Photograph 1 – Study Area
Facing West

Photograph 2 – Study Area
Facing Southeast

Photograph 3 – Study Area
Facing Southeast

Photograph 4 – Study Area
Facing Northwest

Photograph 5 – Study Area
Facing Southeast

Photograph 6 – Stream 1 (Sandy Run Creek)
Facing Upstream

Photograph 7 – Stream 1 (Sandy Run Creek)
Facing Downstream

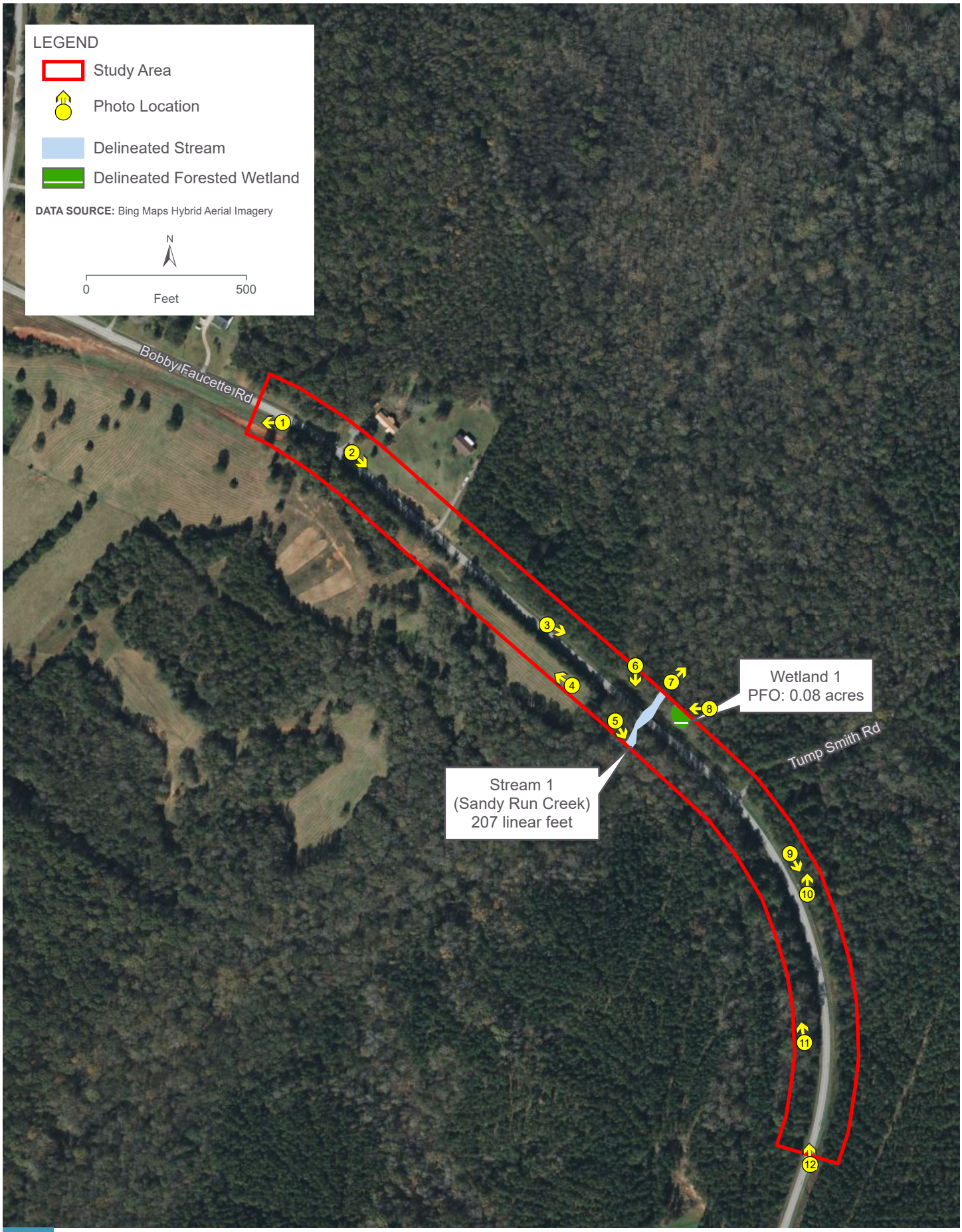
Photograph 8 – Wetland 1
Facing West

Photograph 9 – Study Area
Facing Southeast

Photograph 10 – Non-jurisdictional Linear Conveyance
Facing North

Photograph 11 – Non-jurisdictional Linear Conveyance
Facing North

Photograph 12 – Study Area
Facing North




# SC-114 BRIDGE REPLACEMENT OVER SANDY RUN CREEK

## DELINEATED WATERS OF THE U.S.

**Figure 4**

**TECHNICAL MEMORANDUM**

\\CLTSMAIN\GIS_DATA\GIS\PROJECTS\3689_SCDOT\10351488_CLRB_BRIDGEPKG17\7.2_WIP\MAP_DOCS\APRX\SC114SANDYRUN_TECHMEMO.APRX DATE: 2/20/2023

# 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.

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## Location

Union County, South Carolina

## Local office

South Carolina Ecological Services

(843) 727-4707
(843) 727-4218

176 Croghan Spur Road, Suite 200

Charleston, SC 29407-7558

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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 species[1] 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[2]).

