENDIX E  
AGENT AUTHORIZATION FORM



**AGENT AUTHORIZATION FORM**  
**All Blanks to Be Filled in By the Current Landowner or Legal Representative**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Project Name/Description: Harding Drive Property

Sage Project # 2023.164

Date: \_\_\_\_\_

The Department of the Army  
U.S. Army Corps of Engineers, Wilmington District  
P.O. Box 1890  
Wilmington, NC 28402

NC Division of Water Resources  
3800 Barrett Drive  
Raleigh, NC 27609

Attn: \_\_\_\_\_

Field Office: \_\_\_\_\_

Attn: \_\_\_\_\_

Regional Office: \_\_\_\_\_

Re: Wetlands and Streams Related Consulting and Permitting

To Whom It May Concern:

I, the undersigned, the owner or a duly authorized representative of record of the property/properties identified herein, do authorize representatives of the U.S. Army Corps of Engineers (Corps) and North Carolina Division of Water Resources (NCDWR) to enter upon the property herein described for the purpose of conducting on-site investigations and issuing a determination associated with Waters of the U.S. subject to Federal jurisdiction under Sections 401 and 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. I also hereby designate and authorize Sage Ecological Services to act on my behalf as my agent in the processing of permit applications, to furnish upon request supplemental information in support of applications, etc. from this day forward.

This notification supersedes any previous correspondence concerning the agent for this project.

**Notice: This authorization, for liability and professional courtesy reasons, is valid only for government officials to enter the property when accompanied by Sage staff. Please contact Sage to arrange a meeting prior to visiting the site.**

BY: \_\_\_\_\_

Print Name of Landowner or  
Legal Representative

BY: \_\_\_\_\_

Signature of Landowner or  
Legal Representative