

Standard Local Operating Procedures for Endangered Species
Wood Storks

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USFWS South Florida Ecological Services Office

The Standard Local Operating Procedures for Endangered Species (SLOPES) for Wood Storks provides a tool to assist the user in determining if an action, *i.e.*, a Federal permit, a Federal construction project, or other such action, may adversely affect wood storks. The Wood Stork SLOPES provide the user with a stepwise process to determine if the proposed action will affect wood storks, what effect will the action have on wood storks, and options available that may avoid or minimize the action's effects to wood storks.

The Fish and Wildlife Service (Service) encourages Federal agencies to use the guidelines set forth in the *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (HMG) (Service 1990) for any actions they propose that may have an affect on wood storks. The Service has also prepared supplemental guidelines for south Florida that provide additional assistance to the user in addressing species-specific resource questions (Service 2002a). Additional information on the ecology of wood storks can be found in the *South Florida Multi-Species Recovery Plan* (Service 1999), the *Wood Stork Recovery Plan* (1996), and the *Species Profile: Wood Storks on Military Installations in the Southeastern United States* (Mitchell 1999).

In evaluating project effects to wood storks in Florida, the Service considers effects to the colony, the primary zone, the secondary zone, and the core foraging area (CFA) as direct effects and effects to foraging areas outside the CFA as indirect effects. The Service's HMG and supplemental guidelines define the limits for each of the zones and provide guidance in determining what types of actions may produce adverse effects to wood storks and actions that may be implemented to reduce these effects.

For the purpose of the wood stork SLOPES, the Service considers the colony boundary to include all nests and a 100 meter (325 feet) buffer surrounding the nests. The primary zone adds an additional 400 meters to the colony boundary and the secondary zone adds an additional 350 meters to the primary zone boundary. The CFA is a 30-kilometer (18.6 mile) zone surrounding the

colony boundary. The guidelines recommend restrictions in each of the zones that correspond to nesting and non-nesting season cycles. A nesting season cycle averages 115 to 120 days. Nest sites are generally in woody vegetation over standing water, or on islands surrounded by broad expanses of open water. In south Florida, the nesting season is generally from November through May. For central and north Florida, the nesting season is generally from February through August.

The HMG guidelines address primarily effects to the colony, the primary zone, and the secondary zone. The supplemental guidelines incorporate these assessments and also include effect evaluations to the CFA and to the foraging area outside the CFA. General restriction for each of the zones is provided below, however, refer to the HMG and supplemental guidelines for specific details. Compliance with the HMG and supplemental guidelines are the basis for the Service's concurrence with "no effect," "may affect, not likely to adversely affect," "may beneficially affect," and "may affect, likely to adversely affect" determinations.

Colony: a) no entry during nesting season, b) water levels below rookery sufficient to protect rookery from land based predators during nesting cycle, and c) hydrologic cycle provides periodic dry-down of nest colony (outside the active nesting season) sufficient to promote recruitment of new nest trees.

Primary Zone: Year round: a) no vegetation removal, b) no change in hydroperiod, and c) no construction of building, roadways, towers, powerlines, or canals. Nesting season: a) no increase or change in human activity above existing levels, b) no increase or change in pattern of livestock management, and c) no aircraft/airboat operation closer than 500 feet of colony. Nuisance species removal and normal maintenance activities may occur outside the nesting season.

Secondary Zone: Year round: a) no alterations in hydrology that might affect hydrology of primary zone and b) no removal of wetlands or woods of potential value to wood storks for roosting and feeding. Nesting season: a) no change in human activity above existing levels. Nuisance species removal and normal maintenance activities may occur outside the nesting season.

Powerline and cell towers: a) less than 200 feet in height - no closer than 1 mile from colony and b) greater than 200 feet in height - no closer than 3 miles from colony.