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

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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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:

# Insects

| NAME | STATUS |
| --- | --- |
| Monarch Butterfly *Danaus plexippus*<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9743 | Candidate |

# Critical habitats

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

There are no critical habitats at this location.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

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

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

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| NAME | BREEDING SEASON |
|---|---|
| Chimney Swift *Chaetura pelagica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will *Antrostomus vociferus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Kentucky Warbler *Oporornis formosus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 20 |
| Prothonotary Warbler *Protonotaria citrea*<br>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*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Wood Thrush *Hylocichla mustelina*<br>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 and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

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

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

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

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.

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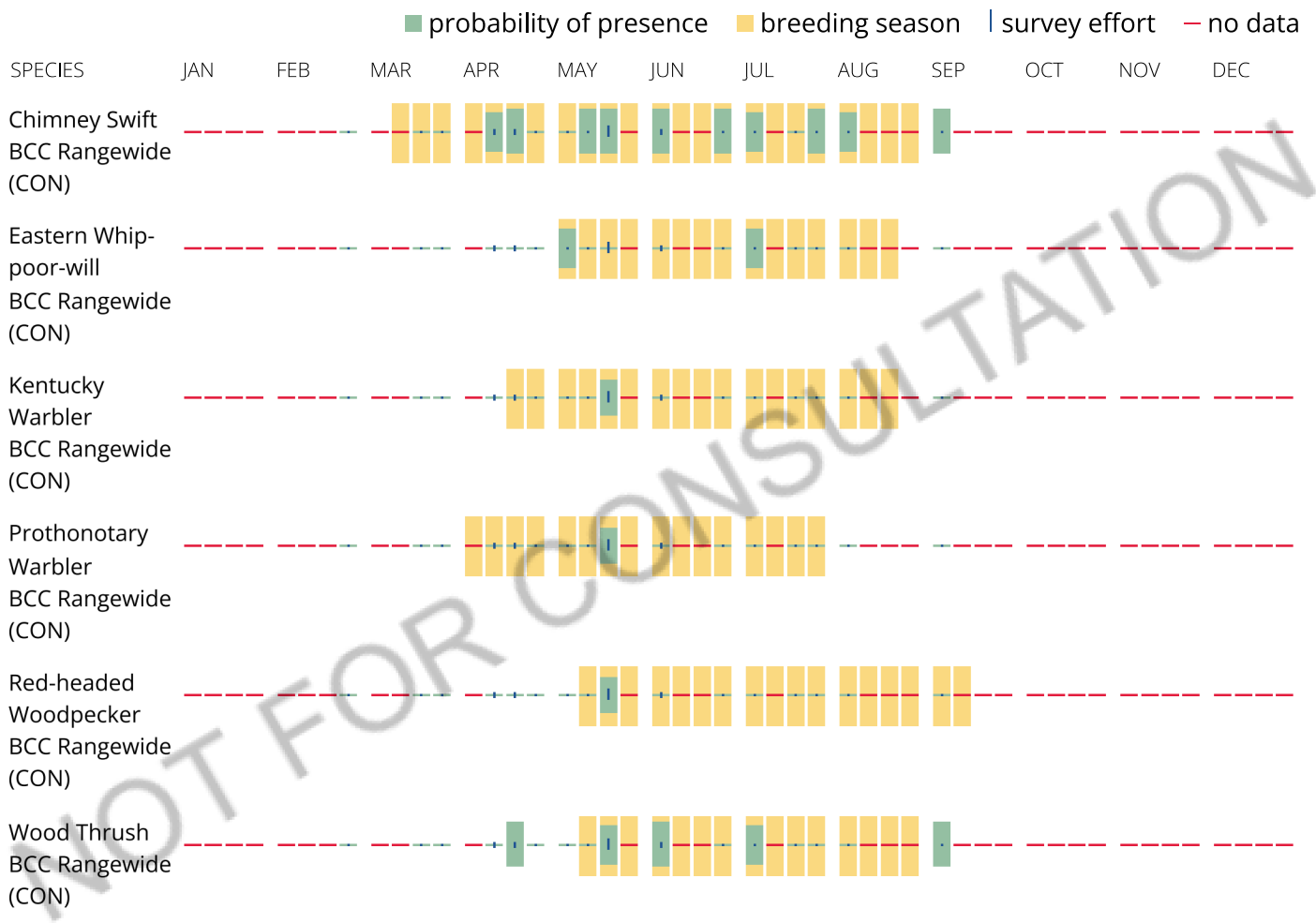
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**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.

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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. 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.

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### 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.

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# 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.

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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 tuberficid 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.

