CAMDEN PRESERVE

PLANNED DEVELOPMENT DISTRICT

EXHIBIT H

THREATENED and ENDANGERED SPECIES

HABITAT EVALUATION

ENVIRONMENTAL SERVICES, INC.
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THIRD FLOOR
SAVANNAH, GEORGIA 31401
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Tech File
Fedx 3/08/05

03 March 2005

Hull Island, LLC
Attn: Mr. Ryker Carter
9409 Homesville Road
Odum, Georgia 31555

RE: Hull Island Property
Threatened and Endangered Species Habitat Evaluation
Horse Stamp Church Road, Camden County, Georgia **ESI#: ES04056.02**

Dear Mr. Carter,

A literature review and habitat assessment were conducted on the subject property for Threatened (T) or Endangered (E) species protected by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act. The purpose of conducting this review is to identify any habitats on site that could support listed species, that if found, could adversely affect the development plans for your property.

A review of the USFWS Camden County list indicated that fifteen (15) animal species and zero (0) plant species as potentially occurring in Camden County. Seven of the listed fifteen animals listed for Camden County inhabit marine environments. The following species do not inhabit or are not known to inhabit areas that could be considered comparable to the land portions of the development zones within the project area: humpback whale *(Megaptera novaeangliae),* right whale *(Eubalaena glacialis)*, green sea turtle *(Chelonia mydas),* hawksbill sea turtle *(Eretmochelys imbricata),* Kemp's ridley sea turtle *(Lepidochelys kempi),* leatherback sea turtle *(Dermochelys coriacea),* and loggerhead sea turtle *(Caretta caretta).* Please note that if the project eventually necessitates in stream construction activities or results in an increased number of watercraft into coastal waters (*i.e.,* marinas, community docks, etc.), it is probable that additional agency coordination and review will be necessary as it relates to the aforementioned marine species.

The following species could not be immediately eliminated during the first phase of the habitat evaluation: West Indian manatee *(Trichechus manatus),* Bachman's warbler *(Vermivora bachmanii)*, bald eagle *(Haliaeetus leucocephalus)*, piping plover *(Charadrius melodus),* red-cockaded woodpecker *(Picoides borealis)*, wood stork *(Mycteria Americana)*, eastern indigo snake *(Drymarchon corais couperi)*, and shortnose sturgeon *(Acipenser brevirostrum).*

West Indian manatee (E) – Manatees can be found in shallow, slow-moving rivers, estuaries, saltwater bays, canals, and coastal areas throughout Georgia. The range of the manatee is limited by temperature. Manatees cannot survive for extended periods in water colder than about 63°F and prefer temperatures warmer than 72°F. Manatees are therefore a migratory species, and within the United States they are primarily concentrated in Florida in the winter. Summer sightings in Alabama, Georgia, and South Carolina are common. According to the attached letter from Greg Krakow of the Georgia Department

of Natural Resources, Wildlife Resources Division, manatee sightings have occurred throughout the tidal rivers and estuaries surrounding the project site.

More specifically, in 1980, approximately 0.5-mile east of I-95, a documented manatee sighting occurred in White Oak Creek, which adjoins the site west just west of I-95. White Oak Creek has also been the listed waterbody for 10 manatee mortalities since 1986 to most recently in 2004, as documented by the Georgia Department of Natural Resources (DNR). A manatee was also sighted in 1999 in Waverly Creek, which also adjoins the western portion of the property. One manatee mortality was also recorded in Waverly Creek in 1999. This data will be used by the resource agencies as proof of manatee use in adjoining waterbodies.

The proposed project should utilize Best Management Practices (BMPs) and work under an authorized NPDES plan during construction of the proposed project. Camden County stormwater regulations will need to be strictly adhered to for the land-based portion of the proposed development. Additionally, when/if the proposed project entails open water uses or the construction of structures within open water, ESI recommends that the applicants plan for extensive coordination with the resource agencies due to the possible presence of manatees.

As noted above, when dock, community dock, or marina permits are pursued, there will be a need to develop a manatee awareness plan and educational program to ensure boaters originating from your community do not cause unnecessary harm to these animals. The recent push for stronger regulation and management for this species comes behind recent lawsuits filed in Florida against the USFWS for not protecting the federally listed manatee.

Bachman's warbler (E) – This species is thought to be extinct and was last seen in Georgia in 1976.

