

August 6, 2014

Mr. Garrett Hollingsworth Strata Solar, LLC 50101 Governors Drive, Suite 280 Chapel Hill, North Carolina 27517

Reference: Limited NEPA Assessment Pit 64 Solar Farm Approximate 47.027 Acre Tract Paynes Road/Highway 64 Pittsboro, North Carolina PEI Project No. 1055

Dear Mr. Hollingsworth:

Pilot Environmental, Inc. (PEI) is pleased to submit this report of the Limited NEPA Assessment for the approximate 47.027 acre tract located north of Highway 64 in Pittsboro, Chatham County, North Carolina. A U.S. Geological Survey (USGS) Topographic Map (Drawing 1) and a 2013 aerial photograph (Drawing 2) of the site are included as attachments.

#### Background

Congress passed the Endangered Species Act (ESA) in 1973. The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and the Commerce Department's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of the Commerce Departments NMFS are mainly marine wildlife. Under the ESA, federally protected species may be listed as either endangered or threatened. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments.

The State Historic Preservation Office (SHPO) was created by the United States government in 1966 under Section 101 of the National Historic Preservation Act (NHPA). The purposes of the SHPO include surveying and recognizing historic properties, reviewing nominations for properties to be included in the National Register of Historic Places, reviewing undertakings for the impact

on the properties as well as supporting federal organizations, state and local governments, and the private sector.

# **Scope of Services**

PEI was contracted to perform a Limited NEPA Assessment for the approximate 47.027 acre tract located north of Highway 64 in Pittsboro, Chatham County, North Carolina. The site is identified by the Chatham County Geographical Information System (GIS) as Parcel Identification Number (PIN) 971200034471. The site is being evaluated for the proposed development with a solar farm. The purpose of the Limited NEPA Assessment is to identify the potential for impact to federally listed threatened and endangered species and cultural resources. The scope of services included a field reconnaissance, a review of available literature and a submittal of relevant site information to solicit comments from the USFWS, the N.C. Natural Heritage Program (NHP) and the N.C. SHPO. The site boundaries were not surveyed at the time of our field delineation.

PEI was also contracted to perform a Phase I Environmental Site Assessment (ESA) and a Stream/Wetland Delineation on the site. Details of these investigations are included in separate reports.

# Federally Listed Threatened and Endangered Species

# Field Reconnaissance

PEI personnel conducted the field reconnaissance on July 4, 2014. The site contains wooded land and fields. An agricultural structure that is used for storing hay is centrally located on the site. Other structures are not located on the site. Densely vegetated wooded areas (hedge-rows) separate agricultural fields on the northern portion of the site. The wooded areas located on the eastern portion of the site are vegetated primarily with hardwood species with moderately dense mid and understories. Tree species within the wooded area on the eastern portion of the site range from diameters at breast height (DBH) of approximately 4 to 24 inches. The wooded area located on the western-central portion of the site appears to consist of overgrown fields with densely vegetated saplings. The remainder of the site contains fields that are used for agricultural purposes and/or overgrown fields.

PEI has conducted a stream/wetland delineation on the site. The stream/wetland delineation of the site was verified by Mr. Andrew Williams with the U.S. Army Corps of Engineers on July 30, 2014. Based on the stream/wetland delineation and agency verification, an unnamed tributary to Landrum Creek and associated wetlands are located on the site. Drawing 3 shows the approximate locations of streams and wetlands located on the site. Other details pertaining to the delineation are included in a separate report.

