

NATURAL RESOURCES EVALUATION OUTLINE AND GUIDANCE

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This document provides guidance and a suggested outline for the development of a Natural Resources Evaluation (NRE) as well as guidance on technical memos, desktop reviews, re-evaluations, and pile driving analyses.

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Section 1: GUIDANCE

An NRE should be prepared for projects that involve one or more of the following:

- Federal listed and candidate species/critical habitat consultation (informal or formal).
- Wetland impacts requiring either a standard/individual or regional general permit (SAJ – 92)
- Substantial adverse effects to Essential Fish Habitat (EFH)

An NRE may be required for any type of Environmental Document but is generally expected for Type 2 Categorical Exclusion (CE), Environmental Assessment (EA), and Environmental Impact Statement (EIS) levels. NREs are consultation documents that require review by the Office of Environmental Management (OEM) regardless of federal Class of Action. NREs for State Environmental Impact Reports (SEIRs) or Non-Major State Actions (NMSAs) will not require OEM review.

An NRE may be used as a Biological Assessment for formal Section 7 consultation under the Endangered Species Act (ESA) provided that all requirements under 50 CFR. § 402.12 and § 402.14 are met.

If an NRE is required for one resource (species, wetland, or EFH), a section for the other resources present in the project area should also be included. For example, a project requires the development of an NRE because of species consultation, but has minor wetland impacts, and no EFH impacts. The NRE developed should include Protected Species and Habitat and Wetlands sections with a statement in the project overview that EFH is not applicable. The Protected Species and Habitat section needs to include information sufficient to complete agency consultation and the Wetlands section should include a discussion of the minor wetland impacts.

For projects that have natural resource impacts that do not exceed any of the thresholds listed above, a technical memo discussing the impacts may be sufficient. The technical memo may apply to any type of Environmental Document (except major construction projects¹), but most often for Type 1 CEs and NMSAs. See the Technical Memo section of this document for more details.

A desktop review may be sufficient for projects with minimal to no potential impacts, which are typically Type 1 CEs or NMSAs. Where a desktop review is sufficient, this evaluation can be described in the Environmental Document and a Technical Memo is not required.

¹ A construction project (or other undertaking having similar physical impacts) that constitutes a major federal action significantly affecting the quality of the human environment under the National Environmental Policy Act (NEPA) [42 U.S.C. 4332(2)(C)].

Section 2: NRE OUTLINE

2.1 Cover Page and Content

- [Technical Report Cover Page, Form No. 650-050-38](#)
- Table of Contents
- List of Tables
- List of Figures
- List of Appendices (as applicable to the specific project)



NOTE: Items such as Florida Natural Areas Inventory (FNAI) data reports, soil descriptions, land use descriptions, photos, pond site descriptions, species surveys, Uniform Mitigation Assessment Method (UMAM) forms, and species protection measures may be included as appendices. The ETDM Summary Report should only be referenced and not included as an appendix.

2.2 Executive Summary

Include a brief project description and results of the evaluation including species impacts with effect determinations, wetland impacts, and EFH impacts. If it is determined that there is no involvement with one of these resource groups, an explanation must be provided (e.g., through field reconnaissance, desktop analysis).



TIP: Be concise. Utilize tables to provide summaries when there are several species and/or wetlands. Do not re-state commitments in this section.

2.3 Project Overview

- 1) Briefly describe the proposed project, including project location and purpose and need. For EAs and EISs, describe alternatives that are being carried forward for analysis during PD&E. Typically Type 2 CEs need only the preferred alternative to be described. This should include proposed drainage (i.e., stormwater ponds and floodplain compensation) and activities related to construction known at the time (i.e., temporary detours, bridge demolition). Include a location map with alternatives, as appropriate.