Bald eagle (T) – Bald eagles are known to utilize inland waterways and estuarine areas for feeding throughout coastal Georgia. Bald eagles typically nest in tall, living trees in a conspicuous location near water and forage over large bodies of water with adjacent trees available for perching. Preventing disturbance activities within a primary zone extending from 750 to 1500 feet outward from a nest tree is considered crucial for maintaining acceptable conditions for bald eagles. The USFWS recommends avoiding any land disturbing activities, including construction and tree-cutting, within this primary zone. Within a secondary zone potentially extending out to a distance of up to 1.0 mile (this distance is negotiable) from the primary zone boundary, construction and land clearing activities could be restricted to the non-nesting period (May 15-September 30). The USFWS also recommends avoiding alteration of natural shorelines where bald eagles forage. According to the attached letter from Greg Krakow of the Georgia Department of Natural Resources, Wildlife Resources Division, the closest recorded nest site is just outside of the project's western boundary. According to the attached email from Jim Ozier of the same agency, the next nearest known nest is about 3 miles SSE of your project site on a hammock just north of the Satilla River.

The unnamed tributaries within the marshes of the project area and the adjoining Waverly Creek and White Oak Creek all provide habitat that would be considered potential feeding habitat for the bald eagle. ESI did observe an apparent eagle nest on a marsh hammock just west of the project boundaries (Figure 1). In an attempt to ascertain the activity status of the nest, ESI walked across the marsh for a closer inspection. The nest appears to be in good condition and a significant amount of bird droppings was apparent on the ground beneath the nest tree; however no bones or other feeding discards were observed. Based on the nest inspection it does appear that the nest is currently active.

Please note that land-clearing activities as a result of the development of the project area will be outside of the aforementioned primary zone (Figure 1). Therefore, development of the western portion of the project, which will be within the secondary zone, should not be precluded. ESI has not included a graphical representation of the secondary zone since the size of this zone has not been negotiated. Please note that it is possible that the resource agencies could recommend development activities within the secondary zone be limited to the non-nesting portion of the year (May 15-September 30). ESI was previously involved with a development across the marsh that was equidistant from and within the secondary zone of the same bald eagle nest that adjoins the property. The presence of this nest did not result in time period restrictions for construction activities at this development.

Piping plover (T) – The piping plover are usually located in the Great Lakes Region, however wintering grounds range from North Carolina to Florida. Piping plovers generally forage and roost along barrier and mainland beaches, sand, mud, and algal flats, washover passes, salt marshes, and coastal lagoons. The property does encompass salt marshes that directly adjoin major waterbodies. Given the fact that no barrier islands or other coastal areas containing expanses of isolated, open sand flats and if no salt marsh impacts for the land-based development activities are proposed, this project is not likely to adversely affect the piping plover.

Red-cockaded woodpecker (RCW) (E) – RCW's nest in mature pine with low understory vegetation and forage in pine and pine/hardwood stands greater than 30 years of age, preferable with a Diameter Breast Height (DBH) greater than 10 inches. Pine and pine/hardwood community types dominate the upland portions of the project area. The entire property, other than the large island (Hull Island), appears to have been harvested for timber approximately 15 years ago; thereby eliminating it as potential nesting and/or foraging habitat. The large island does contain a pine stand >30 years old, however its' location within the middle of the marsh, size and distance to nesting habitat excludes this island as nesting and/or foraging habitat. The closest known RCW location is approximately 19 miles to the southwest of the property. This project is not likely to adversely affect the RCW.

Wood stork (E) – Wood storks primarily feed in brackish wetlands and nest in cypress or other wooded swamps. The primary feeding habitat for wood storks does exist within the salt marshes found within and surrounding the project area. The nature of the onsite wetlands including the mature cypress-gum swamp located in Sections 7 and 8, do not provide nesting habitat for the wood stork (Figure 1). The canopy of this system is not open enough for wading birds to utilize this area as a rookery. The remaining freshwater, forested wetlands are small in nature and past evidence of tree clearing and extensive ditching was noted throughout these areas. The hydrologic nature of these isolated wetlands indicate significant water level flux, periodically drying out throughout the year. Due to the inconsistent water levels of these wetlands, use of these areas by the wood stork is unlikely. Although the wood stork could use the property for roosting or for foraging purposes; however, given the fact that this site does not offer any unique habitat for this species, that could not be found elsewhere, the likelihood of the project negatively affecting this species is low.