### Literature Review

PEI reviewed the USFWS Endangered Species Database to identify federally protected threatened and endangered species in Chatham County, North Carolina. The following federally protected threatened and endangered species are identified in Chatham County, North Carolina:

Common Name	Scientific name	Federal Status	Record Status
Vertebrate:			
Bald eagle	Haliaeetus leucocephalus	BGPA	Current
Cape Fear shiner	Notropis mekistocholas	E	Current
Red-cockaded woodpecker	Picoides borealis	E	Historic
Vascular Plant:			
Harperella	Ptilimnium nodosum	E	Current

T – Threatened E – Endangered BGPA – Bald and Golden Eagle Protection Act

# Species/Habitat Description

# Bald Eagle (Haliaeetus leucocephalus)

Description: The Bald Eagle is a regulated species under the Bald and Golden Eagle Protection Act (BGPA). Bald Eagles were removed from the federal list of threatened and endangered species on August 9, 2007, and are no longer protected under the Endangered Species Act. However, Bald Eagles remain protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The Bald and Golden Eagle Act prohibits anyone from taking, possessing, or transporting a Bald Eagle (*Haliaeetus leucocephalus*) or Golden Eagle (*Aquila chrysaetos*), or the parts, nests, or eggs of such birds without prior authorization. This includes inactive nests as well as active nests. Take means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb. Activities that directly or indirectly lead to take are prohibited without a permit.

A large raptor (bird of prey), the bald eagle has a wingspread of 5½ to 8 feet. Adults have a dark brown body and wings, white head and tail, and a yellow beak. In flight, the bald eagle often soars or glides with the wings held at a right angle to the body. Juvenile bald eagles have mottled brown and white plumage, gradually acquiring their dark brown body and distinctive white head and tail as they mature. Bald eagles generally attain adult plumage by 5 years of age. Adults weigh 8 to 14 pounds, occasionally reaching 16 pounds in Alaska. Those in the northern range grow larger than those in the south, and females are somewhat larger than males. Habitat: Bald eagles generally nest near coastlines, rivers, large lakes or streams that support an adequate food supply. They often nest in mature or old-growth trees; snags (dead trees); cliffs; rock promontories; rarely on the ground; and with increasing frequency on human-made structures such as power poles and communication towers. In forested areas, bald eagles often select the tallest trees with limbs strong enough to support a nest that can weigh more than 1,000 pounds. Nest sites typically include at least one perch with a clear view of the water where the eagles usually forage. Shoreline trees or snags located near reservoirs provide the visibility and accessibility needed to locate aquatic prey. Eagle nests are constructed with large sticks, and may be lined with moss, grass, plant stalks, lichens, seaweed, or sod. Nests are usually about 4-6 feet in diameter and 3 feet deep, although larger nests exist.

Conclusion: The site contains wooded land and fields. A small intermittent stream and wetlands are located on the site. Based on the size of the water bodies located on the site and water bodies identified on the USGS topographic map in the immediate vicinity of the site, it is the opinion of PEI that the presence of Bald Eagles on the site is unlikely.

# Cape Fear shiner (Notropis mekistocholas)

Description: The Cape Fear shiner was first described as a new species in 1971. It is a small (approximately 2 inches long), yellowish minnow with a black band along the sides of its body. The shiner's fins are yellow and somewhat pointed. It has a black upper lip, and the lower lip bears a thin black bar along its margin. The Cape Fear shiner is known to consume plant and animal material. However, unlike most other minnows in the genus *Notropis*, the Cape Fear shiner's digestive tract is modified primarily for a plant diet by having an elongated, convoluted intestine.

Habitat: The Cape Fear shiner is generally associated with gravel, cobble, and boulder substrates, and has been observed in slow pools, riffles, and slow runs. These areas occasionally support water willow (*Justicia americana*), which may be used as cover or protection from predators (e.g. flathead catfish (*Pylodictis olivaris*), bass (*Micropterus spp.*) and crappie (*Pomoxis spp.*)). The Cape Fear shiner can be found swimming in schools of other minnow species but is never the most abundant species. During the spawning season, May through July, the Cape Fear shiner adults move to slower flowing pools to lay eggs on the rocky substrate. Juveniles are often found in slack water, among large rock outcrops of the midstream, and in flooded side channels and pools. Cape Fear shiners are sexually mature after their first year, and are known to live up to 6 years in captivity.