NOT FOR CONSULTATION

# South Carolina Department of Natural Resources

Robert H. Boyles, Jr.
Director

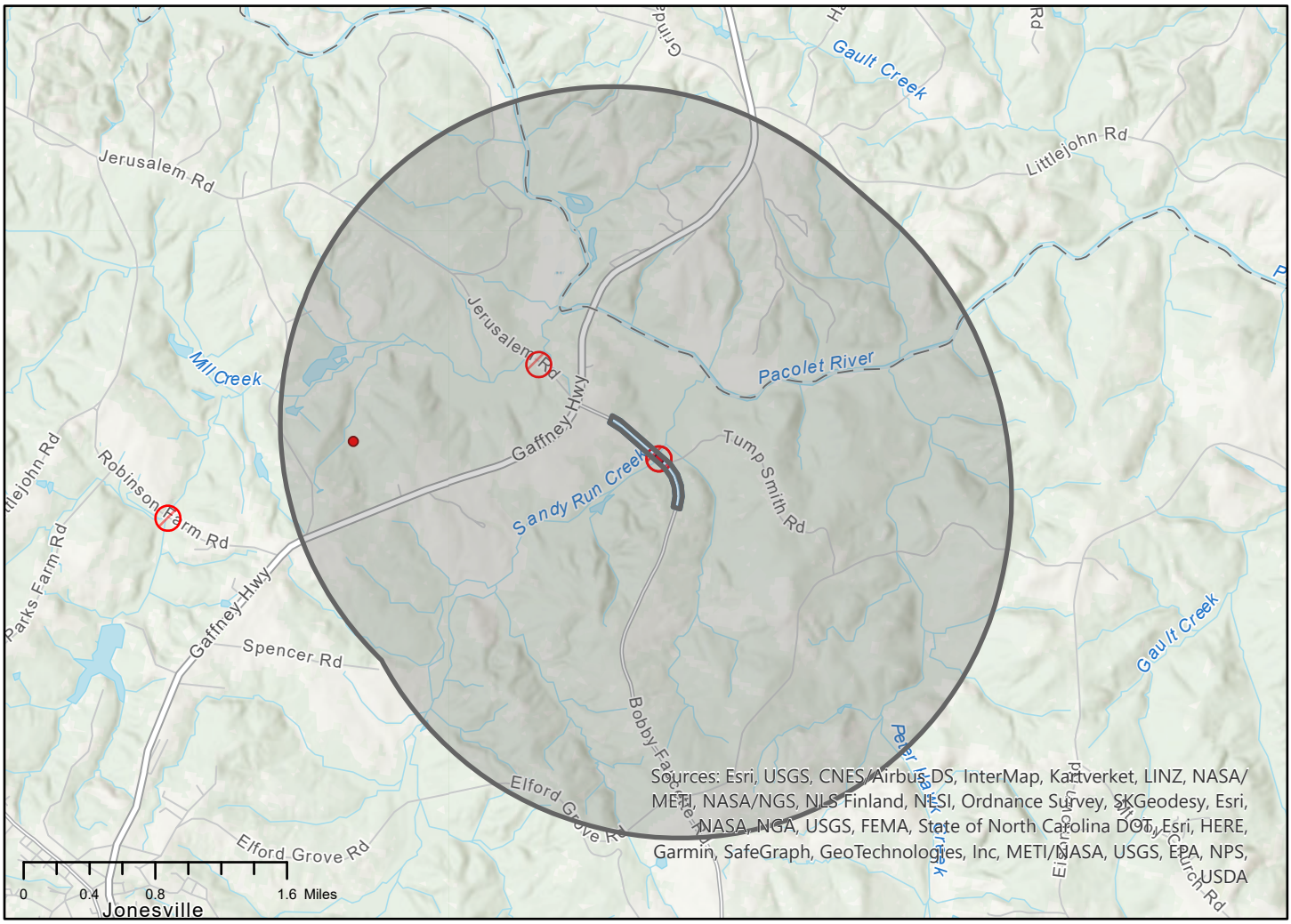
Emily C. Cope
Deputy Director for Wildlife and Freshwater Fisheries

PO Box 167
Columbia, SC 29202
(803) 734-1396
speciesreview@dnr.sc.gov

*Requested on Thursday, January 26, 2023* by *Paul Bright*.

Re: Request for Threatened and Endangered Species Consultation
HDR, Inc. - Sandy Run Creek - Bridge - Union County, South Carolina

The South Carolina Department of Natural Resources (SCDNR) has received your request for threatened and endangered species consultation of the above named project in Union County, South Carolina. The following map depicts the project area and a 2 mile buffer surrounding:




*Live Life Outdoors*

This report includes the following items:
A - A report for species which intersect the project area
B - A report for species which intersect the buffer around the project area
C - A list of best management practices relevant to species near to or within the project area
D - A list of best management practices relevant to the project type
E - Instructions to submit new species observation records to the SC Natural Heritage Program

Please be advised:

The contents of this report, including all tables, maps, recommendations, and various other text, are produced as a direct result of the information a user provides at the time of submission. The SCDNR assumes that all information submitted by the user represents the project scope as proposed, and recommends that additional reports be requested should the scope deviate from how the project was initially represented to the SCDNR.

The technical comments outlined in this report are submitted to speak to the general impacts of the activities as described through inquiry by parties outside the South Carolina Department of Natural Resources. These technical comments are submitted as guidance to be considered and are not submitted as final agency comments that might be related to any unspecified local, state or federal permit, certification or license applications that may be needed by any applicant or their contractors, consultants or agents presently under review or not yet made available for public review. In accordance with its policy 600.01, Comments on Projects Under Department Review, the South Carolina Department of Natural Resources, reserves the right to comment on any permit, certification or license application that may be published by any regulatory agency which may incorporate, directly or by reference, these technical comments.

Interested parties are to understand that SCDNR may provide a final agency position to regulatory agencies if any local, state or federal permit, certification or license applications may be needed by any applicant or their contractors, consultants or agents. For further information regarding comments and input from SCDNR on your project, please contact our Office of Environmental Programs by emailing environmental@dnr.sc.gov or by visiting www.dnr.sc.gov/environmental. Pursuant to Section 7 of the Endangered Species Act, requests for formal letters of concurrence with regards to federally listed species should be directed to the USFWS.

