

Endangered Species Act

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USACE, Jacksonville District

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US Army Corps of Engineers
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Topics

- Introduction
- Endangered Species Act
- Types of consultations
- Effect determinations
- Application information
- Determination tools
- Regional issues



USACE Permit Actions

- Authorities: Section 404 of the CWA and Section 10 of the RHA
- Compliance with applicable federal laws:
 - Magnuson-Stevens Act (Essential Fish Habitat - EFH)
 - National Historic Preservation Act (NHPA)
 - Coastal Zone Management Act
 - Section 401 of the Clean Water Act
 - **Endangered Species Act (ESA)**



Endangered Species Act



- Promulgated by Congress on 1973
- Intended to conserve threatened and endangered species and the ecosystems on which they depend
- Provides broad powers for Secretaries of Interior and Commerce to protect species in jeopardy



Services



Terrestrial and freshwater
Species, Manatee and
Sea Turtles (in land)



Marine species and most
anadromous fish,
Sea Turtles (in the water)



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Endangered Species Act

- **Endangered species** - any species which is in danger of extinction throughout all or a significant portion of its range. [ESA §3(6)]
- **Threatened species** - any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. [ESA §3(20)]
- **Listed species** - any species of fish, wildlife or plant which has been determined to be endangered or threatened under the ESA. [50 CFR §402.02]
- **Critical Habitat** - specific areas within geographic range of species which support physical and biological features essential to the conservation of the species, which may require special management. [ESA §3(5)(A)]



Endangered Species Act

- Section 4 - Listing and Recovery
(Designated critical habitat)
- **Section 7 - Interagency Cooperation**
(50 CFR Part 402)
- Section 9 - Prohibited Acts
(Take prohibited - broad definition)



- Section 10 - Permits
(Habitat conservation plans)



Endangered Species Act

- Section 7 of the ESA
 - Requires that all federal agencies ensure that any **action** they authorize, fund or carry out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat
 - Requires agencies to consult on “may affect” actions



Endangered Species Act

- Listed species worldwide - 2163
- Listed species in Puerto Rico - 73
 - 22 animal species
 - 49 plant species
 - 2 coral species
- Designated critical habitats in PR
 - 12 for listed animal species
 - 2 for listed coral species
- 9 additional species proposed for listing in PR



Types of Consultations

- Early
- Emergency
- Conference
- Informal
- Formal

USACE makes Effect Determination and initiates consultation with the Service



Effect Determinations

■ No effect

- No listed species or designated critical habitat present within action area
- Project has no elements that could possibly affect listed species or designated critical habitat
- Difficult to achieve, specially with in-water work
- No consultation required
- Services would not provide concurrence



Effect Determinations

- **May affect**

- **Not likely to adversely affect** (NLAA or MANLAA)
 - Effects on listed species are expected to be beneficial, insignificant (cannot be measured, detected or evaluated) or discountable (very unlikely)
 - Informal consultation
- **Likely to adversely affect** (LAA)
 - A direct or indirect effect of the action adversely effects listed species or DCH
 - If incidental take is anticipated to occur, the action is adverse
 - Formal consultation



Informal Consultation

- Informal process
- The Service may recommend project modifications to eliminate the LAA determination
- Ends with
 - **Written** concurrence from Service that the **action is NLAA** listed species or critical habitat, or
 - Initiation of formal consultation



Formal Consultation

- A written request to initiate formal consultation shall:
 - Describe proposed action
 - Describe affected area
 - List affected species or critical habitat
 - Describe the effect on listed species or critical habitat and analyze cumulative effects
 - Include relevant reports, environmental impact statement, environmental assessment or biological assessment
 - Include other relevant available information on the action, the affected listed species or critical habitat



(50 CFR 402.14)