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- 2) Define the study area/action area including proposed drainage. State the report contents and purpose (i.e., how each of the three resources apply to the project).
 - 3) Describe the existing conditions:
 - a. Existing land use (including any conservation lands within or adjacent to the project area). Data sources include Environmental Screening Tool (EST), Florida Land Use, Cover and Forms Classification System (FLUCCS), U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory; FNAI's Guide to the Natural Communities of Florida EST screening information, U.S. Geological Survey (USGS) Topographic maps, aerial photographs. Future land use plans may be described to convey information about the future of the project area.
 - b. Existing soils using Natural Resources Conservation Service (NRCS) Soil Surveys.
 - c. Other existing natural features (e.g., aquatic preserves, wild and scenic rivers, springs).



TIP: The EST is a great source for gathering existing data/information.

2.4 Protected Species and Habitat Section

- 1) Provide a brief section introduction noting applicable laws and agencies with jurisdiction. Indicate that the analysis is consistent with Part 2, Chapter 16, Protected Species and Habitat of the Project Development & Environment (PD&E) Manual. Include applicable ETAT comments for projects that were screened in the EST.
- 2) Describe prior agency coordination and methodology used to determine involvement of protected species and critical habitat within the action area. Include a map of the action area being evaluated.



NOTE: Species evaluations should be completed in accordance with Federal Highway Administration's (FHWA) [2002 Memorandum](#) titled "Management of the Endangered Species Act Environmental Analysis and Consultation Process."

2.4.1 Federal Listed Species and Designated Critical Habitat

- a. Provide a list of potential species that may occur in the action area. Lists can be obtained from the Environmental Screening Tool, USFWS, National Marine Fisheries Service (NMFS), Information for Planning and Consultation (IPaC) tool, or other Service-provided sources for federally listed species. A ranking of probability of occurrence, along with a definition of those probabilities, is helpful (e.g., No, Low, Medium/Moderate, High). Define the basis for these probabilities.
- b. Provide a short introductory paragraph for each federal listed wildlife and plant species (including ESA candidate species) with potential to be in the project area. Include the listing status (i.e., endangered, threatened, and species proposed for listing) and brief background information for each species. If there is designated critical habitat for the species, include a brief description of the habitat as part of the species summary. Include a general comment that federally listed species are also considered state listed species (no need to repeat for each species). Include in the discussion any documented occurrences of listed species and maps as needed.
- c. Include discussion of survey methodology and note if further surveys may be required. Specifically describe any species-specific survey protocols that were followed. Include a summary of data gaps if any.



TIP: Longer, detailed species survey information can be included as an appendix with a summary of survey results included within the body of the NRE.

- d. Evaluate and describe specific aspects of the project (including proposed drainage) that may have an effect on the species or critical habitat. The 'may affect' evaluation looks not only at effects on the entire species or local management unit, but also considers the effect on individual members of the species. If even one individual may be affected, the biologist must conclude that there is a 'may affect' situation. If it is determined that no aspects of the project would have an effect on the species or critical habitat, then specific reasoning must be described.
 - i. When appropriate, species effect determination keys may be used to determine anticipated species effects. When a key is used, document the use of the key either by attaching the key (as an appendix) and highlighting the steps followed, or describing in the narrative what path was taken. Provide citations of any keys used.

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- e. Discuss efforts to avoid, minimize or compensate for adverse impacts. Include standard protection measures or other best management practices.
 - f. Use the standard federal effect determinations. Effect determinations must be supported. If the USFWS or NMFS has previously concurred with the determination, include the date of concurrence.
 - i. No Effect
 - ii. May Affect, Not Likely to Adversely Affect
 - iii. May Affect, Likely to Adversely Affect
 - g. Be sure to include a statement for critical habitat as well, regarding whether the proposed action will result in the “destruction or adverse modification of critical habitat.”

