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June 23, 2017
NS Project No. 13531.001.015

Bill Cork
Chief Executive Officer
Hancock County Port and Harbor Commission
14054 Fred and Al Key Road
Kiln, Mississippi 39556

Re: ENVIRONMENTAL DUE DILIGENCE
PORT BIENVILLE INDUSTRIAL PARK – SITE 4
HANCOCK COUNTY, MISSISSIPPI

Mr. Cork:

We have completed the Threatened and Endangered Species Survey for the referenced project located in Pearlington, Mississippi.

We appreciate the opportunity to provide you with environmental consulting services. Should you have any questions concerning this information, please contact me at (228) 374-1211.

Sincerely,

NEEL-SCHAFFER, INC.

Cori L. Gavin

Cori L. Gavin
Environmental Scientist

Enclosures

June 2017

Threatened and Endangered Species Survey Report

Hancock County Port and Harbor Commission
Port Bienville Industrial Park – Site 4
Pearlington, Mississippi

Prepared By

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THREATENED AND ENDANGERED SPECIES SURVEY
HANCOCK COUNTY PORT AND HARBOR COMMISSION
PORT BIENVILLE INDUSTRIAL PARK – SITE 4
PEARLINGTON, MISSISSIPPI
NS Project # 13531.001.015

Prepared For:

Hancock County Port and Harbor Commission

Prepared By:

Neel-Schaffer, Inc.
772 Howard Avenue
Biloxi, Mississippi 39530
(228) 374-1211

Report Date: June 23, 2016

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EXECUTIVE SUMMARY

Hancock County Port and Harbor Commission (HCPHC) is anticipating new development within Port Bienville Industrial Park. Port Bienville Industrial Park is located southwest of Lower Bay Road in Pearlington, Hancock County, Mississippi. HCPHC is taking environmental due diligence initiative on all properties that exhibit a high development potential for prospective tenants. One of the potential development sites, known as Site 4, is located northwest of Port and Harbor Drive and southwest of Road G within the Industrial Park. The site is mostly cleared and routinely mowed and has several gravel access/egress roads. Drainage ditches border both sides along each access road. Several concrete slabs observed on the property indicate previous development. A railroad storing dormant rail cars is located in the middle portion of the property. A site location map and 2016 aerial photograph are included as Figures 1 and 2.

At the time of the site visit on April 20, 2017 and June 16, 2017, two habitats associated with Federally listed threatened and endangered (T&E) species, forested uplands and scrub/shrub wetlands, were observed on the property. While they are not critical habitats, they are associated habitat for *Gopherus polyphemus* (gopher tortoise), and this species may potentially be observed foraging in these habitats at any time. Although these habitats exist on the property, individuals of these species were not observed within property boundaries during the dates of the site visit. For non-critical habitats that are proposed to be impacted, coordination with U.S. Fish and Wildlife Service (USFWS) and the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) should be considered.

1.0 THREATENED AND ENDANGERED SPECIES

The study area lies in southwestern Hancock County, approximately 1.3 miles south-southeast of U.S. Highway 90. Thirteen threatened and endangered (T&E) species are known to occur or could potentially occur within a two-mile radius of the study area (see Table 1).

Table 1. Species of Concern

Scientific Name	**Common Name**
Mycteria Americana	Wood Stork
Charadrius melodus	Piping Plover
Calidris canutus rufa	Red Knot
Potamilus inflatus	Alabama (Inflated) Heelsplitter
Isoetes louisianensis	Louisiana Quillwort
Acipenser oxyrinchus desotoi	Atlantic Sturgeon
Trichechus manatus	West Indian Manatee
Eretmochelys imbricata	Hawksbill Sea Turtle
Dermochelys coriacea	Leatherback Sea Turtle
Lepidochelys kempii	Kemp's Ridley Sea Turtle
Caretta caretta	Loggerhead Sea Turtle
Graptemys oculifera	Ringed Map Turtle
Gopherus polyphemus	Gopher Tortoise

1.1 Project Area Habitat and Plant Communities

A comprehensive walking survey was conducted to differentiate plant communities and land uses within property boundaries, encompassing approximately 35 acres. The site can be delineated between three vegetative communities: forested uplands, disturbed barren uplands, and scrub/shrub wetlands (see Figure 3).