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Biological Opinion

- The Service prepares a Biological Opinion that identifies:
 - Whether an action is or is not likely to jeopardize the continued existence of a listed species or adversely modify designated critical habitat
 - Any incidental take of listed species or adverse modification of critical habitat
 - Any reasonable and prudent alternatives to avoid jeopardy or adverse modification
 - Incorporated as Permit Conditions



Making Effects Determinations

- Be proactive...You can influence the consultation...
 - Consider the federal process early in your project design and planning
 - Species surveys, habitat and benthic assessments may be needed
 - Evaluate alternatives and potential modifications
 - Consider direct, indirect and cumulative effects
 - Avoid, minimize, compensate
 - Permit application is very important
- Ultimately USACE makes the determination and initiates consultation



Application Information

- Reference, incorporate and submit consultation information early with the permit application
- Complete Application \neq Complete Consultation Package
- Nationwide Permits General Condition 18
 - PCN must include:
 - Name(s) of listed species that might be affected
 - Documentation demonstrating compliance with ESA
 - No work shall start until Section 7 is satisfied
- Be knowledgeable of the process
- Take advantage of existing tools and resources



Determination Tools

- USACE Pre-application Consultations
- Technical Assistance by Services
- ESA Consultation Handbook
- Section 7 Regs (50 CFR Part 402)
- Websites and Internet Tools
- Consultation Forms and Instruments used by Services
- Standard Conservation Measures
- Biological Assessments and/or Evaluations



Determination Tools

- Jacksonville District Regulatory Website & Source Book
<http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>

JACKSONVILLE DISTRICT
US Army Corps of Engineers

HOME | MISSIONS | REGULATORY | SOURCEBOOK

Overview
Collapse All Expand All
■ Introduction
■ Geographic Extent
■ Legislative Authorities
■ Delegation of Authority

Permitting
Collapse All Expand All
■ Standard Permit
■ General Permits
■ Letter of Permission
■ Nationwide Permits
■ No Permits Required
■ Artificial Reefs
■ Processing Steps
■ Special Conditions
■ Forms
■ "moss" - Alternatives Analysis Guidance

Wetlands
Collapse All Expand All
■ Wetland Identification
■ Wetland Jurisdiction
■ Requesting a Wetland Delineation

Mitigation
Collapse All Expand All
■ Mitigation
■ Compensatory Mitigation
■ Functional Assessment
■ Wetland Rapid Assessment Procedure (WRAP)
■ Uniform Mitigation Assessment Methodology (UMAM) - FDEP
■ Calculating Mitigation

Endangered Species
Collapse All Expand All
■ Overview
■ Eastern Indigo Snake
■ Everglades Snail Kite
■ Florida Panther
■ Freshwater Mussels
■ Gulf Sturgeon
■ Johnson's Seagrass
■ Manatee
■ North Atlantic Right Whale
■ Sea Turtles
■ Wood Stork

Other Permitting Factors
Collapse All Expand All
■ Cultural Resources
■ Federal Channel Setback Requirements
■ Essential Fish Habitat and Dock Construction Guidelines
■ In-Water Construction Conditions

Appeals
Collapse All Expand All
■ Appeals

Enforcement
Collapse All Expand All
■ Enforcement
■ Memorandum of Agreement

Regulations and Policies
Collapse All Expand All
■ Corps Regulations, Administrative and Policy Materials

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Endangered Species

Collapse All Expand All

- ⊕ Overview
- ⊕ Eastern Indigo Snake
- ⊕ Everglades Snail Kite
- ⊕ Florida Panther
- ⊕ Freshwater Mussels
- ⊕ Gulf Sturgeon
- ⊕ Johnson's Seagrass
- ⊕ Manatee
- ⊕ North Atlantic Right Whale
- ⊕ Sea Turtles
- ⊕ Wood Stork