2.4.2 State Listed Species

- a. Provide a list of potential species that may occur in the action area. Lists can be obtained by the Environmental Screening Tool, Florida Fish and Wildlife Conservation Commission (FWC), Florida Department of Agriculture and Consumer Services, or other FWC-provided sources. A ranking of probability of occurrence, along with a definition of those probabilities, is helpful (e.g. No, Low, Medium/Moderate, High). Define the basis for these probabilities.
- b. For state imperiled wildlife species, follow the outline above for federally listed species in Section III - Federal Listed Species and Designated Critical Habitat. Note any species permits that may be required in the future.
- c. Use the following effect determinations for state imperiled wildlife species. Effect determinations must be supported.
 - i. No effect anticipated
 - ii. No adverse effect anticipated
 - iii. Potential for adverse effect
- d. For state listed plants, provide a short paragraph for each plant species with potential to be in the project area (including proposed drainage areas) and include an effect determination. Include listing status (i.e., endangered, threatened, or commercially exploited). Reference the Regulated Plant Index from Chapter 5B-40.0055, F.A.C., for a list of regulated plants.

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- e. Use the following effect determinations for state listed plants. Effect determinations must be supported.
 - iv. No effect anticipated
 - v. No adverse effect anticipated
 - vi. Potential for adverse effect

2.4.3 Other Protected Species or Habitats

- a. Examples of other protected species or habitats include black bear, bald eagle, southern fox squirrel, and Strategic Habitat Conservation Areas.
- b. Provide a short paragraph for each protected species or habitat with the potential to be in the project area (including proposed drainage areas). Include the regulations providing protection as well as the anticipated effects to the species. Effect determinations are not necessary. Note any species permits that may be required in the future.

2.5 Wetland Evaluation Section

- 1) Provide a brief introduction to the wetland section and note applicable laws and agencies with jurisdiction. Include citations of Executive Order 11990, Protection of Wetlands and Part 2, Chapter 9 of the PD&E Manual. Include applicable ETAT comments for projects that were screened in the EST.
- 2) Include a discussion of methodology used to determine wetlands and other surface waters boundaries, classification, and functional value; include data sources.
 - a. Appropriate methodologies for wetland determination include:
 - i. Corps of Engineers Wetland Delineation Manual, 1987; Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, 2010;
 - ii. The Florida Wetlands Delineation Manual, 1995; and
 - iii. Rule 62-340, F.A.C., Delineation of the Landward Extent of Wetlands and Surface Waters as appropriate.
 - b. Appropriate functional assessment is the Uniform Mitigation Assessment Method (UMAM; Chapter 62-345, F.A.C.).
- 3) Identify and describe wetlands within the project area (including proposed drainage areas). Include maps showing location, boundaries, and FLUCCS/USFWS classification of wetlands and other surface waters in the

project area. Include anticipated wetland regulatory agency jurisdiction (federal and/or state).

- 4) Estimate the wetland and surface water impact acres by comparing wetland and surface water boundaries with each project alternative footprint, if applicable. For projects with multiple alternatives, it will be helpful to present this information in a table. Determine each alternative's impact on each wetland/surface water, including:
 - a. Effects on flood control, erosion control, water pollution abatement, and wildlife habitat value
 - b. Effect on stability and quality of the wetland system
 - c. Short-term vs. long-term effects
- 5) Evaluate and describe the potential direct and indirect effects each project alternative (including proposed drainage areas) will have on the wetlands and other surface waters. Identify any alternatives that avoid wetland impacts.
- 6) Discuss the practicable measures to minimize harm to each wetland/surface water site. Discussion of minimization or avoidance could include a modification in project alignment to avoid/minimize wetland impacts or reduction of the typical section in an environmentally sensitive area.



NOTE: Minimization could involve measures included in FDOT's Standard Specifications for Road and Bridge Construction (i.e., temporary turf, rolled erosion control products, sediment containment systems, runoff control structures, sediment barriers, inlet protection systems, silt fences, and turbidity barriers).

- 7) Provide the functional assessment of the wetlands. Consider presenting this information in a table. UMAM forms for direct impacts and, as applicable, secondary impacts should be included in the Appendices.
- 8) Discuss the potential mitigation options available. The mitigation discussion should provide sufficient evidence to show that project impacts can be fully mitigated.
- 9) Discuss the proposed project's potential contribution to cumulative impacts (i.e., no net loss) on the identified wetlands/surface water. Consider losses resulting from direct and indirect effects of the project. If no cumulative impacts are anticipated, include the rationale.
- 10) Include wetlands finding and mitigation standard statement, if applicable.