Eastern indigo snake (T) – During the winter months, the eastern indigo snake tends to den in xeric sandridge habitat preferred by gopher tortoises. The eastern indigo snake commonly cohabitates in gopher tortoise dens or utilizes inactive/abandoned dens. During warm months, eastern indigo snakes commonly forage in creek bottoms, upland forests, and agricultural fields. Due to the commonality of the warm month habitat description throughout the southeastern United States, typical eastern indigo snake habitat evaluations revolve around the presence or absence of gopher tortoise habitat. A majority of the site does not contain an open understory that usually typifies gopher tortoise habitat. Additionally, clay based soils are common throughout the site. These types of soils typically do not offer digging conditions that are suitable for gopher tortoise burrows.

Xeric sandridges do not exist within the project area and during the extensive fieldwork effort for this project; ESI scientists with extensive gopher tortoise survey experience did not identify any active or inactive or abandoned dens. This project is not likely to adversely affect the eastern indigo snake.

Shortnose sturgeon (E) – Shortnose sturgeons inhabit Atlantic seaboard rivers, primarily the Altamaha, Ogeechee, and Savannah Rivers. The sturgeon is anadromous in the southeast, spending most of the year in brackish estuarine environments and moving into freshwater only when spawning. Spawning habitat appears to consist of river channels with depths of 4 to 34 feet with substrates ranging from rubble/boulder to gravel/sand/log. Larvae are found in the deepest water of the channel and migrate downstream during their first year. Juveniles are found in deeper portions of the lower reaches of rivers near the freshwater/saltwater boundary. In late spring through early winter adult shortnose sturgeon are typically found in estuaries and lower sections of large rivers, although some adults reportedly move into the Atlantic as well.

The property does adjoin Waverly Creek and White Oak Creek, which are waterways that cannot be completely eliminated as habitat. Shortnose sturgeon found in southern waterways generally forage at the interface of fresh tidal waters and saline estuaries and enter into the upper reaches of rivers to spawn. However, ESI does not believe that suitable upstream spawning habitats are present within the aforementioned systems. The two aforementioned creeks dramatically reduce in size outside of the tidal zones and quickly transform into forested wetland systems without well-defined, large stream channels. BMP's for the land based development activities will need to be utilized during the construction process so that water quality is not compromised in adjoining waterways. The land-based portions of the project are not likely to adversely affect the shortnose sturgeon.

Conclusion

Due to a lack of suitable habitat, **land-based development activities** should not be encumbered by threatened and endangered species concerns. The wood stork may utilize the property's marshes and marsh fringe areas for feeding, applicable nesting habitats were not encountered on the property. However, due to the proximity of a documented and field verified bald eagle nest adjoining the property and the suitable habitat for bald eagles within and surrounding the property's marshes and waterbodies, additional agency coordination concerning this species is likely. ESI believes that verifying with the USFWS that development restrictions will not be sought for this project either as was the case with the development on the south side of the marsh. This additional coordination will likely require official correspondence, an agency field visit, and a land-use plan for the western portion of the property.

Development plans that include **water-based development activities** like single-family docks, community docks, and/or marinas will require further threatened and endangered species coordination. Threatened and endangered species play a significant role in the regulatory environment as it relates to marina and community dock permitting. If these waterway structures are part of current or future development plans, additional agency coordination concerning the manatee, piping plover, wood stork, and bald eagle should be anticipated. Manatees are known to utilize the adjoining waterbodies and will likely require extensive agency coordination and the development of a manatee awareness and educational program for users of the facility. ESI cannot completely eliminate the possibility of further coordination concerning the shortnose sturgeon being necessary, however ESI believes suitable upstream spawning habitat is not present in the adjoining waterway systems, thereby likely eliminating potential effects to this species.

Please note that despite the presence of suitable habitat for some of the listed species, as previously summarized, no individuals of these species were observed on the subject property during the various

intensive field studies that ESI conducted. Should you have any questions regarding the content of this letter, or need additional services, please do not hesitate to contact ESI at (912) 236-4711.

Sincerely yours,

ENVIRONMENTAL SERVICES, INC.