Other Permitting Factors

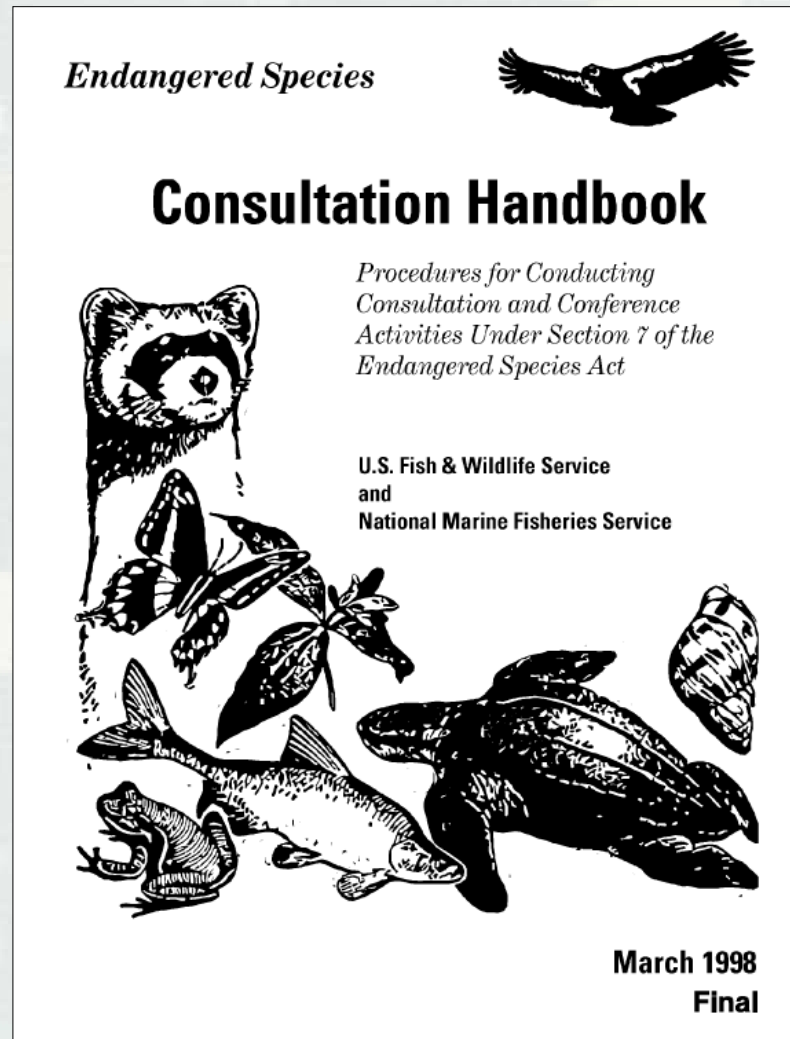
Collapse All Expand All

- ⊕ Cultural Resources
- ⊕ Federal Channel Setback Requirements
- ⊕ Essential Fish Habitat and Dock Construction Guidelines
- ⊕ In-Water Construction Conditions



Determination Tools

- Endangered Species Consultation Handbook

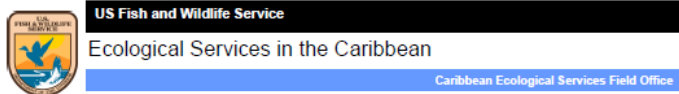


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Determination Tools

- FWS Website and Endangered Species Internet Tools

<http://www.fws.gov/caribbean/es/Endangered-Main.html>



Internet Tools:

Addresses: <http://www.fws.gov/caribbean/es>
<http://ecos.fws.gov>

What you can find?

- Endangered Plants for PR and VI
- Endangered Animals for PR and VI
- Critical Habitat Designations
- Species Recovery Plans
- Endangered Species Map
- NWI Maps
- IPaC
- Links to Other Resources

What info you may see?