Forested Upland

Forested Upland habitat is located along the northwest portion of the property and comprises approximately 0.55 acre. Plant communities include *Andropogon virginicus* (broomsedge bluestem), *Conyza canadensis* (Canadian horseweed), *Ilex vomitoria* (yaupon), *Pinus echinata* (shortleaf pine), *Smilax rotundifolia* (roundleaf greenbriar), and *Triadica sebifera* (Chinese tallow).

Disturbed Barren Upland

Disturbed barren upland habitats are located across most of the property and consist of approximately 33.23 acres. Plant communities include *Centella erecta* (erect centella), *Dichanthelium commutatum* (variable panicgrass), *Digitaria ciliaris* (southern crabgrass), *Digitaria sanguinalis* (hairy crabgrass), *Gaillardia aestivalis* (lanceleaf blanketflower), *Juncus marginatus* (grassleaf rush), *Panicum anceps* (beaked panicgrass), *Paspalum dilatatum* (dallisgrass), *Paspalum notatum* (bahiagrass), *Plantago aristata* (largebracted plantain), and *Tephrosia spicata* (spiked hoarypea).

Scrub/Shrub Wetlands

Scrub/shrub wetland habitats are located along the eastern and southern portions of the property and comprise approximately 1.11 acres. Plant communities consist of *Bulbostylis barbata* (watergrass), *Centella erecta* (erect centella), *Cyperus difformis* (variable flatsedge), *Cyperus esculentus* (yellow nutsedge), *Dichanthelium commutatum* (variable panicgrass), *Digitaria ciliaris* (southern crabgrass), *Diodia virginiana* (Virginia buttonweed), *Eleocharis geniculata* (Canada spikesedge), *Fimbristylis autumnalis* (slender fimbry), *Hydrocotyle prolifera* (whorled marshpennywort), *Juncus biflorus* (bog rush), *Paspalum dilatatum* (dallisgrass), *Paspalum notatum* (bahiagrass), *Paspalum urvillei* (Vasey's grass), *Schoenoplectus americanus* (chairmaker's bulrush), and *Sporobolus junceus* (pineywoods dropseed).

1.2 Threatened and Endangered Species Survey and Methods

On April 20, 2017 and June 16, 2017, a T&E survey was performed by Cori Gavin, Environmental Scientist for Neel-Schaffer, Inc., within the property boundaries. The T&E survey was performed by walking north-south transects spaced approximately 50 to 75 feet apart. No federally listed T&E species or evidence of such was observed within property boundaries on the day of the survey. Critical habitats found on site include scrub/shrub wetlands. Site photographs can be found in Appendix A.

Species Descriptions and Critical Habitats

The following is a description of the 13 listed T&E species known to occur or potentially occurring within a two-mile radius of the study area, along with their associated critical habitats.

- *Mycteria Americana* (wood stork) – Large, bald-headed wading bird that stands at least three feet tall, has a five-foot wingspan, and weighs between four and six pounds. Critical habitat includes emergent freshwater and estuarine wetlands.