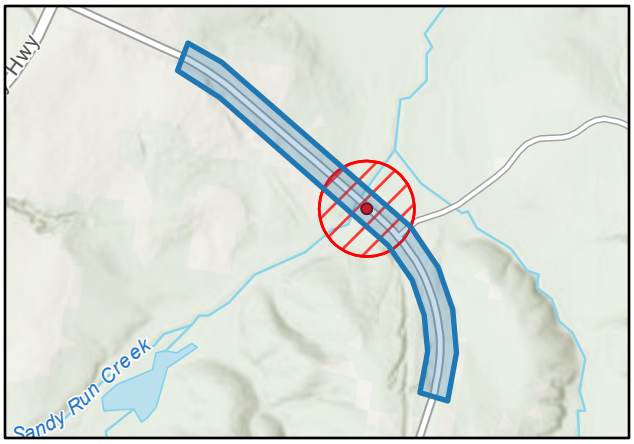
Should you have any questions or need more information, please do not hesitate to contact our office by email at speciesreview@dnr.sc.gov or by phone at 803-734-1396.

Sincerely,

Joseph Lemeris, Jr.
Heritage Trust Program
SC Department of Natural Resources

# A. Project Area - Species Report

There are 2 tracked species records found within the project foot print. The following table outlines occurrences found within the project footprint (if any), sorted by listing status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found on site may be listed in this table but are not represented on the map. Please contact speciesreview@dnr.sc.gov should you have further questions related to sensitive species found within the project area.

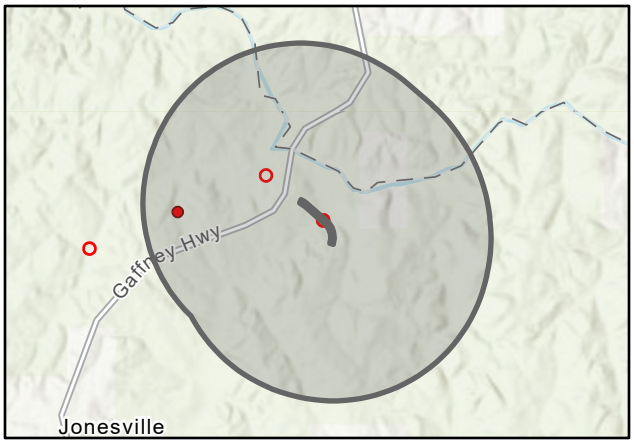



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

| Common Name | Scientific Name | Federal Protection Status | State Protection Status | SWAP Priority | Last Obs. Date | Type |
|---|---|---|---|---|---|---|
| Snail Bullhead | *Ameiurus brunneus* | Not Applicable | Not Applicable | Moderate | 1979-07-12 | Zoological |
| Thicklip Chub | *Cyprinella labrosa* | Not Applicable | Not Applicable | Moderate | 1979-07-12 | Zoological |

# B. Buffer Area - Species Report

The following table outlines rare, threatened or endangered species found within 2 miles of the project footprint, arranged in order of protection status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found within the buffer area may be listed in this table but are not represented on the map.

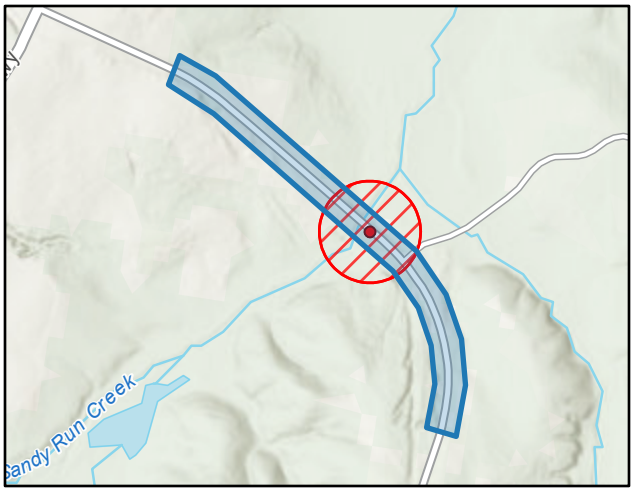



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

| Common Name | Scientific Name | Federal Protection Status | State Protection Status | SWAP Priority | Last Obs. Date | Type |
|---|---|---|---|---|---|---|
| Snail Bullhead | *Ameiurus brunneus* | Not Applicable | Not Applicable | Moderate | 1979-07-12 | Zoological |
| Thicklip Chub | *Cyprinella labrosa* | Not Applicable | Not Applicable | Moderate | 1979-07-12 | Zoological |
| Highback Chub | *Hybopsis hypsinotus* | Not Applicable | Not Applicable | Moderate | 1979-09-07 | Zoological |