CFA: Nesting season: a) no change in hydroperiod that affects colony, primary zone, or secondary zone, and b) no change in hydroperiod that reduces or changes the acreage or type of wetlands. Wetland enhancements or nuisance species removal may occur year-round outside the primary and secondary zones. Wetland impacts: a) must provide compensation ratio of 1 to 1 with temporal lag factor, and b) must provide type for type replacement (short hydroperiod, long hydroperiod, forested, etc.).

Year Round Foraging Area: Wetland impacts: a) must provide compensation ratio of 1 to 1 with temporal lag factor and b) recommend type for type replacement.

Wood Stork SLOPES Flowchart Guide (see Figure 1)

As with the "SLOPES Process" flowchart, the first step is to require project specific information, which generally includes a project description, habitat maps, project location, and county. The location of the nearest wood stork colony is also necessary. The location of the colony influences the evaluation of the project's effects to the colony, the primary zone, secondary zone, and the CFA. Because wood storks are a wetland dependent species, the habitat map needs to also show the wetlands on the property. Wetlands need to be classified as to type and hydroperiod.

Information on the presence of a wood stork colony can be found from a variety of sources. Colony location databases are maintained by the Service, the South Florida Water Management District (SFWMD), the Florida Fish and Wildlife Conservation Commission (FWC), the Florida Natural Areas Inventory, and county and local natural resource agencies. The SFWMD web site is <http://www.sfwmd.gov/org/erd/coastal/wading/index.html>. The FWC web site is <http://wld.fwc.state.fl.us/bba/default.asp>.