- *Charadrius melodus* (piping plover) – Small plover with a very short bill. Pale back blends in with sand beaches and alkali flats. Black band around the neck. Critical habitat includes sandy beaches and tidal flats.
- *Calidris canutus rufa* (red knot) – Stocky bird, 10-11 inches long, with medium-length bill and short legs. Breeding plumage shows face and underparts robin red, back mottled with black, gray, and russet. Winter plumage shows a washed-out gray look with greenish legs. Critical habitat includes tidal flats and coastal mudflats.
- *Potamilus inflatus* (Alabama/inflated heelsplitter mussel) – Large freshwater mussel reaching up to 5.5 inches in length. Shell is typically brown to black with a pink to purple nacre. Found in flowing rivers with stable sand or silt bottoms.
- *Isoetes louisianensis* (Louisiana quillwort) – Often mistaken for grass/sedge, hollow leaves contain four air chambers that give the leaves buoyancy in aquatic conditions. At the base of leaves are reproductive structures that bear spores similar to ferns. Critical habitat is restricted to sandy soils and gravel bars in or near shallow blackwater streams and overflow channels in riparian woodland/bayhead forests of pine flatwoods and upland longleaf pine.
- *Acipenser oxyrinchus desotoi* (Atlantic sturgeon) – Large primitive fish (up to 200 pounds) characterized by bony plates and a hard, extended snout. Inhabit coastal rivers from Louisiana to Florida during warmer months and the Gulf of Mexico and its estuaries and bays in the cooler months.
- *Trichechus manatus* (West Indian manatee) – Known as "sea cow" because it forages on aquatic plants. Most often grey in color but can range from black to light brown. Wrinkled skin covered with hairs and sometimes algae or barnacles. They have large, heavy, seal-shaped bodies with paired flippers and round, paddle-shaped tail. Faces are wrinkled and bear whiskers. West Indian manatees prefer shallow, slow-moving waters of rivers, estuaries, saltwater bays, canals, and coastal areas. Can move easily between freshwater and saltwater environments but prefer freshwater.
- *Eretmochelys imbricata* (Hawksbill sea turtle) – Smaller sea turtle, with adult carapace length ranging from 2.5 to 3 feet. Head is narrow and has two pairs of prefrontal scales. Jaw is not serrate. Carapace is bony without ridges and has large, overlapping scutes and four lateral scutes; and it is orange, brown, or yellow in color. Flippers have two claws. Critical habitat includes coastal reefs, rocky areas, estuaries, and lagoons.

- *Dermochelys coriacea* (leatherback sea turtle) – Largest sea turtle, with adult carapace length reaching 6.5 feet and weighing up to 2,000 pounds. Soft-bodied turtle with primarily black carapace and pinkish-white belly. Carapace consists of leathery, oil-saturated connective tissue overlaying loosely interlocking dermal bones with seven longitudinal ridges. Front flippers without claws or scales. Commonly known as pelagic animals, but forage in coastal waters. Critical habitat includes coastal waters around the U.S. Virgin Islands and Puerto Rico.

- *Lepidochelys kempii* (Kemp's ridley sea turtle) – Smallest marine turtle, with adult carapace length reaching two to 2.5 feet and weighing up to 100 pounds. Carapace is grayis-green, nearly circular with a pale yellowish bottom shell. Kemp's ridley sea turtles occupy muddy or sandy bottoms, and critical habitat includes beaches along the Texas coast and marine habitats in the Gulf of Mexico and Atlantic Ocean.

- *Caretta caretta* (loggerhead sea turtle) – Named for its extremely large head, adult carapace length can reach 3.5 feet and weigh up to 375 pounds. Carapace is reddish-brown to yellowish-brown, heart-shaped, and bony without ridges and has large, non-overlapping rough scutes with five lateral scutes. Front flippers are short and thick with two claws. Critical habitat includes coastal bays and estuaries as well as shallow water along the continental shelves of the Atlantic, Pacific, and Indian oceans.

- *Graptemys oculifera* (ringed map turtle) – Smaller "sawback" turtle displaying accentuated scutes down the center of the carapace. A yellow ring can be seen around each of its scutes. Critical habitat includes clear, fast-flowing rivers.