Conclusion: A stream is located on the western portion of the site. Water and/or fish were not observed in the stream. Based on our observations, suitable habitat for the Cape Fear Shiner is not located on the site.

Limited NEPA Assessment PEI Project No. 1055 August 6, 2014

## Red-cockaded Woodpecker (Picoides borealis)

Description: The red-cockaded woodpecker (RCW) is a small bird measuring about seven inches in length. Identifiable by its white cheek patch and black and white barred back, the males have a few red feathers, or "cockade". These red feathers usually remain hidden underneath black feathers between the black crown and white cheek patch unless the male is disturbed or excited. Female RCWs lack the red cockade. Juvenile males have a red 'patch' in the center of their black crown. This patch disappears during the fall of their first year at which time their 'red-cockades' appear.

Habitat: Red-cockaded woodpecker habitat includes forests with trees old enough for roosting, generally at least 30-120 years old, or greater than 10 inches diameter at breast height, depending on species of pine. The most prominent adaptation of RCWs is their use of living pines for cavity excavation.

For nesting and roosting habitat, red-cockaded woodpeckers prefer open stands of pine containing trees greater than 30 years old. RCWs need live, large older pines to excavate their cavities. Longleaf pines (*Pinus palustrus*) are preferred, but other species of southern pine are also acceptable. Dense stands with a thick hardwood understory are avoided. Foraging habitat is provided in pine and pine hardwood stands 30 years old or older with foraging preference for pine trees 10 inches or larger in diameter. An open understory with "meadow-like" characteristic is preferred by the red-cockaded woodpecker. In good, moderately-stocked, pine habitat, sufficient foraging substrate can be provided on 75 to 125 acres. Prescribed burning is the most efficient and ecologically beneficial method to accomplish hardwood mid-story control.

Conclusion: Wooded areas on the site primarily consist of densely vegetated hardwood species and overgrown fields with densely vegetated saplings. Based on our observations and knowledge of RCWs, it is our opinion that suitable habitat for the RCW is not located on the site.

#### Harperella (Ptilimnium nodosum)

Description: Recent electrophoretic and morphologic data suggest the existence of three distinct species from what were all formerly considered *Ptilimnium nodosum* sensu stricto. *Ptilimnium fluviatile* (Gulf River Harperella) occurs on rocky riverbeds in the mountains of Alabama and Arkansas. *Ptilimnium nodosum* (Pond Harperella) occurs in upland depression ponds and in seepage on granite outcrops in the coastal plain of Georgia and South Carolina. *Ptilimnium viviparum* (Atlantic River Harperella) occurs in rocky riverbeds in the Piedmont and Mountains of North Carolina, Virginia, Maryland and West Virginia

Harperella in North Carolina (described as *Ptilimnium viviparum*, above) is a perennial herb that grows to a height of 6 to 36 inches (0.15 - 1.0 meter). The leaves are reduced to hollow, quill-like structures. The small, white flowers occur in heads, or umbels, reminiscent of a small Queen

Anne's lace (*Daucus carota*) flower head. Flowers have five regular parts and are bisexual or unisexual, each umbel containing both perfect and male florets. Seeds are elliptical and laterally compressed, measuring 0.06 - 0.08 inches (1.5 - 2.0 millimeters) in length (Kral 1980, 1981). In pond habitats, flowering begins in May, while riverine populations flower much later, beginning in late June or July and continuing until frost.

Habitat: Harperella in North Carolina typically occurs on rocky or gravel shoals and sandbars and along the margins of clear, swift-flowing stream sections.

Conclusion: A stream is located on the western portion of the site. Water and/or fish were not observed in the stream. The stream did not contain rocky/gravel shoals and/or sandbars. Based on our field observations, suitable habitat for Harperella is not located on the site.

# USFWS and N.C. NHP Correspondence

PEI submitted letters to the USFWS and N.C. NHP dated July 8, 2014 to solicit comments pertaining to the proposed project. The USFWS responded to our request in a letter dated July 31, 2014. The N.C. NHP responded to our request in a letter dated July 10, 2014. Copies of the letter are included as attachments.

