



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
REGULATORY DIVISION  
P.O. BOX 4970  
JACKSONVILLE, FLORIDA 32232-0019

February 22, 2019

DEPARTMENT OF THE ARMY PERMIT  
REGIONAL GENERAL PERMIT (RGP) SAJ-14  
SAJ-2005-09981 (RGP-MDZ)

**SUBAQUEOUS UTILITY AND TRANSMISSION LINES IN FLORIDA**

Upon recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403) and Section 404 of the Clean Water Act (33 U.S.C. § 1344), general authority is given for activities required for the installation, construction, maintenance, replacement, and repair of subaqueous utility and transmission lines; and, the outfall and intake structures associated with utility lines in all waters of the United States in the State of Florida (where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted by, or otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System program (Section 402 of the Clean Water Act). Authority also is given for discharges associated with the construction, maintenance, replacement, and repair of substations; and, the access roads for the construction and maintenance of subaqueous utility and transmission lines in non-navigable waters of the United States in the State of Florida. A "utility/transmission line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, wire or optical fiber for the transmission for any purpose of electrical energy, telephone, telegraph messages, digital signal, Internet, and radio or television communication. This RGP is subject to the following conditions:

**SPECIAL CONDITIONS:**

1. **Description of Authorized Work:** The work herein authorized includes activities required for the installation, construction, maintenance, replacement, and repair of subaqueous utility and transmission lines, outfall and intake structures associated with the utility line, substations, and access roads for the construction and maintenance of same.
2. **Construction Plans:** No work shall be performed until the applicant submits satisfactory plans for the proposed activity and receives written authorization from the District Engineer.
3. **Terms and Limits of Fill Material:** The limits of discharge of dredged or fill material authorized by this RGP for the installation, construction, maintenance, replacement, and/or repair of subaqueous utility lines is as follows:

- a. Subaqueous utility and transmission lines and outfall and related intake structures in or under all waters of the United States, excluding those areas listed in Special Condition 3 above, provided the discharge does not result in the permanent loss of greater than 1 acre of waters of the United States per 2-mile segment within waters of the United States. *Note: Waters of the United States temporarily affected by filling, flooding, excavation, or drainage, where the project area is restored to preconstruction contours and elevation, are not included in the calculation of permanent loss of waters of the United States. This includes temporary construction mats (e.g., timber, steel, geotextile) used during construction and removed upon completion of the work. Where certain functions and values of waters of the United States are permanently adversely affected (e.g., the conversion of a forested wetland to an herbaceous wetland) mitigation will be required to reduce the adverse effects of the project to the minimal level.*
- b. Associated substations in non-tidal waters of the United States, excluding areas listed in Special Condition 3 above and all non-tidal wetlands adjacent to tidal waters, providing the discharge does not cause the permanent loss of greater than ½ acre of non-tidal waters of the United States.
- c. Access roads in non-tidal waters of the United States, excluding areas listed in Special Condition 3 above and all non-tidal wetlands adjacent to tidal waters, for the construction and maintenance of subaqueous utility transmission lines and substations, provided the discharge does not result in the permanent loss of greater than 1 acre of waters of the United States per 2- mile segment within waters of the United States. *Note: Access roads shall be the minimum width necessary. Access roads constructed under this permit shall be made of pervious materials such as sand, gravel, limestone, etc. Access roads must be constructed so that the length of the road minimizes the adverse effects on waters of the United States and as near as possible to preconstruction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above preconstruction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows. Culverts must be designed and placed so as to maintain aquatic organism passage, including the use of bottomless culverts or culverts sized and partially buried below existing grade to allow for the appropriate flows. Within 120 days from completion of the work, all access roads and culverts used solely for construction of the subaqueous utility or transmission lines must be removed and the affected area restored to preconstruction contours, elevations, and wetland conditions.*

#### **4. Exclusion Zones:**

- a. Monroe County (including John Pennekamp Coral Reef State Park; Lignum Vitae Key State Botanical Site and Aquatic Preserve; Long Key State Park; Curry Hammock State Park; and Bahia Honda State Park);

- b. Timucuan Ecological and Historical Preserve (Duval County);
  - c. Biscayne Bay National Park Protection Zone (Miami-Dade County);
  - d. Guana Tolomato Matanzas National Estuarine Research Reserve (St. Johns and Flagler Counties);
  - e. The St. Lucie Impoundment (Martin County);
  - f. All areas regulated under the Lake Okeechobee and Okeechobee Waterway Shoreline Management Plan, located between the St. Lucie Lock (Martin County) and the W.P. Franklin Lock (Lee County);
  - g. The coastal lakes, their outfalls, and/or the shore areas between the lakes and the Gulf of Mexico as depicted on the attached map (Figure 1);
  - h. Lake Miccosukee near Monticello (Jefferson County);
  - i. American crocodile (*Crocodylus acutus*) Critical Habitat;
  - j. Federally authorized deep-draft navigation channels;
  - k. Everglades National Park;
  - l. Big Cypress National Preserve
  - m. Federal manatee sanctuaries and refuges
5. **State Designated Classified I and II Waters:** No utility and/or transmission lines will be embedded in the bottom of State designated Class I or Class II waters or aquatic preserves.
  6. **Clean Fill Material:** Fill material used with a project shall be limited to suitable, clean fill material, which excludes materials such as trash, debris, car bodies, asphalt, construction materials, concrete block with exposed reinforcement bars, and any soils contaminated with any toxic amounts (see Section 307 of the Clean Water Act).
  7. **Sidecast Material:** Material resulting from trench excavation may be temporarily sidecast (up to three months) into waters of the United States, provided that the material is not placed in such a manner that it is dispersed by currents or other forces. The District Engineer may extend the period of temporary side casting not to exceed a total of 180 days, where appropriate. The top 6- 12 inches of the trench should normally be backfilled with topsoil from the trench. Furthermore, the trench cannot be constructed in such a manner as to drain waters of the United States

(e.g., backfilling with extensive gravel layers, creating a French drain effect). For example, utility line trenches can be backfilled with clay blocks to ensure that the trench does not drain the waters of the United States through which the utility line is installed. Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

8. **Removal of Excess Material:** Dredged or fill material placed as backfill or bedding for subaqueous utility and transmission lines must not change the preconstruction bottom contours. Excess material must be moved to an upland disposal area.
9. **Best Management Practices:** The permittee agrees to abide by the attached Best Management Practices (BMPs) in the event that oil or other potentially hazardous material is unexpectedly discharged in waters of the United States as a result of construction or operation of the authorized work. This permit condition does not supersede or replace any other condition of this general permit.
10. **Turbidity Controls:** Turbidity control measures, including best management practices, shall be used throughout construction to control erosion and siltation to ensure there are no violations of State Water Quality Standards as established in sections 62-4.242 and 62-4.244 of the Florida Administrative Code and Chapters 62-302, 62-520, 62-522, and 62-550 of the Florida Administrative Code. Reduction and/or elimination of turbid water conditions and the erosion of disturbed or filled areas in adjacent water bodies and wetlands are to be achieved through the use of silt curtains, silt screens, or other appropriate erosion control measures, between the construction area and wetlands or surface waters, during periods of fill placement and construction. Such devices shall be properly maintained until such time as those disturbed areas become sufficiently stabilized by natural recruitment of vegetation or other measures.
11. **Compensatory Mitigation:** Compensatory mitigation for unavoidable permanent impacts to waters of the United States may be required at the discretion of the U.S. Army Corps of Engineers (Corps). To offset lost wetland and other aquatic resource functions, appropriate mitigation, including purchase of credits at a federally-approved mitigation bank, may be accepted. Mitigation undertaken at a federally-approved mitigation bank will be assessed using a minimum ratio of 1:1 (impact acreage: credit) or an appropriate functional assessment method (e.g., Uniform Mitigation Assessment Methodology (UMAM)) in accordance with the guidelines found in the Final Compensatory Mitigation Rule (33 CFR 332), which can be accessed at: [www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx](http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx). Waters of the United States temporarily affected by filling, flooding, excavation, or drainage, where the project area is restored to preconstruction contours and elevation, are not included in the calculation of permanent loss of waters of the United States. This includes temporary construction mats (e.g., timber, steel, geotextile) used during construction and removed upon completion of the work. Where certain functions and values of waters of the United States are permanently

adversely affected, such as the conversion of a forested wetland to an herbaceous wetland in the aerial transmission line right-of-way, mitigation will be required to reduce the adverse effects of the project to the minimal level.

12. **Prohibition on Severing Jurisdiction:** No project will be authorized under this RGP if the proposed fill activity will result in upstream waters of the United States being removed from Federal jurisdiction.
13. **Prohibition on Altering Stream Flow:** This permit does not authorize stream channelization or the bank-to-bank filling, relocating, and/or culverting of perennial or intermittent streams. The authorized activities must not increase flooding or negatively impact the pre-project hydraulic flow characteristics or water quality of any affected stream.
14. **Wild and Scenic Rivers:** Work authorized under this RGP must be designed and constructed to avoid or mitigate any adverse effects to rivers listed in the National Rivers Inventory which are protected under the Wild and Scenic Rivers Act and subject of the August 2, 1979 Presidential Memorandum. Work that could adversely affect (i.e., alter, or otherwise threaten the protection and conservation of) these systems shall be coordinated with the National Park Service and such coordination shall be concluded prior to any verification under this RGP. The National Rivers Inventory list and consultation instructions may be obtained at the following website: <https://www.nps.gov/ncrc/programs/rtca/nri/index.html>
15. **Threatened and Endangered Species Exclusion and Restriction Zones:** In accordance with Section 7 of the Endangered Species Act, projects proposed within the following areas cannot be authorized unless separate, project-specific consultation has been concluded with the U.S. Fish and Wildlife Service (FWS) and/or the National Marine Fisheries Service (NMFS), as appropriate:
  - a. within ½ mile of an active red-cockaded woodpecker (*Picoides borealis*) colony site;
  - b. In the Atlantic Ocean or Gulf of Mexico or on or contiguous with the Atlantic Ocean beaches or Gulf of Mexico beaches;
  - c. within Gulf sturgeon (*Acipenser oxyrinchus desotoi*) designated critical riverine habitat under the jurisdictional responsibility of the U.S. Fish and Wildlife Service;
  - d. Gulf Sturgeon (*Acipenser oxyrinchus desotoi*) critical habitat migratory restriction zones, Smalltooth Sawfish (*Pristis pectinata*) limited exclusion zones, Atlantic Sturgeon (*Acipenser oxyrinchus*) critical habitat exclusion zone, as defined in JAXBO (reference the following website <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>);

- e. within the Florida panther (*Puma concolor coryi*) consultation area (reference <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>); or,
- f. within rivers, identified as habitat for federally listed and candidate species of freshwater mussels (i.e., the Escambia River, Yellow River, Choctawhatchee River, Chipola River, Apalachicola River, Ochlockonee River, Santa Fe and New Rivers, and Econfina Creek (Florida panhandle), the Suwannee River, and their creeks and tributaries);
- g. within a Core Foraging Area (CFA) of a wood stork rookery and project does not incorporate the wood stork guidelines (see <http://www.saj.usace.army.mil/Missions/Regulatory/Sourcebook.aspx>)

**16. NMFS Programmatic Biological Opinion Project Design Criteria (PDCs):**

Structures authorized under this RGP must satisfy the general PDCs applicable to all projects as well as all activity specific PDCs (attached) provided for all activities and structures as stated in the NMFS' U.S. Army Corps of Engineers Jacksonville District Programmatic Biological Opinion, November 2017 (JAXBO). In accordance with the Endangered Species Act, the Corps will seek individual consultation with the NMFS for all projects that do not comply with the PDCs of JAXBO prior to verification. Please note that failure to comply with all project PDCs, where a take of listed species occurs, would constitute an unauthorized take, and noncompliance with this RGP. The NMFS is the appropriate authority to enforce the terms and conditions of JAXBO. The most current version of JAXBO can be accessed at the Jacksonville District Regulatory Division internet webpage in the Endangered Species section of the Sourcebook located at:

<http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx> *Note: JAXBO may be subject to revision at any time. It is our intention that the most recent version of these conditions will be utilized during the evaluation of the permit application.*

- 17. Wood Stork Effect Determination Key:** Prior to verification of authorization, the dichotomous key titled, *The Corps of Engineers, Jacksonville District, U.S. Fish and Wildlife Service, Jacksonville Ecological Services Field Office, and State of Florida Effect Determination Key for the Wood Stork in Central and North Peninsular Florida, September 2008*; or, as appropriate, *The Corps of Engineers, Jacksonville District, U.S. Fish and Wildlife Service, Jacksonville Ecological Services Field Office, and State of Florida Effect Determination Key for the Wood Stork in South Florida, January 2010* (reference <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>), will be used to determine potential affects upon wood stork (*Mycteria americana*). Those projects determined to be a "may affect" will not be authorized unless consistent with the Programmatic Consultation, or individual consultation on the project has been re-initiated and concluded with the FWS in accordance with the Endangered Species Act. Additionally, in accordance with the dichotomous key, some projects determined to be "may affect, not likely to adversely affect" will not be authorized until consultation on the project has been re-initiated and concluded with the FWS. *Note:*

*This key may be subject to revision at any time. It is our intention that the most recent version of this technical tool will be utilized during the evaluation of the permit application.*

- 18. Eastern Indigo Snake Effect Determination Key:** Prior to verification of authorization, the dichotomous key titled, *Eastern Indigo Snake Programmatic Effect Determination Key (South Florida), Revised August 1, 2017*; or, as appropriate, *Eastern Indigo Snake Programmatic Effect Determination Key (North Florida), August 12, 2013* (reference <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>), will be used to determine potential affects upon eastern indigo snakes (*Drymarchon corais couperi*). Those projects determined to be a “may affect” to eastern indigo snakes will not be authorized unless consistent with the Programmatic Consultation or individual consultation on the project has been re-initiated and concluded with the U.S. Fish and Wildlife Service in accordance with the Endangered Species Act. Additionally, depending on the location of the project, some projects determined to be “may affect, not likely to adversely affect” will not be authorized until consultation on the project has been re-initiated and concluded. *Note: This key may be subject to revision at any time. It is our intention that the most recent version of this technical tool will be utilized during the evaluation of the permit application.* To ensure minimal impacts to eastern indigo snakes, for all projects proposed in eastern indigo snake habitat, the permittee shall implement the *U.S. Fish and Wildlife Service’s Standard Protection Measures for the Eastern Indigo Snake, August 12, 2013* (reference <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>).
- 19. Manatee Effect Determination Key:** Prior to verification of authorization, the dichotomous key titled, *The Corps of Engineers, Jacksonville District, and the State of Florida Effect Determination Key for the Manatee in Florida, April 2013* (<http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>), will be used to determine potential impacts to manatee (*Trichechus manatus*). Those determined to be a “may affect” to the manatee will not be authorized unless consistent with the Programmatic Consultation or individual consultation on the project has been reinitiated and concluded with the U.S. Fish and Wildlife Service in accordance with the Endangered Species Act. Additionally, depending on the location of the project, some projects determined to be “may affect, not likely to adversely affect” will not be authorized until consultation on the project has been re-initiated and concluded. *Note: The manatee key may be subject to revision at any time. It is our intention that the most recent version of this technical tool will be utilized during the evaluation of the permit application.*
- 20. Manatee Construction Conditions:** For projects in or under waters accessible to manatees, the permittee will implement the *Standard Manatee Conditions for In-Water Work, 2011* (reference <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>) and/or requirements as appropriate for the proposed activity. *Note: These conditions may*

*be subject to revision at any time. It is our intention that the most recent version of these conditions will be utilized during the evaluation of the permit application.*

**21. Sea Turtle and Smalltooth Sawfish Construction Conditions:** For projects in or under waters accessible to sea turtles, smalltooth sawfish (*Pristis pectinata*), Gulf sturgeon (*Acipenser oxyrinchus desotoi*), Atlantic sturgeon (*Acipenser oxyrinchus*), or shortnose sturgeon (*Acipenser brevirostrum*), the permittee will utilize the *Sea Turtle and Smalltooth Sawfish Construction Conditions, March 23, 2006* (reference <http://www.saj.usace.army.mil/Missions/Regulatory/index.htm>) and/or requirements, as appropriate for the proposed activity. *Note: These conditions may be subject to revision at any time. It is our intention that the most recent version of these conditions will be utilized during the evaluation of the permit application.*

**22. Take of Endangered Species:** This RGP has been conditioned to protect species and potential critical habitat protected by the ESA. No activity shall be authorized under this RGP which is likely to result in incidental take, or adversely affect a protected species or a species proposed for listing, or destroy or adversely modify critical habitat protected under the ESA. Consultation with the FWS and/or NMFS may be initiated if any work authorized under this RGP is determined to affect the following: 1) any federally-listed threatened or endangered species, including those listed in Attachment 4, or a species proposed for such designation; or, 2) designated critical habitat for these or any other federally-listed threatened or endangered species or habitat proposed to be designated as critical habitat for any federally-listed threatened or endangered species. In the event of incidental take, you must cease work and notify the Corps immediately. No work shall continue or new work commence, until consultation is re-initiated and concluded, in accordance with Section 7, ESA. During Section 7 consultation, any verification under this RGP shall be suspended, and such verification may be revoked or modified, as deemed appropriate to comply with Federal law. Species and protected habitat under the purview of the FWS and NMFS may be obtained by accessing the following sites:

<https://ecos.fws.gov/ipac/>

<https://www.fisheries.noaa.gov/species-directory>

**23. Essential Fish Habitat:** No work shall be authorized by this RGP which may have direct or indirect adverse impacts to essential fish habitat such as, but not limited to the following: entire water column, vegetated and unvegetated bottom, tidal freshwater (palustrine) wetlands and forests, hard or soft corals, oyster reefs, shell banks, coral and live/hard bottom habitats, mangroves and fringe mangroves/scrub-shrub communities, estuarine emergent vegetation (e.g., flooded saltmarshes, brackish marsh, and tidal creeks), marine emergent vegetation, and/or the following species of submerged rooted aquatic vegetation (SAV): shoal grass (*Halodule wrightii*), paddle grass (*Halophila decipiens*), star grass (*Halophila engelmanni*), Johnson's seagrass (*Halophila johnsonii*), sago pondweed (*Potamogeton pectinatus*), clasping-leaved pondweed (*Potamogeton perfoliatus*), widgeon grass

(*Ruppia maritima*), manatee grass (*Syringodium filiforme*), turtle grass (*Thalassia testudinum*), tapegrass (*Vallisneria americana*), horned pondweed (*Zannichellia palustris*), and eel grass (*Zostera marina*). Indirect effects include secondary and cumulative effects. In addition, the project cannot have adverse effects on any other essential fish habitat, listed above.

#### **24. Cultural Resources and/or Historic Properties:**

- a. No structure or work shall adversely affect, impact, or disturb properties listed in the *National Register of Historic Places* (NRHP) or those eligible for inclusion in the NRHP.
- b. If during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the permittee shall immediately stop all work in the vicinity and notify the Corps. The Corps shall then notify the Florida State Historic Preservation Officer (SHPO) and the appropriate Tribal Historic Preservation Officer(s) (THPO(s)) to assess the significance of the discovery and devise appropriate actions.
- c. A cultural resources assessment may be required of the permit area, if deemed necessary by the SHPO, THPO(s), or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO and the Corps.
- d. In the unlikely event that unmarked human remains are identified on non-federal lands, they will be treated in accordance with Section 872.05 Florida Statutes. All work in the vicinity shall immediately cease and the permittee shall immediately notify the medical examiner, Corps, and State Archeologist. The Corps shall then notify the appropriate SHPO and THPO(s). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the State Archeologist, SHPO, and the Corps.
- e. In the unlikely event that human remains are encountered on federal or tribal lands, or in situations where Archaeological Resources Protection Act of 1979, or Native American Graves Protection Repatriation Act of 1990 applies, all work in the vicinity shall immediately cease and the permittee immediately notify the

Corps. The Corps shall then notify the appropriate THPO(s) and SHPO. Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. After such notification, project activities on federal lands shall not resume without written authorization from the Corps, and/or appropriate THPO(s), SHPO, and federal manager. After such notification, project activities on tribal lands shall not resume without written authorization from the appropriate THPO(s) and the Corps.

25. **Tribal Coordination:** Coordination with Federally recognized Tribes (e.g., Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida) is required prior to verification of any activity or work authorized by this RGP when such work would occur adjacent to, or on, Tribal lands. Projects or work proposed adjacent to, or on, tribal lands shall require review for any impacts of the proposed work to Tribal trust resources prior to verification. No verification under this RGP shall be made unless coordination with the appropriate Tribe(s) has been concluded for projects or work that may affect tribal trust resources.
26. **Notification of Unmarked Utilities:** No work shall be performed until after the permittee provides notification to the owner(s) or operator(s) of any marked utilities in the work area, unless the permittee is the same entity as the owner(s) or operator(s).
27. **National Oceanic and Atmospheric Administration (NOAA) Notification of Utilities in Navigable Waters:** Where the proposed subaqueous utility or transmission line is to be installed in or under navigable waters of the United States, at least 2 weeks prior to the start of the authorized work, the permittee must notify the NOAA and the Corps in writing that the work is commencing; and, again, upon completion of the work. The permittee shall notify the District Engineer in writing at the letterhead address, attention Regulatory Division; and, the NOAA, either in mailed correspondence to Nautical Data Branch Office of Coast Survey N/CS26, 1315 East-West Highway, Silver Spring, MD 20910-3282 or by electronic mail correspondence, with scans of the requisite documents attached, through [ocs.ndb@noaa.gov](mailto:ocs.ndb@noaa.gov). The post-construction notification will include “as-built plans”, signed and sealed by a registered surveyor/engineer licensed in the State of Florida, that certify the project is constructed as authorized; and, must include an accurate depiction of the location and configuration of the completed activity in relation to the mean high water of the navigable water.
28. **Modification or Alteration of Federal Projects:** In order to assure that this RGP does not impair the usefulness of existing Corps projects and that it is not injurious to the public, the following special conditions are required pursuant to 33 U.S.C. 408 authorization:
  - a. Construction of directional boring vaults, junction boxes, and/or pads are not allowed within 25 feet of the top of the bank of any federal project.