Endangered & Threatened Plants or Animals

- Species Profile
- Recovery Plans
- Photos
- Fact Sheets

Critical Habitat Designations

- Federal Register Publication Date
- Description of Designation
- Maps

Species Recovery Plans

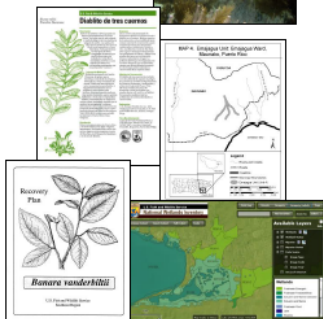
- Document with information about the species

National Wetland Inventory Map

- Wetland Mapper Viewer
- Download Wetland Digital Data
- View Wetlands Data with Google Earth

Caribbean Endangered Species Map

- Municipalities Found
- Common Names (English & Spanish)
- Taxonomic Group
- Status of Specie
- General Distribution
- General Comments



U.S. FISH AND WILDLIFE SERVICE
Caribbean Endangered Species Map
Mapa de Especies Caribeñas en Peligro de Extinción

Puerto Rico
U.S. Virgin Islands

PO Box 491 * Boquerón, PR 00622 * Phone: 787-851-7297 * Fax: 787-851-7440



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Determination Tools

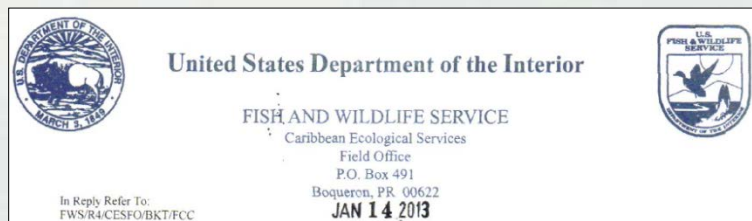
- FWS Recommended Manatee Conservation Measures

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|--|--|--|--|--|--|---|
| | | | | | | <p><i>path of your vessel, reduce the velocity to 5 mph and turn your vessel away from the manatee's path or wait until the manatee has moved from the area by putting your vessel in neutral.)</i></p> <ol style="list-style-type: none"> Luego de asegurarse de que el manatí esté fuera de la trayectoria de su embarcación, continúe navegando despacio (no más de 5 mph) hasta que su embarcación se encuentre a no menos de 50 pies (15 metros) del manatí. <i>(After you are certain that the manatee is well outside of the path of your vessel, resume navigation slowly (not more than 5 mph) until your vessel is not less than 50 feet (15 meters) away from the manatee.)</i> Obedezca las zonas con límites de velocidad y reduzca la velocidad en aguas llanas menores a 10 pies de profundidad en particular cerca de la costa, en las desembocaduras de ríos, en praderas de hierbas marinas y manglares. <i>(Obey regulatory speed zones and reduce velocity in shallow waters less than 10 feet, particularly close to the coast, in river mouths, in sea grass beds and mangroves.)</i> Si observa un manatí mientras usted está en el agua, obsérvelo pasivamente, no lo persiga, acose o lo toque. <i>(If you observe a manatee while in the water, passively observe it, do not follow it, nor harass or touch.)</i> No tire basura al agua. El manatí puede ingerirla o enredarse en ella, lo cual podría causarle heridas o la muerte. <i>(Do not throw trash in the water. Manatees may ingest or entangle on trash, which may injure or kill it.)</i> Nunca alimente o le ofrezca agua a un manatí. Es ilegal y los malacostumbra a acercarse a lugares donde pueden ser lastimados. <i>(Never feed or give water to a manatee. It is illegal and will wrongly habituate them to approach areas where they can be injured.)</i> <p>Informe accidentes con un manatí inmediatamente. Si encuentra un bebé manatí solo, en peligro, herido o muerto, llame al Cuerpo de Vigilantes del Departamento de Recursos Naturales y Ambientales al 787-724-5700 o al Programa de Rescate de Mamíferos Marinos al 787-833-2025, 787-538-4684 ó 787-645-5593. <i>(Inform any accident with a manatee immediately. If you find a baby manatee alone, in danger, injured or dead, call the Department of Natural and Environmental Resources Law Enforcement of at 787-724-5700 or the Marine Mammal Rescue Program at 787-833-2025, 787-538-4684 or 787-645-5593.)</i></p> <p>Herir o matar un manatí puede conllevar multas de más de \$50,000 y/o no menos de dos años de cárcel. ¡EVÍTESE ESE RIESGO! <i>(Harming or killing a manatee could carry fines of more than \$50,000 and/or not less than two years in prison. AVOID THIS RISK!)</i></p> <p>GRACIAS POR AYUDAR A SALVAR LOS MANATÍES THANKS FOR HELPING SAVE THE MANATEES</p> |
|--|--|--|--|--|--|---|