# C. Species Best Management Practices (1 of 1)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.

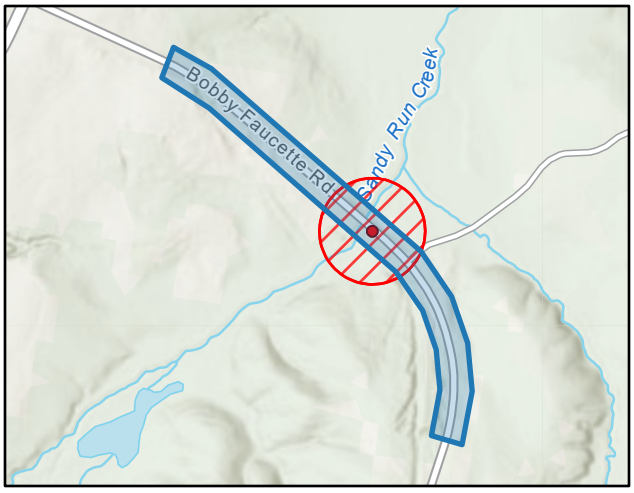



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

| |
|---|
| Cavity- and tree-roosting bat species including the federally threatened northern long-eared bat (Myotis septentrionalis), state-endangered Rafinesque's big-eared bat (Corynorhinus rafinesquii), and the federally at-risk tricolored bat (Perimyotis subflavus) have been known to occur in the county of the proposed site. As a conservation measure, it is recommended that any tree clearing activities be conducted during the inactive season for Northern long-eared bat (November 15th through March 31st) to avoid negative impacts to the species. If any of the above species are found on-site, please contact the USFWS and SCDNR. |
| Species in the above table with SWAP priorities of High, Highest or Moderate are designated as having conservation priority under the South Carolina State Wildlife Action Plan (SWAP). SWAP species are those species of greatest conservation need not traditionally covered under any federal funded programs. Species are listed in the SWAP because they are rare or designated as at-risk due to knowledge deficiencies; species common in South Carolina but listed rare or declining elsewhere; or species that serve as indicators of detrimental environmental conditions. SCDNR recommends that appropriate measures should be taken to minimize or avoid impacts to the aforementioned species of concern. |

# D. Project Best Management Practices (1 of 2)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



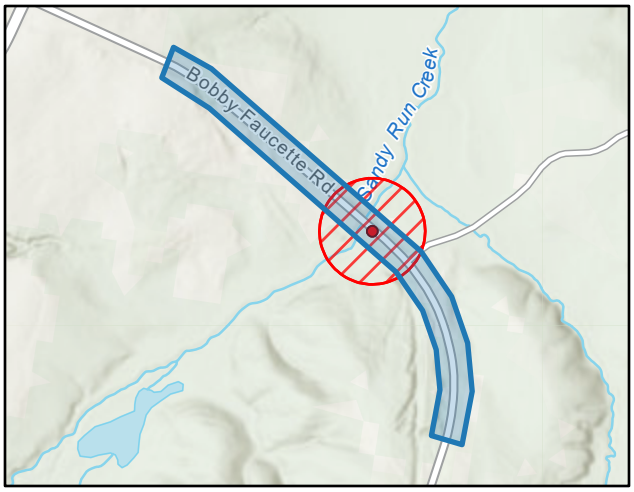

Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri,

Review of available data, National Wetlands Inventory and hydric soils, indicate that wetlands or waters of the United States are present within your project area. These areas may require a permit from the U.S. Army Corps of Engineers (USACE), as well as a compensatory mitigation plan. SCDNR advises that you consult with the USACE Regulatory to determine if jurisdictional wetlands are present and if a permit and mitigation is required for any activities impacting these areas. For more information, please visit their website at www.sac.usace.army.mil/Missions/Regulatory. Additionally, a 401 Water Quality Certification may also be required from the SC Department of Health & Environmental Control. For more information, please visit their website at https://www.scdhec.gov/environment/water-quality/water-quality-certification-section-401-clean-water-act.

- All necessary measures must be taken to prevent oil, tar, trash and other pollutants from entering the adjacent offsite areas/wetlands/water.
- Once the project is initiated, it must be carried to completion in an expeditious manner to minimize the period of disturbance to the environment.
- Upon project completion, all disturbed areas must be permanently stabilized with vegetative cover (preferable), riprap or other erosion control methods as appropriate.
- The project must be in compliance with any applicable floodplain, stormwater, land disturbance, shoreline management guidance or riparian buffer ordinances.
- Prior to beginning any land disturbing activity, appropriate erosion and siltation control measures (e.g. silt fences or barriers) must be in place and maintained in a functioning capacity until the area is permanently stabilized.
- Materials used for erosion control (e.g., hay bales or straw mulch) will be certified as weed free by the supplier.
- Inspecting and ensuring the maintenance of temporary erosion control measures at least:
  a. on a daily basis in areas of active construction or equipment operation;
  b. on a weekly basis in areas with no construction or equipment operation; and
  c. within 24 hours of each 0.5 inch of rainfall.
- Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts.
- Land disturbing activities must avoid encroachment into any wetland areas (outside the permitted impact area).Wetlands that are unavoidably impacted must be appropriately mitigated.
- Your project may require a Stormwater Permit from the SC Department of Health & Environmental Control, please visit https://www.scdhec.gov/environment/water-quality/stormwater

# D. Project Best Management Practices (2 of 2)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.




Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri,

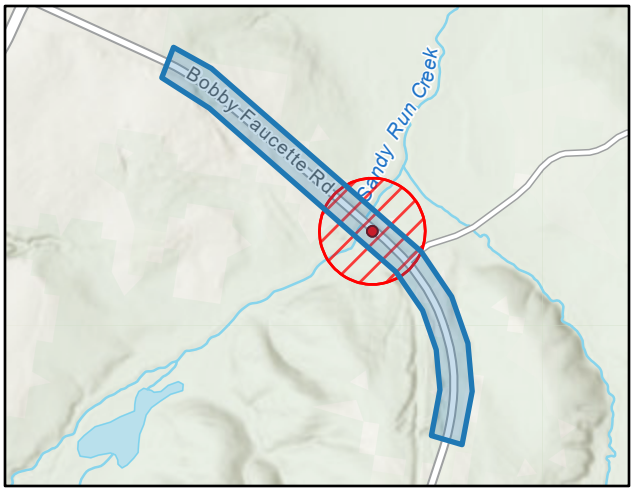
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
- Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
- Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion and exclude plant species found on the exotic pest plant council list: https://www.se-eppc.org/southcarolina/SCEPPC_LIST2014finalOct.pdf.