The letter response indicates that the USFWS concurs with our opinion that the proposed action of developing the site with a solar farm is not likely to adversely affect any federally listed endangered or threatened species, their formally designated habitat, or species currently proposed for listing under the Act at the site. According to the letter, the USFWS believes that the requirements of Section 7(a)(2) of the Act have been satisfied for the proposed project.

The letter responds from the N.C. NHP indicates that the N.C. NHP does not have any records of rare species, important natural communities, natural areas, or conservation/managed areas within the proposed project area or within one mile of the proposed project area.

# Federally Listed Threatened and Endangered Species

# **Field Reconnaissance**

PEI personnel conducted the field reconnaissance on July 4, 2014. The site consists of wooded land and fields. An agricultural structure is centrally located on the site. The agriculture structure is an open wood framed, metal roofed building that is currently being utilized for hay and feed storage. During the reconnaissance, PEI did not observe other structures that appeared older than fifty years in age or other obvious indicators to the presence of archaeological remains.

*Limited NEPA Assessment PEI Project No. 1055 August 6, 2014* 

#### Literature Review

PEI reviewed the N.C. SHPO - Historic Properties Office (HPO) Geographical Information Systems (GIS) website to obtain information regarding the potential occurrence of historical resources for the site and adjacent properties of the site. The N.C. SHPO - HPO GIS website (Drawing 4), identified historic properties listed and/or eligible of listing are located approximately 1,900 feet and more from the site.

#### SHPO Correspondence

PEI submitted a letter to the N.C. SHPO dated July 2, 2014 soliciting comments pertaining to the proposed project. The N.C. SHPO responded to a N.C. State Clearinghouse Review request in a letter dated June 18, 2014. A copy of the letter is included as an attachment.

According to the response letter, the N.C. SHPO has conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, the N.C. SHPO has no comment on the project as proposed.

#### **Conclusions and Opinions**

This Limited NEPA Assessment has revealed that it is not likely for the proposed development of the site with a solar farm to impact federally listed threatened/endangered species and/or cultural resources. If additional information concerning federally listed threatened/ endangered species and/or cultural resources becomes available that makes a material difference in our findings and conclusions, then PEI reserves the right to review applicable information that could alter the conclusions and opinions found within this report. Additional assessment is not recommended at this time.

Limited NEPA Assessment PEI Project No. 1055 August 6, 2014

## Closing

We appreciate the opportunity to provide our services to you. Please contact us at (336) 708-4997 if you have questions or require additional information.

Sincerely,

Bradley S. Luckey Project Manager

Michael T. Brame, PWS Principal

Attachments: Drawing 1 – USGS Topographic Map Drawing 2 – 2010 Aerial Photograph Drawing 3 – Wetland Flag Map Drawing 4 – N.C SHPO HPO GIS Map USFWS Response Letter, Dated July 31, 2014 N.C. NHP Response Letter, Dated July 10, 2014 N.C. SHPO Response Letter, Dated June 18, 2014







CHO389 Cooper-Bouldin Log Hous



N.C. SHPO HPO GIS Website

SCALE: 1" = 1,000'



N.C. SHPO HPO GIS Map

**LEGEND** 

Site Boundary

CH0392 V

CHO68

Pit 64 Solar Farm Approximate 47.027 Acre Tract Pittsboro, NC PEI No. 1055



# United States Department of the Interior

FISH AND WILDLIFE SERVICE Raleigh ES Field Office Post Office Box 33726 Raleigh, North Carolina 27636-3726

July 31, 2014

Bradley Luckey Pilot Environmental, Inc. PO Box 128 Kernersville, NC 27285

Re: Pitt 64- Solar Farm- Chatham County, NC

### Dear Mr. Luckey:

This letter is to inform you that a list of all federally-protected endangered and threatened species with known occurrences in North Carolina is now available on the U.S. Fish and Wildlife Service's (Service) web page at http://www.fws.gov/raleigh. Therefore, if you have projects that occur within the Raleigh Field Office's area of responsibility (see attached county list), you no longer need to contact the Raleigh Field Office for a list of federally-protected species.