Determination Tools

- FWS Blanket Clearance Letters
 - Federal Highway Administration
 - Federal Transportation Authority
 - Housing and Urban Development
 - Rural Development
 - Federal Communication Commission



We have determined that communication towers to be located on urbanized areas and vacant lots deprived of forested habitats are not likely to adversely affect federally-listed species under our jurisdiction. Furthermore, consultation pursuant section 7 of the Endangered Species Act would not be needed for projects that meet the following criteria.

evaluation of communication tower projects proposed in Puerto Rico and the U.S. Virgin Islands. The U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office has been providing technical assistance to private companies regarding the possible effects of communication towers (including radio, television, cellular, and microwave) on fish and wildlife resources, including federally-listed species and migratory birds.

We have determined that communication towers to be located on urbanized areas and vacant lots deprived of forested habitats are not likely to adversely affect federally-listed species under our jurisdiction. Furthermore, consultation pursuant section 7 of the Endangered Species Act would not be needed for projects that meet the following criteria.



Determination Tools

NOAA-NMFS Website and Internet Tools

http://sero.nmfs.noaa.gov/protected_resources/index.html

The screenshot shows the NOAA Fisheries website for the Southeast Regional Office. The main content area is titled "Protected Resources Division" and includes a description of the division's role in conservation and recovery of marine mammals and endangered species. A "Hot topics" section lists recent news items, such as NOAA releasing 185 Florida loggerhead sea turtles into the wild and NOAA announcing regulations to protect marine mammals during Navy training and testing in the Atlantic and Gulf of Mexico. A "Menu" sidebar on the right lists various resources like "Outreach and Education Materials", "Endangered Species", "Section 7 Consultations", "Threatened and Endangered Species Lists", "Listing Petitions", "Sea Turtles", "Sturgeon", "Johnson's Seagrass", "Sawfish", "Coral", "Species of Concern", "Marine Mammals", "Bottlenose Dolphins", "North Atlantic Right Whales", "Marine Mammal Health & Stranding", "Marine Mammal Authorization Program", "Pelagic Longline Take Reduction Plan", "Bottlenose Dolphin Take Reduction Plan", and "Atlantic Large Whale Take Reduction Plan".

Menu

- Outreach and Education Materials
- Endangered Species**
 - Section 7 Consultations
 - Threatened and Endangered Species Lists
 - Listing Petitions
 - Sea Turtles
 - Sturgeon
 - Johnson's Seagrass
 - Sawfish
 - Coral
 - Species of Concern
- Marine Mammals**
 - Bottlenose Dolphins
 - North Atlantic Right Whales
 - Marine Mammal Health & Stranding
 - Marine Mammal Authorization Program
 - Pelagic Longline Take Reduction Plan
 - Bottlenose Dolphin Take Reduction Plan
 - Atlantic Large Whale Take Reduction Plan

How to Submit a Consultation

Instructions on how and where to submit a complete consultation request packet of information.

Effects Determination Guidance

Information on how to determine the level of effect your project might have to listed species and/or critical habitat.

Species and Critical Habitat Found in the Southeast Region

Find out which ESA-listed or proposed for listing species and critical habitat are found in your state or region.

How to Track your Consultation in PCTS

Instructions are provided to track consultations on-line.

