



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

1875 Century Boulevard  
Atlanta, Georgia 30345

In Reply Refer To:  
FWS/R4/DH NRDAR

JAN 22 2014



#### Memorandum

To: Field Supervisor, Panama City Ecological Services Office

From: Deputy Deepwater Horizon, Department of the Interior Natural Resource Damage Assessment and Restoration (NRDAR), Case Manager

Subject: Informal Consultation and Conference Request for the Proposed Florida Pensacola Bay Living Shoreline Project, Florida

As you are no doubt aware, on or about April 20, 2010, the mobile offshore drilling unit *Deepwater Horizon* experienced an explosion, leading to a fire and its subsequent sinking in the Gulf of Mexico (the Gulf). These events resulted in the discharge of millions of barrels of oil into the Gulf over a period of 87 days. In addition, various response actions were undertaken in an attempt to minimize impacts from spilled oil. These events are hereafter collectively referred to as the Oil Spill.

The Department of the Interior (DOI), acting through the U.S. Fish and Wildlife Service (the Service) and other Bureaus, is a designated natural resource trustee agency authorized by the Oil Pollution Act of 1990 (OPA) and other applicable federal laws to assess and assert a natural resource damages claim for this Oil Spill. DOI is only one of several Trustees, including National Oceanic and Atmospheric Administration (NOAA) and the State of Florida, so authorized. Consistent with their federal and state authorities, the Trustees are investigating the resource injuries and losses that occurred as a result of the Oil Spill and have initiated restoration planning to identify the actions that will be needed or appropriate to restore injured resources and to make the public whole for the injuries and losses that occurred. This process is known as a Natural Resource Damage Assessment (NRDA).

On April 20, 2011, DOI, NOAA, and the Trustees for the five Gulf states affected by the Oil Spill entered into an agreement with BP, a responsible party for the Oil Spill, under which BP agreed to provide \$1 billion for early restoration projects in the Gulf to address injuries to natural resources caused by the Oil Spill. The subject project is being evaluated by the Trustees as a potential early restoration project. The early restoration project has been proposed in a draft early restoration plan that was released for public comment and review on December 6, 2013. If the Trustees select the project after consideration of public comment and a stipulated agreement is reached with BP, the early restoration project will be implemented by the state of Florida and NOAA. DOI, acting through the Service, will be a co-Trustee for the project, if it is selected and implemented.

The above facts lead us to the conclusion that consultation and conference under Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*), is required for the proposed project and we wish to engage in such consultation. Accordingly, we have reviewed the proposed Florida Pensacola Bay Living Shoreline project for potential impacts to listed, candidate, and proposed species and designated and proposed critical habitats in accordance with Section 7 of the ESA. We determined the proposed project may affect, but is not likely to adversely affect, West Indian manatee, piping plover, or red knot (if listed) and have provided our analysis in the attached Biological Evaluation. We have also reviewed the proposed project for impacts to bald eagles and migratory birds in accordance with the Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 U.S.C. 668-668c) and the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712), respectively. Consultation will also be initiated with National Marine Fisheries Service for species where ESA regulatory authority is shared and in regards to Marine Mammal Protection Act (MMPA) of 1972, as amended (16 U.S.C. 1461 *et seq.*).

We request your review of and concurrence/conference with the attached intra-Service Section 7 Biological Evaluation form describing the proposed project, potential effects, conservation measures and justifications for our determinations. If you have questions or concerns regarding this request for consultation, please contact Holly Herod, Fish and Wildlife Biologist, at 404-679-7089 or [holly\\_herod@fws.gov](mailto:holly_herod@fws.gov).

Attachment

**SOUTHEAST REGION  
INTRA-SERVICE SECTION 7  
BIOLOGICAL EVALUATION FORM**

**Originating Person:** Holly Herod; prepared by David Mills (representing the State of Florida Natural Resource Trustees – The Florida Department of Environmental Protection and the Florida Fish and Wildlife Conservation Commission)

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**E-Mail:** [holly\\_herod@fws.gov](mailto:holly_herod@fws.gov); [dmills@stratusconsulting.com](mailto:dmills@stratusconsulting.com)

**Date:** 2013-12-05

**PROJECT NAME (Grant Title/Number):** Pensacola Bay Living Shoreline Project

**I. Service Program:**

- NRDAR**
- Ecological Services**
- Federal Aid**
  - Clean Vessel Act**
  - Coastal Wetlands**
  - Endangered Species Section 6**
  - Partners for Fish and Wildlife**
  - Sport Fish Restoration**
  - Wildlife Restoration**
- Fisheries**
- Migratory Birds**
- Refuges/Wildlife**

**II. State/Agency:** Florida Department of Environmental Protection (DEP) and Florida Fish and Wildlife Conservation Commission (FWC) and National Oceanic and Atmospheric Administration (NOAA)

**III. Station Name:** DOI Deepwater Horizon Case Management Team, USFWS Southeast Regional Office, Atlanta, Georgia 30345

**IV. Location (attach map):** See Figures A and B at the end of this document for a map indicating the proposed project areas. The proposed living shoreline project is located in Escambia County along an urban shoreline of Pensacola Bay in area that has been the location of previous successful living shoreline projects.