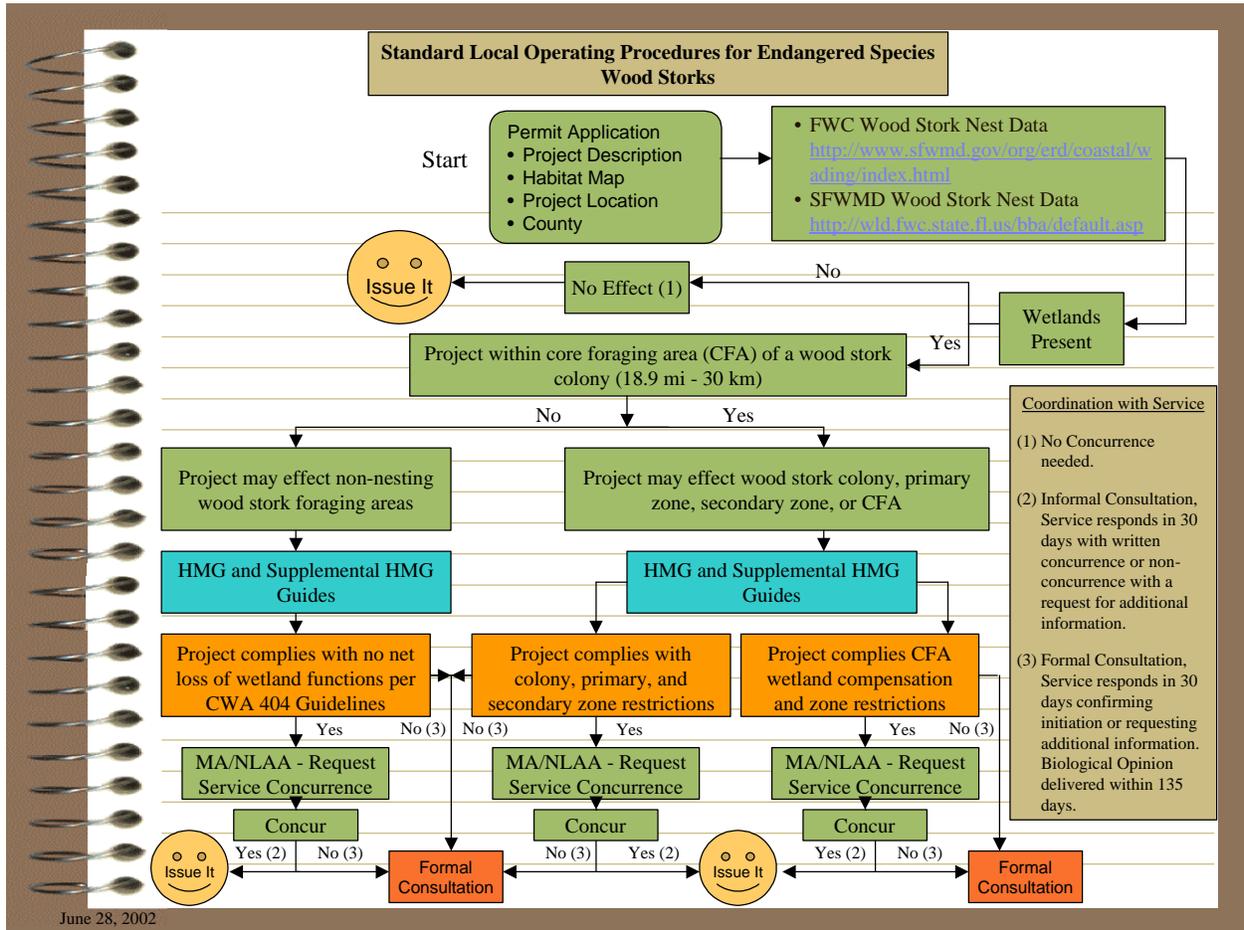


Figure 1. Wood Stork SLOPES Flowchart Guide

Wetlands Present in Project Footprint - Yes/No

With the information gathered, a determination can be made that a) no wetlands are within the project footprint, therefore the project will have no effect to wood storks or b) wetlands are present in the project footprint and further assessment is necessary. If no wetlands are present in the project footprint, then the U.S. Army Corps of Engineers (Corps) may make the determination that the project will have no effect on wood storks and can proceed with the Federal action. If desired, the Corps can request a concurrence letter from the Service.

Wetlands Present, Project Outside the Boundary of the Colony and its CFA -Yes/No

If wetlands (suitable habitat) are present on the property, the determination needs to be made as to whether the project may have an effect on a colony and its CFA or is the project outside the boundary of the CFA. If the project is outside the boundary of the CFA, the Service generally considers the compensation/mitigation requirements of EO 11990: Protection of Wetlands (3 C.F.R 121 (1978)) and/or the avoidance, minimization, and compensation requirements of Section 404 of the Clean Water Act (33 U.S.C. 1344) as acceptable measures to minimize adverse effects to adult foraging wood storks. In this scenario, the Corps may make the determination that the project may affect, but is not likely to adversely affect the endangered wood stork and request concurrence from the Service. Upon receipt of the concurrence request and supporting data, the Service may provide concurrence.

Wetlands Present, Project within CFA Boundary

At this point in the wood stork SLOPES process, additional guidance from the HMG and the supplemental guidelines is appropriate and the effects that the project may have on the survival and productivity of the wood stork colony are evaluated. If the project is outside the boundary of the colony and the primary and secondary zones, project effects are primarily related to foraging needs for the colony and include primarily wetland losses and hydrology pattern changes.

CFA Effect Assessments

The evaluation of effects to the CFA must address project-induced changes in wetland hydrology and direct loss of wetlands. In this scenario, loss of wetlands and/or a change in the wetland hydroperiod may adversely affect survival of nestlings and the productivity of the colony. The supplemental guidelines provide measures that may minimize adverse effects to the colony. If wetland alterations occur from the project, the supplemental guidelines recommend wetland compensation at a ratio of 1 to 1 with the inclusion of a temporal lag factor. The compensatory wetlands must be a type for type system, *i.e.*, a short hydroperiod wetland cannot replace a long hydroperiod wetland and vice-versa. A biological assessment that describes

the proposed project, its projected impacts, and measures proposed to minimize adverse effects is recommended.