TIP: Mitigation options to consider include mitigation bank credits, Water Management District (WMD) mitigation services, and FDOT designed, constructed, and maintained sites.

2.6 Essential Fish Habitat Section

- 1) Provide a brief section introduction noting the applicable law (Magnuson-Stevens Fishery Conservation and Management Act) and agency with jurisdiction (NMFS). Include citation of Part 2, Chapter 17, Essential Fish Habitat of the PD&E Manual. Include applicable ETAT comments for projects that were screened in the EST and any additional coordination that has occurred since screening.
- 2) Describe methodology used to determine involvement of Essential Fish Habitat within the action area.
- 3) If there is involvement with EFH, identify EFH, Habitat Areas of Particular Concern (HAPC(s)), and managed species that may be affected. Describe the action in more detail specific for impacts to EFH/HAPC(s) if necessary. Include how and when the action is expected to occur and if it is temporary or permanent in nature.
- 4) Provide an analysis of the adverse effects, including indirect and cumulative effects, of the project on EFH, HAPC(s), the managed species, and associated species by life history stage. Include anticipated duration of action and the magnitude of effects in the discussion.
- 5) Summarize proposed measures to avoid, minimize, mitigate or otherwise offset adverse effects on EFH.
- 6) Include FDOT's determination regarding the potential adverse effects of the project on EFH. Effect determinations must be supported.
 - a. Minimal
 - b. More than minimal but less than substantial
 - c. Substantial

2.7 Anticipated Permits Section

List the anticipated environmental permits that may be required for the project. Tables are encouraged.

2.8 Conclusion Section

- 1) Provide a brief summary for each of the applicable resource sections. Tables are encouraged.
- 2) List Implementation Measures/Design Considerations



NOTE: Implementation measures are actions that FDOT would be required to take per procedure, standard specification, or other agency requirements and will be implemented at a later project phase. They help address or reduce project effects and need to be included in the NRE and communicated to the agencies. Implementation measures are not tracked as commitments since they would already be required at some stage of the project. The following list provides examples but is not all inclusive. Some items potentially could become commitments depending on project specific circumstances:

- Using Best Management Practices for erosion control
- Conducting gopher tortoise surveys and permitting
- Conducting bald eagle or osprey nest surveys
- Updated general wildlife or plant surveys during the design phase (i.e., depending on species, such as crested caracara, could be a commitment)

- 3) List Commitments
 - a. Refer to [PD&E Manual](#), Part 2, Chapter 22: Commitments for guidance on commitments.



NOTE: Agency species protection measures should be listed as commitments because they are not part of Standard Specifications. Continued agency coordination is required through project development and should not be listed as a commitment (discuss in #4 below). If future species surveys are required, the commitment should be species-specific. The goal of the NRE is to reach concurrence on all species.

- 4) Describe the next steps for agency consultation/coordination. Include the U.S. Army Corps of Engineers (USACE), USFWS, Environmental Protection Agency (EPA), NMFS, Florida Department of Environmental Protection (FDEP), WMDs and other appropriate federal, state, and local agencies.

2.9 Agency Submittal and Revisions



NOTE: Do not include “DRAFT” watermarks or notations on the NRE for submittal to the agencies for review. NREs are final documents once submitted to resource agencies.

USFWS, NMFS and FWC are the most likely agencies to provide feedback on the NRE. However, the NRE should be submitted to the USACE and FDEP/WMD for informational purposes. Submittal of the NRE to resource agencies helps to keep them informed on the status/progress of the project.

The NRE that was originally submitted to the agencies should not be modified unless agency comments are so substantial that an addendum would not suffice to address the comments. An addendum should include agency comments to provide a clear timeline and explanation of the revisions or updates to the originally submitted information. The NRE, any addendums, and the agency concurrence letter(s) should be uploaded to the StateWide Environmental Project Tracker (SWEPT) project file.



TIP: After consultation has been completed, the NRE, any addendums, and the agency concurrence letters should be uploaded to SWEPT.