- *Gopherus polyphemus* (gopher tortoise) – The gopher tortoise is the only tortoise in the Southeast and can easily be distinguished by its large size, rigid, unhinged plastron and its stumpy, elephantine feet. Adult gopher tortoises are large, 9-15 inches (24 - 38 cm) in length, and are tan or brown above with a yellowish plastron. The juveniles can be yellowish and brightly patterned. Males have a concave plastron and longer tail than females. Found in relatively well-drained, sandy soils generally associated with longleaf pine and dry oak sand hills. They also live in scrub, pine flatwoods, dry prairie, coastal grasslands and dunes, mixed hardwood-pine communities, and a variety of habitats that have been disturbed or altered by man, such as power-line rights-of-way, and along roadsides. Corolla is pink with dots and yellow lines within, and the capsule is globose. It is found in wet pine savannas and flatwoods, depressions in pinelands, bogs, and along the edges of cypress-gum ponds and depressions.

Critical Habitats within Project Area

The property exhibits two habitat types that may be considered critical or associated habitat for one of the listed T&E species (see Figure 3). Forested uplands and scrub/shrub wetlands can be considered associated habitat for *Gopherus polyphemus* (gopher tortoise), although this species most notably prefer pine savannahs. Because this habitat exists within property boundaries, and undeveloped mixed forests are adjacent to the south and west, there is a potential for this species to be found foraging within the property boundaries at any time, although nesting and breeding in these habitats is unlikely.

2.0 PROPOSED ACTION

The proposed action – anticipated future development – may potentially affect listed T&E species or their associated habitats directly or indirectly.

2.1 Direct Effects

Direct effects to the proposed action to T&E species or their associated habitats include the removal of habitat these T&E species depend on to forage, breed, or nest. Construction timing should be coordinated to minimize any interference with the gopher tortoise breeding season.

2.2 Indirect Effects

Increased human activity, i.e. truck traffic, within the property as a result of the proposed action could deter certain T&E species from foraging or nesting in areas to which they might expand under natural conditions. However, due to the proximity of the railroad and Mac, LLC, it is unlikely that increased anthropogenic activity would have much effect on the level of disturbance already affecting faunal use of the property.

3.0 CONCLUSIONS

Neel-Schaffer has performed a threatened and endangered species survey, in conformance with U.S. Fish and Wildlife Service scope and recommendations, of the Port Bienville Industrial Park Site 4 property located northwest of Port and Harbor Drive and southwest of Road G in Pearlington, Mississippi. This assessment included research into the current uses of the property and adjacent properties and a survey of the property for listed species of concern, their critical/associated habitats, wetlands, and all other biological aspects within the boundaries of the property. The threatened and endangered species survey revealed evidence of non-critical habitat associated with *Gopherus polyphemus* within the property boundaries. Because these non-critical habitats exist within property boundaries, and undeveloped mixed forests are adjacent to the west and south, there is a potential for

these species to be found foraging within the property boundaries at any time, although nesting and breeding in these non-critical habitats is unlikely. Coordination with USFWS and MDWFP should be performed prior to construction to ensure these species are not breeding, nesting, or foraging in critical habitat areas prior to or during construction activities.