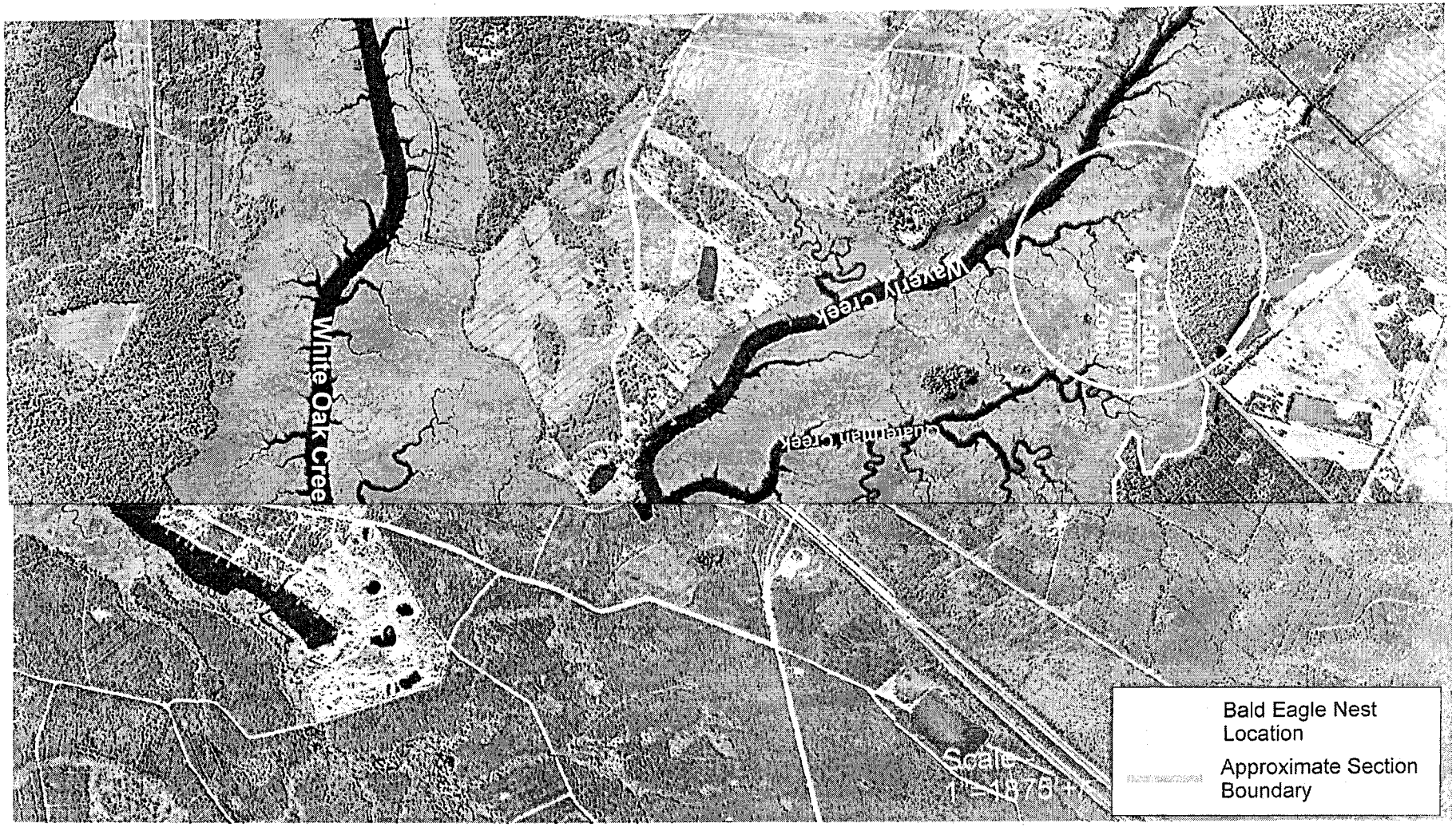
Michael J. DeMell
Vice President

Brandon F. Smith
Senior Scientist III

MD/bs
ES04056.02/T&E_Report
(March 2005)

xc: Thomas McCook, Coastal Forest Investments
Gary Howalt, ESI Corporate

Attachments Enclosed



ENVIRONMENTAL SERVICES, INC.