Observer Lists

An updated list of NMFS-approved, ESO-qualified individuals and ESO-provider companies, as well as information on companies that provide marine mammal observers to industry.

Emergency Consultations

Information about emergency consultations, procedures, and related forms.

Frequently Requested Biological Opinions

Copies of biological opinions of significance for fisheries, dredging, and various regulatory actions.

Endangered Species Act Policies, Guidance, and Regulations


Helpful guidance documents in reference to Section 7 consultation preparation.



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Determination Tools

- NOAA-NMFS Vessel Strike Avoidance Measures

| | | | | |
|---|--|--|---|---|
|  <p>Background The National Marine Fisheries Service (NMFS) is responsible for the protection and management of the nation's fish and wildlife resources. The following information is required to be reported to NMFS in order to protect the vessel and the environment.</p> <p>Protect Vessel protect Caribbean informa ship stri sighting</p> <p>Vessel In orde measur</p> <p>1. Injured Vessel regardl</p> <p>2.</p> <p>3.</p> <p>4. If the in respons as need email (</p> <p>5. For ad NOAA Southe 263 13 St. Pete Tel: (77 Visit us</p> <p>NMFS S</p> | <p>6.</p> <p>Additional</p> <p>1.</p> <p>2.</p> <p>3.</p> <p>4.</p> <p>Injured</p> <p>Observed or N</p> <p>ENVIRONMENTAL C</p> | <p>Reporter Information</p> <p>Reporting Vessel/Air</p> <p>Strike Vessel Information</p> <p>TYPE OF VESSEL: Check one</p> <p><input type="checkbox"/> Container</p> <p><input type="checkbox"/> Tanker</p> <p><input type="checkbox"/> Freight</p> <p><input type="checkbox"/> Research</p> <p><input type="checkbox"/> Fishing</p> <p>Name of Vessel involved</p> <p>Vessel Make</p> | <p>NAVIGATION INFORMATION</p> <p>Vessel Activity</p> <p>Total # of watchstanders</p> <p>INCIDENT INFORMATION</p> <p>Part of vessel struck by</p> <p>Was avoidance action taken?</p> <p>Comments on damage</p> | <p>NOAA Fisheries Service Southeast Region Ship Strike Report - Continued</p> <p>ANIMAL INFORMATION</p> <p>Time elapsed between sighting and collision</p> <p>Distance from vessel when first sighted</p> <p>Animal's orientation to the vessel</p> <p>Estimated size/species of whale</p> <p>Other marine mammals present? Approximate number Species</p> <p>What direction was the whale traveling</p> <p>Briefly describe whale's behavior prior to strike</p> <p>Briefly describe whale's behavior after collision (if seen)</p> <p>Portion of animal struck Condition post-strike Blood seen in water after strike</p> <p>Description of wounds on animal. Use drawings to mark the location of wound(s). Include estimates of length and depth of wounds.</p> |
| | | <p>ENVIRONMENTAL CONDITIONS</p> <p>Lighting <input type="checkbox"/> Weather <input type="checkbox"/></p> <p>Wind Speed</p> <p>Wave Height</p> | | |



Determination Tools

■ NOAA-NMFS Sea Turtle Construction Conditions



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
O:\forms\Sea Turtle and Smalltooth Sawfish Construction Conditions.doc