**A. Ecoregion Number and Name:** Southeast Region

**B. County and State:** Escambia County, Florida

**C. Section, township, and range (or latitude and longitude):** See Figure A

**D. Distance (miles) and direction to nearest town:** See Figure A

**V. Description of Proposed Action (attach additional pages as needed):**

This project consists of implementing living shoreline techniques at two neighboring sites, Project GreenShores (PGS) Site II and Sanders Beach (see Figure A for general location and Figure B for additional detail). PGS Site II is located immediately west of Muscogee Wharf in downtown Pensacola and will complete the construction of the third breakwater structure at this site building off of work completed as part of a previous project GreenShores effort. The Sanders Beach site is 3 miles to the west, near the mouth of Bayou Chico. The Sanders Beach site project design is in the conceptual phase but the intention is to expand on the successful Project GreenShores effort by implementing similar design and restoration techniques at the Sanders Beach site.

This project will create and restore approximately 18.8 acres of salt marsh habitat and 4 acres of oyster reefs on City of Pensacola-owned submerged lands. Oyster breakwaters will be constructed at both sites to protect the embayment and created salt marsh habitat. Building upon knowledge gained from prior projects, oyster breakwater / living shoreline methods will be employed along almost one-half mile of shoreline. Construction activities will include placement of linear structures that may utilize artificial and/or shell-based materials generally follow a +0.6 ft Mean Lower Low Water target crest elevation. The structures will likely have variable crest widths (30-100 ft), based on desired wave reduction and with a height that falls within the mean high and low water lines of the site. The specific breakwater elevation and technique design will be selected to maximize created wetland protection and meet state regulatory requirements. Additional information on the PGS II and Sanders Beach components of this project include:

- **Project GreenShores II Area Submerged Reef** is an expansion/completion of an existing reef with a crest width of 100 ft and total height of 3.5 ft. Average water depth is assumed to be -4 ft below Mean Lower Low Water with a final crest elevation of -0.5' Mean Lower Low Water. Calculated volume of material is approximately 11,000 tons of riprap/fossilized oyster shell. It is anticipated that a crane mounted on the barge will be used to distribute material to the design cross-section. A footprint of approximately 1.9 acres of fine-grained sediment will be covered with riprap/fossilized oyster shell. Additionally, up to 6 warning signs placed on 12-inch diameter treated posts will be driven adjacent to the submerged reef with appropriate signage for marine traffic. No materials are anticipated for removal from the site.
- **Sanders Beach Area Submerged Reef** is anticipated to be 2,400 feet long with a crest width of 30 ft and total height of 3.5 ft. Average water depth is assumed to be -2.5 ft below Mean Lower Low Water with a final crest elevation of +0.63 ft above MLLW. Calculated volume of material is approximately 14,000 tons of riprap. It is anticipated that a crane mounted on the barge will be used to distribute material to the design cross-section. A footprint of approximately 3.15 acres of fine-grained sediment will be covered with a riprap. Additionally, 8 warning signs placed on 12-inch diameter treated posts will be driven adjacent to the submerged reef with appropriate signage for marine traffic. No materials are anticipated for removal from the site.

- **Created Salt Marsh:** Suitable fill materials will be utilized to construct the 18.8 acres of intertidal marsh and will be planted with appropriate native vegetation, such as *Spartina alterniflora* and *Juncus roemerianus*. Plugs of Saltmarsh Cordgrass (*Spartina alterniflora*) will be planted on 1-foot centers in the area located landward of the breakwater. Plants will be installed within 30-days of the first growing period subsequent to construction of the breakwater. A minimum of 80 percent of the plantings must be viable at the end of the first growing season subsequent to initial planting or additional plantings may occur.