THREATENED & ENDANGERED SPECIES MAP
Hull Island Property
Camden County, Georgia

Figure: 1
Project: ES04056.02
Date: March 2005

Georgia Department of Natural Resources
Wildlife Resources Division

Georgia Natural Heritage Program
2117 U.S. Hwy. 278 S.E., Social Circle, Georgia 30025-4714
(770) 918-6411, (706) 557-3032

Joel Holcomb, Commissioner
Dan Forster, Division Director

March 2, 2005

Brandon Smith
Senior Scientist III
Environmental Services, Inc.
204 West St. Julian Street, Third Floor
Savannah, GA 31401

Subject: **Known or Potential Occurrences of Special Concern Plant and Animal Species on or near Ella Park Church Road Property, ESI Project No.: ES04056.02, Camden County, Georgia**

Dear Mr. Smith:

This is in response to your request of February 3, 2005. According to our records, within a three-mile radius of the project, there are the following special concern species occurrences:

Haliaeetus leucocephalus (Bald Eagle) nesting site 0.2 mi. NW, near Waverly Creek
Trichechus manatus (Manatee) in tidal creeks near the site

Although we don't know specifics about this project, we are concerned about impact to the habitats of the Manatee and Bald Eagle. Both of these are on the Georgia list of protected species and are considered endangered or threatened, respectively, by the Federal government.

Enclosed are lists from Camden and neighboring Glynn Counties that should aid in assessing the potential for rare species occurrences within the area of concern.

Please keep in mind the limitations of our database. The data collected by the Georgia Natural Heritage Program comes from a variety of sources, including museum and herbarium records, literature, and reports from individuals and organizations, as well as field surveys by our staff biologists. In most cases the information is not the result of a recent on-site survey by our staff. Many areas of Georgia have never been surveyed thoroughly. Therefore, the Georgia Natural Heritage Program can only occasionally provide definitive information on the presence or absence of rare species on a given site. Our files are updated constantly as new information is received. **Thus, information provided by our program represents the existing data in our files at the time of the request and should not be considered a final statement on the species or area under consideration.**

If you know of populations of special concern species that are not in our database, please fill out the appropriate data collection form and send it to our office. Forms can be obtained through our web site (http://www.georgiawildlife.com) or by contacting our office. If I can be of further assistance, please let me know.

Sincerely,

Greg Krakow
Data Manager
Cc Kelie Moore

IR 9712

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, FL 33702
(727) 570-5312, FAX 570-5517
http://sero.nmfs.noaa.gov

MAR 1 2005

Dear Colleague:

The National Marine Fisheries Service (NOAA Fisheries) Protected Resources Division has reviewed your letter pursuant to section 7(a)(2) of the Endangered Species Act (ESA) concerning Ella Park Church Road Property, Camden County, Georgia, ESI Project No. ES04056.02.

_____**There are no ESA-listed species** or designated critical habitat under our purview in the action area.

_____**We cannot determine** impacts to threatened or endangered species, or designated critical habitat, under NOAA Fisheries' purview because the letter lacks sufficient information to evaluate the project. **Enclosed are guidelines** to conduct a proper biological evaluation.

_____**Please provide a letter** from the lead federal action agency designating you to conduct ESA section 7 consultation with this office.

X **Enclosed is a list** of federally-protected species under the jurisdiction of NOAA Fisheries for the state of **Georiga.** Biological information on federally-protected species and candidate species can be found at the following website addresses: http://www.nmfs.noaa.gov/prot_res/prot_res.html; http://noflorida.fws.gov/SeaTurtles/seaturtle-info.htm); http://endangered.fws.gov/wildlife.html#Species; http://www.cmc-ocean.org/main.php3; http://floridaconservation.org/psm/turtles/turtle.htm; http://obis.env.duke.edu/data/sp_profiles.php; www.mote.org/~colins/Sawfish/SawfishHomePage.html; www.floridasawfish.com; www.flmnh.ufl.edu/fish/sharks/InNews/sawprop.htm;.Gulf sturgeon critical habitat rule and maps (http://alabama.fws.gov/gs/); http://www.cccturtle.org;.

_____**It is NOAA Fisheries opinion that the project will have no effect** on listed species or critical habitat protected by the ESA under NOAA Fisheries' purview. No further consultation with NOAA Fisheries pursuant to section 7(a)(2) of the ESA is required unless the project description changes.

Consultation with NOAA Fisheries, Habitat Conservation Division (HCD), pursuant to the Magnuson-Stevens Fishery Conservation and Management Act's requirements for essential fish habitat consultation may be required. Please contact HCD at (727) 570-5317. If you have any ESA questions, please contact our ESA section 7 coordinator, Eric Hawk, at (727) 570-5312, or by e-mail at eric.hawk@noaa.gov.