Section 3: TECHNICAL MEMOS

A technical memo is a brief document that can be prepared for projects with minimal impacts to protected species and habitat, wetlands, or EFH, and when consultation is not required with resource agencies. A technical memo **cannot** be prepared for a project that involves one or more of the following:

- Federal listed and candidate species/critical habitat consultation (informal or formal);
- Wetland impacts requiring either a standard/individual or regional general permit (SAJ – 92);
- Substantial adverse effects to Essential Fish Habitat (EFH); or,
- The proposed project constitutes a major construction activity or federal action under NEPA [42 U.S.C. § 4332(2)(C)].

Because technical memos are not consultation documents, review by OEM is not required.

Much of the evaluation of impacts to protected species and habitat, wetlands, or EFH can be completed through desktop analysis. A field visit is recommended to support the GIS analysis. For Protected Species and Habitat, the technical memo should include:

- 1) A description of sources used to gather species information, including any surveys performed.
- 2) A list of potential species that may occur in the action area.
- 3) Documentation of use of a species programmatic effect determination key, when applicable, by:
 - a. Attaching the key and highlighting the steps followed, and/or
 - b. Describing what path was taken; and,
 - c. Citation of keys used
- 4) Supported effect determinations for each species and critical habitat



TIP: Examples of support effect determinations:

- **“The project limits occur within a heavily disturbed area and there is no suitable habitat to support [species name] in the project area. No listed species were observed during the [DATE] field review. A determination of *no effect* is made for [species name(s) / habitat] for this project.”**
- **“Based on the scope of work for this project, no wildlife habitat (describe/name the habitat type for the species of**

interest) will be impacted; therefore, *no effect* on [species name(s) / habitat] is anticipated.”

- “Although occurrence of [species name] has been documented [distance away] from the project limits, no [species name] habitat will be impacted as part of this project. The project is expected to have *no effect* on [species name(s) / habitat].”

For Wetlands and Other Surface Waters, a technical memo may be prepared for projects where wetland impacts may be authorized under a FDEP or WMD general permit or a USACE Nationwide permit. Projects requiring an individual/standard or regional general permit must be supported with an NRE.

For EFH, technical memos may be appropriate for project impacts that are expected to be minor and have a “minimal” degree of effect where consultation is not required.



NOTE: Technical memos for NEPA Classes of Action need to include the NEPA Assignment standard statement on the cover page:

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

For Type 1 CEs or NMSAs, a technical memo is not required if desktop analysis is sufficient to: 1) document that the project will have minimal or no impact on these resources and/or 2) supports the type of Environmental Document. The Type 1 CE or NMSA should provide sufficient discussion to support this determination. Inclusion of project area maps showing natural resource location(s) is a good practice to demonstrate the minimal/no impact the project will have on the resource.

Section 4: RE-EVALUATIONS

Documentation for re-evaluations should be commensurate with the project changes being evaluated. Therefore, documentation could range from a desktop review, an NRE addendum (i.e., if consultation was not completed during PD&E, a species with potential involvement becomes newly listed, or other project changes warrant this level of evaluation), or other documentation to support a permit application. If agency consultation was completed during the re-evaluation, documentation of consultation (letters, emails, concurrence, etc.) with the appropriate agency must be maintained in the SWEPT file (i.e., typically attached as supporting documentation to the re-evaluation).

Section 5: PILE DRIVING INFORMATION FOR NMFS

Some basic information on the pile driving activity is required to conduct an effects analysis. The basic information required includes:

- Material composition of the piles (steel, concrete, wood, composite);
- Type of pile (e.g., sheet, H, tubular, square, etc.);
- Diameter of the piles;
- Number of piles driven;
- Number of hammer strikes per pile;
- Duration to drive a single pile;
- Number of piles driven per day;
- Time of year of the activity;
- Type of pile driving methods (e.g., hydraulic, diesel, vibratory hammer);
- Other pile driving methods (e.g., drilling, jetting);
- Vessels required;
- Total duration of the project;
- Depth, bottom, type, and habitat characteristics; and
- A map of the project area.