#### **VI. Description of the Project Area (attach additional pages as needed):**

The potential project area is identified in Figures A and B. The project area is located in Pensacola Bay in Escambia County, Florida. The proposed Pensacola Bay Living Shoreline project is intended to employ living shoreline techniques that utilize natural and/or artificial breakwater material to stabilize shorelines along a portion of Pensacola Bay. This project would expand/complete an existing breakwater at the Project GreenShores Site II and create approximately 2,400 feet of oyster breakwater near Sanders Beach to dampen wave energy while also providing habitat that was once present in the region. In addition, to the approximately 4 acres of oyster breakwater habitat created, approximately 18.8 acres of intertidal marsh would be constructed in nearby areas to protect and enhance the existing shoreline.

#### **VII. Species and Habitat:**

##### **A. Complete the following table:**

Table 1, provided at the end of this document, provides a summary of the different species that were identified and initially considered for the project's potential impacts. The information in this table was adopted from the U.S. Fish and Wildlife, Panama City office website: <http://www.fws.gov/panamacity/specieslist.html> which provides a county-based list of federal threatened, endangered, and other species of concern likely to occur in the Florida Panhandle.

#### **VIII. Determination of Effects:**

##### **A. Explanation of effects of the action on species and critical habitats in item VII.A (attach additional pages as needed):**

Table 2 presents a summary of the potential species/critical habitat that could be impacted from the proposed Pensacola Bay Living Shoreline project. The species/critical habitat in Table 2 were identified after considering where there was potential overlap from information on identified natural communities in Table 1 with the potential locations where the project would be implemented and areas adjacent to the immediate project locations.

#### **Table 2. Potential Impacts to Species/Critical Habitats**

SPECIES/CRITICAL HABITAT	SPECIES/CRITICAL HABITAT IMPACTS
Green turtle, Hawksbill turtle, Kemp's ridley turtle; Leatherback turtle, Loggerhead turtle	<p>The main risk to sea turtles during implementation of this project would come from in-water boat/material collisions during construction which could result in harm or mortality. Consultation will be initiated with NMFS, as this agency has jurisdiction to review impacts to sea turtles in the estuarine and marine environments.</p> <p>There will be a limited amount of terrestrial work to develop the salt marsh habitat. However, sea turtles are not known to nest on the surrounding beaches. Therefore, no effects to nesting sea turtles are anticipated</p> <p>No proposed or designated critical habitat for sea turtles occurs within the action area; therefore, none will be adversely affected or modified.</p>
West Indian manatee	<p>The county in the project area is not part of the 36 Florida counties that are identified as being counties where manatees regularly occur in coastal and inland waters (U.S. Department of the Interior, 2011). However, manatees could be present in the project waters (U.S. Department of the Interior, 2011).</p> <p>The main risk to manatees during implementation of this project would come from in-water boat/material collisions and noise which could result in harm or mortality. Measures to avoid these impacts are described below.</p>
Piping plover and Red knot	<p>Habitat at the project site is not typically used by piping plover or red knot. However, individuals could be present during the wintering period. The main risk to Piping plovers and Red knots is from human disturbance while resting and foraging in habitats adjacent to work areas. The proposed project could result in short term increases in noise which could startle individuals, though we would expect normal activity to resume within minutes or cause individuals to move to a nearby area. Because foraging/resting habitats are nearby (less than two miles) we would expect this temporary displacement to be within normal movement patterns and consider this effect insignificant and discountable. The proposed project will not result in any changes to shoreline habitats where piping plover or red knots could be feeding or resting and is not expected to increase visitor use; therefore, no indirect effects are expected. Piping plover critical habitat is not designated in or near the action.</p>
Gulf sturgeon	<p>NMFS is providing consultation for Gulf sturgeon and its Critical Habitat in the estuarine environment. As a result, Gulf Sturgeon will not be considered in the consultation with the USFWS.</p>

**B. Table 3. Explanation of actions (Conservation Measures) to be implemented to reduce adverse effects:**

SPECIES	CONSERVATION MEASURES TO MINIMIZE IMPACTS
Green turtle, Hawksbill turtle, Kemp's ridley turtle, Leatherback turtle, Loggerhead turtle	<p>Nesting sea turtles are not expected in the project area; therefore, no effects are anticipated.</p> <p>To minimize risks in the aquatic environment, all construction conditions identified in the <i>Sea Turtle and Smalltooth Construction Conditions</i> (NOAA, 2006) would be implemented and adhered to during project construction to</p>

SPECIES	CONSERVATION MEASURES TO MINIMIZE IMPACTS
	minimize the risk of collisions.
West Indian manatee	All construction conditions identified in the <i>Standard Manatee Conditions for In-water Work</i> (FWC, 2011) would be implemented and adhered to during project construction. We determined with the implementation of these conservation measures, potential impacts to any manatees present would be avoided or minimized to an insignificant and discountable level. Therefore, the proposed project may affect but is not likely to adversely affect the West Indian manatee.
Piping plover & Red knot	The low likelihood of species presence, the availability of suitable habitat nearby, and the infrequent nature of the project noise are not expected to disrupt normal behavioral patterns of these two species and no conservation measures are necessary. For these reasons, we determined the project may affect but is not likely to adversely affect the piping plover or red knot (if listed)
Gulf sturgeon	See note in above table about the review of potential Gulf sturgeon impacts.. being coordinated through NMFS instead of through the USFWS.