- Review of available data, National Hydrography Dataset, indicates that streams or waters of the United States are present within your project area. These areas may require a permit from the U.S. Army Corps of Engineers (USACE), as well as a compensatory mitigation plan. SCDNR advises that you consult with the USACE Regulatory to determine if jurisdictional waters are present and if a permit and mitigation is required for any activities impacting these areas. For more information, please visit their website at www.sac.usace.army.mil/Missions/Regulatory. Additionally, a 401 Water Quality Certification or a State Navigable Waters permit may also be required from the SC Department of Health & Environmental Control. For more information, please visit the following websites:
    - https://www.scdhec.gov/environment/water-quality/water-quality-certification-section-401-clean-water-act
    - https://www.scdhec.gov/environment/water-quality/navigable-waters
- Excavation/Construction activities must not occur during fish spawning season from March through June due to its negative impacts on eggs and reproduction activities.
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
- Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
- Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion.

Your project area includes a FEMA special flood hazard area and may require a permit from the County National Floodplain Insurance Program Manager before impacts occur to aquatic resources and the associated floodplains on site. Please refer to https://www.dnr.sc.gov/water/flood/documents/nfipadmindirectory.pdf to find your appropriate contact information.

# E. Instructions for Submitting Species Observations

The SC Natural Heritage Dataset relies on continuous monitoring and surveying for species of concern throughout the state. Any records of species of concern found within this project area would greatly benefit the quality and comprehensiveness of the statewide dataset for rare, threatened and endangered species. Below are instructions for how to download the SC Natural Heritage Occurrence Reporting Form through the Survey123 App.




Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri,

## Conservation Ranks & SWAP Priority Status

The SC Natural Heritage Program assigns S Ranks for species tracked within the state of South Carolina based on ranking methodology developed by NatureServe and its state program network. For information conservation rank definitions, please visit https://explorer.natureserve.org/AboutTheData/Statuses

The SCDNR maintains and updates it's State Wildlife Action Plan (SWAP) every 10 years. This plan categorizes species of concern by Moderate, High, and Highest Priority. Please visit https://www.dnr.sc.gov/swap/index.html for more information about the SC SWAP.

## Instructions for accessing the SC Natural Heritage Occurrence Reporting Form

For use in a browser (on your desktop/PC):

1) Follow https://bit.ly/scht-reporting-form
2) Select ‘Open in browser’
3) The form will open and you can begin entering data!

This method of access will also work on a browser on a mobile device, but only when connected to the internet. To use the form in the field without relying on data/internet access, follow the steps below.

For use on a smartphone or tablet using the field app:

1) Download the Survey123 App from the Google Play store or the Apple Store. This app is free to download. Allow the app to use your location.

2) No need to sign in. However, you will need to provide the app with our Heritage Trust GIS portal web address. You will only need to do this once: (this is a known bug with ESRI’s software, and future releases of the form should not require the below steps. Bear with us in the meantime!).

a. Tap ‘Sign in’
b. Tap the settings (gear symbol) in the upper right corner
c. Tap ‘Add Portal’
d. After the ‘https://’, type schtportal.dnr.sc.gov/portal
e. Tap ‘Add Portal’
f. Tap the back-arrow icon (upper left corner) twice to return to the main sign in page.

3) Use the camera app (or other QR Reader app) to scan the QR code on this page from your smartphone or tablet. Click on the ‘Open in the Survey123 field app’. This will prompt a window to allow Survey123 to download the SC Natural Heritage Occurrence Reporting Form. Select ‘Open.’

4) The form will automatically open in Survey123, and you can begin entering data! This form will stay loaded in the app on your device until you manually delete it, and you can submit as many records as you like.

The HERITAGE TRUST Program

# Listed species believed to or known to occur in Union, South Carolina

The following report contains species that are known to or are believed to occur in this county, based on the species current range, as defined by the USFWS. The definition of current range that the FWS uses is the general geographic area where we know or suspect that a species currently occurs.

This list of species by county cannot be used for consultation purposes. To obtain an official list of species that should be considered during consultation, please visit IPaC.

CSV

Show 10 entries

Search:

5 Species Listings

| Group | Name | Population | Status | Lead Office | Recovery Plan |
|---|---|---|---|---|---|
| Mammals | Tricolored bat (Perimyotis subflavus) | Wherever found | Proposed Endangered | 5 | |
| Insects | Monarch butterfly (Danaus plexippus) | Wherever found | Candidate | 3 | |
| Mammals | Little brown bat (Myotis lucifugus) | Wherever found | Under Review | 5 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fishes | Robust redhorse (Moxostoma robustum) | Wherever found | Under Review | 4 | | |
| Flowering Plants | Georgia aster (Symphyotrichum georgianum) | Wherever found | Resolved Taxon | 4 | | |