- b. Subaqueous utility lines installed via horizontal direction drilling (HDD) within a federal project must ensure the top of the HDD boring is a minimum of 14 feet beneath the bottom of any shallow draft navigation channel or 10 feet beneath the bottom of any flood control channel, including a minimum of 25 feet outside the channel edges to allow for maintenance of the side slopes, and the estimated total drilling fluid pressure is less than 10 psi.
- c. Subaqueous utility lines installed via trenching must be a minimum of 14 feet below the authorized depth of any shallow draft federal navigation channel including a minimum of 25 feet outside the channel edges to allow for maintenance of the side slopes.
- d. Subaqueous utility lines installed via trenching must be a minimum of 10 feet below the authorized depth of any federal flood control channel including a minimum of 25 feet outside of the channel edges.
- e. All projects beneath a Federal flood control or navigation channel will be required to provide at the completion of work, an as-built survey showing the horizontal and vertical location (X-Y-Z coordinates in NAD 83 and NAVD 88, as applicable) of the object below the channel as it enters and exits the design edges of the authorized width of the channel, plus a minimum of 25 feet outside the channel edges.
- f. Evaluation of applications for utility line crossings of levees, dikes, dams, or other water retaining structures and crossings beneath deep draft federal navigation projects will require case specific review and approval pursuant to 33 U.S.C. 408 prior to authorization under this RGP. Subaqueous utility or transmission line crossings, proposed in or under all Federal canals with Federal levees, will require project specific permission pursuant to 33 U.S.C. 408 from the U.S. Army Corps of Engineers prior to receiving authorization under this RGP. Once, the project specific approval under 33 U.S.C. 408 has been received, and all other conditions of the permit have been met, a permit verification letter may be issued.
- g. Work and structures crossing federal projects that are not in compliance with the above criteria, shall not be eligible for authorization under this RGP until case specific review has been completed by the Jacksonville District Engineering Division in accordance with 33 U.S.C. 408 and the project has received approval from the Jacksonville District Commander or the Chief of EN, per the Delegation of Authority Certification for Small and Low Impact Section 408 Approvals, dated 10 October 2018.
- h. Prior to commencement of construction within the right-of-way of a Federal channel or Federal project area, the permittee shall receive written confirmation from the Real Estate Division, U.S. Army Corps of Engineers, Jacksonville or Mobile District, as appropriate, that a consent-to-easement (CTE) is being

processed. Confirmation may be obtained by submitting your request to real estate via the following addresses:

- Jacksonville District (all of Florida east of the Aucilla River)  
Email box: [repermittsaj.cesaj@usace.army.mil](mailto:repermittsaj.cesaj@usace.army.mil)  
Office: (904) 570-4514
- Mobile District (from Escambia County east to the Aucilla River)  
US Army Corps of Engineers  
Mobile District  
Real Estate Division  
P.O. Box 2288  
Mobile, AL 36628  
Office: (770) 904-3254

Such confirmation from the Real Estate Division shall suffice for the purpose of regulatory permitting and allow for commencement of construction of the authorized activity prior to receipt of the CTE.

29. **Horizontal Directional Drilling (HDD):** Except as otherwise required by Special Condition of this RGP, directional boring vaults, junction boxes, and/or pads will not be constructed within 50 feet of the top of the bank of waterways (rivers/streams). HDD pilot, entrance, and exit holes must be the minimum diameter necessary; and, must be set back from the waterway (river/stream) bank by a minimum of 50 feet. Excavated materials and drilling mud must be stockpiled on non-wetland areas, where available. Appropriate fabric must be placed beneath all materials stockpiled in wetlands. As part of any verification under this RGP, the permittee must submit a frac-out plan to the Corps for approval. Such plan must be consistent with the example from JaxBO (attached). No work shall commence prior to Corps approval of the frac-out plan. Further, the permittee shall submit a benthic survey for SAV, coral, and/or hardbottom habitat in areas where these resources could occur. In the event that any of these benthic resources are discovered within the proposed project footprint, the permittee must submit plans to avoid and minimize impacts to such resources as a result of frac-out based on consideration of geologic formation, boring depth, drilling mud pressure, and a pressure profile.
30. **Depth Below Bottom Contour:** Except as required by Special Conditions of this RGP, all subaqueous utility and/or transmission lines authorized by this RGP must be installed a minimum of 6 feet below the bottom contour of any other water of the United States. The 6-foot criterion applies to the entire authorized width of the crossing, plus a minimum of 10 feet on each side of the crossing.
31. **Water Quality Certification and Coastal Zone Management Consistency:** A permit, issued by the Department of Environmental Protection, shall provide the applicable Water Quality Certification (WQC) or waiver thereto, and Coastal Zone Consistency Concurrence. WQC is waived for activities authorized under this RGP

that qualify for an exemption under Section 403.813(1) or 373.406, F.S., or the rules of the Florida Administrative Code adopted under Part IV of Chapter 373, F.S.

32. **Hold Harmless:** The permittee shall defend and hold the Government harmless from any and all claims by reason of the placement and installation of subaqueous transmission lines authorized by this permit.
33. **Assurance of Navigation:** For projects authorized under this RGP in or under navigable waters of the United States, the permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
34. **As-Built Certification:** Within 60 days of completion of the work authorized by this permit, the permittee shall submit as-built drawings of the authorized work and a completed "As-Built Certification By Professional Engineer" form (Attachment) to the Corps. The as-built drawings shall be signed and sealed by a registered professional engineer and include the following:
  - a. A plan view drawing of the location of the authorized work footprint, as shown on the permit drawings, with transparent overlay of the work as constructed in the same scale as the permit drawings on 8½-inch by 11-inch sheets. The plan view drawing should show all "earth disturbance," including wetland impacts and water management structures.
  - b. A list of any deviations between the work authorized by this permit and the work as constructed. In the event that the completed work deviates, in any manner, from the authorized work, describe on the attached "As-Built Certification By Professional Engineer" form the deviations between the work authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings any deviations that have been listed. Please note that the depiction and/or description of any deviations on the drawings and/or "As-Built Certification By Professional Engineer" form does not constitute approval of any deviations by the Corps.
  - c. Include the Department of the Army permit number on all sheets submitted.
35. **Reporting Address:** The permittee shall submit all construction notifications, compliance documentation and any other correspondence required by the general and special conditions of this permit to the following mailbox: SAJ-RD-Enforcement@usace.army.mil Submittals shall not exceed 10 MB. The permittee

shall reference the assigned permit verification number, SAJ-XXXX-XXXXX (RGP-XXX), on all submittals.

36. **Discretionary Authority:** Conformance with descriptions and quantities contained herein does not necessarily guarantee authorization under this regional general permit. The District Engineer reserves the right to require that any request for authorization under this regional general permit be evaluated as an individual permit.
37. **Ability to Rescind or Revoke Authorization:** Authorization under this regional general permit may be rescinded or revoked at any time if the information provided by the applicant in support of the permit application proves to have been false, incomplete, or inaccurate.
38. **General Conditions:** The permittee shall perform all work and subsequent actions in accordance with the attached general conditions.
39. **RGP Expiration:** This RGP shall be valid for a period of 5 years from the date of issuance unless suspended or revoked by issuance of a public notice by the District Engineer. The Corps, in conjunction with the Federal resource agencies, will conduct annual reviews to ensure that continued use of the permit during the 5-year authorization period is not contrary to the public interest. If this RGP expires or is revoked prior to completion of the authorized work, authorization of activities that have commenced or are under contract to commence in reliance on this RGP will remain in effect provided the activity is completed within 12 months of the date this RGP expired or was revoked.

BY AUTHORITY OF THE SECRETARY OF THE ARMY



for Andrew D. Kelly  
Colonel, U.S. Army  
District Engineer

Enclosures:

- Figure 1 – Florida Panhandle Coastal Dune Lakes
- Figure 2 – General PDCs
- Figure 3 – PDCs for In-Water Activities
- Figure 4 – PDCs for Mangroves, Seagrasses, Corals, and Hard Bottom for All Projects
- Figure 5 – JAXBO Activity 8 PDCs
- Table 1 – Federally listed species in Peninsular Florida
- Table 2 – Federal Threatened, Endangered, and Other Species of Concern Likely to Occur in the Florida Panhandle

Table 3 – Federally Listed Species in Florida – Consultation for this RGP  
General Conditions

GENERAL CONDITIONS  
33 CFR PART 320-330

1. The time limit for completing the work authorized ends on the **dates identified in the letter.**
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow a representative from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit



Figure 1  
 Florida Panhandle Coastal Dune Lakes

**General PDCs Applicable to All Projects:**

**AP.1.** The applicant must agree to adhere to PDCs for *In-Water Activities* (provided below).

**AP.2.** All projects involving the installation of piles or sheet piles shall follow the PDCs for *In-Water Noise from Pile and Sheet Pile Installation* (Section 2.2). This Opinion does not cover projects that use seismic surveys, low frequency sonar, explosions, and seismic air guns.

**AP.3.** All projects proposed in or near areas with mangroves, seagrasses, corals, or hard bottom habitat must refer to PDCs for *Mangroves, Seagrasses, Corals, and Hard Bottom for All Projects* (provided below) to determine whether the project is covered under the Opinion and, if it is covered, to ensure it is sited, designated, and implemented following all of the PDCs in that section.

**AP.4.** For every project, the USACE must determine if the project is located within:

- Smalltooth sawfish critical habitat limited exclusion zones (Section 2.1.1.1)
- Gulf sturgeon critical habitat migratory restriction zones (Section 2.1.1.2)
- Atlantic sturgeon critical habitat exclusion zone (St. Marys River) (Section 2.1.1.3)
- North Atlantic right whale educational sign zones (Section 2.1.1.4)
- U.S. Caribbean sea turtle critical habitat restriction zones (Section 2.1.1.5)
- Bryde's whale exclusion zone (Section 2.1.1.6)

Where the activity is excluded from the Opinion within a particular zone, the application must be processed under a separate consultation. Where additional restrictions apply to activities within that zone, the USACE or other authorizing entity must ensure that the project meets the requirements for that zone.

**AP.5.** This Opinion only covers new construction (i.e., installation, repair, replacement) and does not apply to after-the-fact consultations or enforcement actions handled by the USACE.

**AP.6.** All activities must be completed during daylight hours.

## **PDCs for In-Water Activities**

For an activity to be covered under this Opinion, the USACE authorization must include the following conditions. Failure to comply with these conditions could result in enforcement action by the USACE and/or NMFS.

**AP.7. Education and Observation:** The permittee must ensure that all personnel associated with the project are instructed about the potential presence of species protected under the ESA and the Marine Mammal Protection Act (MMPA). All on-site project personnel are responsible for observing water-related activities for the presence of protected species. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing ESA-listed species or marine mammals. To determine which species may be found in the project area, please review the relevant Protected Species List at:  
[http://sero.nmfs.noaa.gov/protected\\_resources/section\\_7/threatened\\_endangered/index.html](http://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/index.html)

**AP.8. Reporting** of interactions with protected species:

- a) Any collision(s) with and/or injury to any sea turtle, sawfish, whale, or sturgeon occurring during the construction of a project, shall be reported immediately to NMFS's Protected Resources Division (PRD) at (1-727-824-5312) or by email to [takereport.nmfs@noaa.gov](mailto:takereport.nmfs@noaa.gov) and [SAJ-RD-Enforcement@usace.army.mil](mailto:SAJ-RD-Enforcement@usace.army.mil).
- b) Smalltooth sawfish: Report sightings to 1-844-SAWFISH or email [Sawfish@MyFWC.com](mailto:Sawfish@MyFWC.com)
- c) Sturgeon: Report dead sturgeon to 1-844-STURG 911 (1-844-788-7491) or email [nmfs.ser.sturgeonnetwork@noaa.gov](mailto:nmfs.ser.sturgeonnetwork@noaa.gov)
- d) Sea turtles and marine mammals: Report stranded, injured, or dead animals to 1-877-WHALE HELP (1-877-942-5343).
- e) North Atlantic right whale: Report injured, dead, or entangled right whales to the USCG via VHF Channel 16.

**AP.9. Vessel Traffic and Construction Equipment:** All vessel operators must watch for and avoid collision with species protected under the ESA and MMPA. Vessel operators must avoid potential interactions with protected species and operate in accordance with the following protective measures:

- a) *Construction Equipment:*
  - i) All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while operating in water depths where the draft of the vessel provides less than a 4-foot (ft) clearance from the bottom, and in all depths after a protected species has been observed in and has departed the area.
  - ii) All vessels will follow marked channels and/or routes using the maximum water depth whenever possible.
  - iii) Operation of any mechanical construction equipment, including vessels, shall cease immediately if a listed species is observed within a 50-ft radius of construction equipment and shall not resume until the species has departed the area of its own volition.

- iv) If the detection of species is not possible during certain weather conditions (e.g., fog, rain, wind), then in-water operations will cease until weather conditions improve and detection is again feasible.
- b) *All Vessels:*
  - i) Sea turtles: Maintain a minimum distance of 150 ft.
  - ii) North Atlantic right whale: Maintain a minimum 1,500-ft distance (500 yards).
  - iii) Vessels 65 ft in length or longer must comply with the Right Whale Ship Strike Reduction Rule (50 CFR 224.105) which includes reducing speeds to 10 knots or less in Seasonal Management Areas (<http://www.fisheries.noaa.gov/pr/shipstrike/>).
  - iv) Mariners shall check various communication media for general information regarding avoiding ship strikes and specific information regarding right whale sightings in the area. These include NOAA weather radio, USCG NAVTEX broadcasts, and Notices to Mariners.
  - v) Marine mammals (i.e., dolphins, whales [other than North Atlantic right whales], and porpoises): Maintain a minimum distance of 300 ft.
  - vi) When these animals are sighted while the vessel is underway (e.g., bow-riding), attempt to remain parallel to the animal's course. Avoid excessive speed or abrupt changes in direction until they have left the area.
  - vii) Reduce speed to 10 knots or less when mother/calf pairs or groups of marine mammals are observed, when safety permits.

**AP.10. Turbidity Control Measures during Construction:** Turbidity must be monitored and controlled. Prior to initiating any of the work covered under this Opinion, the Permittee shall install turbidity curtains as described below. In some instances, the use of turbidity curtains may be waived by the USACE project manager if the project is deemed too minimal to generate turbidity (e.g., certain ATON installation, scientific survey device placement, marine debris removal) or if the current is too strong for the curtains to stay in place. Turbidity curtains specifications:

- a) Install floating turbidity barriers with weighted skirts that extend to within 1 ft of the bottom around all work areas that are in, or adjacent to, surface waters.
- b) Use these turbidity barriers throughout construction to control erosion and siltation and ensure that turbidity levels within the project area do not exceed background conditions.
- c) Position turbidity barriers in a way that does not block species' entry to or exit from designated critical habitat.
- d) Monitor and maintain turbidity barriers in place until the authorized work has been completed and the water quality in the project area has returned to background conditions.
- e) In the range of ESA-listed corals (St. Lucie Inlet, Martin County south to the Dry Tortugas and the U.S. Caribbean) and Johnson's seagrass (Turkey Creek/Palm Bay south to central Biscayne Bay in the lagoon systems on the east coast of Florida):
  - Projects that include upland earth moving (e.g., grading to install a building or parking lot associated with a dock and seawall project), must install sediment control barriers to prevent any upland sediments from reaching estuarine or marine waters.
  - The turbidity curtain requirement cannot be waived for any project that moves or removes sediment (e.g., dredging, auger to create a pile, trenching to install a cable

line). If turbidity curtains are not feasible in an area based on site conditions such as water current, high wave action, or stormy conditions, the project must undergo individual Section 7 consultation and is not covered under this Programmatic Opinion.

**AP.11. Entanglement:** All turbidity curtains and other in-water equipment must be properly secured with materials that reduce the risk of entanglement of marine species (described below). Turbidity curtains likewise must be made of materials that reduce the risk of entanglement of marine species.

- a) In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) must be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, must be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line is allowed in the water.
- b) Turbidity curtains and other in-water equipment must be placed in a manner that does not entrap species within the construction area or block access for them to navigate around the construction area.

Figure 4. PDCs for Mangroves, Seagrasses, Corals, and Hard Bottom

#### **PDCs for Mangroves, Seagrasses, Corals and Hard Bottom for All Projects**

Note: **For projects authorized in reliance on this Opinion only**, the PDCs below supercede any other guidance documents otherwise applicable to reduce or avoid impacts to mangroves, seagrasses, and corals. This includes the NMFS's *Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation, Marsh, or Mangrove Habitat* dated August 2001, and NMFS's *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or over Johnson's Seagrass (Halophila johnsonii)*, dated October 2002. NMFS may still apply these guidance documents in other consultations, including consultations on Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act, as appropriate.

#### **AP.12. Mangroves**

- To qualify for coverage under this Opinion, all projects must be sited and designed to avoid or minimize impacts to mangroves.
- Mangrove removal must be conducted in a manner that avoids any unnecessary removal and is limited to the following instances:
  - Removal to install up to a 4-ft-wide walkway for a dock.
  - Removal to install up to an 8-ft-wide walkway for public docks, where the walkway is necessary to address compliance with the Americans with Disability Act (ADA).
  - Removal to install culverts necessary to improve water quality or restore hydrology between 2 water bodies. Such mangrove removal is limited to a maximum of 20 linear feet (lin ft) of shoreline per culvert opening.
  - Removal of mangroves above mean high water (MHW) provided that the tree does not have any prop roots that extend into the water below the MHWL.

- Mangrove Trimming. Mangrove trimming is regulated by FDEP, Puerto Rico Department of Natural and Environmental Resources, and U.S. Virgin Islands Department of Planning and Natural Resources. Consistent with those authorities, when used in this Opinion, mangrove trimming refers to the removal (using hand equipment such as chain saws and/or machetes) of lateral branches (i.e., no alteration of the trunk of the tree) in a manner that ensures survival of the tree. This Opinion does not limit or supersede any restrictions on mangrove removal required under any federal, state, or local law.
  - This Opinion only covers projects with associated mangrove trimming occurring waterward of MHW if such trimming (1) occurs within the area where the authorized structures are placed or will be placed (e.g., removal of branches that overhang a dock), (2) is necessary to provide temporary construction access, and (3) is conducted in a manner that avoids any unnecessary trimming.
  - The Opinion does not apply to projects proposing to remove red mangrove props roots waterward of MHW, except for removal to install the dock walkways, as described above (up to a 4-ft walkway and up to a 8-ft ADA compliant walkway) and to install culverts necessary to improve water quality or restore hydrology between 2 water bodies.

**AP.13. Seagrass:**

- Pile-supported structures must follow the PDCs for *Docks or Other Minor Structures* (PDC A2.17, Section 2.2.2)

**Johnson’s seagrass:**

- This Opinion does not apply to projects where Johnson’s seagrass is found within the project footprint except for:
  - Installation of pile-supported structures that meet the PDCs for *Docks or Other Minor Structures* (PDC A2.17, Section 2.2.2).
  - Maintenance dredging of previously authorized areas. This is limited to the removal of no more than 0.1 acre (ac) (4,356 ft<sup>2</sup>) of Johnson’s seagrass per year (Activity 3; see Section 2.2.3)
  - Transmission/utility line repairs within the same footprint of the lines being repaired (Activity 8; see Section 2.2.8).

**Non-listed seagrasses:**

- All impacts to non-ESA listed native, non-invasive seagrasses should be avoided and minimized to the extent practicable.
- This Opinion does not apply to projects located within the geographic boundary of U.S. Caribbean sea turtle critical habitat (hawksbill, leatherback, and the NA DPS of green sea turtle critical habitat identified in Section 2.1.1.5) if non-ESA listed, native, non-invasive seagrasses are found within the project footprint.