VIII. Table 4. Effect Determination and Response Requested:

Species	Species Impacts					Response Requested*
	NE	NLAA	MAA	JP	JC	
Green turtle	X					Concurrence (terrestrial); Consultation with NMFS (in-water)
Hawksbill turtle	X					Concurrence (terrestrial); Consultation with NMFS (in-water)
Kemp's ridley turtle	X					Concurrence (terrestrial); Consultation with NMFS (in-water)
Leatherback turtle	X					Concurrence (terrestrial); Consultation with NMFS (in-water)
Loggerhead turtle	X					Concurrence (terrestrial); Consultation with NMFS (in-water)

Species	Species Impacts					Response Requested*
	NE	NLAA	MAA	JP	JC	
West Indian manatee		X				Concurrence
Piping plover		X				Concurrence
Red knot		X				Conference
Gulf sturgeon <sup>a</sup>	---	---	---	---	---	Consultation with NMFS

<sup>a</sup> NMFS is providing consultation for Gulf sturgeon and its CH in the estuarine environment so this species will not be considered in the consultation with the USFWS.

## X. Bald Eagles

Are bald eagles present in the action area?  No  Yes

If "Yes," can you implement the conservation measures below?  Yes  No

1. If bald eagle breeding or nesting behaviors are observed or a nest is discovered or known, all activities (walking, camping, cleanup, use of a UTV, ATV, or boat) should avoid the nest by a minimum of 660 feet. If the nest is protected by a vegetated buffer where there is *no* line of sight to the nest, then the minimum avoidance distance is 330 feet. This avoidance distance shall be maintained from the onset of breeding/courtship behaviors until any eggs have hatched and eaglets have fledged (approximately 6 months).
2. If a similar activity (like driving on a roadway) is closer than 660 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.
3. If a vegetated buffer is present and there is no line of sight to the nest and a similar activity is closer than 330 feet to a nest, then you may maintain a distance buffer as close to the nest as the existing tolerated activity.
4. In some instances activities conducted within 660 feet of a nest may result in disturbance, particularly for the eagles occupying the Mississippi barrier islands. If an activity appears to cause initial disturbance, the activity shall stop and all individuals and equipment will be moved away until the eagles are no longer displaying disturbance behaviors.

If not, contact the Service's Migratory Bird Permit Office to determine how to avoid impacts or if a permit may be needed.

## XI. Migratory Birds

- A. Identify the species anticipated in the project area and behaviors (breeding, roosting, foraging) anticipated during project implementation.



SPECIES	BEHAVIOR	SPECIES/HABITAT IMPACTS
Seabirds (terns, gulls, skimmers, double-crested cormorant, American white pelican, brown pelican)	Foraging, feeding, resting, roosting, nesting	Seabirds forage in water and rest in terrestrial habitats, both in the general vicinity of the project area. However, the project will take place in-water, and most roosting occurs in dune habitat. The level of project activity in open water is unlikely to startle resting birds due to distance from terrestrial habitats and activities will occur during the day only so roosting should not be impacted. Seabirds could be feeding in the area; however, they would likely move from the area of construction due to disturbance.
Shorebirds	Foraging, feeding, resting	Shorebirds forage, feed, and rest in the types of habitats consistent with some of the shoreline areas near the proposed location of the living shoreline breakwaters. As such, they may be impacted locally and temporarily by the project. It is expected that they would be able to move to another nearby location to continue foraging, feeding and resting. Therefore we do not anticipate impacts. No nesting habitat is thought to be present. If any nesting is observed conservation measures will be implemented.