Sincerely,

Teletha Griffin
Administrative Support Assistant
Protected Resources Division

Enclosure
File:1514-22.b
O:\FORMS\Form letters\specieslist0218053.wpd

Endangered and Threatened Species and Critical Habitats under the Jurisdiction of the National Marine Fisheries Service

Georgia

Listed Species	Scientific Name	Status	Date Listed
Marine Mammals			
blue whale	*Balaenoptera musculus*	Endangered	12/02/70
finback whale	*Balaenoptera physalus*	Endangered	12/02/70
humpback whale	*Megaptera novaeangliae*	Endangered	12/02/70
right whale	*Eubalaena glacialis*	Endangered	12/02/70
sei whale	*Balaenoptera borealis*	Endangered	12/02/70
sperm whale	*Physeter macrocephalus*	Endangered	12/02/70
Turtles			
green sea turtle	*Chelonia mydas*	Threatened[1]	07/28/78
hawksbill sea turtle	*Eretmochelys imbricata*	Endangered	06/02/70
Kemp's ridley sea turtle	*Lepidochelys kempii*	Endangered	12/02/70
leatherback sea turtle	*Dermochelys coriacea*	Endangered	06/02/70
loggerhead sea turtle	*Caretta caretta*	Threatened	07/28/78
Fish			
shortnose sturgeon	*Acipenser brevirostrum*	Endangered	03/11/67

Species Proposed for Listing

None

Designated Critical Habitat

Right whale: Between 31°15'N (approximately the mouth of the Altamaha River, Georgia) and 30°15'N (approximately Jacksonville, Florida) from the coast out to 15 nautical miles offshore; the coastal waters between 30°15'N and 28°00'N (approximately Sebastian Inlet, Florida) from the coast out to 5 nautical miles.

Proposed Critical Habitat

None

Candidate Species[2]	Scientific Name
Fish	
dusky shark	*Carcharhinus obscurus*
sand tiger shark	*Odontaspis taurus*
night shark	*Carcharinus signatus*
Atlantic sturgeon	*Acipenser oxyrhynchus oxyrhynchus*
speckled hind	*Epinephelus drummondhayi*
Warsaw grouper	*Epinephelus nigritus*

2. Candidate species are not protected under the Endangered Species Act, but concerns about their status indicate that they may warrant listing in the future. Federal agencies and the public are encouraged to consider these species during project planning so that future listings may be avoided.

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[1] Green turtles are listed as threatened, except for breeding populations of green turtles in Florida and on the Pacific Coast of Mexico, which are listed as endangered.

Brandon F. Smith

From: Jim Ozier [jim ozier@dnr.state.ga.us]
Sent: Monday, March 07, 2005 3:24 PM
To: Smith, Brandon
Subject: Re: BE/RCW Request

Brandon, as you mention, there is a bald eagle nest just west of your project site at:

Certainly this nest will need to be taken into consideration for any proposed project at the site you describe. A management plan can be developed through consultation with Georgia DNR and USFWS.

The next nearest known nest is about 3 miles SSE of your project site on a hammock just north of the Satilla River.

The nearest known red-cockaded woodpeckers are about 19 miles to the SW.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Jim Ozier
Sr. Wildlife Biologist
Georgia Department of Natural Resources
Wildlife Resources Division
Nongame-Endangered Wildlife Program
116 Rum Creek Drive
Forsyth, Georgia 31029-6518
478-994-1438 478-993-3050 fax

>>> "Brandon F. Smith" <bsmith@esinc.cc> 3/2/2005 2:42:49 PM >>>
Mr. Ozier,
Could you please inform me on the nearest known RCW and bald eagle locations for the coordinates below? I have given you the eastern and western most reaches of the property due to its' extensive size. I know there is a recored bald eagle nest just west of our site. If you are interested, I have seen the nest, its' good condition and the amount of scat beneath the nest (which is on a hammock) leads me to believe that it is still active. I walked out to the hammock just a couple of weeks ago to investigate its condition.

Eastern Bounday: 31 2' 51.4" 81 38' 56.9"
Western Boundary: 31 4' 1.9" 81 42' 6.1"

Thank you so much.

Brandon Smith
Senior Scientist III
Environmental Services, Inc.
204 West St. Julian Street, Third Floor
Savannah, Georgia 31401
bsmith@esinc.cc
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