#### **AP.14. Coral and Hard Bottom Habitat**

- This Opinion does not apply to projects that may affect, directly or indirectly, ESA-listed corals.
- Projects occurring within in the Florida Keys National Marine Sanctuary (FKNMS) may require separate consultation or authorization from NOAA's FKNMS. Projects authorized to occur in the FKNMS shall comply with any measures NOAA FKNMS has developed to avoid, minimize, and/or mitigate any effects on non-listed corals. For projects occurring outside of the FKNMS, if non-listed corals are found within the project footprint, we recommend relocating all non-listed corals, when possible, in a manner that is protective of the corals.
- This Opinion does not apply to projects where hard bottom habitat is found within the project footprint, except for the temporary placement (up to 24 months) of scientific survey devices (Activity 5) that have a footprint of less than 1 square foot (ft<sup>2</sup>) per device and are installed in a manner that does not permanently alter the hardbottom (e.g., the devices are not installed by drilling). For this Opinion, we define hard bottom in 2 ways:
  - Natural consolidated hard substrate that is suitable to support corals, coral larval settlement, reattachment and recruitment of asexual coral fragments. These areas of hard bottom or dead coral skeleton must be free from fleshy or turf macroalgae cover and sediment cover.
  - Nearshore and surf-zone, low-profile hard bottom outcroppings (e.g., worm-rock reef [sabellariid worm reefs] and eolianite, granodiorite). This habitat can be persistent or ephemeral, cycling through periods of exposure and cover by sand. The range of this hard bottom habitat extends along the southeastern coast of Florida from Cape Canaveral to Miami-Dade County and in the U.S. Caribbean. It is an important developmental habitat for juvenile hawksbill and green sea turtles, which use it for both foraging and refuge.

Figure 5. PDCs for Activity 8/ Transmission and Utility Lines -

### ***JAXBO Activity 8 Project Design Criteria***

#### **PDCs specific to Activity 8 for Transmission and Utility Line Activities:**

- A8.1. Activity 8 includes the installation, repair, replacement, and removal of support structures, footers, foundations, as well as the placement of riprap or concrete mat for pipeline protection. The USACE defines a utility/transmission line as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, wire or optical fiber for the transmission for any purpose of electrical energy, telephone, telegraph messages, digital signal, Internet, and radio or television communication.
- A8.2. Structures permanently placed on the waterbottom (e.g., foundations, piles, and footings) to support aerial transmission lines must total less than a 0.5 ac for all structures combined. Because permanent structures have the potential to interfere with or impede sea turtles from entering or exiting the beach, they cannot be placed on or near beaches used for sea turtle nesting.
- A8.3. Subaqueous utility and transmission lines may be installed (including as part of a repair/replacement project) using horizontal directional drilling, if the drilling originates and terminates on the uplands (i.e., no in-water work). For subaqueous transmission lines installed, repaired, or replaced using horizontal directional drilling, the applicant must provide and follow a frac-out contingency plan in Appendix D or another plan with at a minimum the same level of information as is provided in the plan contained in Appendix D.
- A8.4. Subaqueous utility and transmission lines may be installed (including as part of a repair/replacement project) by trenching. When excavating the trench, the bottom sediments may be temporarily sidecast into areas devoid of submerged aquatic vegetation and mangroves. Immediately upon completing the excavation and placing the transmission or utility line into the trench, the trench must be filled and the bottom contours must be restored to pre-construction conditions. The District Engineer may allow the trench to remain open and temporary sidecasting to continue after the excavation is complete, as long as the total time the trench is open and the material is sidecast during and after excavation does not exceed 180 days.
- A8.5. New subaqueous transmission and utility lines shall not be placed on the sea floor (i.e., pinned or anchored and not buried) under this Opinion. Sections of existing buried lines may be repaired or replaced above the sea floor by pinning or anchoring the new section of line in place to ensure that it does not move and damage surrounding seagrasses, hardbottom, coral, or coral reef habitat.
- A8.6. When repairing existing transmission or utility lines, riprap and articulated mats may be placed on subaqueous lines that are buried in trenches or on lines that are attached to the sea floor (in accordance with A8.5) to stabilize the line. Riprap and articulated mats may also be used to stabilize new subaqueous lines placed in high erosion areas. These

stabilization materials are limited to the minimum amount necessary to stabilize and protect the lines existing lines (which may have been exposed by scouring) and cannot be placed on seagrasses, hardbottom, corals, or coral reef habitat.

**Additional PDCs for Activity 8 applicable in critical habitat:**

*In addition to the PDCs above, the project must be designed to meet the following PDCs if the project occurs in the critical habitat, as described below.*

- A8.7. Acropora critical habitat: This Opinion does not apply to the new installation of transmission and utility lines within the geographic boundary of Acropora critical habitat. This Opinion covers the repair and replacement of transmission and utility lines in Acropora critical habitat, but only if the essential feature is not present, and only if the placement meets the measures described in PDC A8.5 to limit movement of the lines.
- A8.8. Smalltooth sawfish critical habitat: Structures supporting aerial transmission or utility lines, such as foundation towers and transmission line poles, cannot be placed in smalltooth sawfish critical habitat in areas where the essential features are present. Transmission or utility line projects are not allowed in areas identified as smalltooth sawfish limited exclusion zones, as defined in Section 2.1.1.1, above.
- A8.9. Johnson's seagrass critical habitat: All newly installed subaqueous transmission or utility lines must be placed using horizontal directional drilling from the uplands. Repair and replacement of existing subaqueous lines, whether the existing lines are buried within trenches or placed on the sea floor outside of trenches, is allowed in the same footprint as the existing line. Structures supporting aerial transmission or utility lines, such as foundation towers and transmission line poles, cannot be placed in Johnson's seagrass critical habitat in waters shallower than -13 ft deep.
- A8.10. Gulf sturgeon: No new transmission and utility line activities installation are allowed in the Gulf sturgeon critical habitat migratory restriction zones (defined in Section 2.1.1.2) between September and March, when sturgeon are likely to be present in these areas. Repair/replacement activities may occur in Gulf sturgeon critical habitat migratory restriction zones at any time of year as long as the repair or replacement is accomplished without the use of heavy in-water equipment (i.e., if the repair or replacement does not require trenching). Additional noise restrictions are required for pile and sheet pile installation in the Gulf sturgeon critical habitat migratory restriction zones defined in Section 2.1.1.2.
- A8.11. U.S. Caribbean sea turtle critical habitat (hawksbill, leatherback, and the NA DPS of green sea turtle critical habitat): Under this Opinion, the only transmission and utility line projects that can occur in U.S. Caribbean sea turtle critical habitat are repair and replacement projects.

Table 1  
 Federally Listed Species in Peninsula Florida

**Federally listed and candidate species and designated critical habitat occurrences in Florida by County**

Note: species may occur in suitable community types in counties that are not checked

Counties	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	DeSoto	Dixie	Duval	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson	Lafayette	Lake		
<b>Mammals (except whales)</b>																																				
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CH					✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓																		
<b>Birds</b>																																				
T								✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
T	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
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E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ = Species occurs in county; E=Endangered; T=Threatened; C=Candidate; CH=Critical habitat designated; SA=Similarity of Appearance; XN=Nonessential experimental population



Counties		Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	DeSoto	Dixie	Duval	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson	Lafayette	Lake		
<b>Reptiles</b>																																					
E	American crocodile						✓					✓																									
CH	"																																				
SA	American alligator	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
T	Atlantic salt marsh snake					✓																															
T	Bluetail (=blue-tailed) mole skink																																				
T	Eastern indigo snake	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
E	Green sea turtle			✓		✓	✓		✓			✓				✓	✓	✓	✓				✓				✓										
E	Hawksbill (=carey) sea turtle			✓		✓	✓									✓	✓	✓	✓				✓				✓										
E	Kemp's (=Atlantic) ridley sea turtle																✓	✓	✓								✓										
E	Leatherback sea turtle					✓	✓									✓	✓	✓	✓				✓				✓										
T	Loggerhead sea turtle			✓		✓	✓		✓			✓				✓	✓	✓	✓				✓				✓										
T	Sand skink																											✓									✓
<b>Amphibians</b>																																					
T	Flatwoods salamander		✓	✓	✓			✓										✓	✓				✓					✓									
<b>Fishes</b>																																					
T	Gulf sturgeon			✓				✓				✓		✓		✓	✓	✓	✓	✓	✓		✓	✓			✓		✓	✓		✓	✓	✓	✓		
E	Okaloosa darter			✓																																	
E	Shortnose sturgeon										✓					✓																					
<b>Invertebrates</b>																																					
T	Chipola slabshell							✓																												✓	
E	Fat three-ridge (mussel)							✓											✓	✓			✓														✓
E	Gulf moccasinshell			✓				✓																													✓
C	Highlands tiger beetle																												✓								
E	Ochlockonee moccasinshell																																				
E	Oval pigtoe	✓		✓	✓			✓				✓																									✓
T	Purple bankclimber							✓																✓													✓
E	Schaus swallowtail butterfly																																				
E	Shinyrayed pocketbook							✓																													
T	Squirrel chimney (=Florida) cave shrimp	✓																																			
T	Stock Island tree snail																																				
<b>Plants</b>																																					
E	American chaffseed																																				
E	Apalachicola rosemary																																				
E	Avon Park harebells																												✓								
E	Beach jacquemontia						✓																														
E	Beautiful pawpaw								✓																												✓

✓ = Species occurs in county; E=Endangered; T=Threatened; C=Candidate; CH=Critical habitat designated; SA=Similarity of Appearance; XN=Nonessential experimental population

Counties		Lee	Leon	Levy	Liberty	Madison	Manatee	Marion	Martin	Miami-Dade	Monroe	Nassau	Okaloosa	Okeechobee	Orange	Osceola	Palm Beach	Pasco	Pinellas	Polk	Putnam	Santa Rosa	Sarasota	Seminole	St. Lucie	St. Johns	Sumter	Suwannee	Taylor	Union	Volusia	Wakulla	Walton	Washington			
<b>Reptiles</b>																																					
E	American crocodile	✓								✓	✓																										
CH	"									✓	✓																										
SA	American alligator	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
T	Atlantic salt marsh snake																																				
T	Bluetail (=blue-tailed) mole skink															✓				✓																	
T	Eastern indigo snake	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
E	Green sea turtle	✓					✓		✓	✓	✓	✓	✓				✓	✓	✓				✓	✓		✓	✓					✓	✓		✓	✓	
E	Hawksbill (=carey) sea turtle						✓		✓	✓	✓	✓	✓				✓	✓	✓				✓	✓		✓	✓					✓	✓		✓	✓	
E	Kemp's (=Atlantic) ridley sea turtle								✓	✓	✓	✓	✓				✓	✓	✓				✓	✓		✓	✓					✓	✓		✓	✓	
E	Leatherback sea turtle								✓	✓	✓	✓	✓				✓	✓	✓				✓	✓		✓	✓					✓	✓		✓	✓	
T	Loggerhead sea turtle	✓					✓		✓	✓	✓	✓	✓				✓	✓	✓				✓	✓		✓	✓					✓	✓		✓	✓	
T	Sand skink							✓							✓	✓				✓																	
<b>Amphibians</b>																																					
T	Flatwoods salamander				✓								✓										✓										✓	✓	✓		
<b>Fishes</b>																																					
T	Gulf sturgeon		✓	✓	✓	✓	✓						✓					✓	✓				✓					✓	✓				✓	✓	✓		
E	Okaloosa darter											✓																							✓	✓	
E	Shortnose sturgeon																				✓																
<b>Invertebrates</b>																																					
T	Chipola slabshell																																		✓		
E	Fat three-ridge (mussel)				✓																														✓	✓	
E	Gulf moccasinshell																																		✓	✓	
C	Highlands tiger beetle																			✓																	
E	Ochlockonee moccasinshell		✓																																		
E	Oval pigtoe		✓										✓															✓									
T	Purple bankclimber		✓		✓																														✓		
E	Schaus swallowtail butterfly								✓	✓																											
E	Shinyrayed pocketbook		✓																																✓		
T	Squirrel chimney (=Florida) cave shrimp																																				
T	Stock Island tree snail									✓																											
<b>Plants</b>																																					
E	American chaffseed		✓																																		
E	Apalachicola rosemary				✓																																
E	Avon Park harebells																			✓																	
E	Beach jacquemontia								✓								✓																				
E	Beautiful pawpaw	✓													✓																					✓	

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Counties	Alachua	Baker	Bay	Bradford	Brevard	Broward	Calhoun	Charlotte	Citrus	Clay	Collier	Columbia	DeSoto	Dixie	Duval	Escambia	Flagler	Franklin	Gadsden	Gilchrist	Glades	Gulf	Hamilton	Hardee	Hendry	Hernando	Highlands	Hillsborough	Holmes	Indian River	Jackson	Jefferson	Lafayette	Lake		
<b>Plants (continued)</b>																																				
C	Big Pine partridge pea																																			
C	Blodgett's silverbush																																			
E	Britton's beargrass						✓																			✓	✓									✓
E	Brooksville (=Robins') bellflower																									✓	✓									
C	Cape Sable thoroughwort																																			
E	Carter's mustard				✓				✓																			✓								
C	Carter's small-flowered flax																																			
E	Chapman rhododendron									✓									✓				✓													
E	Cooley's meadowrue																																			
E	Cooley's water-willow																										✓									
E	Crenulate lead-plant																																			
T	Crystal Lake nailwort			✓																																
E	Deltoid spurge																																			
E	Etonia rosemary																																			
T	Florida bonamia						✓	✓																	✓			✓						✓		✓
C	Florida brickell-bush																																			
E	Florida golden aster																									✓										
C	Florida indigo																																			
E	Florida perforate cladonia																											✓								
C	Florida pineland crab grass																																			
C	Florida prairie clover																																			
C	Florida semaphore cactus																																			
T	Florida skullcap			✓																																
E	Florida torreyia																																			
E	Florida ziziphus																											✓								
E	Four-petal pawpaw																																			
E	Fragrant prickly-apple																																			
E	Fringed campion																																			
T	Garber's spurge																																			
E	Garrett's mint																																			
E	Gentian pinkroot						✓																													
T	Godfrey's butterwort			✓																																
E	Harper's beauty																																			
E	Highlands scrub hypericum																											✓								
T	Johnson's seagrass						✓																													
E	Key tree-cactus																																			
E	Lakela's mint																																			

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<b>Plants (continued)</b>																																					
E	Lewton's polygala							✓								✓					✓																
E	Longspurred mint							✓																													
T	Miccosukee gooseberry																																				✓
E	Okeechobee gourd													✓			✓																				
T	Papery whitlow-wort																																				
T	Pigeon wings																																				
C	Pineland sandmat									✓																											
E	Pygmy fringe-tree																✓																				
E	Rugel's pawpaw																																				
C	Sand flax											✓																									✓
E	Sandlace																																				
E	Scrub blazing star																																				
T	Scrub buckwheat																																				
E	Scrub lupine							✓																													
E	Scrub mint									✓																											
E	Scrub plum																																				
E	Short-leaved rosemary																																				
E	Small's milkpea									✓																											
E	Snakeroot																																				
T	Telephus spurge																																				
E	Tiny polygala								✓	✓							✓																				
C	Wedge spurge										✓																										
T	White birds-in-a-nest				✓																																
E	Wide-leaf warca																✓																				
E	Wireweed																																				

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Table 2

FEDERAL THREATENED, ENDANGERED,  
AND OTHER SPECIES OF CONCERN LIKELY TO OCCUR IN  
THE FLORIDA PANHANDLE

Compiled by the U.S. Fish and Wildlife Service November 2012

Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
<b>Amphibians:</b>																				
Florida bog frog	<i>Rana okaloosae</i>	SSC	ce	Palustrine: seepage slope, baygall Riverine: seepage slope, seepage stream												Oka	San		Wal	
Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	T (CH)		Palustrine: wet flatwoods, dome swamp, basin swamp, Terrestrial: mesic flatwoods (reproduces in ephemeral wetlands within this community)				Fra					Jef		Lib			Wak		
Georgia blind salamander	<i>Haideotriton wallacei</i>	SSC	ce	Subterranean: aquatic cave								Jac								
Gopher frog	<i>Rana capito</i>	SSC	ce	Terrestrial: sandhill, scrub, scrubby flatwoods, xeric hammock (reproduces in ephemeral wetlands within these communities)	Bay	Cal		Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib		San	Wak		Was
Reticulated flatwoods salamander	<i>Ambystoma bishopi</i>	E (CH)		Palustrine: wet flatwoods, dome swamp, basin swamp, Terrestrial: mesic flatwoods (reproduces in ephemeral wetlands within this community)	Bay	Cal	Esc			Gul	Hol	Jac				Oka	San		Wal	Was
Striped newt	<i>Notophthalmus perstriatus</i>	C	SSC	Terrestrial: sandhills, scrub, scrubby flatwoods, xeric hammocks, coastal strand										Leo				Wak		
<b>Birds:</b>																				
Arctic peregrine falcon	<i>Falco peregrinus tundrius</i>	ce	E	Estuarine: winters along coasts Lacustrine: various Palustrine: various Terrestrial: various, ruderal	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Bachman's sparrow	<i>Aimophila aestivalis</i>	ce		Terrestrial: various, ruderal	Bay		Esc	Fra		Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was

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This is not an exhaustive list of where species do occur, but a guide to indicate areas that might require surveys if appropriate habitat exists. Please contact Florida Natural Areas Inventory (850-224-8207) for additional species location information.

FEDERAL THREATENED, ENDANGERED,  
AND OTHER SPECIES OF CONCERN LIKELY TO OCCUR IN  
THE FLORIDA PANHANDLE

Compiled by the U.S. Fish and Wildlife Service November 2012

Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Bald eagle	<i>Haliaeetus leucocephalus</i>	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	Bay	Cal	Esc	Fra	Gad	Gul		Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Least tern	<i>Sterna antillarum</i>		T	Estuarine: various Lacustrine: various Riverine: various Terrestrial: beach dune, ruderal. Nests common on rooftops.	Bay		Esc	Fra		Gul			Jef	Leo		Oka	San	Wak	Wal	
Piping plover	<i>Charadrius melodus</i>	T (CH)	T	Estuarine: exposed unconsolidated substrate Marine: exposed unconsolidated substrate Terrestrial: dunes, sandy beaches, and inlet areas. Mostly wintering and migrants.	Bay		Esc	Fra		Gul						Oka	San	Wak	Wal	
Red knot	<i>Calidris canutus</i>	C		Estuarine: exposed unconsolidated substrate Marine: exposed unconsolidated substrate Terrestrial: dunes, sandy beaches, and inlet areas. Mostly wintering and migrants.	Bay		Esc	Fra		Gul			Jef			Oka	San	Wak	Wal	
Red-cockaded woodpecker	<i>Picooides borealis</i>	E		Terrestrial: mature pine forests	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Reddish egret	<i>Egretta rufescens</i>	ce	SSC	Estuarine: tidal swamp, depression marsh, bog, marl prairie, wet prairie Lacustrine: flatwoods/prairie lake, marsh lake Marine: tidal swamp				Fra										Wak		

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Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Southeastern kestrel	<i>Falco sparverius paulus</i>	ce	T	Estuarine: various habitats Palustrine: various habitats Terrestrial: open pine forests, clearings, ruderal, various	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Southeastern snowy plover	<i>Charadrius alexandrinus tenuirostris</i>	ce	T	Estuarine: exposed unconsolidated substrate Marine: exposed unconsolidated substrate Terrestrial: dunes, sandy beaches, and inlet areas	Bay		Esc	Fra		Gul						Oka	San		Wal	
Stoddard's yellow-throated warbler	<i>Dendroica dominica stoddardi</i>	ce		Terrestrial: wooded habitats with spanish moss, various	Bay		Esc									Oka	San		Wal	
Wakulla seaside sparrow	<i>Ammodramus maritimus juncicolus</i>	ce	SSC	Estuarine: tidal marsh Marine: tidal marsh				Fra					Jef					Wak		
Wood stork	<i>Mycteria americana</i>	E	E	Estuarine: marshes Lacustrine: floodplain lakes, marshes (feeding), various Palustrine: marshes, swamps, various	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
<b>Crustaceans:</b>																				
Panama City Crayfish (Econfina crayfish)	<i>Procambarus econfinae</i>	ce	SSC	Palustrine: wet flatwoods; temporary or fluctuating ponds or semipermanently inundated ditches, also ruderal, roadside ditches and utility easements. Associated soil types: Pamlico-Dorovan Complex, Rutlege sand, Osier fine sand, Plummer sand, Pelham sand; some Leon sands.	Bay															
<b>Fish:</b>																				
Blackmouth shiner	<i>Notropis melanostomus</i>	ce	E	Riverine: blackwater stream													San		Wal	

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Bluestripe shiner	<i>Cyprinella callitaenia</i>	ce		Riverine: alluvial stream		Cal			Gad			Jac			Lib					
Crystal darter	<i>Ammocrypta asprella</i>	ce	T	Riverine: alluvial stream			Esc										San			
Gulf sturgeon	<i>Acipenser oxyrinchus desotoi</i>	T (CH)	SSC	Estuarine: various Marine: various habitats Riverine: alluvial and blackwater streams	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Okaloosa darter	<i>Etheostoma okaloosae</i>	T	E	Riverine: seepage stream												Oka			Wal	
<b>Mammals:</b>																				
Choctawhatchee beach mouse	<i>Peromyscus polionotus allophrys</i>	E (CH)	E	Terrestrial: beach dune, coastal scrub	Bay													Oka		
Florida black bear	<i>Ursus americanus floridanus</i>	ce	T	Palustrine: tifi swamps, floodplains Terrestrial: pine and hardwood forests	Bay	Cal	Esc	Fra	Gad	Gul	Hol		Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Florida mouse	<i>Podomys floridanus</i>	ce	SSC	Terrestrial: scrub, sandhill, scrubby flatwoods				Fra												
Gray bat	<i>Myotis grisescens</i>	E	E	Palustrine: caves, various Terrestrial: caves, various							Hol	Jac		Leo						Was
Indiana bat	<i>Myotis sodalis</i>	E	E	Palustrine: various Terrestrial: various										Jac						
Perdido Key beach mouse	<i>Peromyscus polionotus trissyllepsis</i>	E (CH)	E	Terrestrial: beach dune, coastal scrub.					Esc											
Round-tailed muskrat	<i>Neofiber alleni</i>	ce		Estuarine: tidal marsh Lacustrine: marsh lake, flatwoods/prairie lake Palustrine: floodplain marsh, swale, depression marsh, basin marsh				Fra					Jef	Leo	Lib			Wak		
Santa Rosa beach mouse	<i>Peromyscus polionotus leucocephalus</i>	ce		Terrestrial: beach dune, coastal scrub			Esc									Oka	San			