**B. If species or habitat impacts could occur, identify avoidance and minimization measures to prevent incidental take. Incidental take of Migratory Birds cannot be authorized.**

SPECIES/SPECIES GROUP	CONSERVATION MEASURES TO MINIMIZE IMPACTS
Seabirds (terns, gulls, skimmers, double-crested cormorant, American white pelican, brown pelican)	Care will be taken to minimize noise and physical disruptions (e.g., vibration) near areas where foraging or resting birds are encountered. All disturbances will be localized and temporary. The general behavior of these birds is to mediate their own exposure to human activity when given the opportunity, which they will have. Roosting should not be impacted because the project will occur during daylight hours only. Nesting should not be impacted because the project will not occur near nesting habitats.
Shorebirds	<p>If the project will be implemented during shorebird nesting season, areas that could be affected by project noise will be examined for nesting shorebirds or evidence of nesting shorebirds. If nesting or evidence of nesting is observed, the most recent version of the Florida Fish and Wildlife Conservation Commission's (FWC) standard guidelines to protect against impacts to nesting shorebirds will be obtained and followed.</p> <p>Among other elements these guidelines note that:</p> <ul style="list-style-type: none"> <li>- driving on the beach for construction shall be limited to the minimum necessary within the designated travel corridor, which will be established just above or just below the primary "wrack"</li> </ul>



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**XIII. Reviewing Ecological Services Office Evaluation:**

A. Concurrence  Nonconcurrency

B. Formal consultation required

C. Conference required

D. Informal conference required

E. Remarks (attach additional pages as needed):

*Received by Living Bladine*  
**RECEIVED**  
*7/19/14*  
*1605*

*Donald Q* *2/6/14*  
Signature date  
*DONALD IMM* *PCFO*  
Field Supervisor office

**References**

Florida Fish and Wildlife Conservation Commission (FWC), 2011. Standard Manatee Conditions for In-Water Work. [http://myfwc.com/media/415448/Manatee\\_StdCondIn\\_waterWork.pdf](http://myfwc.com/media/415448/Manatee_StdCondIn_waterWork.pdf) Accessed August 13, 2013.

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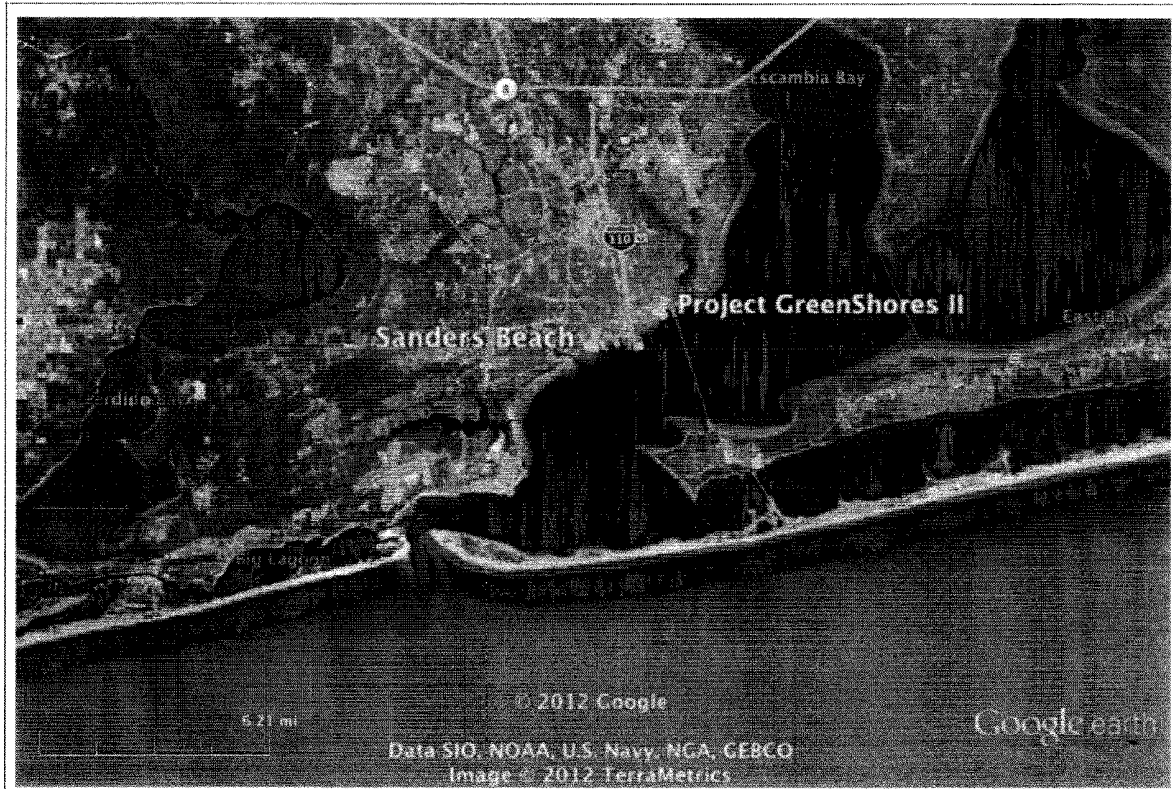
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**Figure A. General location of envisioned Project GreenShores Site II and Sanders Beach living shorelines.**