Our web page contains a complete and frequently updated list of all endangered and threatened species protected by the provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(Act), and a list of federal species of concern<sup>1</sup> that are known to occur in each county in North Carolina.

Section 7 of the Act requires that all federal agencies (or their designated non-federal representative), in consultation with the Service, insure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally-listed endangered or threatened species. A biological assessment or evaluation may be prepared to fulfill that requirement and in determining whether additional consultation with the Service is necessary. In addition to the federally-protected species list, information on the species' life histories and habitats and information on completing a biological assessment or evaluation web page at http://www.fws.gov/raleigh. Please check the web site often for updated information or changes.

<sup>&</sup>lt;sup>1</sup> The term "federal species of concern" refers to those species which the Service believes might be in need of concentrated conservation actions. Federal species of concern receive no legal protection and their designation does not necessarily imply that the species will eventually be proposed for listing as a federally endangered or threatened species. However, we recommend that all practicable measures be taken to avoid or minimize adverse impacts to federal species of concern.

If your project contains suitable habitat for any of the federally-listed species known to be present within the county where your project occurs, the proposed action has the potential to adversely affect those species. As such, we recommend that surveys be conducted to determine the species' presence or absence within the project area. The use of North Carolina Natural Heritage program data should not be substituted for actual field surveys.

If you determine that the proposed action may affect (i.e., likely to adversely affect or not likely to adversely affect) a federally-protected species, you should notify this office with your determination, the results of your surveys, survey methodologies, and an analysis of the effects of the action on listed species, including consideration of direct, indirect, and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e., no beneficial or adverse, direct or indirect effect) on federally listed species, then you are not required to contact our office for concurrence (unless an Environmental Impact Statement is prepared). However, you should maintain a complete record of the assessment, including steps leading to your determination of effect, the qualified personnel conducting the assessment, habitat conditions, site photographs, and any other related articles.

With regard to the above-referenced project, we offer the following remarks. Our comments are submitted pursuant to, and in accordance with, provisions of the Endangered Species Act.

Based on the information provided and other information available, it appears that the proposed action is not likely to adversely affect any federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing under the Act at these sites. We believe that the requirements of section 7(a)(2) of the Act have been satisfied for your project. Please remember that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

However, the Service is concerned about the potential impacts the proposed action might have on aquatic species. Aquatic resources are highly susceptible to sedimentation. Therefore, we recommend that all practicable measures be taken to avoid adverse impacts to aquatic species, including implementing directional boring methods and stringent sediment and erosion control measures. An erosion and sedimentation control plan should be submitted to and approved by the North Carolina Division of Land Resources, Land Quality Section prior to construction. Erosion and sedimentation controls should be installed and maintained between the construction site and any nearby down-gradient surface waters. In addition, we recommend maintaining natural, vegetated buffers on all streams and creeks adjacent to the project site.

The North Carolina Wildlife Resources Commission has developed a Guidance Memorandum (a copy can be found on our website at (http://www.fws.gov/raleigh) to address and mitigate secondary and cumulative impacts to aquatic and terrestrial wildlife resources and water quality. We recommend that you consider this document in the development of your projects and in completing an initiation package for consultation (if necessary).

We hope you find our web page useful and informative and that following the process described above will reduce the time required, and eliminate the need, for general correspondence for species' lists. If you have any questions or comments, please contact Kathy Matthews of this office at (919) 856-4520 ext. 27.