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Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Southeastern big-eared bat	<i>Plecotus rafinesquii</i>	ce		Palustrine: various, floodplains Terrestrial: pine and hardwood forests, ruderal, various		Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Southeastern shrew	<i>Sorex longirostris longirostris</i>	ce	SSC	Palustrine: floodplain forest, floodplain swamp										Leo						
St. Andrew beach mouse	<i>Peromyscus polionotus peninsularis</i>	E (CH)	E	Terrestrial: beach dune, coastal scrub	Bay							Gul								
West Indian manatee	<i>Trichechus manatus latirostris</i>	E	E	Estuarine: submerged vegetation, open water Marine: open water, submerged vegetation Riverine: alluvial stream, blackwater stream, spring-run stream	Bay				Esc	Fra		Gul			Jef			Oka	San	Wak
<b>Mussels:</b>																				
Chipola slabshell	<i>Elliptio chipolaensis</i>	T (CH)		Riverine: main channel of the Chipola River and its larger tributaries in substrate combinations of silt, clay, sand and occasionally gravel. Panhandle drainages: Chipola River		Cal				Gul		Jac								
Choctaw bean	<i>Villosa choctawensis</i>	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			Esc				Hol					Oka	San		Wal	Was
Fat threedge	<i>Amblema neislerii</i>	E (CH)		Riverine: main channels of small to large rivers in slow to moderate currents; fine to medium silty sand, also mixtures of sand, clay, and gravel. Panhandle drainages: Chipola and Apalachicola Rivers		Cal		Fra	Gad	Gul		Jac			Lib					

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Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Fuzzy pigtoe	<i>Pleurobema strodeanum</i>	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			Esc				Hol	Jac				Oka	San		Wal	Was
Gulf moccasinshell	<i>Medionidus penicillatus</i>	E (CH)		Riverine: medium-sized creeks to large rivers with sand and gravel substrates in slow to moderate currents. Panhandle drainages: Econfina Creek and Chipola River	Bay	Cal		Fra	Gad	Gul		Jac			Lib					Was
Narrow pigtoe	<i>Fusconaia escambia</i>	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			Esc									Oka	San			
Ochlockonee moccasinshell	<i>Medionidus simpsonianus</i>	E (CH)		Riverine: large creeks to medium-sized rivers in substrates of sand with some gravel in moderate current. Panhandle drainages: Ochlockonee River (upstream of Lake Talquin)					Gad					Leo	Lib			Wak		
Oval pigtoe	<i>Pleurobema pyriforme</i>	E (CH)		Riverine: medium-sized creeks to small rivers; various substrates; slow to moderate currents. Panhandle drainages: Econfina (Creek), Chipola, Ochlockonee, and Suwannee Rivers	Bay	Cal		Fra	Gad	Gul		Jac		Leo	Lib			Wak		Was

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Purple bankclimber	<i>Elliptioideus sloatianus</i>	T (CH)		Riverine: small to large rivers in sand, sand mixed with mud, or gravel substrates with slow to moderate currents. Panhandle drainages: Chipola, Apalachicola, and Ochlockonee Rivers		Cal		Fra	Gad	Gul		Jac		Leo	Lib			Wak		
Round ebonyshell	<i>Fusconaia rotulata</i>	E (CH)		Riverine: medium-sized rivers 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			Esc										San			
Shinyrayed pocketbook	<i>Hamiota (=Lampsilis) subangulata</i>	E (CH)		Riverine: medium-sized creeks to mainstem rivers in a range of substrates including sand, clay, and gravel with slow to moderate current. Panhandle drainages: Econfinia (Creek), Chipola, and Ochlockonee (upstream of Lake Talquin) Rivers		Cal		Fra	Gad	Gul		Jac		Leo	Lib			Wak		
Southern kidneyshell	<i>Ptychobranchus jonesi</i>	E (CH)		Riverine: small to medium-sized creeks and rivers in sand with some silt or claystone pockets with sand; often near exposed limestone. Panhandle drainages: Escambia and Choctawhatchee Rivers															Wal	Was
Southern sandshell	<i>Hamiota australis</i>	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			Esc				Hol	Jac				Oka	San		Wal	Was

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Tapered pigtoe	<i>Fusconaia burkei</i>	T (CH)		Riverine: Small to medium-sized creeks to large rivers in stable substrates of sand, small gravel, or sandy mud, with slow to moderate current. Panhandle drainages: Choctawhatchee River	Bay						Hol	Jac							Wal	Was
<b>Plants:</b>																				
Alabama anglepod	<i>Matelea alabamensis</i>	ce	E	Terrestrial: bluff, slope forest, upland hardwood forest; on slopes					Gad					Leo	Lib					
Allegheny-spurge	<i>Pachysandra procumbens</i>		E	Terrestrial: upland mixed forest, bluff, calcareous soil								Jac								
Alternate-leaf or pagoda dogwood	<i>Cornus alternifolia</i>		E	Palustrine: creek swamps Terrestrial: slope forest, upland hardwood forest, bluffs	Bay	Cal			Gad					Leo					Wal	
American bladdernut	<i>Staphylea trifolia</i>		E	Palustrine: bottomland forest Terrestrial: upland mixed forest, slope forest; at interface of bluff and floodplain					Gad						Lib					
American chaffseed	<i>Schwalbea americana</i>	E	E	Palustrine: wet prairie Terrestrial: scrub, sandhill, mesic flatwoods					Gad					Leo						
Apalachicola dolls daisy	<i>Boltonia apalachicolensis</i>	ce		Palustrine: Floodplain Forest				Fra		Gul					Lib					Was
Apalachicola rosemary	<i>Conradina glabra</i>	E	E	Terrestrial: sandhill dissected by ravines of the Sweetwater Creek system. Light shade to full sunlight; along edges of ravines, pine plantations, and roadsides.											Lib					
Apalachicola wild indigo	<i>Baptisia megacarpa</i>		E	Palustrine: floodplain forest Terrestrial: upland mixed forest, slope forest	Bay	Cal					Hol	Jac			Lib					Was
Ashe's magnolia	<i>Magnolia ashei</i>		E	Terrestrial: slope and upland hardwood forest,	Bay				Gad			Jac		Leo	Lib	Oka	San	Wak	Wal	Was

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				ravines																
Aster	<i>Aster hemisphericus</i>	ce	E	Terrestrial: upland mixed forest, on sandstone outcrop																Was
Baldwyn's spiny-pod	<i>Matelea baldwyniana</i>	ce	E	Terrestrial: bluff, upland mixed forest, bottomland forest, roadsides; calcareous soil					Gad			Jac								
Baltzell's sedge	<i>Carex baltzellii</i>	ce	T	Terrestrial: slope forest, moist sandy loam; moist sandy loam	Bay	Cal	Esc		Gad					Leo	Lib	Oka	San		Wal	Was
Barbara's buttons	<i>Marshallia obovata</i>		E	Terrestrial: sandhill, upland mixed forest								Jac								
Bear tupelo or Dwarf blackgum	<i>Nyssa ursina</i>	ce								Gul										
Bent golden aster	<i>Pityopsis flexuosa</i>	ce	E	Terrestrial: sandhill, upland pine forest, ruderal	Bay			Fra	Gad	Gul				Leo	Lib				Wak	
Buckthorn	<i>Bumelia lycioides</i>		E	Palustrine: bottomland forest, dome swamp, floodplain forest Terrestrial: upland hardwood forest		Cal			Gad			Jac	Jef		Lib				Wak	
Buckthorn	<i>Bumelia thornei</i>	ce	E	Palustrine: hydric hammock, floodplain swamp			Esc	Fra		Gul		Jac								
Canada honewort	<i>Cryptotaenia canadensis</i>		E	Palustrine: floodplain forest, bottomland forest Riverine: alluvial stream bank		Cal			Gad			Jac			Lib					
Carolina grass-of-parnassus	<i>Parnassia caroliniana</i>	ce	E	Palustrine: seepage slope Terrestrial: mesic flatwoods				Fra							Lib					
Carolina larkspur	<i>Delphinium carolinianum</i>		E	Terrestrial: upland glade, calcareous soil					Gad											
Chapman's butterwort	<i>Pinguicula planifolia</i>	ce	T	Palustrine: wet flatwoods, seepage slopes, bog, dome swamp, ditches; in water	Bay	Cal	Esc	Fra		Gul		Jac		Leo	Lib		San		Wal	Was
Chapman's crownbeard	<i>Verbesina chapmanii</i>	ce	T	Palustrine: seepage slope Terrestrial: mesic flatwoods with wiregrass ( <i>Aristida stricta</i> )	Bay	Cal		Fra		Gul					Lib				Wal	

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Chapman's rhododendron	<i>Rhododendron chapmanii</i>	E	E	Palustrine: seepage slope (titi bog) Terrestrial: mesic flatwoods; ecotone between flatwoods or more xeric longleaf communities and titi bogs.					Gad	Gul					Lib					
Chapman's sedge	<i>Carex chapmanii</i>	ce		Palustrine: hydric hammock, floodplain forest Terrestrial: slope forest									Jef					Wak		
Cooley's meadowrue	<i>Thalictrum cooleyi</i>	E	E	Palustrine: seepage slope, edges of shrub bogs, disturbed areas; one site on Champion International Corp. land															Wal	
Corkwood	<i>Leitneria floridana</i>		T	Estuarine: tidal marsh Palustrine: freshwater tidal swamp, hydric hammock				Fra										Wak		
Croomia	<i>Croomia pauciflora</i>	ce	E	Terrestrial: slope forest					Gad						Lib					
Cruise's golden-aster	<i>Chrysopsis gossypina cruiseana</i>	ce	E	Terrestrial: coastal dunes, coastal strand, coastal grassland; openings and blowouts	Bay		Esc									Oka	San		Wal	
Cucumber magnolia	<i>Magnolia acuminata</i>		E	Terrestrial: slope forest, upland mixed forest							Hol								Wal	
Curtiss' loosestrife	<i>Lythrum curtissii</i>	ce	E	Palustrine: wet flatwoods edges, floodplain swamp, seepage slope, dome swamp edges Terrestrial: seepage slope	Bay	Cal		Fra	Gad					Leo	Lib					
Curtiss' sandgrass	<i>Calamovilfa curtissii</i>	ce	T	Palustrine: mesic and wet flatwoods, wet prairie, depression marsh Terrestrial: mesic flatwoods	Bay		Esc									Oka	San		Wal	
Dark-headed hatpin	<i>Eriocaulon nigrobacteatum</i>	ce		Palustrine: Wet Boggy Seepage slopes, mucky soils	Bay	Cal				Gul										
Decumbant pitcher plant	<i>Sarracenia purpurea</i>		T	Palustrine: Bogs	Bay	Cal	Esc		Gad	Gul	Hol	Jac			Lib	Oka	San		Wal	Was

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Dew-thread	<i>Drosera filifolia</i>		E	Lacustrine: exposed lake bottoms	Bay															Was
Eastern ninebark	<i>Physocarpus opulifolius</i>		E	Riverine: seepage stream banks		Cal						Jac								
False hellebore	<i>Veratrum woodii</i>		E	Terrestrial: slope forest					Gad						Lib					
Florida anise	<i>Illicium floridanum</i>		T	Palustrine: floodplain forest, baygall Riverine: seepage stream bank Terrestrial: slope forest, seepage slope	Bay	Cal	Esc		Gad			Jac			Lib	Oka	San	Wak	Wal	Was
Florida bear-grass	<i>Nolina atopocarpa</i>	ce	T	Terrestrial: mesic flatwoods grassy areas				Fra							Lib					
Florida pondweed	<i>Potamogeton floridanus</i>	ce		Riverine: blackwater stream			Esc										San			
Florida skullcap	<i>Scutellaria floridana</i>	T	E	Palustrine: seepage slope, wet flatwoods, grassy openings Terrestrial: mesic flatwoods	Bay			Fra		Gul					Lib					
Florida spiny-pod	<i>Matelea floridana</i>	ce	E	Terrestrial: upland mixed forest, upland hardwood forest								Jac			Lib					
Florida torreyia	<i>Torreya taxifolia</i>	E	E	Terrestrial: slope forest, upland mixed forest, and ravines.					Gad			Jac			Lib					
Florida willow	<i>Salix floridana</i>	ce	E	Palustrine: hydric hammock, bottomland forest Riverine: spring-run stream margins								Jac	Jef							
Florida yew	<i>Taxus floridana</i>	ce	E	Palustrine: dome swamp Terrestrial: slope forest					Gad						Lib					Was
Flyr's brickell-bush	<i>Brickellia cordifolia</i>	ce	E	Terrestrial: upland hardwood forest, near streams					Gad			Jac	Jef	Leo				Wak		
Fringed campion	<i>Silene polypetala</i>	E	E	Terrestrial: upland mixed forest, slope forest, and along utility corridors in appropriate habitats.					Gad			Jac								
Gentian pinkroot	<i>Spigelia gentianoides</i>	E	E	Terrestrial: mixed hardwood forest; rich humus		Cal			Gad			Jac			Lib					Was

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Giant water-dropwort	<i>Oxypolis filiformis greenmanii</i>		E	Palustrine: dome swamp, wet flatwoods, ditches; in water	Bay	Cal				Gul										
Godfrey's spiderlily	<i>Hymenocallis godfreyi</i>	ce		Estuarine: Brackish Marshes														Wak		
Godfrey's (violet) butterwort	<i>Pinguicula ionantha</i>	T	E	Palustrine: wet flatwoods, wet prairie, bog; in shallow water Riverine: seepage slope; in shallow water. Also, roadside ditches and similar habitat.	Bay	Cal		Fra		Gul					Lib			Wak		
Godfrey's blazing star	<i>Liatris provincialis</i>	ce	E	Terrestrial: sandhill, scrub, coastal grassland; disturbed areas				Fra										Wak		
Green adder's-mouth	<i>Malaxis unifolia</i>		E	Palustrine: floodplain forest Terrestrial: slope forest, upland mixed forest								Jac		Leo	Lib			Wak		
Green violet	<i>Hybanthus concolor</i>		E	Terrestrial: slope forest, upland mixed forest					Gad											
Gulf coast lupine	<i>Lupinus westianus</i>	ce	T	Terrestrial: beach dune, scrub, disturbed areas, roadsides, blowouts in dunes	Bay		Esc	Fra		Gul						Oka	San		Wal	Was
Gulf sweet pitcherplant	<i>Sarracenia rubra ssp. gulfensis</i>	ce																	Wal	Was
Hairy fever tree	<i>Pinckneya bracteata</i>		T	Palustrine: creek swamps, titi swamps, bogs	Bay							Jac								
Harper's beauty	<i>Harperocallis flava</i>	E	E	Palustrine: wet prairie, seepage slope, roadsides, edges of titi swamps	Bay	Cal		Fra		Gul					Lib					
Harper's grooved yellow flax	<i>Linum sulcatum var harperi</i>	ce		Palustrine: wet flatwoods Terrestrial: mesic flatwoods; in site-prepped areas				Fra		Gul					Lib					
Harper's yellow-eyed grass	<i>Xyris scabrifolia</i>	ce	T	Palustrine: seepage slope, wet prairie, bogs	Bay	Cal	Esc	Fra		Gul					Lib					Was
Heartleaf	<i>Hexastylis arifolia</i>		T	Riverine: seepage stream bank Terrestrial: slope forest			Esc						Jef	Leo	Lib	Oka	San		Wal	Was

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Heart-leaved willow	<i>Salix eriocephala</i>		E	Palustrine: floodplain swamp, alluvial woodlands					Gad			Jac		Leo						
Hooded pitcher plant	<i>Sarracenia minor</i>		T	Palustrine: wet flatwoods, wet prairie, seepage slope				Fra	Gad	Gul			Jef	Leo				Wak		
Hummingbird flower	<i>Macranthera flammea</i>		E	Palustrine: seepage slope, dome swamp edges, floodplain swamps Riverine: seepage stream banks Terrestrial: seepage slopes	Bay	Cal	Esc	Fra				Jac		Leo	Lib	Oka	San		Wal	
Indian cucumber-root	<i>Medeola virginiana</i>		E	Palustrine: bottomland forest Terrestrial: bottomland forest					Gad					Leo			San			
Karst pond xyris	<i>Xyris longisepala</i>		E	Lacustrine: sandhill upland lake margins	Bay					?				Leo		?			Wal	?
Lace-lip	<i>Spiranthes laciniata</i>		T	Palustrine: wet flatwoods	Bay															
Large whorled pogonia	<i>Isotria verticillata</i>		E	Terrestrial: slope forest					Gad											Was
Large-flowered grass-of-parnassus	<i>Parnassia grandifolia</i>		E	Palustrine: dome swamp margins, seepage slope Riverine: blackwater stream, spring-run stream edge Terrestrial: mesic flatwoods				Fra							Lib					
Large-leaved jointweed	<i>Polygonella macrophylla</i>	ce	T	Terrestrial: scrub, sand pine/oak scrub ridges	Bay		Esc	Fra								Oka	San	Wak	Wal	
Little people	<i>Lepuropetalon spathulatum</i>		E	Terrestrial: upland glade, moist soil					Gad											
Marianna columbine	<i>Aquilegia canadensis var australis</i>	ce	E	Palustrine: floodplain forest Terrestrial: bluff; soil over limestone								Jac			Lib					Was
Meadowbeauty	<i>Rhexia parviflora</i>	ce	E	Palustrine: dome swamp margin, seepage slope, depression marsh; on slopes; with hypericum	Bay	Cal		Fra		Gul					Lib	Oka				

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Mexican tear-thumb	<i>Polygonum meisnerianum</i>		E	Lacustrine: clastic upland lakes, sandhill upland lake, sinkhole lake Palustrine: floodplain forests; shallow water at edge									Jef	Leo						
Miccosukee gooseberry	<i>Ribes echinellum</i>	T	E	Terrestrial: upland mixed forest, upland hardwood forest. Only known sites along east bank of Lake Miccosukee.					Gad				Jef							
Mountain laurel	<i>Kalmia latifolia</i>		T	Riverine: seepage stream bank Terrestrial: slope forest, seepage stream banks	Bay	Cal	Esc		Gad		Hol	Jac		Leo	Lib	Oka	San		Wal	Was
Narrow-leaved trillium	<i>Trillium lancifolium</i>		E	Palustrine: bottomland forest Terrestrial: upland mixed forest, slope forest					Gad			Jac			Lib					
Nettle-leaved sage	<i>Salvia urticifolia</i>		E	Terrestrial: upland glade					Gad			Jac								
Northern prickly ash	<i>Zanthoxylum americanum</i>		E	Terrestrial: slope forest; calcareous soils					Gad			Jac								
Nuttall's rayless goldenrod	<i>Bigelovia nutallii</i>		E	Riverine: seepage stream banks Terrestrial: scrub, upland pine forest - sandstone outcrops																Was
Orange azalea	<i>Rhododendron austrinum</i>		E	Palustrine: bottomland forest Riverine: seepage stream bank Terrestrial: slope forest, upland mixed forest		Cal	Esc		Gad		Hol	Jac		Leo	Lib	Oka	San		Wal	Was
Panhandle lily	<i>Lilium iridollae</i>	ce	E	Palustrine: baygall, dome swamp edges, mucky soil, seepage slope, edges of titi bogs, Riverine: blackwater stream banks			Esc							Leo		Oka	San		Wal	
Panhandle Meadow-beauty	<i>Rhexia salicifolia</i>	ce			Bay	Cal								Leo		Oka		Wak	Wal	Was