<b>Resource category</b>	<b>Common name</b>	<b>FWS status</b>	<b>State status</b>	<b>Natural communities</b>	<b>Species impacts (NE, NLAA, MAA)</b>	<b>Justification for Determination</b>
Amphibians	Reticulated flatwoods salamander	E (CH)		Palustrine: wet Flatwoods, dome swamp, basin swamp, Terrestrial: mesic flatwoods (reproduces in ephemeral wetlands within this community).	NE	Listed natural community is inconsistent with the project habitat
Birds	Arctic peregrine falcon	ce	E	Estuarine: winters along coasts; Terrestrial: various, ruderal.	NE	Listed natural community is inconsistent with the project habitat
Birds	Bachman's sparrow	ce		Terrestrial: ruderal.	NE	Listed natural community is inconsistent with the project habitat
Birds	Bald eagle	BGEPA		Estuarine: marsh edges, tidal swamp, open water Lacustrine: swamp lakes, edges Palustrine: swamp, floodplain Riverine: shoreline, open water Terrestrial: pine and hardwood forests, clearings.	NE	Listed natural community is inconsistent with the project habitat
Birds	Least tern		T	Terrestrial: beach dune, ruderal. Nests common on rooftops.	NE	Listed natural community is inconsistent with the project habitat
Birds	Piping plover	T (CH)	T	Estuarine: exposed unconsolidated substrate Marine: exposed unconsolidated substrate Terrestrial: dunes, sandy beaches, and inlet areas. Mostly wintering and migrants.	NLAA	See Table 2, 3, and 4
Birds	Red knot	C		Estuarine: exposed unconsolidated substrate Marine: exposed unconsolidated substrate Terrestrial: dunes, sandy beaches, and inlet areas. Mostly wintering and migrants.	NLAA	See Table 2, 3, and 4
Birds	Red-cockaded woodpecker	E		Terrestrial: mature pine forests.	NE	Listed natural community is inconsistent with the project habitat
Birds	Southeastern kestrel	ce	T	Terrestrial: open pine forests, clearings, ruderal, various.	NE	Listed natural community is inconsistent with the project habitat
Birds	Southeastern snowy plover	ce	T	Estuarine: exposed unconsolidated substrate Marine: exposed unconsolidated substrate Terrestrial: dunes, sandy beaches, and inlet areas.	NE	Listed natural community is inconsistent with the project habitat
Birds	Stoddard's yellow-throated warbler	ce		Terrestrial: wooded habitats with Spanish moss, various.	NE	Listed natural community is inconsistent with the project habitat

Table 1. Listed species of concern in the counties where activity for the Pensacola Bay Living Shorelines project could occur						
Resource category	Common name	FWS status	State status	Natural communities	Species impacts (NE, NLAA, MAA)	Justification for Determination
Birds	Wood stork	E	E	Estuarine: marshes Lacustrine: floodplain lakes, marshes (feeding), various Palustrine: marshes, swamps, various.	NE	Listed natural community is inconsistent with the project habitat
Fish	Crystal darter	ce	T	Riverine: alluvial stream.	NE	Listed natural community is inconsistent with the project habitat
Fish	Gulf sturgeon	T (CH)	SSC	Estuarine and marine habitats with sandy substrates; Riverine: alluvial and blackwater streams.	---	See Table 2, 3, and 4
Mammals	Florida black bear	ce	T	Palustrine: titi swamps, floodplains Terrestrial: pine and hardwood forests.	NE	Listed natural community is inconsistent with the project habitat
Mammals	Santa Rosa beach mouse	ce		Terrestrial: beach dune, coastal scrub.	NE	Listed natural community is inconsistent with the project habitat
Mammals	Southeastern big-eared bat	ce		Terrestrial: pine and hardwood forests, ruderal, floodplains, various.	NE	Listed natural community is inconsistent with the project habitat
Mammals	West Indian manatee	E	E	Estuarine: submerged vegetation, open water Marine: open water, submerged vegetation Riverine: alluvial stream, blackwater stream, spring-run stream.	NLAA	See Table 2, 3, and 4
Mussels	Choctaw bean	E (CH)		Riverine: Small to large creeks and rivers in sand to silty-sand substrates with moderate current. Panhandle drainages: Escambia, Yellow, and Choctawhatchee Rivers.	NE	Listed natural community is inconsistent with the project habitat
Mussels	Fuzzy pigtoe	T (CH)		Riverine: small to medium-sized creeks and rivers with slow to moderate currents in sand and sand with some silt. Panhandle drainages: Escambia, Yellow, and Choctawhatchee Rivers.	NE	Listed natural community is inconsistent with the project habitat
Mussels	Narrow pigtoe	T (CH)		Riverine: small to medium-sized creeks and rivers in stable substrates of sand, sand and gravel, or silty sand, with slow to moderate current. Panhandle drainages: Escambia and Yellow Rivers.	NE	Listed natural community is inconsistent with the project habitat
Mussels	Round ebonyshell	E (CH)		Riverine: medium-size drivers in stable substrates of sand, small gravel, or sandy mud in slow to moderate current. Panhandle drainages: restricted to the main channel of the Escambia River.	NE	Listed natural community is inconsistent with the project habitat