Kathy H. Matthews

Field Supervisor

# List of Counties in the Service's Raleigh Field Office Area of Responsibility

Alamance Beaufort Bertie Bladen Brunswick Camden Carteret Caswell Chatham Chowan Columbus	
Craven	
Cumberland	
Currituck	
Dare	
Duplin	
Durham	
Edgecombe	
Franklin	
Gates	
Granville	
Greene	
Guilford	
Halifax Harnett	
Hertford	
Hoke	
Hyde	
Johnston	
Jones	
Lee	
Lenoir	and a start of the
Martin	
Montgomery	
Moore	
Nash	
New Hanover	
Northampton	
Onslow	
Orange Pamlico	
Pasquotank Pender	
render	

Perquimans Person Pitt Randolph Richmond Robeson Rockingham Sampson Scotland Tyrrell Vance Wake Warren Washington Wayne Wilson



### North Carolina Department of Environment and Natural Resources

Office of Land and Water Stewardship

Pat McCrory Governor

Bryan Gossage Director July 10, 2014 John E. Skvarla, III Secretary

Mr. Bradley S. Luckey Pilot Environmental, Inc. P.O. Box 128 Kernersville, NC 27285 blineback@pilotenviro.com

RE: Pitt 64 Solar Farm, Paynes Road and US Highway 64 West, Pittsboro, Chatham County, NC PEI Project No. 1055

Dear Mr. Luckey:

Thank you for the opportunity to provide information from the North Carolina Natural Heritage Program (NCNHP) database for the proposed project referenced above. The Natural Heritage Program database does not have any records of rare species, important natural communities, natural areas, or conservation/managed areas within the proposed project area or within one mile of the proposed project area.

Please note that although the NCNHP database does not show records of natural heritage elements within the project area, it does not necessarily mean that they are not present; it may simply mean that the area has not been surveyed. The use of Natural Heritage Program data should not be substituted for actual field surveys if needed, particularly if the project area contains suitable habitat for rare species.

Feel free to contact me at 919-707-8629 or <u>Allison.Weakley@ncdenr.gov</u> if you have questions or need additional information.

Sincerely,

AllisonWeabley

Allison Schwarz Weakley, Conservation Planner NC Natural Heritage Program

#### NORTH CAROLINA STATE CLEARINGHOUSE DEPARTMENT OF ADMINISTRATION INTERGOVERNMENTAL REVIEW

JUN 0 5 2014

COUNTY: CHATHAM

H11: ENERGY RELATED FACILITIES/ACTIVITIES 
 STATE NUMBER:
 14-E-4600-0507

 DATE RECEIVED:
 05/29/2014

 AGENCY RESPONSE:
 06/25/2014

 REVIEW CLOSED:
 06/30/2014

CH 14-1178

Due apolit A- (NC) DAH

Due 6/13/14 5 00 6-10-14

MS RENEE GLEDHILL-EARLEY CLEARINGHOUSE COORDINATOR DEPT OF CULTURAL RESOURCES STATE HISTORIC PRESERVATION OFFICE MSC 4617 - ARCHIVES BUILDING RALEIGH NC

#### REVIEW DISTRIBUTION

CC&PS - DIV OF EMERGENCY MANAGEMENT DENR LEGISLATIVE AFFAIRS DEPT OF AGRICULTURE DEPT OF CULTURAL RESOURCES DEPT OF TRANSPORTATION TRIANGLE J COG

#### PROJECT INFORMATION

APPLICANT: N.C. Department of Commerce TYPE: State Environmental Policy Act

Environmental Review

DESC: Application of Pit 64 Farm, LLC for Certificate to construct a 5 MW Solar Photovoltaic Electric Generating Facility in Chatham Co. Docket #SP-3673, Sub 0. - View document at

http://starwl.ncuc.net/NCUC/portal/ncuc/page/Dockets/portal.aspx, Type SP-3673
Sub 0 in the Docket Number search line.

Located on the south side of Hillside Dairy Road, north of US Hwy 64 West, west of Pittsboro, NC

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF	THIS REVIEW THE FOLLOWING IS SUBMITTED:	NO COMMENT COMMENTS ATTACHED
SIGNED BY:	Kines Gledhill-Early	DATE: 6.18.14