Determination Tools

- USACE / NOAA-NMFS Dock Construction Guidelines

| | | |
|---|---|---|
| <p>Construction Guidelines for Docks or over Submerged Aquatic Vegetation U.S. Army Corps of Engineers</p> <p>Submerged Aquatic Vegetation</p> <ol style="list-style-type: none"> Avoidance. The piling-supported structure shall be located in areas where SAV is not present. The height of piling-supported structure shall be limited to 5 feet above the surface of the decking. The width of the piling-supported structure shall be limited to 10 feet at the midpoint of the piling-supported structure. Over-SAV bed portions of the structure shall be limited to the extent that is practicable. a. If possible, terminal platforms shall be avoided. b. If a terminal platform is provided, it shall be limited to 160 square feet in area and the configuration of the platform shall be limited to a 5-foot height requirement; the long axis of the platform shall be parallel to the shoreline. c. If the terminal platform is provided, it shall be limited to 120 square feet in area and the minimum 4-foot wide by 20-foot high structure shall be provided 2 feet above MHW to facilitate platform access. The platform shall be aligned in the direction of the shoreline section is constructed with grates. One uncovered boat lift (as used) may be added to facilitate access to the structure. The stern catwalk shall be cantilevered. Pilings shall be installed in "halos" around the newly installed pressure pump may be used. The spacing of pilings through the structure shall be limited to 10 feet. The gaps between deckboards shall be limited to 1/2 inch. <p>Marsh:</p> <p>Grid Specifications and Suppliers Section 203 - February 2003 - Manufacturer name and date of revision: May 2003 - The terms dock and pile shall be added to the title: March 2008 - Added requirement for grid specifications.</p> | <ol style="list-style-type: none"> The piling-supported structure shall be located in areas where SAV is not present. The over-marsh portion of the structure shall be limited to the extent that is practicable. The width of the piling-supported structure shall be limited to 10 feet at the midpoint of the piling-supported structure. <p>Mangroves.</p> <ol style="list-style-type: none"> The width of the piling-supported structure shall be limited to 10 feet at the midpoint of the piling-supported structure. Mangrove clearing is restricted to the extent that is practicable. The location and alignment of the structure shall be limited to the extent that is practicable. <p>The following information does not constitute a design standard for any particular provider and is provided for informational purposes only. The piling-supported structure construction shall be limited to the use of grids, grates, lattices, and materials used in construction shall be limited to a maximum percent open space.</p> <p>A type of fiberglass grate panel (1-800-527-4043). A type of plastic grate panels are also distributed by the manufacturer and are available in a variety of sizes and materials. The manufacturer shall be integrally molded into the top of the grate panel. The load-bearing capacity of the selected manufacturer(s) for product specifications shall be limited to the extent that is practicable.</p> <p>Grid Specifications and Suppliers Section 203 - February 2003 - Manufacturer name and date of revision: May 2003 - The terms dock and pile shall be added to the title: March 2008 - Added requirement for grid specifications.</p> | <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); background-color: red; color: white; padding: 5px;">ERDC/EL TR-08-41</div> <div style="text-align: right;">  <p>US Army Corps of Engineers® Engineer Research and Development Center</p> </div> </div> <p style="text-align: center;"><i>Wetlands Regulatory Assistance Program</i></p> <h2 style="text-align: center;">Evaluation of Regulatory Guidelines to Minimize Impacts to Seagrasses from Single-family Residential Dock Structures in Florida and Puerto Rico</h2> <p style="text-align: center;">Deborah J. Shafer, Jocelyn Karaszia, Lisamarie Carrubba, and Craig Martin October 2008</p>  <p style="text-align: center; font-size: small;">Approved for public release; distribution is unlimited.</p> |
|---|---|---|



Determination Tools

- NOAA Environmental Sensitivity Index Maps

<http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html>

U.S. Department of Commerce | National Oceanic and Atmospheric Administration | National Ocean Service



Office of Response and Restoration


Home Oil and Chemical Spills Environmental Restoration Marine Debris Training and Education Multimedia

Environmental Sensitivity Index (ESI) Maps

[ESI Maps](#) [Download ESIs](#) [View ESIs Online](#) [Order ESIs](#) [Basics](#) [Exercises](#) [Toolkit](#) [News](#)

Environmental Sensitivity Index (ESI) maps provide a concise summary of coastal resources that are at risk if an oil spill occurs nearby. Examples of at-risk resources include biological resources (such as birds and shellfish beds), sensitive shorelines (such as marshes and tidal flats), and human-use resources (such as public beaches and parks).