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Panhandle spiderlily	<i>Hymenocallis henryae</i>	ce	E	Palustrine: dome swamp edges, wet prairie, wet flatwoods, baygall edges, swamp edges Terrestrial: wet prairies and flatwoods	Bay			Fra		Gul					Lib				Wal	
Papery whitlow-wort	<i>Paronychia chartacea minima</i>	T	E	Terrestrial: Karst sandhill lake margins	Bay							Jac								Was
Parrot pitcher plant	<i>Sarracenia psittacina</i>		T	Palustrine: wet flatwoods, wet prairie, seepage slope	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac			Lib	Oka	San	Wak	Wal	Was
Perforate reindeer lichen	<i>Cladonia perforata</i>	E	E	Terrestrial: coastal strand, rosemary scrub; full sun. Sites: Eglin AFB Santa Rosa/Okaloosa Island.												Oka	San			
Pine-woods aster	<i>Eurybia spinulosus</i>	ce	E	Palustrine: seepage slope Terrestrial: sandhill, scrubby and mesic flatwoods	Bay	Cal		Fra		Gul										Was
Pondspice	<i>Litsea aestivalis</i>	ce	E	Palustrine: hydric hammock, baygall, dome swamp; on peaty soils												Oka				
Primrose-flower butterwort	<i>Pinguicula primulifolia</i>		E	Palustrine: bogs, pond margins, margins of spring runs	Bay		Esc				Hol					Oka	San		Wal	Was
Purple cliff brake	<i>Pellaea atropurpurea</i>		E	Terrestrial: upland glade								Jac							Wal	Was
Pyramid magnolia	<i>Magnolia pyramidata</i>		E	Terrestrial: slope forest	Bay	Cal			Gad			Jac		Leo	Lib	Oka	San		Wal	Was
Quillwort yellow-eyed grass	<i>Xyris isoetifolia</i>	ce		Lacustrine: sandhill upland lake margins Palustrine: wet flatwoods, wet prairie	Bay					Gul										Was
Red-flowered pitcher plant	<i>Sarracenia rubra</i>		T	Palustrine: bog, wet prairie, seepage slope, wet flatwoods Riverine: seepage stream banks			Esc									Oka	San		Wal	
Rosebud orchid or spreading pagonia	<i>Cleistes divaricata</i>		T	Palustrine: wet flatwoods	Bay															

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FEDERAL THREATENED, ENDANGERED,  
AND OTHER SPECIES OF CONCERN LIKELY TO OCCUR IN  
THE FLORIDA PANHANDLE

Compiled by the U.S. Fish and Wildlife Service November 2012

Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Rue anemone	<i>Thalictrum thalictroides</i>		T	Terrestrial: bluff, slope forest; on limestone					Gad			Jac		Leo						
Scare-weed	<i>Baptisia simplicifolia</i>	ce	T	Terrestrial: mesic flatwoods, sandhill; on disturbed sites				Fra	Gad					Leo	Lib			Wak		
Shade betony	<i>Stachys crenata</i>		E	Terrestrial: upland glades, calcareous soils					Gad											
Shooting star	<i>Dodecatheon meadia</i>		E	Terrestrial: upland glade, upland mixed forest					Gad											
Sicklepod	<i>Arabis canadensis</i>		E	Terrestrial: upland mixed forest, limestone outcrops								Jac			Lib					
Silky camellia	<i>Stewartia malacodendron</i>		E	Palustrine: baygall Palustrine: slope forest, upland mixed forest, Terrestrial: slope forest, upland mixed forest; acid soils	Bay	Cal	Esc		Gad						Lib	Oka	San		Wal	Was
Smooth-barked St. John's wort	<i>Hypericum lissophloeus</i>	ce	E	Lacustrine: sandhill upland lake margins Terrestrial: sandhill upland lake margins	Bay														?	Was
Snowy orchid	<i>Platanthera nivea</i>		T	Palustrine: bogs	Bay	Cal				Gul		Jac		Leo				Wak	Wal	Was
Southern lip fern	<i>Cheilanthes microphylla</i>		E	Terrestrial: upland mixed forest, shell mound, rockland hammock; on limestone																Was
Southern marshallia	<i>Marshallia ramosa</i>		E	Terrestrial: upland pine forest, with wiregrass ( <i>Aristida stricta</i> )																Was
Southern milkweed	<i>Asclepias viridula</i>	ce	T	Palustrine: wet prairie, seepage slope edges Riverine: seepage stream banks Terrestrial: mesic flatwoods, drainage ditches	Bay			Fra		Gul			Jef		Lib			Wak	Wal	Was
Southern red lily	<i>Lilium catesbaei</i>		T	Palustrine: wet prairie, wet flatwoods, seepage slope Terrestrial: mesic flatwoods, seepage slope; usually with grasses	Bay	Cal	Esc	Fra	Gad	Gul		Jac			Lib		San	Wak	Wal	Was

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Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Spoon-leaved sundew	<i>Drosera intermedia</i>		T	Lacustrine: sinkhole lake edges Palustrine: seepage slope, wet flatwoods, depression marsh Riverine: seepage stream banks, drainage ditches	Bay	Cal	Esc	Fra		Gul				Leo		Oka	San		Wal	
St. John's-susan	<i>Rudbeckia nitida</i>	ce	E	Palustrine: wet flatwoods and prairies, roadside ditches	Bay															
Sweet shrub	<i>Calycanthus floridus</i>		E	Terrestrial: upland hardwood forest, slope forest, bluffs Palustrine: bottomland forest, stream banks, floodplains	Bay		Esc	Fra	Gad			Jac			Lib	Oka	San		Wal	
Telephus spurge	<i>Euphorbia telephioides</i>	T	E	Terrestrial: mesic flatwoods; disturbed wiregrass ( <i>Aristida stricta</i> ) areas, coastal scrub. All known sites are within 4 miles of Gulf of Mexico.	Bay			Fra		Gul										
Thick-leaved water willow	<i>Justicia crassifolia</i>	ce	E	Palustrine: dome swamp, seepage slope Terrestrial: mesic flatwoods	Bay			Fra		Gul										
Trailing arbutus	<i>Epigaea repens</i>		E	Terrestrial: bluff, slope forest, mixed hardwood forest			Esc		Gad						Lib	Oka	San			
Tropical waxweed	<i>Cuphea aspera</i>	ce		Palustrine: wet prairie, seepage slope Terrestrial: mesic flatwoods		Cal		Fra		Gul										
Trout lily	<i>Erythronium umbilicatum</i>		E	Terrestrial: slope forest, bluff					Gad					Leo						
Washington thorn	<i>Crataegus phaenopyrum</i>		E	Palustrine: basin swamp, basin marsh, edges of wet areas											Lib			Wak		Was
West Florida cow-lily	<i>Nuphar ulvacea</i>	ce				Cal	Esc					Jac				Oka	San			Was
West's flax	<i>Linum westii</i>	ce	E	Palustrine: dome swamp, depression marsh, wet flatwoods, wet prairie, pond margins	?	Cal		Fra		Gul		Jac			Lib	Oka				

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Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
White birds-in-a-nest	<i>Macbridea alba</i>	T	E	Palustrine: seepage slope Terrestrial: grassy mesic pine flatwoods, savannahs, roadsides, and similar habitat.	Bay			Fra		Gul					Lib					
White Indian Plantain	<i>Amoglossum album</i>	ce		Palustrine: wet flatwoods	Bay					Gul										
White-top pitcher plant	<i>Sarracenia leucophylla</i>	ce	E	Palustrine: wet prairie, seepage slope, baygall edges, ditches	Bay	Cal	Esc	Fra		Gul	Hol				Lib	Oka	San		Wal	
Wild coco	<i>Pteroglossaspis ecristata</i>	ce	T	Terrestrial: pine rockland, upland hardwood forest, scrubby flatwoods, mesic flatwoods; on moist sand											Lib			Wak		
Wild hydrangea	<i>Hydrangea arborescens</i>		E	Terrestrial: bluff											Lib				Wal	
Wiregrass gentian	<i>Gentiana pennelliana</i>	ce	E	Palustrine: seepage slope, wet prairie, roadside ditches Terrestrial: mesic flatwoods, planted slash pine	Bay	Cal		Fra	Gad	Gul				Leo	Lib			Wak	Wal	
Wood's poppy-mallow	<i>Callirhoe papaver</i>		E	Terrestrial: upland mixed forest, roadsides; edge or understory					Gad			Jac		Leo						
Yellow butterwort	<i>Pinguicula lutea</i>		T	Palustrine: flatwoods, bogs	Bay			Fra		Gul			Jef			Oka		Wak	Wal	
Yellow fringed orchid	<i>Platanthera ciliaris</i>		T	Palustrine: bogs, wet flatwoods Terrestrial: Bluff	Bay	Cal	Esc			Gul	Hol	Jac			Lib	Oka	San		Wal	Was
Yellow fringeless orchid	<i>Platanthera integra</i>	ce	E	Palustrine: wet prairie, seepage slope Terrestrial: mesic flatwoods	Bay	Cal	Esc	Fra		Gul		Jac			Lib	Oka	San	Wak	Wal	Was
Yellow-root	<i>Xanthorhiza simplicissima</i>		E	Riverine: seepage stream; sandy banks					Gad			Jac					San		Wal	
<b>Reptiles:</b>																				
Alligator snapping turtle	<i>Macrolemys temminckii</i>	ce	SSC	Estuarine: tidal marsh Lacustrine: river floodplain lake, swamp lake Riverine: alluvial stream, blackwater	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was

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Common Name	Scientific Name	FWS Status	State Status	Natural Communities	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jack	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
				stream																
Barbour's map turtle	<i>Graptemys barbouri</i>	ce	SSC	Palustrine: floodplain stream, floodplain swamp Riverine: alluvial stream		Cal		Fra	Gad	Gul		Jac			Lib					
Eastern indigo snake	<i>Drymarchon couperi</i>	T	T	Estuarine: tidal swamp Palustrine: hydric hammock, wet flatwoods Terrestrial: mesic flatwoods, upland pine forest, sandhills, scrub, scrubby flatwoods, rockland hammock, ruderal	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>	ce	SSC	Lacustrine: ruderal, sandhill upland lake Terrestrial: sandhill, scrubby flatwoods, xeric hammock, ruderal	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac		Leo	Lib	Oka	San	Wak	Wal	
Gopher tortoise	<i>Gopherus polyphemus</i>	C	SSC	Terrestrial: sandhills, scrub, scrubby flatwoods, xeric hammocks, coastal strand, ruderal	Bay	Cal	Esc	Fra	Gad	Gul	Hol	Jac	Jef	Leo	Lib	Oka	San	Wak	Wal	Was
Green turtle	<i>Chelonia mydas</i>	E	E	Terrestrial: sandy beaches; nesting	Bay		Esc	Fra		Gul						Oka	San		Wal	
Hawksbill turtle	<i>Eretmochelys imbricata imbricata</i>	E	E	Marine: open water; no nesting	Bay		Esc	Fra		Gul			Jef			Oka	San	Wak	Wal	
Kemp's ridley turtle	<i>Lepidochelys kempii</i>	E	E	Terrestrial: sandy beaches; nesting	Bay		Esc	Fra		Gul						Oka	San		Wal	
Leatherback turtle	<i>Dermochelys coriacea</i>	E	E	Terrestrial: sandy beaches; nesting	Bay		Esc	Fra		Gul						Oka	San		Wal	
Loggerhead turtle	<i>Caretta caretta</i>	T	T	Terrestrial: sandy beaches; nesting	Bay		Esc	Fra		Gul						Oka	San		Wal	

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**Table 3**  
**Federally Listed Species in Florida**  
**Consultation for SAJ-14 - SAJ-2005-09981 - Subaqueous Utility and Transmission Lines**

<i>Finding</i>	<i>Agency</i>	<i>Status</i>	<i>Species Listing</i>	
<b>MAMMALS</b>				
NE	FWS	E	<i>Myotis grisescens</i>	Bat, Grey
NE	FWS	E	<i>Odocoileus virginianus clavium</i>	Deer, Key
MANLAA	FWS*	E	<i>Trichechus manatus</i>	Manatee, West Indian
MANLAA	FWS	E	<i>Peromyscus polionotus phasma</i>	Mouse, Anastasia Island Beach
MANLAA	FWS*	E	<i>Peromyscus polionotus allopkyrs</i>	Mouse, Choctawhatchee Beach
NE	FWS	E	<i>Peromyscus gossypinus allapaticola</i>	Mouse, Key Largo Cotton
MANLAA	FWS*	E	<i>Peromyscus polionotus trissyllepsis</i>	Mouse, Perdido Key Beach
MANLAA	FWS	T	<i>Peromyscus polionotus niveiventris</i>	Mouse, Southeastern Beach
MANLAA	FWS*	E	<i>Peromyscus polionotus peninsularis</i>	Mouse, St. Andrew Beach
MANLAA	FWS	E	<i>Puma concolor coryi</i>	Panther, Florida
NE	FWS	E	<i>Sylvilagus palustris hefneri</i>	Rabbit, Lower Keys Marsh
NE	FWS*	E	<i>Oryzomys palustris natator</i>	Rice Rat (Lower FL Keys)
NE	FWS	E	<i>Microtus pennsylvanicus dukecampbelli</i>	Vole, Florida Salt Marsh
NE	NMFS	E	<i>Balaenoptera musculus</i>	Whale, Blue
NE	NMFS	E	<i>Balaenoptera physalus</i>	Whale, Finback
NE	NMFS	E	<i>Megaptera novaeangliae</i>	Whale, Humpback
MANLAA	NMFS*	E	<i>Eubalaena glacialis</i>	Whale, Right
NE	NMFS	E	<i>Balaenoptera borealis</i>	Whale, Sei
NE	NMFS	E	<i>Physeter macrocephalus</i>	Whale, Sperm
NE	FWS	E	<i>Canis rufus</i>	Wolf, Red
NE	FWS	E	<i>Neotoma floridana smalli</i>	Woodrat, Key Largo
<b>BIRDS</b>				
MANLAA	FWS	T	<i>Polyborus plancus audubonii</i>	Caracara, Audubon's Crested
MANLAA	FWS	T	<i>Aphelocoma coerulescens</i>	Jay, Florida Scrub
MANLAA	FWS*	E	<i>Rostrhamus sociabilis plumbeus</i>	Kite, Everglade Snail
MANLAA	FWS*	T	<i>Charadrius melodus</i>	Plover, Piping
MANLAA	FWS	E	<i>Ammodramus(=Ammospiza) maritimus mirabilis</i>	Sparrow, Cape Sable Seaside
MANLAA	FWS	E	<i>Ammodramus savannarum floridanus</i>	Sparrow, Florida Grasshopper
MANLAA	FWS	E	<i>Mycteria americana</i>	Stork, Wood
MANLAA	FWS	T	<i>Sterna dougallii dougallii</i>	Tern, Roseate
MANLAA	FWS	E	<i>Vermivora bachmanii</i>	Warbler, Bachman's
MANLAA	FWS	E	<i>Dendroica kirtlandii</i>	Warbler, Kirtland's
MANLAA	FWS	E	<i>Picoides borealis</i>	Woodpecker, Red-cockaded
<b>REPTILES &amp; AMPHIBIANS</b>				
MANLAA	FWS*	E	<i>Crocodylus acutus</i>	Crocodile, American
MANLAA	FWS*	T	<i>Ambystoma cingulatum</i>	Salamander, Frosted Flatwoods
MANLAA	FWS*	E	<i>Ambystoma bishopi</i>	Salamander, Reticulated Flatwoods
MANLAA	NMFS/FWS	E	<i>Chelonia mydas</i>	Sea Turtle, Green
MANLAA	NMFS/FWS	E	<i>Eretmochelys imbricata</i>	Sea Turtle, Hawksbill
MANLAA	NMFS/FWS	E	<i>Lepidochelys kempii</i>	Sea Turtle, Kemp's ridley
MANLAA	NMFS/FWS	E	<i>Dermochelys coriacea</i>	Sea turtle, Leatherback

MANLAA	NMFS/FWS	T	<i>Caretta caretta</i>	Sea Turtle, Loggerhead
MANLAA	FWS	T	<i>Eumeces egregius lividus</i>	Skink, Bluetail Mole
MANLAA	FWS	T	<i>Neoseps reynoldsi</i>	Skink, Sand
MANLAA	FWS	T	<i>Nerodia clarkii taeniata</i>	Snake, Atlantic Salt Marsh
MANLAA	FWS	T	<i>Drymarchon corais couperi</i>	Snake, Eastern Indigo
			<b>FISH</b>	
MANLAA	FWS	T	<i>Etheostoma okaloosae</i>	Darter, Okaloosa
MANLAA	NMFS*	E	<i>Pristis pectinata</i>	Sawfish, Smalltooth
MANLAA	NMFS*	E	<i>Acipenser oxyrinchus</i>	Sturgeon, Atlantic
MANLAA	NMFS/FWS*	T	<i>Acipenser oxyrinchus desotoi</i>	Sturgeon, Gulf
MANLAA	NMFS	E	<i>Acipenser brevirostrum</i>	Sturgeon, Shortnose
			<b>INVERTEBRATES</b>	
MANLAA	FWS*	T	<i>Elliptoideus sloatianus</i>	Bankclimber, Purple
MANLAA	FWS	E	<i>Heraclides aristodemus ponceanus</i>	Butterfly, Schaus Swallowtail
MANLAA	NMFS*	T	<i>Acropora palmata</i>	Coral, Elkhorn
MANLAA	NMFS*	T	<i>Acropora cervicornis</i>	Coral, Staghorn
MANLAA	FWS*	E	<i>Medionidus penicillatus</i>	Moccasinshell, Gulf
MANLAA	FWS*	E	<i>Medionidus simpsonianus</i>	Moccasinshell, Ochlockonee
MANLAA	FWS*	E	<i>Pleurobema pyriforme</i>	Pigtoe, Oval
MANLAA	FWS*	E	<i>Lampsilis subangulata</i>	Pocketbook, Shinyrayed
MANLAA	FWS	T	<i>Palaemonetes cummingsi</i>	Shrimp, Squirrel Chimney Cave
MANLAA	FWS*	T	<i>Elliptio chipolaensis</i>	Slabshell, Chipola
NE	FWS	T	<i>Orthalicus reses</i>	Snail, Stock Island Tree
MANLAA	FWS*	E	<i>Amblema neislerii</i>	Three-ridge, Fat
			<b>PLANTS</b>	
MANLAA	FWS	E	<i>Chrysopsis floridana</i>	Aster, Florida Golden
MANLAA	FWS	E	<i>Nolina brittoniana</i>	Beargrass, Britton's
MANLAA	FWS	E	<i>Harperocallis flava</i>	Beauty, Harper's
MANLAA	FWS	E	<i>Campanula robiniae</i>	Bellflower, Brooksville
MANLAA	FWS	T	<i>Macbridea alba</i>	Birds-in-a-nest, White
MANLAA	FWS	E	<i>Liatris ohlingerae</i>	Blazingstar, Scrub
MANLAA	FWS	T	<i>Bonamia grandiflora</i>	Bonamia, Florida
MANLAA	FWS	T	<i>Eriogonum longifolium gnaphalifolium</i>	Buckwheat, Scrub
MANLAA	FWS	T	<i>Pinguicula ionantha</i>	Butterwort, Godfrey's
NE	FWS	E	<i>Pilosocereus robinii</i>	Cactus, Key tree
MANLAA	FWS	E	<i>Silene polypetala</i>	Campion, Fringed
MANLAA	FWS	E	<i>Schwalbea americana</i>	Chaffseed, American
MANLAA	FWS	E	<i>Cladonia perforata</i>	Cladonia, Florida Perforate
MANLAA	FWS	E	<i>Chionanthus pygmaeus</i>	Fringe-tree, Pygmy
MANLAA	FWS	T	<i>Ribes echinellum</i>	Gooseberry, Miccosukee
MANLAA	FWS	E	<i>Cucurbita okeechobeensis okeechobeensis</i>	Gourd, Okeechobee
MANLAA	FWS	E	<i>Crotalaria avonensis</i>	Harebells, Avon Park
MANLAA	FWS	E	<i>Hypericum cumulicola</i>	Hypericum, Highlands Scrub
MANLAA	FWS	E	<i>Jacquemontia reclinata</i>	Jacquemontia, Beach
MANLAA	FWS	E	<i>Amorpha crenulata</i>	Lead-plant, Crenulate

MANLAA	FWS	E	<i>Lupinus aridorum</i>	Lupine, Scrub
MANLAA	FWS	E	<i>Thalictrum cooleyi</i>	Meadowrue, Cooley's
MANLAA	FWS	E	<i>Galactia smallii</i>	Milkpea, Small's
MANLAA	FWS	E	<i>Dicerandra christmanii</i>	Mint, Garrett's
MANLAA	FWS	E	<i>Dicerandra immaculata</i>	Mint, Lakela's
MANLAA	FWS	E	<i>Dicerandra cornutissima</i>	Mint, Longspurred
MANLAA	FWS	E	<i>Dicerandra frutescens</i>	Mint, Scrub
MANLAA	FWS	E	<i>Warea carteri</i>	Mustard, Carter's
MANLAA	FWS	E	<i>Deeringothamnus pulchellus</i>	Pawpaw, Beautiful
MANLAA	FWS	E	<i>Asimina tetramera</i>	Pawpaw, Four-petal
MANLAA	FWS	E	<i>Deeringothamnus rugelii</i>	Pawpaw, Rugel's
MANLAA	FWS	T	<i>Clitoria fragrans</i>	Pigeon Wings
MANLAA	FWS	E	<i>Spigelia gentianoides</i>	Pinkroot, Gentian
MANLAA	FWS	E	<i>Prunus geniculata</i>	Plum, Scrub
MANLAA	FWS	E	<i>Polygala lewtonii</i>	Polygala, Lewton's
MANLAA	FWS	E	<i>Polygala smallii</i>	Polygala, Tiny
MANLAA	FWS	E	<i>Cereus eriophorus fragrans</i>	Prickly-apple, fragrant
MANLAA	FWS	E	<i>Rhododendron chapmanii</i>	Rhododendron, Chapman
MANLAA	FWS	E	<i>Conradina glabra</i>	Rosemary, Apalachicola
MANLAA	FWS	E	<i>Conradina etonia</i>	Rosemary, Etonia
MANLAA	FWS	E	<i>Conradina brevifolia</i>	Rosemary, Short-leaved
MANLAA	FWS	E	<i>Polygonella myriophylla</i>	Sandlace
MANLAA	NMFS*	T	<i>Halophila johnsonii</i>	Seagrass, Johnson's
MANLAA	FWS	T	<i>Scutellaria floridana</i>	Skullcap, Florida
MANLAA	FWS	E	<i>Eryngium cuneifolium</i>	Snakeroot
MANLAA	FWS	E	<i>Chamaesyce deltoidea deltoidea</i>	Spurge, Deltoid
MANLAA	FWS	T	<i>Chamaesyce garberi</i>	Spurge, Garber's
MANLAA	FWS	T	<i>Euphorbia telephioides</i>	Spurge, Telephus
MANLAA	FWS	E	<i>Torreya taxifolia goveniana</i>	Torreya, Florida
MANLAA	FWS	E	<i>Warea amplexifolia</i>	Warea, Wide-leaf
MANLAA	FWS	E	<i>Justicia cooleyi</i>	Water-willow, Cooley's
MANLAA	FWS	T	<i>Paronychia chartacea</i>	Whitlow-wort, Papery
MANLAA	FWS	E	<i>Polygonella basiramia</i>	Wireweed
MANLAA	FWS	E	<i>Ziziphus celata</i>	Ziziphus, Florida

\*Finding also applies to Designated Critical Habitat  
MANLAA – may affect not likely to adversely affect  
NE – no effect



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960



January 25, 2010

David S. Hobbie  
Chief, Regulatory Division  
Jacksonville District Corps of Engineers  
Post Office Box 4970  
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2007-FA-1494  
Service Consultation Code: 41420-2007-I-0964  
Subject: South Florida Programmatic  
Concurrence  
Species: Wood Stork

Dear Mr. Hobbie:

The Fish and Wildlife Service's (Service) South Florida Ecological Services Office (SFESO) and the U.S. Army Corps of Engineers Jacksonville District (Corps) have been working together to improve the consultation process for federally listed species associated with the Corps' wetland permitting program. The Service provided letters to the Corps dated March 23, 2007, and October 18, 2007, in response to a request for a multi-county programmatic concurrence with a criteria-based determination of "may affect, not likely to adversely affect" (NLAA) for the threatened eastern indigo snake (*Drymarchon corais couperi*) and the endangered wood stork (*Mycteria americana*) for projects involving freshwater wetland impacts within specified Florida counties. In our letters, we provided effect determination keys for these two federally listed species, with specific criteria for the Service to concur with a determination of NLAA.