4.0 REFERENCES

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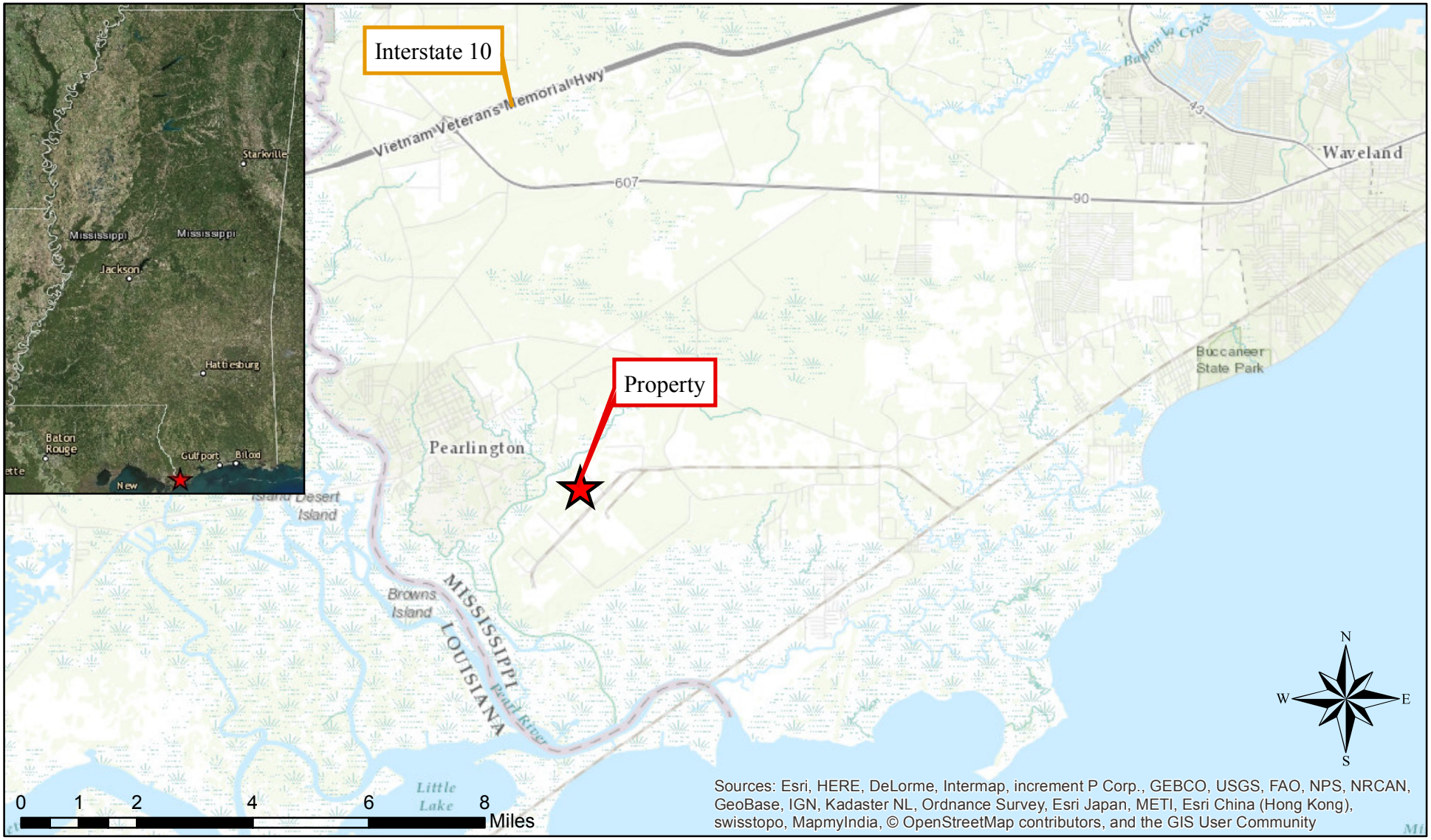
FIGURES