| Comment ID | Date | Full Name | Email | Street Address | City | Zipcode | Do you wish to receive a response to this comment? | How would you like a response? | Comment | Response |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2/7/2023 12:46 | Tommy Grady | tgrady@ed.sc.gov | 3915 Cross Keys Hwy | UNION | 29379 | Yes | By_Email | Will the bridges on Hwy 49, over the Tyger River, and Fairforest Creek be used while a new bridge is built beside the existing one's. | Yes. The Hwy 49 over Tyger River and Fairforest Creek bridges will be constructed using staged construction with traffic utilizing the existing bridge until the new bridge is built. |
| 2 | 2/8/2023 0:56 | Jackson Hurst | ghostlightmater@yahoo.com | 4216 Cornell Crossing | Kennesaw, GA | 30144 | Yes | By_Email | I approve and support SCDOT's Closed and Load Restricted Bridge Package 17 Project. The aspect that I love about SCDOT's Closed and Load Restricted Bridge Package 17 Project is that the following bridges: US 176 (Whitmire Highway) over Padgetts Creek, SC 72 (Carlisle Chester Highway) over Coxs Creek, SC 215 (Buffalo-West Springs Highway) over Fair Forest Creek, SC 49 (Cross Keys Highway) over Tyger Creek, SC 49 (Cross Keys Highway) over Fair Forest Creek, and SC 114 (Bobby Faucette Road) over Sandy Run Creek will be replaced with new bridges that are safer and up to current design standards. | Thank you for your comments. |
| 3 | 2/8/2023 1:44 | Jackie Johnson | jackiejohnson101861@gmail.com | 687 GALILEE CHURCH RD | UNION | 29379 | Yes | By_phone | W | Michael Pitts spoke to Ms. Johnson by phone on 2/24/23. He addressed her concerns, and she mentioned she was happy to hear the six Union County bridges being replaced. |
| 4 | 2/8/2023 14:14 | Tabetha James | April.james7@gmail.com | 111 Spencer Rd | Jonesville | 29353 | No | | The fact that we could possibly be saying “I wish we would have addressed the issue before someone had to die” makes the projects a no-brainer. Preservation of life should always take precedence. | Thank you for your comments. |
| 5 | 2/8/2023 21:08 | Philip D. Poole II | knightme38@yahoo.com | 112 Fairforest Heights | Buffalo | 29321 | Yes | By_Email | I own the property at the bridge on the left side if you where traveling towards Buffalo.I want to know it my land would be affected.I see flags on it way off the road?Would like to know what side of the bridge is the new one going to be? | Mr. Pitts discussed over the phone with Mr. Poole that the current conceptual design is shifting away from his property with no current right-of-way impacts. Conceptual designs are subject to change if a design-build contractor proposes a different design through the Alternative Technical Concept (ATC) process. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 2/9/2023 14:16 | Patricia McGinnis | Pjmcginnis76@gmail.com | 2363 Buffalo west springs highway | Buffalo | 29321 | Yes | By_Email | Repairing these bridges would be fine but what you're going to do is just shut them all down and leave them close for long periods of time and when you do that you're going to basically be stranding union we can't get to I 26 now we won't be able to get to Lauren's or Greenville . We will either have to go through Chester or Spartanburg. You're going to be stranding an entire community of thousands of people know if you can shut down a bridge, fixed it and then moved on to another bridge that would be great but that's not what you do you just shut down the bridge and come back a couple years later if ever | The proposed bridge replacements will be constructed using staged construction with traffic utilizing the existing bridge until the new bridge is built. The bridges will not be closed during construction but will remain open to traffic until the new bridges are built with the exception of SC 114 which is being proposed with closing and detouring traffic to expedite construction. |
| 7 | 2/14/2023 4:17 | James Knight | Cliffknight69@gmail.com | 801 Meadow Woods Road | Buffalo | 29322 | Yes | By_Email | I truly think this project is great and much needed, but as our bridges are in desperate need of repair so are the miles of roads around union . It just seems that regardless of what we as a community do (call,fill out form online ) the roads are put on the back burner. I mean to put it in perspective my road has sub-base failure and also has a section of road that in the spring the grass needs to be cut coming out of the road in a 100' section. Again it's great the bridges are being repaired but that is a small section of roadway compared to the amount of roads in need of obvious repairs. Any clarity on this matter would be greatly appreciated.I have had to replace 2 rims due to the road conditions which are out of our control and can't get reimbursed due to the process of being denied because, o we didn't know about it so we can't be responsible. | Thank you for your comment. SCDOT is actively repairing the roadways as well. Please use SCDOT's Project Viewer to keep up to date on what roads are being repaired around you. Https://www.scdot.org/business/projectviewer.aspx. For information regarding vehicular damage caused by our roadways, please use the website: https://www.scdot.org/travel/travel-DamageClaims.aspx |
| 8 | 2/21/2023 2:29 | Don Sawyer | angusman914@gmail.com | 1162 Meadow Woods Rd. | Buffalo | 29321 | No | | If you intend to raise the bridges in the process, please consider raising the any adjacent roads as well, like Meadow Woods Rd. at Tyger River Bridge. Several years back, SCDOT raised the interstate bridges along I-385, but didn't raise the ramps, now you can't see over the bridge railings to see oncoming traffic pulling out of the stop sign at the ramps. SCDOT lowered the speed limit, but I'd rather see what's coming, than depend on someone going slow. If you don't understand the comment, take a low riding sedan for a southbound trip on I-385 and take exit 5 ramp, and turn left onto Hwy 49. | |

## Mathis, Jennifer

**From:** Pitts, Michael E. <PittsME@scdot.org>
**Sent:** Friday, May 26, 2023 7:51 AM
**To:** Cliffknight69@gmail.com
**Subject:** 4462250 SCDOT Bridge Package 17 - Union County

Good Morning –

Please see below to view the response to your comment submitted during the public comment period with regards to the Union county bridge replacements.

| Comment | Response |
|---|---|
| I truly think this project is great and much needed, but as our bridges are in desperate need of repair so are the miles of roads around union . It just seems that regardless of what we as a community do (call, fill out form online ) the roads are put on the back burner. I mean to put it in perspective my road has sub-base failure and also has a section of road that in the spring the grass needs to be cut coming out of the road in a 100' section. Again it's great the bridges are being repaired but that is a small section of roadway compared to the amount of roads in need of obvious repairs. Any clarity on this matter would be greatly appreciated. I have had to replace 2 rims due to the road conditions which are out of our control and can't get reimbursed due to the process of being denied because, o we didn't know about it so we can't be responsible. | Thank you for your comment. SCDOT is actively repairing the roadways as well. Please use SCDOT's Project Viewer to keep up to date on what roads are being repaired around you. https://www.scdot.org/business/projectviewer.aspx. For information regarding vehicular damage caused by our roadways please use the website: https://www.scdot.org/travel/travel-DamageClaims.aspx |

Thank you for your comment and please continue to check the project website for updates.