When an oil spill occurs, ESI maps can help responders meet one of the main response objectives: reducing the environmental consequences of the spill and the cleanup efforts. Additionally, ESI maps can be used by planners—before a spill happens—to identify vulnerable locations, establish protection priorities, and identify cleanup strategies.



Shorelines on ESI maps are color-coded by sensitivity to oil. Symbols mark localized areas for biological and human-use resources.

Access the ESI Products:

- [Download ESIs:](#) Download from this page ESI maps and data in a number of formats.
- [View ESIs Online:](#) Explore and query ESI mapping data using several online options.
- [Order ESIs:](#) Learn how to order ESI maps and data from OR&R.


Key Features of ESI Maps and Data

- Uses GIS techniques to integrate maps of a region with geographically-referenced **biological resources**, **human-use resources**, and ESI-classified **shorelines** that are ranked based on their sensitivity to oiling.
- Contains a summary view of ESI data on the back of the paper map, and GIS versions of the ESI data that can be used for more complex queries.
- Serves as a quick reference for oil spill responders and coastal zone managers.
- Available as a single map, or a regional collection of maps called an ESI atlas.
- Available in electronic formats (including several GIS formats) for most coastal regions of the U.S., as well as a few international locations.


ESI maps are created by NOAA OR&R researchers, working with colleagues in state government agencies, federal government agencies, and industry.

On Our Radar


Response Tools for Spills




25 Year Report on Exxon Valdez Oil Spill



Gulf Dolphins III after Deepwater Horizon Spill



No Trash Island from Japan in Pacific Ocean



Determination Tools

- NOAA Environmental Sensitivity Index Maps

<http://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html>



Threatened and Endangered Species Databases

ESI data contain a wealth of information about coastal and near-shore biological resources that may be at risk in the event of an oil spill. Sometimes, the abundance of information mapped is overwhelming to those who use the data intermittently. The Threatened and Endangered Species (T&E) databases make some of the most critical resources easier to access. (A [January 2013 blog post](#) provides more information about these databases.)

Each T&E database consists of multiple layers, each representing one species that is listed by either the state or federal government as threatened, endangered, or a species of concern. The map objects have embedded attributes, including the threatened and endangered status (both federal and state) and the year the data were mapped, as well as the species' monthly presence, seasonal breeding activities, and concentration (abundance). The year the data were mapped is important because ESIs are a "snapshot in time," and federal and state status can change. There is also a supporting source table which provides information about the original data provider.

By looking at each species individually, you can more easily visualize where and when a particular species may be at risk and needing protection from oiling or spill clean-up activities.

Access the ESI data: [ESI Threatened and Endangered Species](#)



On Our Radar

Response Tools for Spills



25 Year Report on Exxon Valdez Oil Spill



Regional Issues – Puerto Rico

- NMFS PRD Consultation Timeframes
 - Extensive backlog and delay in consultations
 - Monthly meetings between USACE and NMFS
- Critical Habitat for *Acropora* spp.
 - Identify presence of essential features
- Seven new proposed coral species – September 2014
- Pre-application consultations and Interagency Meetings
 - Limited use
 - Monthly interagency meetings
 - Not to fill application form
 - Corps cannot design project
 - Identify challenges and offer guidance



What about ATF?

- No ESA Section 7 Consultation on ATF
- Because all federal agencies must ensure that any **action** they authorize, fund or carry out is not likely to jeopardize.... That cannot be done if the action has already occurred prior to authorization.
- Be sure you obtain a permit or obtain an NPR prior to construction



Highlights

- Listed species issues will continue to be challenging
- USACE makes the effect determination and initiates consultation
- Consider the federal process in your project design
- Species surveys, habitat and benthic assessments may be needed
- Submit Section 7 information with permit application
- Take advantage of existing tools and resources
- No ESA Section 7 Consultation on ATF