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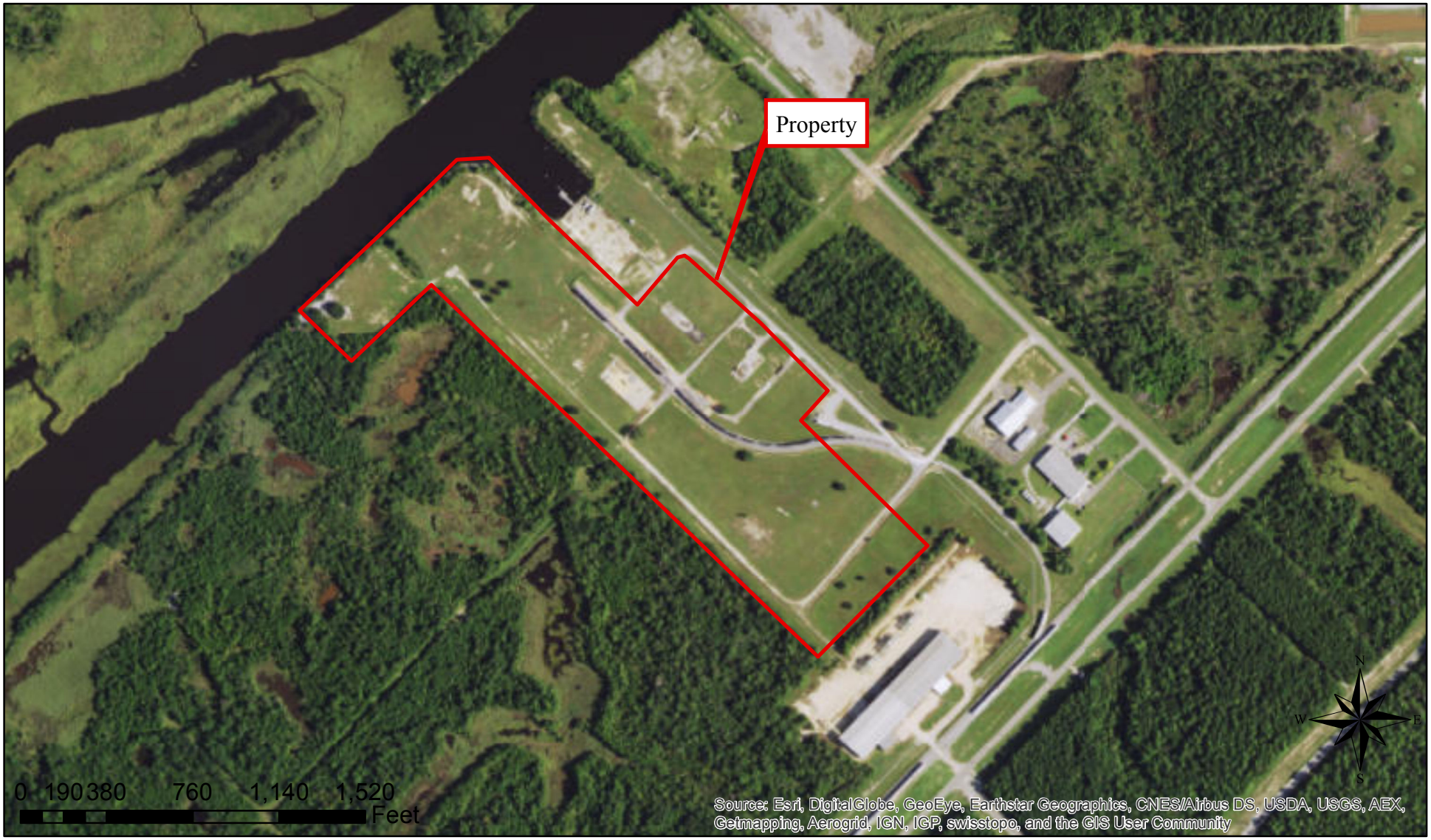
Port Bienville Industrial Park
Site 4
Hancock County, Mississippi