Table 1. Listed species of concern in the counties where activity for the Pensacola Bay Living Shorelines project could occur						
Resource category	Common name	FWS status	State status	Natural communities	Species impacts (NE, NLAA, MAA)	Justification for Determination
Mussels	Southern sandshell	T (CH)		Riverine: found in small to medium-sized creeks and rivers in sandy substrates sometimes with some silt in slow to moderate current. Panhandle drainages: Escambia, Yellow, and Choctawhatchee Rivers.	NE	Listed natural community is inconsistent with the project habitat
Plants	Baltzell's sedge	ce	T	Terrestrial: slope forest, moist sandy loam; moist sandy loam.	NE	Listed natural community is inconsistent with the project habitat
Plants	Buckthorn	ce	E	Palustrine: hydric hammock, floodplain swamp.	NE	Listed natural community is inconsistent with the project habitat
Plants	Chapman's butterwort	ce	T	Palustrine: wet flatwoods, seepage slopes, bog, dome swamp, ditches; in water.	NE	Listed natural community is inconsistent with the project habitat
Plants	Cruise's golden-aster	ce	E	Terrestrial: coastal dunes, coastal strand, coastal grassland; openings and blowouts.	NE	Listed natural community is inconsistent with the project habitat (marine: open water)
Plants	Curtiss' sandgrass	ce	T	Palustrine: mesic and wet flatwoods, wet prairie, depression marsh Terrestrial: mesic flatwoods.	NE	Listed natural community is inconsistent with the project habitat
Plants	Decumbant pitcher plant		T	Palustrine: Bogs.	NE	Listed natural community is inconsistent with the project habitat
Plants	Florida anise		T	Palustrine: floodplain forest, baygall Riverine: seepage stream bank Terrestrial: slope forest, seepage slope.	NE	Listed natural community is inconsistent with the project habitat
Plants	Florida pondweed	ce		Riverine: blackwater stream.	NE	Listed natural community is inconsistent with the project habitat
Plants	Gulf coast lupine	ce	T	Terrestrial: beach dune, scrub, disturbed areas, roadsides, blowouts in dunes.	NE	Listed natural community is inconsistent with the project habitat
Plants	Harper's yellow-eyed grass	ce	T	Palustrine: seepage slope, wet prairie, bogs.	NE	Listed natural community is inconsistent with the project habitat
Plants	Heartleaf		T	Riverine: seepage stream bank Terrestrial: slope forest.	NE	Listed natural community is inconsistent with the project habitat
Plants	Hummingbird flower		E	Palustrine: seepage slope, dome swamp edges, floodplain swamps Riverine: seepage stream banks Terrestrial: seepage slopes.	NE	Listed natural community is inconsistent with the project habitat
Plants	Large-leaved jointweed	ce	T	Terrestrial: scrub, sandpine/oak scrub ridges.	NE	Listed natural community is inconsistent with the project habitat