**Michael E. Pitts, P.E., Assoc. DBIA**
*Alternative Delivery Program Manager*
**P** 803.737.2566 **M** 803.413.9316 **E** pittsme@scdot.org
955 Park Street, P.O. Box 191, Columbia, SC 29202-0191


#ProgressisourPriority

LET 'EM WORK. LET 'EM LIVE.

## Mathis, Jennifer

**From:** Pitts, Michael E. <PittsME@scdot.org>
**Sent:** Friday, May 26, 2023 7:49 AM
**To:** Pjmcginnis76@gmail.com
**Subject:** 4462250 SCDOT Bridge Package 17 - Union County

Good Morning –

Please see below to view the response to your comment submitted during the public comment period with regards to the Union county bridge replacements.

| Comment | Response |
|---|---|
| Repairing these bridges would be fine but what you're going to do is just shut them all down and leave them close for long periods of time and when you do that you're going to basically be stranding union we can't get to I 26 now we won't be able to get to Lauren's or Greenville . We will either have to go through Chester or Spartanburg. You're going to be stranding an entire community of thousands of people know if you can shut down a bridge, fixed it and then moved on to another bridge that would be great but that's not what you do you just shut down the bridge and come back a couple years later if ever. | The proposed bridge replacements will be constructed using staged construction with traffic utilizing the existing bridge until the new bridge is built. The bridges will not be closed during construction but will remain open to traffic until the new bridges are built with the exception of SC 114 which is being proposed with closing and detouring traffic to expedite construction. |

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## Mathis, Jennifer

**From:** Pitts, Michael E. <PittsME@scdot.org>
**Sent:** Friday, May 26, 2023 7:45 AM
**To:** knightme38@yahoo.com
**Subject:** 4462250 SCDOT Bridge Package 17 - Union County

Good Morning –

Please see below to view the response to your comment submitted during the public comment period with regards to the Union county bridge replacements.

| Comment | Response |
|---|---|
| I own the property at the bridge on the left side if you were traveling towards Buffalo. I want to know it my land would be affected. I see flags on it way off the road? Would like to know what side of the bridge is the new one going to be? | Mr. Pitts discussed over the phone with Mr. Poole that the current conceptual design is shifting away from his property with no current right-of-way impacts. Conceptual designs are subject to change if a design-build contractor proposes a different design through the ATC (Alternative Technical Concept) Process. |

Thank you for your comment and please continue to check the project website for updates.


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## Mathis, Jennifer

**From:** Pitts, Michael E. <PittsME@scdot.org>
**Sent:** Friday, May 26, 2023 7:38 AM
**To:** April.james7@gmail.com
**Subject:** 4462250 SCDOT Bridge Package 17 - Union County

Good Morning –

Please see below to view the response to your comment submitted during the public comment period with regards to the Union county bridge replacements.

| Comment | Response |
|---|---|
| The fact that we could possibly be saying "I wish we would have addressed the issue before someone had to die" makes the projects a no-brainer. Preservation of life should always take precedence. | Thank you for your comments. |

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## Mathis, Jennifer

**From:** Pitts, Michael E. <PittsME@scdot.org>
**Sent:** Friday, May 26, 2023 7:37 AM
**To:** Jackson Hurst
**Subject:** RE: 4462250 SCDOT Bridge Package 17 - Union County

Good Morning –

Please see below to view the response to your comment submitted during the public comment period with regards to the Union county bridge replacements.

| Comment | Response |
|---|---|
| I approve and support SCDOT's Closed and Load Restricted Bridge Package 17 Project. The aspect that I love about SCDOT's Closed and Load Restricted Bridge Package 17 Project is that the following bridges: US 176 (Whitmire Highway) over Padgetts Creek, SC 72 (Carlisle Chester Highway) over Coxs Creek, SC 215 (Buffalo-West Springs Highway) over Fair Forest Creek, SC 49 (Cross Keys Highway) over Tyger Creek, SC 49 (Cross Keys Highway) over Fair Forest Creek, and SC 114 (Bobby Faucette Road) over Sandy Run Creek will be replaced with new bridges that are safer and up to current design standards. | Thank you for your comments. |

Thank you for your comment and please continue to check the project website for updates.


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## Mathis, Jennifer

**From:** Pitts, Michael E. <PittsME@scdot.org>
**Sent:** Friday, May 26, 2023 7:35 AM
**To:** tgrady@ed.sc.gov
**Subject:** 4462250 SCDOT Bridge Package 17 - Union County

Good Morning –

Please see below to view the response to your comment submitted during the public comment period with regards to the Union county bridge replacements.

| Comment | Response |
|---|---|
| Will the bridges on Hwy 49, over the Tyger River, and Fairforest Creek be used while a new bridge is built beside the existing ones. | Yes. The Hwy 49 over Tyger River and Fairforest Creek bridges will be constructed using staged construction with traffic utilizing the existing bridge until the new bridge is built. |

Thank you for your comment and please continue to check the project website for updates.


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