The Service has revisited these keys recently and believes new information provides cause to revise these keys. Specifically, the new information relates to foraging efficiencies and prey base assessments for the wood stork and permitting requirements for the eastern indigo snake. This letter addresses the wood stork key and is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). The eastern indigo snake key will be provided in a separate letter.

### **Wood stork**

#### Habitat

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically construct their nests in medium to tall trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those



that have limited human disturbance and low exposure to land-based predators. Nesting colonies protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

Successful nesting generally involves combinations of average or above-average rainfall during the summer rainy season and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes, which maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging sites, a variety of wetland types should be present, with both short and long hydroperiods. The Service (1999) describes a short hydroperiod as a 1 to 5-month wet/dry cycle, and a long hydroperiod as greater than 5 months. During the wet season, wood storks generally feed in the shallow water of the short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry-down (though usually retaining some surface water throughout the dry season).

Wood storks occur in a wide variety of wetland habitats. Typical foraging sites for the wood stork include freshwater marshes and stock ponds, shallow, seasonally flooded roadside and agricultural ditches, narrow tidal creeks and shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Through tactolocation, or grope feeding, wood storks in south Florida feed almost exclusively on fish between 2 and 25 centimeters [cm] (1 and 10 inches) in length (Ogden et al. 1976). Good foraging conditions are characterized by water that is relatively calm, uncluttered by dense thickets of aquatic vegetation, and having a water depth between 5 and 38 cm (5 and 15 inches) deep, although wood storks may forage in other wetlands. Ideally, preferred foraging wetlands would include a mosaic of emergent and shallow open-water areas. The emergent component provides nursery habitat for small fish, frogs, and other aquatic prey and the shallow, open-water areas provide sites for concentration of the prey during seasonal dry-down of the wetland.

### Conservation Measures

The Service routinely concurs with the Corps' "may affect, not likely to adversely affect" determination for individual project effects to the wood stork when project effects are insignificant due to scope or location, or if assurances are given that wetland impacts have been avoided, minimized, and adequately compensated such that there is no net loss in foraging potential. We utilize our *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service 1990) (Appendix 1) (HMG) in project evaluation. The HMG is currently under review and once final will replace the enclosed HGM. There is no designated critical habitat for the wood stork.

The SFESO recognizes a 29.9 kilometer [km] (18.6-mile) core foraging area (CFA) around all known wood stork colonies in south Florida. Appendix 2 (to be updated as necessary) provides locations of colonies and their CFAs in south Florida that have been documented as active within the last 10 years. The Service believes loss of suitable wetlands within these CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, we recommend compensation be provided for impacts to foraging habitat. The compensation should consider wetland type, location, function, and value (hydrology, vegetation, prey utilization) to ensure that wetland functions lost due to the project are adequately offset. Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected wood stork colonies. The Service may accept, under special circumstances, wetland compensation located outside the CFAs of the affected wood stork nesting colonies. On occasion, wetland credits purchased from a "Service Approved" mitigation bank located outside the CFAs could be acceptable to the Service, depending on location of impacted wetlands relative to the permitted service area of the bank, and whether or not the bank has wetlands having the same hydroperiod as the impacted wetland.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing the Wood Stork Effect Determination Key below. If the use of this key results in a Corps determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination<sup>1</sup>. This Key is subject to revisitation as the Corps and Service deem necessary.

The Key is as follows:

- A. Project within 0.76 km (0.47 mile)<sup>2</sup> of an active colony site<sup>3</sup> ..... "may affect"<sup>4</sup>
  - Project impacts Suitable Foraging Habitat (SFH) at a location greater than 0.76 km (0.47 mile) from a colony site..... "go to B"
  - Project does not affect SFH<sup>5</sup> ..... "no effect".

<sup>1</sup> With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

<sup>2</sup> Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

<sup>3</sup> An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

<sup>4</sup> Consultation may be concluded informally or formally depending on project impacts.

<sup>5</sup> Suitable foraging habitat (SFH) are wetlands that typically have shallow-open water areas that are relatively calm and having a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small

- B. Project impact to SFH is less than 0.20 hectare (one-half acre)<sup>6</sup>.....*NLAA<sup>1</sup>*  
     Project impact to SFH is greater in scope than 0.20 hectare (one-half acre).....*go to C*
- C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site .....*go to D*  
     Project impacts to SFH within the CFA of a colony site .....*go to E*
- D. Project impacts to SFH have been avoided and minimized to the extent practicable, and compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines and habitat compensation replaces the foraging value matching the hydroperiod<sup>7</sup> of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Appendix 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance<sup>8</sup> ..... *NLAA<sup>1</sup>*  
     Project not as above..... “*may affect<sup>4</sup>*”
- E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration

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ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

<sup>6</sup> On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide ranging species, and individually, habitat change from impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

<sup>7</sup> Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) that short hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

<sup>8</sup> For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Appendix 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

matching the hydroperiod<sup>6</sup> of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands. See Appendix 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance<sup>8</sup>..... “NLAA<sup>1</sup>”

Project does not satisfy these elements ..... “may affect<sup>4</sup>”

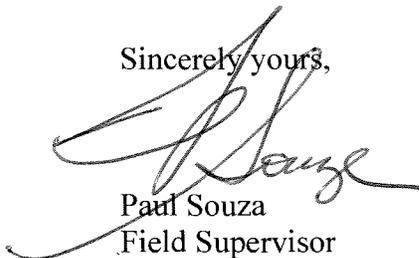
This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

Monitoring and Reporting Effects

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued where the effect determination was: “may affect, not likely to adversely affect.” We request that the Corps send us an annual summary consisting of: project dates, Corps identification numbers, project acreages, project wetland acreages, and project locations in latitude and longitude in decimal degrees.

Thank you for your cooperation and effort in protecting federally listed species. If you have any questions, please contact Allen Webb at extension 246.

Sincerely yours,



Paul Souza  
Field Supervisor  
South Florida Ecological Services Office

Appendices

- cc: w/Appendices
- Corps, Jacksonville, Florida (Stu Santos)
- EPA, West Palm Beach, Florida (Richard Harvey)
- FWC, Vero Beach, Florida (Joe Walsh)
- Service, Jacksonville, Florida (Billy Brooks)

**LITERATURE CITED**

- Ceiley, D.W. and S.A. Bortone. 2000. A survey of freshwater fishes in the hydric flatwoods of flint pen strand, Lee County, Florida. Proceedings of the 27th Annual Conference on Ecosystems Restoration and Creation, 70-91. Hillsborough Community College; Hillsborough County, Florida.
- Flemming, D.M., W.F. Wolff, and D.L. DeAngelis. 1994. Importance of landscape heterogeneity to wood storks. Florida Everglades Management 18: 743-757.
- Kahl, M.P., Jr. 1964. Food ecology of the wood stork (*Mycteria americana*) in Florida. Ecological Monographs 34:97-117.
- Ogden, J.C. 1991. Nesting by wood storks in natural, altered, and artificial wetlands in central and northern Florida. Colonial Waterbirds 14:39-45.
- Ogden, J.C., J.A. Kushlan, and J.T. Tilmant. 1976. Prey selectivity by the wood stork. Condor 78(3):324-330.
- Ogden, J.C. 1996. Wood Stork in J.A. Rodgers, H. Kale II, and H.T. Smith, eds. Rare and endangered biota of Florida. University Press of Florida; Gainesville, Florida.
- Rodgers, J.A. Jr., A.S. Wenner, and S.T. Schwikert. 1987. Population dynamics of wood storks in northern and central Florida, USA. Colonial Waterbirds 10:151-156.
- Rodgers, J.A., Jr., S.T. Schwikert, and A. Shapiro-Wenner. 1996. Nesting habitat of wood storks in north and central Florida, USA. Colonial Waterbirds 19:1-21.
- U.S. Fish and Wildlife Service. 1990. Habitat management guidelines for the wood stork in the southeast region. Prepared by John C. Ogden for the Southeast Region U.S. Fish and Wildlife Service; Atlanta, Georgia.
- U.S. Fish and Wildlife Service. 1999. South Florida multi-species recovery plan. Fish and Wildlife Service; Atlanta, Georgia. Available from: <http://verobeach.fws.gov/Programs/Recovery/vbms5.html>.



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960



January 25, 2010

David S. Hobbie  
Chief, Regulatory Division  
U.S. Army Corps of Engineers  
Post Office Box 4970  
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2009-FA-0642

Service Consultation Code: 41420-2009-I-0467

41910-2010-I-0045

Subject: North and South Florida  
Ecological Services Field Offices  
Programmatic Concurrence for Use  
of Original Eastern Indigo Snake  
Key(s) Until Further Notice

Dear Mr. Hobbie:

The U.S. Fish and Wildlife Service's (Service) South and North Florida Ecological Services Field Offices (FO), through consultation with the U.S. Army Corps of Engineers Jacksonville District (Corps), propose revision to both Programmatic concurrence letters/keys for the federally threatened Eastern Indigo Snake (*Drymarchon corais couperi*), (indigo snake), and now provide one key for both FO's. The original programmatic key was issued by the South Florida FO on November 9, 2007. The North Florida FO issued a revised version of the original key on September 18, 2008. Both keys were similar in content, but reflected differences in geographic work areas between the two Field Offices. The enclosed key satisfies each office's responsibilities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*).

Footnote number 3 in the original keys indicated "A member of the excavation team should be authorized for Incidental Take during excavation through either a section 10(a)(1)(A) permit issued by the Service or an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission (FWC)." We have removed this reference to a Service issued Section 10(a)(1)(A) permit, as one is not necessary for this activity. We also referenced the FWC's revised April 2009 Gopher Tortoise Permitting Guidelines with a link to their website for updated excavation guidance, and have provided a website link to our Standard Protection Measures. All other conditions and criteria apply.

We believe the implementation of the attached key achieves our mutual goal for all users to make consistent effect determinations regarding this species. The use of this key for review of projects

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located in all referenced counties in our respective geographic work areas leads the Service to concur with the Corps' determination of "may affect, not likely to adversely affect" (MANLAA) for the Eastern indigo snake. The biological rationale for the determinations is contained within the referenced documents and is submitted in accordance with section 7 of the Act.

Should circumstances change or new information become available regarding the eastern indigo snake or implementation of the key, the determinations may be reconsidered as deemed necessary.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to either Allen Webb (Vero Beach) at 772-562-3909, extension 246, or Jay Herrington (Jacksonville) at 904-731-3326.

Sincerely,



Paul Souza  
Field Supervisor  
South Florida Ecological Services Office



David L. Hankla  
Field Supervisor  
North Florida Ecological Services Office

Enclosure

cc: electronic only  
FWC, Tallahassee, Florida (Dr. Elsa Haubold)  
Service, Jacksonville, Florida (Jay Herrington)  
Service, Vero Beach, Florida (Sandra Sneckenberger)

## Eastern Indigo Snake Programmatic Effect Determination Key

### Scope of the key

This key should be used only in the review of permit applications for effects determinations within the North and South Florida Ecological Services Field Offices Geographic Areas of Responsibility (GAR), and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH). Counties within the **North** Florida GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

Counties in the **South** Florida GAR include Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, St. Lucie.

### Habitat

Over most of its range, the eastern indigo snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (Service 1999). Eastern indigo snakes appear to need a mosaic of habitats to complete their life cycle. Wherever the eastern indigo snake occurs in xeric habitats, it is closely associated with the gopher tortoise (*Gopherus polyphemus*), the burrows of which provide shelter from winter cold and summer desiccation (Speake et al. 1978; Layne and Steiner 1996). Interspersion of tortoise-inhabited uplands and wetlands improves habitat quality for this species (Landers and Speake 1980; Auffenberg and Franz 1982).

In south Florida, agricultural sites, such as sugar cane fields, created in former wetland areas are occupied by eastern indigo snakes (Enge pers. comm. 2007). Formerly, indigo snakes would have only occupied higher elevation sites within the wetlands. The introduction of agriculture and its associated canal systems has resulted in an increase in rodents and other species of snakes that are prey for eastern indigo snakes. The result is that indigos occur at higher densities in these areas than they did historically.

Even though thermal stress may not be a limiting factor throughout the year in south Florida, indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigos use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumii*) burrows in coastal areas (Service 2006). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges. In extreme south Florida (the Everglades and Florida Keys), indigo snakes are found in tropical

hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats (Steiner et al. 1983). It is suspected that they prefer hammocks and pine forests, because most observations occur in these habitats disproportionately to their presence in the landscape (Steiner et al. 1983). Hammocks may be important breeding areas as juveniles are typically found there. The eastern indigo snake is a snake-eater so the presence of other snake species may be a good indicator of habitat quality.

**Conservation Measures**

The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004) located at: <http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes> will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing an Eastern Indigo Snake Effect Determination Key, similar in utility to the West Indian Manatee Effect Determination Key and the Wood Stork Effect Determination Keys presently being utilized by the Corps. If the use of this key results in a Corps' determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination and no additional correspondence will be necessary<sup>1</sup>. This key is subject to revisitation as the Corps and Service deem necessary.

- A. Project is not located in open water or salt marsh.....go to B  
     Project is located solely in open water or salt marsh..... "no effect"
- B. Permit will be conditioned for use of the Service's *Standard Protection Measures For The Eastern Indigo Snake* during site preparation and project construction.....go to C  
     Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested<sup>2</sup> ..... "may affect"
- C. There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....go to D  
     There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities ..... "NLAA"
- D. The project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows.....go to E

The project will impact more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested<sup>2</sup>..... "may affect"

- E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow<sup>3</sup>. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work..... "NLAA"

Permit will not be conditioned as outlined above and consultation with the Service is requested<sup>2</sup> ..... "may affect"

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<sup>1</sup>With an outcome of "no effect" or "NLAA" as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

<sup>2</sup>Consultation may be concluded informally or formally depending on project impacts.

<sup>3</sup> If burrow excavation is utilized, it should be performed by experienced personnel. The method used should minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the Florida Fish and Wildlife Conservation Commission's revised April 2009 Gopher Tortoise Permitting Guidelines located at [http://myfwc.com/License/Permits\\_ProtectedWildlife.htm#gophertortoise](http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise). A member of the excavation team should be authorized for Incidental Take during excavation through an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960

August 1, 2017

Donnie Kinard  
U.S. Army Corps of Engineers  
Post Office Box 4970  
Jacksonville, Florida 32232-0019

Subject: Consultation Key for the Eastern Indigo Snake – Revised

Dear Mr. Kinard:

This letter revises and replaces the January 25, 2010, and August 13, 2013, letters to the U.S. Army Corps of Engineers (Corps) regarding the use of the eastern indigo snake programmatic effect determination key (Key) for projects occurring within the South Florida Ecological Service's Office (SFESO) jurisdiction. This revision supersedes all prior versions of the Key in the SFESO area. The purpose of this revision is to clarify portions of the previous keys based on questions we have been asked, specifically related to habitat and refugia used by eastern indigo snakes (*Drymarchon corais couperi*), in the southern portion of their range and within the jurisdiction of the SFESO. This Key is provided pursuant to the Service's authorities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*). This Key revision has been assigned Service Consultation Code: 41420-2009-I-0467-R001.

The purpose of this Key is to assist the Corps (or other Federal action agency) in making appropriate effects determinations for the eastern indigo snake under section 7 of the Act, and streamline informal consultation with the SFESO for the eastern indigo snake when the proposed action can be walked through the Key. The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

This Key uses project size and home ranges of eastern indigo snakes as the basis for making determinations of "may affect, but is not likely to adversely affect" (NLAA) and "may affect, and is likely to adversely affect" (may affect). Suitable habitat for the eastern indigo snake consists of a mosaic of habitats types, most of which occur throughout South Florida. Information on home ranges for individuals is not available in specific habitats in South Florida. Therefore, the SFESO uses the information from a 26-year study conducted by Layne and Steiner (1996) at Archbold Biological Station, Lake Placid, Florida, as the best available

information. Layne and Steiner (1996) determined the average home range size for a female eastern indigo snake was 46 acres and 184 acres for a male.

Projects that would remove/destroy less than 25 acres of eastern indigo snake habitat are expected to result in the loss of a portion of an eastern indigo snakes home range that would not impair the ability of the individual to feed, breed, and shelter. Therefore, the Service finds that take would not be reasonably certain to occur due to habitat loss. However, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take. Consequently, projects less than 25 acres that include the Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and a commitment to excavate underground refugia as part of the proposed action would be expected to avoid take and thus, may affect, but are not likely to adversely affect the species.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range.

Projects that would remove 25 acres or more of eastern indigo snake habitat could remove more than half of a female eastern indigo snakes home range. This loss of habitat within a home range would be expected to significantly impair the ability of that individual to feed, breed, and shelter. Therefore, the Service finds take through habitat loss would be reasonably certain to occur and formal consultation is appropriate. Furthermore, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take.

Eastern indigo snakes use a variety of habitat and are difficult to detect. Therefore, site specific information on the land use, observations of eastern indigo snakes within the vicinity, as well as other factors, as appropriate, will all be considered by the Service when making a final recommendation on the appropriate effects determination and whether it is appropriate to conclude consultation with the Corps (or other Federal action agency) formally or informally for projects that will impact 25 acres or more of habitat. Accordingly, when the use of the Key results in a determination of "may affect," the Corps (or other Federal action agency) is advised that consultation may be concluded informally or formally, depending on the project specific effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps (or other Federal action agency) desires to proceed with a consultation request prior to receiving

additional technical assistance from the Service, we recommend the agency documents the biological rationale for their determination and proceed with a request accordingly.

If the use of the Key results in a determination of “no effect,” no further consultation is necessary with the SFESO. If the use of the Key results in a determination of “NLAA,” the SFESO concurs with this determination based on the rationale provide above, and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake. For “no effect” or “NLAA” determinations, the Service recommends that the Corps (or other Federal action agency) documents the pathway used to reach your no effect or NLAA determination in the project record and proceed with other species analysis as warranted.

**Eastern Indigo Snake Programmatic Effect Determination Key**  
**Revised July 2017**  
**South Florida Ecological Service Office**

**Scope of the Key**

This Key should be used only in the review of permit applications for effects determinations for the eastern indigo snake (*Drymarchon corais couperi*) within the South Florida Ecological Service’s Office (SFESO) area (Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, and St. Lucie Counties). There is no designated critical habitat for the eastern indigo snake.

This Key is subject to revision as the Corps (or other Federal action agency) and Service deem necessary and in particular whenever there is new information on eastern indigo snake biology and effects of proposed projects.

The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

**Habitat**

Habitat use varies seasonally between upland and wetland areas, especially in the more northern parts of the species’ range. In southern parts of their range eastern indigo snakes are habitat generalists which use most available habitat types. Movements between habitat types in northern areas of their range may relate to the need for thermal refugia (protection from cold and/or heat).