<b>Resource category</b>	<b>Common name</b>	<b>FWS status</b>	<b>State status</b>	<b>Natural communities</b>	<b>Species impacts (NE, NLAA, MAA)</b>	<b>Justification for Determination</b>
Plants	Mountain laurel		T	Riverine: seepage stream bank Terrestrial: slope forest, seepage stream banks.	NE	Listed natural community is inconsistent with the project habitat
Plants	Orange azalea		E	Palustrine: bottomland forest Riverine: seepage stream bank Terrestrial: slope forest, upland mixed forest.	NE	Listed natural community is inconsistent with the project habitat
Plants	Panhandle lily	ce	E	Palustrine: baygall, dome swamp edges, mucky soil, seepage slope, edges of titi bogs, Riverine: banks.	NE	Listed natural community is inconsistent with the project habitat
Plants	Parrot pitcher plant		T	Palustrine: wet flatwoods, wet prairie, seepage slope.	NE	Listed natural community is inconsistent with the project habitat c
Plants	Primrose-flower butterwort		E	Palustrine: bogs, pond margins, margins of spring runs.	NE	Listed natural community is inconsistent with the project habitat
Plants	Red-flowered pitcher plant		T	Palustrine: bog, wet prairie, seepage slope, wet flatwoods Riverine: seepage stream banks.	NE	Listed natural community is inconsistent with the project habitat
Plants	Silky camellia		E	Palustrine: baygall Palustrine: slope forest, upland mixed forest, Terrestrial: slope forest, upland mixed forest; acid soils.	NE	Listed natural community is inconsistent with the project habitat
Plants	Southern red lily		T	Palustrine: wet prairie, wet flatwoods, seepage slope Terrestrial: mesic flatwoods, seepage slope; usually with grasses.	NE	Listed natural community is inconsistent with the project habitat
Plants	Spoon-leaved sundew		T	Lacustrine: sinkhole lake edges Palustrine: seepage slope, wet flatwoods, depression marsh Riverine: seepage stream banks, drainage ditches.	NE	Listed natural community is inconsistent with the project habitat
Plants	Sweet shrub		E	Terrestrial: upland hardwood forest, slope forest, bluffs Palustrine: bottomland forest, stream banks, floodplains.	NE	Listed natural community is inconsistent with the project habitat
Plants	Trailing arbutus		E	Terrestrial: bluff, slope forest, mixed hardwood forest.	NE	Listed natural community is inconsistent with the project habitat
Plants	West Florida cow-lily	ce		Riverine: shallow, clear, or tannic-acid tinted waters, often rooted in sandy substrate	NE	Listed natural community is inconsistent with the project habitat
Plants	White-top pitcher plant	ce	E	Palustrine: wet prairie, seepage slope, baygall edges, ditches.	NE	Listed natural community is inconsistent with the project habitat

<b>Resource category</b>	<b>Common name</b>	<b>FWS status</b>	<b>State status</b>	<b>Natural communities</b>	<b>Species impacts (NE, NLAA, MAA)</b>	<b>Justification for Determination</b>
Plants	Yellow fringed orchid		T	Palustrine: bogs, wet flatwoods Terrestrial: Bluff.	NE	Listed natural community is inconsistent with the project habitat
Plants	Yellow fringeless orchid	ce	E	Palustrine: wet prairie, seepage slope Terrestrial: mesic flatwoods.	NE	Listed natural community is inconsistent with the project habitat
Reptiles	Alligator snapping turtle	ce	SSC	Estuarine: tidal marsh Lacustrine: river floodplain lake, swamp lake Riverine: alluvial stream, blackwater stream.	NE	Listed natural community is inconsistent with the project habitat
Reptiles	Eastern indigo snake	T	T	Estuarine: tidal swamp Palustrine: hydric hammock, wet Flatwoods Terrestrial: mesic flatwoods, upland pine forest, sand hills, scrub, scrubby flatwoods, rockland hammock, ruderal.	NE	Listed natural community is inconsistent with the project habitat
Reptiles	Florida pine snake	ce	SSC	Lacustrine: ruderal, sandhill upland lake Terrestrial: flatwoods, xeric hammock, ruderal.	NE	Listed natural community is inconsistent with the project habitat
Reptiles	Gopher tortoise	C	SSC	Terrestrial: sandhills, scrub, scrubby flatwoods, xeric hammocks, coastal strand, ruderal.	NE	Listed natural community is inconsistent with the project habitat
Reptiles	Green turtle	E	E	Terrestrial: sandy beaches; nesting.	NE	See Table 2, 3, and 4
Reptiles	Hawksbill turtle	E	E	Marine: open water; no nesting.	NE	See Table 2, 3, and 4
Reptiles	Kemp's ridley turtle	E	E	Terrestrial: sandy beaches; nesting.	NE	See Table 2, 3, and 4
Reptiles	Leatherback turtle	E	E	Terrestrial: sandy beaches; nesting.	NE	See Table 2, 3, and 4
Reptiles	Loggerhead turtle	T	T	Terrestrial: sandy beaches; nesting.	NE	See Table 2, 3, and 4

BGEPA = Bald and Golden Eagle Protection Act, C = candidate, ce = consideration encouraged, CH = critical habitat, E = endangered, P = proposed, SSC = species of special concern, T = threatened.

Source: This table reflects the information available from the U.S. Fish and Wildlife, Panama City office website: <http://www.fws.gov/panamacity/specieslist.html> which provides a county-based list of federal threatened, endangered, and other species of concern likely to occur in the Florida Panhandle. Information downloaded March 13, 2013.

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