Figure
1
Site Location Map



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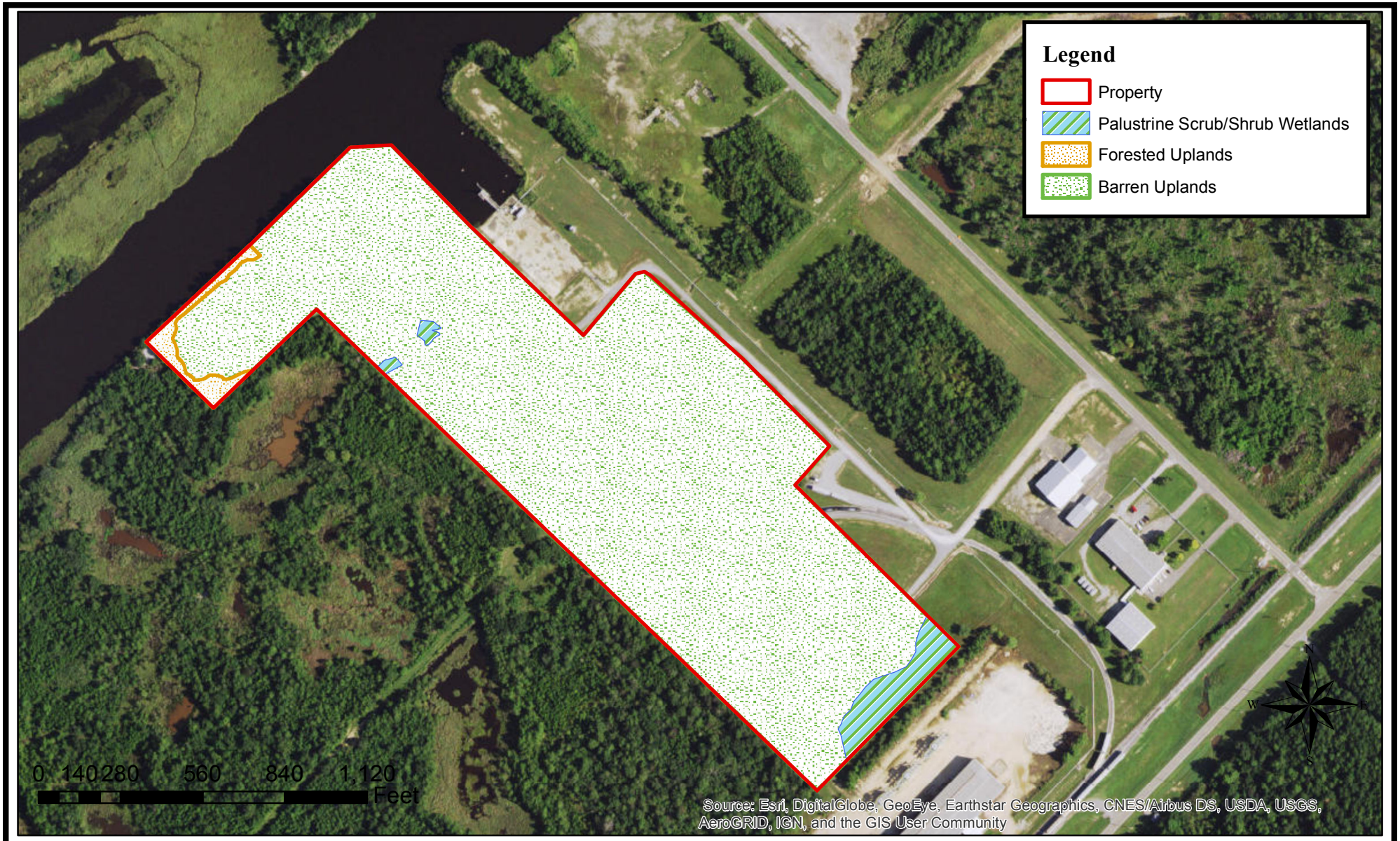
Port Bienville Industrial Park
Site 4
Hancock County, Mississippi

Figure
2
2016 Aerial Photograph



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Port Bienville Industrial Park
Site 4
Hancock County, Mississippi

Figure 3 Critical Habitats Within Study Area

APPENDIX A

SITE PHOTOGRAPHS

Photograph facing south from northern portion of property

Photograph of middle portion of the property, facing west, and showing scrub/shrub wetlands

Railroad and dormant rail cars stored on property. Photograph facing southeast.

Photograph, facing south, of aboveground pipeline observed on property

Photograph of red fox squirrel (*Sciurus niger*) foraging on property