In northern areas of their range eastern indigo snakes prefer an interspersed of tortoise-inhabited sandhills and wetlands (Landers and Speake 1980). In these northern regions eastern indigo

snakes most often use forested areas rich with gopher tortoise burrows, hollowed root channels, hollow logs, or the burrows of rodents, armadillos, or land crabs as thermal refugia during cooler seasons (Lawler 1977; Moler 1985a; Layne and Steiner 1996). The eastern indigo snake in the northern region is typically classified as a longleaf pine savanna specialist because here, in the northern four-fifths of its range, the eastern indigo snake is typically only found in vicinity of xeric longleaf pine–turkey oak sandhills inhabited by the gopher tortoise (Means 2006).

In the milder climates of central and southern Florida, comprising the remaining one fifth of its range, thermal refugia such as those provided by gopher tortoise burrows may not be as critical to survival of indigo snakes. Consequently, eastern indigo snakes in these regions use a more diverse assemblage of habitats such as pine flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, edges of freshwater marshes, muckland fields, coastal dunes, and xeric sandhill communities; with highest population concentrations of eastern indigo snakes occurring in the sandhill and pineland regions of northern and central Florida (Service 1999). Eastern indigo snakes have also been found on agricultural lands with close proximity to wetlands (Zeigler 2006).

In south Florida, agricultural sites (*e.g.*, sugar cane fields and citrus groves) are occupied by eastern indigo snakes. The use of sugarcane fields by eastern indigo snakes was first documented by Layne and Steiner in 1996. In these areas there is typically an abundance of wetland and upland ecotones (due to the presence of many ditches and canals), which support a diverse prey base for foraging. In fact, some speculate agricultural areas may actually have a higher density of eastern indigo snakes than natural communities due to the increased availability of prey. Gopher tortoise burrows are absent at these locations but there is an abundance of both natural and artificial refugia. Enge and Endries (2009) reporting on the status of the eastern indigo snake included sugarcane fields and citrus groves in a Global Information Systems (GIS)-base map of potential eastern indigo snake habitat. Numerous sightings of eastern indigo snakes within sugarcane fields have been reported within south Florida (Florida Fish and Wildlife Conservation Commission Indigo Snake Database [Enge 2017]). A recent study associated with the Comprehensive Everglades Restoration Plan (CERP) (A-1 FEB Project formerly A-1 Reservoir; Service code: 41420-2006-F-0477) documented eastern indigo snakes within sugarcane fields. The snakes used artificial habitats such as piles of limerock, construction debris, and pump stations. Recent studies also associated with the CERP at the C-44 Project (Service code: 41420-2009-FA-0314), and C-43 Project (Service code: 41420-2007-F-0589) documented eastern indigo snakes within citrus groves. The snakes used artificial habitats such as boards, sheets of tin, construction debris, pipes, drain pipes in abandoned buildings and septic tanks.

In extreme south Florida (*i.e.*, the Everglades and Florida Keys), eastern indigo snakes also utilize tropical hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats. Though eastern indigo snakes have been found in all available habitats of south Florida it is thought they prefer hammocks and pine forests since most observations occur there and use of these areas is disproportionate compared to the relatively small total area of these habitats (Steiner *et al.* 1983).

Even though thermal stress may not be a limiting factor throughout the year in south Florida, eastern indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigo snakes use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasyurus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumi*) burrows in coastal areas (Layne and Steiner 1996; Wilson and Porras 1983). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges.

### **Minimization Measures**

The Service developed protection measures for the eastern indigo snake “Standard Protection Measures for the Eastern Indigo Snake” (Service 2013) located at: [https://www.fws.gov/verobeach/ReptilesPDFs/20130812\\_EIS%20Standard%20Protection%20Measures\\_final.pdf](https://www.fws.gov/verobeach/ReptilesPDFs/20130812_EIS%20Standard%20Protection%20Measures_final.pdf). These protection measures (or the most updated version) are considered a minimization measure for projects proposed within eastern indigo snake habitat.

### **Determinations**

If the use of this Key results in a determination of “**no effect**,” no further consultation is necessary with the SFESO.

If the use of this Key results in a determination of “**NLAA**,” the SFESO concurs with this determination and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake.

For no effect or NLAA determinations, the Corps (or other Federal action agency) should make a note in the project file indicating the pathway used to reach your no effect or NLAA determination.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the subsequent Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual’s home range.

If the use of this Key results in a determination of “**may affect**,” consultation may be concluded informally or formally depending on project effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps desires to proceed with a consultation request prior to receiving additional technical assistance from the Service, we recommend the Corps document the biological rationale for their determination and proceed with a request accordingly.

- A. Project is not located in open water or salt marsh.....go to B  
 Project is located solely in open water or salt marsh.....**no effect**
  
- B. Permit will be conditioned for use of the Service's most current guidance for Standard Protection Measures For The Eastern Indigo Snake (currently 2013) during site preparation and project construction.....go to C  
 Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested.....**may affect**
  
- C. The project will impact less than 25 acres of eastern indigo snake habitat (e.g., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes).....go to D  
 The project will impact 25 acres or more of eastern indigo snake habitat (e.g., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes).....**may affect**
  
- D. The project has no known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and/or injured during project activities.....**NLAA**  
 The project has known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and /or injured.....go to E
  
- E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be excavated prior to site manipulation in the vicinity of the burrow<sup>1</sup>. If an eastern indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.....**NLAA<sup>2</sup>**  
 Permit will not be conditioned as outlined above.....**may affect**

**End Key**

<sup>1</sup> If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a Florida Fish and Wildlife Conservation Commission Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at <http://myfwc.com/gophertortoise>.

<sup>2</sup> Please note, if the proposed project will impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, NLAA is not the appropriate conclusion. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range

Working with the Fish and Wildlife Foundation of Florida, the Service has established a fund to support conservation and recovery for the eastern indigo snake. Any project that has the potential to affect the eastern indigo snake and/or its habitat is encouraged to make a voluntary contribution to this fund. If you would like additional information about how to make a contribution and how these monies are used to support eastern indigo snake recovery please contact Ashleigh Blackford, Connie Cassler, or José Rivera at 772-562-3559.

This revised Key is effective immediately upon receipt by the Corps. Should circumstances change or new information become available regarding the eastern indigo snake and/or implementation of the Key, the determinations herein may be reconsidered and this Key further revised or amended.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. If you have any questions or comments regarding this Key, please contact the SFESO at 772-562-3909.

Sincerely,



Roxanna Hinzman  
Field Supervisor  
South Florida Ecological Services

Cc:

Corps, Jacksonville, Florida (Dale Beter, Muriel Blaisdell, Ingrid Gilbert, Angela Ryan,  
Irene Sadowski, Victoria White, Alisa Zarbo)  
Service, Athens, Georgia (Michelle Elmore)  
Service, Jacksonville, Florida (Annie Dziergowski)  
Service, Panama City, Florida (Sean Blomquist)

**LITERATURE CITED**

- Enge K. M. 2017. Personal communication. Email from Kevin Enge, Florida Fish and Wildlife Conservation Commission, Gainesville, Florida to Steve Mortellaro, U.S. Fish and Wildlife Service, Vero Beach, Florida, July 5, 2017. Locations of Eastern Indigo Snake (*Drymarchon couperi*).
- Enge K. M. and M. J. Endries. 2009. Status of the Eastern Indigo Snake (*Drymarchon couperi*) in Florida. Southeast Partners in Amphibian and Reptile Conservation Meeting.
- Landers, J. L. and D.W. Speake. 1980. Management Needs of Sandhill Reptiles in Southern Georgia. Proceedings Annual Conference of Southeastern Association of Fish and Wildlife Agencies. 34: 515-529.
- Layne, J.N., and T.M. Steiner. 1996. Eastern indigo snake (*Drymarchon corais couperi*): summary of research conducted on Archbold Biological Station. Report prepared under Order 43910-6-0134 to the U.S. Fish and Wildlife Service; Jackson, Mississippi.
- Lawler, H.E. 1977. The status of *Drymarchon corais couperi* (Holbrook), the eastern indigo snake, in the southeastern U.S.A. *Herpetological Review* 8(3):76-79.
- Means, D. B. 2006. Vertebrate faunal diversity of longleaf pine ecosystems. In *The Longleaf Pine Ecosystem* pp. 157-213. Springer New York.
- Molar, P.E. 1985a. Distribution of the eastern indigo snake, *Drymarchon corais couperi*, in Florida. *Herpetological Review* 16(2):37-38.
- Moler, P.E. 1985b. Home range and seasonal activity of the eastern indigo snake, *Drymarchon corais couperi*, in northern Florida. Final performance report, Study E-1-06, III-A-5. Florida Game and Fresh Water Fish Commission; Tallahassee, Florida.
- Steiner, T.M., O.L. Bass, Jr., and J.A. Kushlan. 1983. Status of the eastern indigo snake in Southern Florida National Parks and vicinity. South Florida Research Center Report SFRC-83-01, Everglades National Park; Homestead, Florida.
- U.S. Fish and Wildlife Service (Service). 1999. South Florida multi-species recovery plan. 23 pp.
- U.S. Fish and Wildlife Service (Service). 2013. Standard Protection Measures for the Eastern Indigo Snake. August 12, 2013. U.S. Fish and Wildlife Service, South Florida Ecological Services Office; Vero Beach, Florida.
- Wilson, L.D. and L. Porras. 1983. The ecological impact of man on the south Florida herpetofauna. *University of Kansas Museum of Natural History Special Publication* 9:1-89.
- Zeigler, M. 2006. Personal communication. Citrus grove operations manager. Meeting with the U.S. Fish and Wildlife Service on August 1, 2006. Agricultural Resource Management; Vero Beach, Florida.

**STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE**  
**U.S. Fish and Wildlife Service**  
**August 12, 2013**

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: [jaxregs@fws.gov](mailto:jaxregs@fws.gov); South Florida Field Office: [verobeach@fws.gov](mailto:verobeach@fws.gov); Panama City Field Office: [panamacity@fws.gov](mailto:panamacity@fws.gov)). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or “approval” from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

**POSTER INFORMATION**

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11” x 17” or larger paper and laminated, is attached):

**DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

**SIMILAR SNAKES:** The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

**LIFE HISTORY:** The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

**PROTECTION UNDER FEDERAL AND STATE LAW:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. “Taking” of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. “Take” is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

**IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

**IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

**Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:**

**North Florida Field Office – (904) 731-3336**  
**Panama City Field Office – (850) 769-0552**  
**South Florida Field Office – (772) 562-3909**

## **PRE-CONSTRUCTION ACTIVITIES**

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

## **DURING CONSTRUCTION ACTIVITIES**

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

## **POST CONSTRUCTION ACTIVITIES**

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.

## ***EASTERN INDIGO SNAKE***



The Eastern Indigo Snake is the largest nonpoisonous snake in North America, growing to a maximum of eight feet. The color of both adults and young is shiny bluish-black with some red or cream coloring on the chin or sides of the head. The indigo snake is usually found in high, dry, well-drained sandy soils, in the same habitat preferred by the gopher tortoise. During warmer months, indigo snakes may also be found in streams, swamps and flatwoods habitats. Gopher tortoise burrows are used by many prey animals, that are easily captured by the indigo snake in the burrow. Indigo snakes also use the burrows as dens for cover, and laying eggs. Other potential dens are stumps of trees, cavities in the soil, and under piles of debris.

The decline in the population of indigos is attributed to habitat loss due to development and over-collecting for the pet trade. Fragmentation of habitat results in many indigo snakes killed by traffic.

Every effort should be undertaken to avoid harming any snake observed during the construction of [project name]. If all snakes are avoided, the danger of harming a protected species due to mis-identification is reduced. The Endangered Species Act (ESA) of 1973 makes it a violation to “harass, harm, pursue, hunt, shoot,

wound, kill, capture, or collect endangered or threatened species.” Violations can result in fines of up to \$20,000 and/or up to one year in prison. If it appears that the construction activities will cause a violation of the ESA, construction must be stopped until the proper action can be determined. Any indigo snake encountered during the construction activity that does not leave on its own accord must be removed by a qualified biologist.

Contact the following agencies if indigo snakes are observed:

U.S. Fish & Wildlife Service - 561-562-3909

Florida Fish & Wildlife Conservation Commission, 1-800-282-8002

**THE CORPS OF ENGINEERS, JACKSONVILLE DISTRICT, AND THE STATE OF  
FLORIDA EFFECT DETERMINATION KEY FOR THE MANATEE IN FLORIDA  
April 2013**

**Purpose and background of the key**

The purpose of this document is to provide guidance to improve the review of permit applications by U.S. Army Corps of Engineers' (Corps) Project Managers in the Regulatory Division regarding the potential effects of proposed projects on the endangered West Indian manatee (*Trichechus manatus*) in Florida, and by the Florida Department of Environmental Protection or its authorized designee or Water Management District, for evaluating projects under the State Programmatic General Permit (SPGP) or any other Programmatic General Permits that the Corps may issue for administration by the above agencies. Such guidance is contained in the following dichotomous key. The key applies to permit applications for in-water activities such as, but not limited to: (1) dredging [new or maintenance dredging of not more than 50,000 cubic yards], placement of fill material for shoreline stabilization, and construction/placement of other in-water structures as well as (2) construction of docks, marinas, boat ramps and associated trailer parking spaces, boat slips, dry storage or any other watercraft access structures or facilities.

At a certain step in the key, the user is referred to graphics depicting important manatee areas or areas with inadequate protection. The maps can be downloaded from the Corps' web page at <http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>. We intend to utilize the most recent depiction of these areas, so should these areas be modified by statute, rule, ordinance and/or other legal mandate or authorization, we will modify the graphical depictions accordingly. These areas may be shaded or otherwise differentiated for identification on the maps.

***Explanatory footnotes are provided in the key and must be closely followed whenever encountered.***

**Scope of the key**

This key should only be used in the review of permit applications for effect determinations on manatees and should not be used for other listed species or for other aquatic resources such as Essential Fish Habitat (EFH). Corps Project Managers should ensure that consideration of the project's effects on any other listed species and/or on EFH is performed independently. This key may be used to evaluate applications for all types of State of Florida (State Programmatic General Permits, noticed general permits, standard general permits, submerged lands leases, conceptual and individual permits) and Department of the Army (standard permits, letters of permission, nationwide permits, and regional general permits) permits and authorizations. The final effect determination will be based on the project location and description; the potential effects to manatees, manatee habitat, and/or manatee critical habitat; and any measures (such as project components, standard construction precautions, or special conditions included in the authorization) to avoid or minimize effects to manatees or manatee critical habitat. Projects that key to a "may affect" determination equate to "likely to adversely affect" situations, and those projects should not be processed under the SPGP or any other programmatic general permit. For

all “may affect” determinations, Corps Project Managers shall refer to the Manatee Programmatic Biological Opinion, dated March 21, 2011, for guidance on eliminating or minimizing potential adverse effects resulting from the proposed project. If unable to resolve the adverse effects, the Corps may refer the applicant to the U.S. Fish and Wildlife Service (Service) for further assistance in attempting to revise the proposed project to a “may affect, not likely to adversely affect” level. The Service will coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) and the counties, as appropriate. Projects that provide new access for watercraft and key to “may affect, not likely to adversely affect” may or may not need to be reviewed individually by the Service.

**MANATEE KEY**  
**Florida<sup>1</sup>**  
**April 2013**

**The key is not designed to be used by the Corps' Regulatory Division for making their effect determinations for dredging projects greater than 50,000 cubic yards, the Corps' Planning Division in making their effect determinations for civil works projects or by the Corps' Regulatory Division for making their effect determinations for projects of the same relative scope as civil works projects. These types of activities must be evaluated by the Corps independently of the key.**

- A. Project is not located in waters accessible to manatees and does not directly or indirectly affect manatees (see Glossary).....*No effect*
- Project is located in waters accessible to manatees **or** directly or indirectly affects manatees ..... **B**
- B. Project consists of one or more of the following activities, all of which are *May affect*:
1. blasting or other detonation activity for channel deepening and/or widening, geotechnical surveys or exploration, bridge removal, movies, military shows, special events, etc.;
  2. installation of structures which could restrict or act as a barrier to manatees;
  3. new or changes to existing warm or fresh water discharges from industrial sites, power plants, or natural springs or artesian wells (but only if the new or proposed change in discharge requires a Corps permit to accomplish the work);
  4. installation of new culverts and/or maintenance or modification of existing culverts (where the culverts are 8 inches to 8 feet in diameter, ungrated and in waters accessible, or potentially accessible, to manatees)<sup>2</sup>;
  5. mechanical dredging from a floating platform, barge or structure<sup>3</sup> that restricts manatee access to less than half the width of the waterway;
  6. creation of new slips or change in use of existing slips, even those located in a county with a State-approved Manatee Protection Plan (MPP) in place and the number of slips is less than the MPP threshold, to accommodate docking for repeat use vessels, (e.g., water taxis, tour boats, gambling boats, etc; or slips or structures that are not civil works projects, but are frequently used to moor large vessels (>100') for shipping and/or freight purposes; does not include slips used for docking at boat sales or repair facilities or loading/unloading at dry stack storage facilities and boat ramps); [Note: For projects within Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the reviewer should proceed to Couplet C.]
  7. any type of in-water activity in a Warm Water Aggregation Area (WWAA) or No Entry Area (see Glossary and accompanying Maps<sup>4</sup>); [Note: For residential docking facilities in a Warm Water Aggregation Area that is not a Federal manatee sanctuary or No Entry Area, the reviewer should proceed to couplet C.]
  8. creation or expansion of canals, basins or other artificial shoreline and/or the connection of such features to navigable waters of the U.S.; [Note: For projects proposing a single residential dock, the reviewer should proceed to couplet C; otherwise, project is a *May Affect*.]

- 9. installation of temporary structures (docks, buoys, etc.) utilized for special events such as boat races, boat shows, military shows, etc., but only when consultation with the U.S. Coast Guard and FWS has not occurred; [Note: See programmatic consultation with the U.S. Coast Guard on manatees dated May 10, 2010.].

Project is other than the activities listed above..... C

C. Project is located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps<sup>4</sup>) ..... D

Project is not located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps<sup>4</sup>) ..... G

D. Project includes dredging of less than 50,000 cubic yards ..... E

Project does not include dredging ..... G

E. Project is for dredging a residential dock facility or is a land-based dredging operation ..... N

Project not as above..... F

F. Project proponent **does not elect** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... *May affect*

Project proponent **elects** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... G

G. Project provides new<sup>5</sup> access for watercraft, *e.g.*, docks or piers, marinas, boat ramps and associated trailer parking spaces, new dredging, boat lifts, pilings, floats, floating docks, floating vessel platforms, boat slips, dry storage, mooring buoys, or other watercraft access (residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access) or improvements allowing increased watercraft usage..... H

Project does not provide new<sup>5</sup> access for watercraft, *e.g.*, bulkheads, seawalls, riprap, maintenance dredging, boardwalks and/or the maintenance (repair or rehabilitation) of currently serviceable watercraft access structures provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements do not allow increased watercraft usage..... N

H. Project is located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map<sup>4</sup>) ..... *May affect*

Project is not located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map<sup>4</sup>)..... I

I. Project is for a multi-slip facility (see Glossary) ..... J

Project is for a residential dock facility or is for dredging (see Glossary)..... N

J. Project is located in a county that currently has a State-approved MPP in place (BREVARD, BROWARD, CITRUS, CLAY, COLLIER, DUVAL, INDIAN RIVER, LEE, MARTIN, MIAMI-DADE, PALM BEACH, ST. LUCIE, SARASOTA, VOLUSIA) or shares contiguous waters with a county having a State-approved MPP in place (LAKE, MARION, SEMINOLE)<sup>6</sup> ..... K

Project is located in a county not required to have a State-approved MPP ..... L

- K. Project has been developed or modified to be consistent with the county’s State-approved MPP **and** has been verified by a FWC review (or FWS review if project is exempt from State permitting) **or** the number of slips is below the MPP threshold ..... N
- Project has not been reviewed by the FWC or FWS **or** has been reviewed by the FWC or FWS **and** determined that the project is not consistent with the county’s State-approved MPP ..... *May affect*
- L. Project is located in one of the following counties: CHARLOTTE, DESOTO<sup>7</sup>, FLAGLER, GLADES, HENDRY, HILLSBOROUGH, LEVY, MANATEE, MONROE<sup>7</sup>, PASCO<sup>7</sup>, PINELLAS ..... M
- Project is located in one of the following counties: BAY, DIXIE, ESCAMBIA, FRANKLIN, GILCHRIST, GULF, HERNANDO, JEFFERSON, LAFAYETTE, MONROE (south of Craig Key), NASSAU, OKALOOSA, OKEECHOBEE, PUTNAM, SANTA ROSA, ST. JOHNS, SUWANNEE, TAYLOR, WAKULLA, WALTON ..... N
- M. The number of slips does not exceed the residential dock density threshold (see Glossary) ..... N
- The number of slips exceeds the residential dock density threshold (see Glossary) ..... *May affect*
- N. Project impacts to submerged aquatic vegetation<sup>8</sup>, emergent vegetation or mangrove will have beneficial, insignificant, discountable<sup>9</sup> or no effects on the manatee<sup>10</sup> ..... O
- Project impacts to submerged aquatic vegetation<sup>8</sup>, emergent vegetation or mangrove may adversely affect the manatee<sup>10</sup> ..... *May affect*
- O. Project proponent **elects** to follow standard manatee conditions for in-water work<sup>11</sup> and requirements, as appropriate for the proposed activity, prescribed on the maps<sup>4</sup> ..... P
- Project proponent **does not elect** to follow standard manatee conditions for in-water work<sup>11</sup> and appropriate requirements prescribed on the maps<sup>4</sup> ..... *May affect*
- P. If project is for a new or expanding<sup>5</sup> multi-slip facility and is located in a county with a State-approved MPP in place **or** in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Putnam, St. Johns, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the determination of “*May affect, not likely to adversely affect*” is appropriate<sup>12</sup> and no further consultation with the Service is necessary.
- If project is for a new or expanding<sup>5</sup> multi-slip facility and is located in Charlotte, Desoto, Flagler, Glades, Hendry, Hillsborough, Levy, Manatee, Monroe (north of Craig Key), Pasco, or Pinellas County, further consultation with the Service is necessary for “*May affect, not likely to adversely affect*” determinations.
- If project is for repair or rehabilitation of a multi-slip facility and is located in an Important Manatee Area, further consultation with the Service is necessary for “*May affect, not likely to adversely affect*” determinations. If project is for repair or rehabilitation of a multi-slip facility and: (1) is **not** located in an Important Manatee Area; (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage, the determination of “*May affect, not likely to adversely affect*” is appropriate<sup>12</sup> and no further consultation with the Service is necessary.
- If project is a residential dock facility, shoreline stabilization, or dredging, the determination of “*May affect, not likely to adversely affect*” is appropriate<sup>12</sup> and no further consultation with the Service is necessary. **Note:** For residential dock facilities located in a Warm Water Aggregation Area or in a No Entry area, seasonal restrictions may apply. See footnote 4 below for maps showing restrictions.
- If project is other than repair or rehabilitation of a multi-slip facility, a new<sup>5</sup> multi-slip facility, residential dock facility, shoreline stabilization, or dredging, and does not provide new<sup>5</sup> access for watercraft or

improve an existing access to allow increased watercraft usage, the determination of “*May affect, not likely to adversely affect*” is appropriate<sup>12</sup> and no further consultation with the Service is necessary.

<sup>1</sup> On the St. Mary’s River, this key is only applicable to those areas that are within the geographical limits of the State of Florida.

<sup>2</sup> All culverts 8 inches to 8 feet in diameter must be grated to prevent manatee entrapment. To effectively prevent manatee access, grates must be permanently fixed, spaced a maximum of 8 inches apart (may be less for culverts smaller than 16 inches in diameter) and may be installed diagonally, horizontally or vertically. For new culverts, grates must be attached prior to installation of the culverts. Culverts less than 8 inches or greater than 8 feet in diameter are exempt from this requirement. If new culverts and/or the maintenance or modification of existing culverts are grated as described above, the determination of “*May affect, not likely to adversely affect*” is appropriate<sup>11</sup> and no further consultation with the Service is necessary.

<sup>3</sup> If the project proponent agrees to follow the standard manatee conditions for in-water work as well as any special conditions appropriate for the proposed activity, further consultation with the Service is necessary for “*May affect, not likely to adversely affect*” determinations. These special conditions may include, but are not limited to, the use of dedicated observers (see Glossary for definition of dedicated observers), dredging during specific months (warm weather months vs cold weather months), dredging during daylight hours only, adjusting the number of dredging days, does not preclude or discourage manatee egress/ingress with turbidity curtains or other barriers that span the width of the waterway, etc.

<sup>4</sup> Areas of Inadequate Protection (AIPs), Important Manatee Areas (IMAs), Warm Water Aggregation Areas (WWAAs) and No Entry Areas are identified on these maps and defined in the Glossary for the purposes of this key. These maps can be viewed on the [Corps’ web page](#). If projects are located in a No Entry Area, special permits may be required from FWC in order to access these areas (please refer to Chapter 68C-22 F.A.C. for boundaries; maps are also available at [FWC’s web page](#)).

<sup>5</sup> New access for watercraft is the addition or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (maintenance dredging, residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, new dredging, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees. The repair or rehabilitation of any type of currently serviceable watercraft access structure is not considered new access provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements to the existing watercraft access structures do not result in increased watercraft usage.

<sup>6</sup> Projects proposed within the St. Johns River portion of Lake, Marion, and Seminole counties and contiguous with Volusia County shall be evaluated using the Volusia County MPP.

<sup>7</sup> For projects proposed within the following areas: the Peace River in DeSoto County; all areas north of Craig Key in Monroe County, and the Anclote and Pithlachascotee Rivers in Pasco County, proceed to Couplet M. For all other locations in DeSoto, Monroe (south of Craig Key) and Pasco Counties, proceed to couplet N.

<sup>8</sup> Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat, proceed to couplet O.

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, the applicant can elect to avoid/minimize impacts to that vegetation. In that instance, where impacts are unavoidable and the applicant elects to abide by or employ construction techniques that exceed the criteria in the following documents, the reviewer should conclude that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat and proceed to couplet O.

- “Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat,” prepared jointly by the U.S. Army Corps of Engineers and the National Marine Fisheries Service (August 2001) [refer to the [Corps’ web page](#)], and
- “Key for Construction Conditions for Docks or Other Minor Structures Constructed in or over Johnson’s seagrass (*Halophila johnsonii*),” prepared jointly by the National Marine Fisheries Service and U.S. Army Corps of Engineers (October 2002), for those projects within the known range of Johnson’s seagrass occurrence (Sebastian Inlet to central Biscayne Bay in the lagoon systems on the east coast of Florida) [refer to the [Corps’ web page](#)],

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, and the applicant does not elect to follow the above Guidelines, the Corps will need to request formal consultation on the manatee with the Service as *May affect*.

For activities other than docks and other piling-supported minor structures proposed in SAV, marsh, or mangroves (*e.g.*, new dredging, placement of riprap, bulkheads, etc.), if the reviewer determines the impacts to the SAV, marsh or mangroves will not adversely affect the manatee or its critical habitat, proceed to couplet O, otherwise the Corps will need to request formal consultation on the manatee with the Service as *May affect*.

<sup>9</sup> See Glossary, under “is not likely to adversely affect.”

<sup>10</sup> Federal reviewers, when making your effects determination, consider effects to manatee designated critical habitat pursuant to section 7(a)(2) of the Endangered Species Act. State reviewers, when making your effects determination, consider effects to manatee habitat within the entire State of Florida, pursuant to Chapter 370.12(2)(b) Florida Statutes.

<sup>11</sup> See the [Corps' web page](#) for manatee construction conditions. At this time, manatee construction precautions c and f are not required in the following Florida counties: Bay, Escambia, Franklin, Gilchrist, Gulf, Jefferson, Lafayette, Okaloosa, Santa Rosa, Suwannee, and Walton.

<sup>12</sup> By letter dated April 25, 2013, the Corps received the Service’s concurrence with “*May affect, not likely to adversely affect*” determinations made pursuant to this key for the following activities: (1) selected non-watercraft access projects; (2) watercraft-access projects that are residential dock facilities, excluding those located in the Braden River AIP; (3) launching facilities solely for kayaks and canoes, and (4) new or expanding multi-slip facilities located in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County.

Additionally, in the same letter dated April 25, 2013, the Corps received the Service’s concurrence for “*May affect, not likely to adversely affect*” determinations specifically made pursuant to Couplet G of the key for the repair or rehabilitation of currently serviceable multi-slip watercraft access structures provided all of the following are met: (1) the project is not located in an IMA, (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage. Upon receipt of such a programmatic concurrence, no further consultation with the Service for these projects is required.

## GLOSSARY

**Areas of inadequate protection (AIP)** – Areas within counties as shown on the maps where the Service has determined that measures intended to protect manatees from the reasonable certainty of watercraft-related take are inadequate. Inadequate protection may be the result of the absence of manatee or other watercraft speed zones, insufficiency of existing speed zones, deficient speed zone signage, or the absence or insufficiency of speed zone enforcement.

**Boat slip** – A space on land or in or over the water, other than on residential land, that is intended and/or actively used to hold a stationary watercraft or its trailer, and for which intention and/or use is confirmed by legal authorization or other documentary evidence. Examples of boat slips include, but are not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

**Critical habitat** – For listed species, this consists of: (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act (ESA), on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the ESA, upon a determination by the Secretary that such areas are essential for the conservation of the species. Designated critical habitats are described in 50 CFR 17 and 50 CFR 226.

**Currently serviceable** – Currently, serviceable means usable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

**Direct effects** – The direct or immediate effects of the project on the species or its habitat.

**Dredging** – For the purposes of this key, the term dredging refers to all in-water work associated with dredging operations, including mobilization and demobilization activities that occur in water or require vessels.

**Emergent vegetation** – Rooted emergent vascular macrophytes such as, but not limited to, cordgrass (*Spartina alterniflora* and *S. patens*), needle rush (*Juncus roemerianus*), swamp sawgrass (*Cladium mariscoides*), saltwort (*Batis maritima*), saltgrass (*Distichlis spicata*), and glasswort (*Salicornia virginica*) found in coastal salt marsh-related habitats (tidal marsh, salt marsh, brackish marsh, coastal marsh, coastal wetlands, tidal wetlands).

**Formal consultation** – A process between the Services and a Federal agency or applicant that: (1) determines whether a proposed Federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; (2) begins with a Federal agency's written request and submittal of a complete initiation package; and (3) concludes with the issuance of a biological opinion and incidental take statement by either of the Services. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed

action “is not likely to adversely affect” listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.14]

**Important manatee areas (IMA)** – Areas within certain counties where increased densities of manatees occur due to the proximity of warm water discharges, freshwater discharges, natural springs and other habitat features that are attractive to manatees. These areas are heavily utilized for feeding, transiting, mating, calving, nursing or resting as indicated by aerial survey data, mortality data and telemetry data. Some of these areas may be federally-designated sanctuaries or state-designated “seasonal no entry” zones. Maps depicting important manatee areas and any accompanying text may contain a reference to these areas and their special requirements. Projects proposed within these areas must address their special requirements.

**Indirect effects** – Those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur. Examples of indirect effects include, but are not limited to, changes in water flow, water temperature, water quality (*e.g.*, salinity, pH, turbidity, nutrients, chemistry), prop dredging of seagrasses, and manatee watercraft injury and mortality. Indirect effects also include watercraft access developments in waters not currently accessible to manatees, but watercraft access can, is, or may be planned to waters accessible to manatees by the addition of a boat lift or the removal of a dike or plug.

**Informal consultation** – A process that includes all discussions and correspondence between the Services and a Federal agency or designated non-Federal representative, prior to formal consultation, to determine whether a proposed Federal action may affect listed species or critical habitat. This process allows the Federal agency to utilize the Services’ expertise to evaluate the agency’s assessment of potential effects or to suggest possible modifications to the proposed action which could avoid potentially adverse effects. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed action “is not likely to adversely affect” listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.13]

**In-water activity** – Any type of activity used to construct/repair/replace any type of in-water structure or fill; the act of dredging.

**In-water structures – watercraft access structures** – Docks or piers, marinas, boat ramps, boat slips, boat lifts, floats, floating docks, pilings (depending on use), boat davits, etc.

**In-water structures – other than watercraft access structures** – Bulkheads, seawalls, riprap, groins, boardwalks, pilings (depending on use), etc.

**Is likely to adversely affect** – The appropriate finding in a biological assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effect is not: discountable, insignificant, or beneficial (see definition of “is not likely to adversely affect”). An “is likely to adversely affect” determination requires the initiation of formal consultation under section 7 of the ESA.

**Is not likely to adversely affect** – The appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. **Discountable effects** are those extremely unlikely to occur. **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur.

**Manatee Protection Plan (MPP)** – A manatee protection plan (MPP) is a comprehensive planning document that addresses the long-term protection of the Florida manatee through law enforcement, education, boat facility siting, and habitat protection initiatives. Although MPPs are primarily developed by the counties, the plans are the product of extensive coordination and cooperation between the local governments, the FWC, the Service, and other interested parties.

**Manatee Protection Plan thresholds** – The smallest size of a multi-slip facility addressed under the purview of a Manatee Protection Plan (MPP). For most MPPs, this threshold is five slips or more. For Brevard, Clay, Citrus, and Volusia County MPPs, this threshold is three slips or more.

**Mangroves** – Rooted emergent trees along a shoreline that, for the purposes of this key, include red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*) and white mangrove (*Laguncularia racemosa*).

**May affect** – The appropriate conclusion when a proposed action may pose any effects on listed species or designated critical habitat. When the Federal agency proposing the action determines that a “may affect” situation exists, then they must either request the Services to initiate formal consultation or seek written concurrence from the Services that the action “is not likely to adversely affect” listed species. For the purpose of this key, all “may affect” determinations equate to “likely to adversely affect” and Corps Project Managers should request the Service to initiate formal consultation on the manatee or designated critical habitat. **No effect** – the appropriate conclusion when the action agency determines its proposed action will not affect a listed species or designated critical habitat.

**Multi-slip facility** – Multi-slip facilities include commercial marinas, private multi-family docks, boat ramps and associated trailer parking spaces, dry storage facilities and any other similar structures or activities that provide access to the water for multiple (five slips or more, except in Brevard, Clay, Citrus, and Volusia counties where it is three slips or more) watercraft. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

**New access for watercraft** – New dredging and the addition, expansion or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (residential boat lifts, pilings, floats, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees.

**Observers** – During dredging and other in-water operations within manatee accessible waters, the standard manatee construction conditions require all on-site project personnel to watch for manatees to ensure that those standard manatee construction conditions are met. Within important manatee areas (IMA) and under special circumstances, heightened observation is needed. **Dedicated Observers** are those having some prior experience in manatee observation, are dedicated only for this task, and must be someone other than the dredge and equipment operators/mechanics. **Approved Observers** are dedicated observers who also must be approved by the Service (if Federal permits are involved) and the FWC (if state permits are involved), prior to work commencement. Approved observers typically have significant and often project-specific observational experience. Documentation on prior experience must be submitted to these agencies for approval and must be submitted a minimum of 30 days prior to work commencement. When dedicated or approved observers are required, observers must be on site during all in-water activities, and be equipped with polarized sunglasses to aid in manatee observation. For prolonged in-water operations, multiple observers may be needed to perform observation in shifts to reduce fatigue (recommended shift length is no longer than six hours). Additional information concerning observer approval can be found at [FWC's web page](#).

**Residential boat lift** – A boat lift installed on a residential dock facility.

**Residential dock density ratio threshold** – The residential dock density ratio threshold is used in the evaluation of multi-slip projects in some counties without a State-approved Manatee Protection Plan and is consistent with 1 boat slip per 100 linear feet of shoreline (1:100) owned by the applicant.

**Residential dock facility** – A residential dock facility means a private residential dock which is used for private, recreational or leisure purposes for single-family or multi-family residences designed to moor no more than four vessels (except in Brevard, Clay, Citrus, and Volusia counties which allow only two vessels). This also includes normal appurtenances such as residential boat lifts, boat shelters with open sides, stairways, walkways, mooring pilings, dolphins, etc. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

**Submerged aquatic vegetation (SAV)** – Rooted, submerged, aquatic plants such as, but not limited to, shoal grass (*Halodule wrightii*), paddle grass (*Halophila decipiens*), star grass (*Halophila engelmanni*), Johnson's seagrass (*Halophila johnsonii*), sago pondweed (*Potamogeton pectinatus*), clasping-leaved pondweed (*Potamogeton perfoliatus*), widgeon grass (*Ruppia maritima*), manatee grass (*Syringodium filiforme*), turtle grass (*Thalassia testudinum*), tapegrass (*Vallisneria americana*), and horned pondweed (*Zannichellia palustris*).

**Warm Water Aggregation Areas (WWAAs) and No Entry Areas** – Areas within certain counties where increased densities of manatees occur due to the proximity of artificial or natural warm water discharges or springs and are considered necessary for survival. Some of these areas may be federally-designated manatee sanctuaries or state-designated seasonal “no entry” manatee protection zones. Projects proposed within these areas may require consultation in order to offset expected adverse impacts. In addition, special permits may be required from the FWC in order to access these areas.

**Watercraft access structures** – Docks or piers, marinas, boat ramps and associated trailer parking spaces, boat slips, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

**Waters accessible to manatees** – Although most waters of the State of Florida are accessible to the manatee, there are some areas such as landlocked lakes that are not. There are also some weirs, salinity control structures and locks that may preclude manatees from accessing water bodies. If there is any question about accessibility, contact the Service or the FWC.

**STANDARD MANATEE CONDITIONS FOR IN-WATER WORK**  
2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at [ImperiledSpecies@myFWC.com](mailto:ImperiledSpecies@myFWC.com)
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at [MyFWC.com/manatee](http://MyFWC.com/manatee). Questions concerning these signs can be sent to the email address listed above.

# CAUTION: MANATEE HABITAT

**All project vessels**

**IDLE SPEED / NO WAKE**

When a manatee is within 50 feet of work  
all in-water activities must

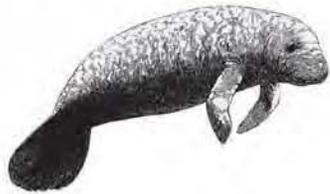
**SHUT DOWN**

Report any collision with or injury to a manatee:

**Wildlife Alert:**

**1-888-404-FWCC(3922)**

cell \*FWC or #FWC





**Florida Fish  
and Wildlife  
Conservation  
Commission**

*Managing fish and wildlife  
resources for their long-term  
well-being and the benefit  
of people.*

620 South Meridian Street  
Tallahassee, Florida  
32399-1600

MyFWC.com

## **Manatee Educational Signs**

Required by Permit or Submerged Lands Lease

March 2011

In order to obtain FWC approval for the manatee educational signs required by state permit or submerged lands lease, requests should be sent to:

[ImperiledSpecies@myfwc.com](mailto:ImperiledSpecies@myfwc.com)

or:

Florida Fish and Wildlife Conservation Commission  
Imperiled Species Management Section 6-A  
620 South Meridian Street Tallahassee, FL 32399-1600.

The FWC requests that the permittee propose and submit a plan for installing signs based on the guidelines discussed below. FWC will review the sign placement proposal and notify the permittee within 60 days of receiving the plan if the signs and locations are unacceptable. Modifications to the type, location and number of proposed signs may be required. All sign proposals should follow the general guidelines in this document. The following information should be included in this plan and forwarded to FWC for review:

- A detailed upland project site plan with proposed sign locations, types, and proposed numbers of manatee signs. Include which way the signs are proposed to face.
- The project address or a location map of the facility in relation to waterways.
- The project permit or submerged lands lease number.
- Your name, email address, mailing address and a phone number.

### **Guidelines for the installation of signs**

- Signs must be placed in a prominent location for maximum visibility. Areas that are recommended include: dock walkways, dock master offices, near restrooms or other high patron foot traffic areas.
- Signs must be replaced when faded, damaged or outdated.
- If the facility is large or has multiple docks with separate walkways that are a considerable distance apart, multiple signs should be installed.
- These signs must not face the water, must never be attached to pilings or navigational markers in the water. One exception to signs facing the water exists for the temporary sign, "Caution Boaters" during in-water work.

### **FWC Approved Signs and Sign Specifications**

The FWC designs manatee educational signs, which can be produced by most sign companies. Signs other than depicted may be considered, but must be pre-approved by FWC's Imperiled Species Management Section. There is a list of known sign vendors who produce FWC signs on our [Manatee Sign Vendor webpage](#) as well as downloadable files for sign companies not on this list who may want to produce these signs.

## Manatee Educational Signs February 2011

For durability, all signs should be fiberglass or metal with rounded corners (hand-sanded to remove all sharp edges and burrs), constructed of 0.08 Gauge 5052-H38 Aluminum with an Alodine 1200 conversion coating and Engineer Grade Type I reflective sheeting. Signs constructed to other specifications may not provide durability acceptable to the consumer.

The approved signs must meet the following specifications:

Florida Friendly Boating (2009)	Caution: Boaters (2009)	Entanglement (2010)	Caution: Shut Down (2009)
Minimum size should be 30" tall x 36" wide with rounded corners	Minimum size should be 30" tall x 24" wide with rounded corners	Minimum size should be 15" tall X 12" wide with rounded corners	Minimum size should be 8½" tall by 11" wide metal with rounded corners
			
This sign is considered the manatee educational sign. In 2009, it replaced the older manatee educational sign called "Manatee Basics for Boaters".	This sign is sometimes referred to as an awareness sign. In 2009, it replaced the "Caution: Manatee Area" sign.  These signs are also frequently used as temporary signs for construction purposes.	This entanglement sign is typically placed near recycling bins or trash containers.	This temporary sign is required as part of the standard manatee construction conditions and is intended to be placed near dredge, tugboat and work boat operators.

The size and type of signs required by permit or lease may vary from those depicted in this guide. If you have any questions, please contact FWC's Imperiled Species Management Section.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE**  
Southeast Regional Office  
263 13th Avenue South  
St. Petersburg, FL 33701

## **SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS**

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006

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