To assist in the preparation of the biological assessment, the Service has prepared a *Biological Assessment/Biological Evaluation Guideline* (2002b). The Biological Assessment/Biological Evaluation Guideline includes the typical data needs that the Service believes are necessary to evaluate the project effects to listed species. In general, the report includes a project introduction, proposed action, project habitat descriptions, species effects, recommendations to minimize species effects, and conclusions and commitments. This document is the basis for the Corps determination of effects and needs to include sufficient information to support the determination.

In the above scenario, the Service considers projects that comply with the HMG and the supplemental guidelines as having provided acceptable measures that minimize adverse effects to wood storks foraging in the CFA. Upon receipt of the biological assessment, the Corps may make the determination that the project may affect, but is not likely to adversely affect the endangered wood stork and request concurrence from the Service. Upon receipt of the concurrence request and supporting data, the Service may provide concurrence.

Colony and Primary and Secondary Zone Assessments

The HMG and supplemental guidelines provide guidance on types of actions that the Service believes may have an adverse effect to wood storks if conducted within the boundaries of the colony, primary zone, and secondary zone. These guides also further define effects that may occur during the nesting season and non-nesting season. If an action is proposed that is restricted during the nesting season but allowed during the non-nesting season, then a project proposed with this stipulation would be viewed by the Service as having provided acceptable measures that would minimize adverse effects to wood storks. These measures would need to be documented in the biological assessment. Upon receipt of the biological assessment, the Corps may make the determination that the project may affect, but is not likely to adversely affect the endangered wood stork and request concurrence from the Service. Upon receipt of the

concurrency request and supporting data, the Service may provide concurrence.

Nesting Season Restrictions

The nesting period for wood storks covers a time frame that encompasses a 10-month window (November through August) and accounts for all nesting cycles for south, central, and north Florida populations. Because a nest cycle initiation and culmination are generally a 110 to 120-day event, refinements of the nesting period may be possible through the use of a site monitor. The site monitor's function is to determine if nesting activity has begun for early nesting season actions and if the fledglings have left the nest and are capable of sustained flight for late nesting season actions.

Early Nesting Season Actions

For early nesting season actions, the monitor's role is to document when courtship and/or nest building activities have begun. Once courtship and/or nest building activities commence, construction related actions must cease. In situations where such a project is proposed, the inclusion of the site monitor into the project plan and documented in the biological assessment would provide assurance to the Service that acceptable measures have been implemented that would minimize adverse effects to nesting wood storks. Upon receipt of the biological assessment, the Corps may make the determination that the project may affect, but is not likely to adversely affect the endangered wood stork and request concurrence from the Service. Upon receipt of the concurrence request and supporting data, the Service may provide concurrence.

Late Nesting Season Construction

For late season nesting actions, the monitor's role is to document the end of the nesting season and that the fledglings have left the nest and are capable of sustained flight. Sustained flight is documented by defined, smooth flight by young wood storks from the colony to adjacent foraging areas without obvious signs of awkward wing patterns and loss of balance at landings. Sustained flight is documented by a 2-day survey event with the observations concentrated on the young

wood storks. In situations where such a project is proposed, the inclusion of the site monitor into the project plan and documented in the biological assessment would provide assurance to the Service that acceptable measures have been implemented that would minimize adverse effects to nesting wood storks. Upon receipt of the biological assessment, the Corps may make the determination that the project may affect, but is not likely to adversely affect the endangered wood stork and request concurrence from the Service. Upon receipt of the concurrence request and supporting data, the Service may provide concurrence.

Formal Consultation

The formal consultation scenario in the wood stork SLOPES flowchart addresses the circumstances where an action results in a "may affect, likely to adversely affect" determination for wood storks. In these situations, the project proponent has proposed actions that because of a variety of project specific circumstances either cannot be achieved during the non-nesting season, require intrusion into the primary zone, or other actions that will result in adverse effects to either the eggs in the nest, the nestlings, or the colony. In these situations, formal consultation is required with the Service. The importance of the wood stork HMG and supplemental guidelines is in determining the options that may be available to minimize the proposed action's adverse effects to wood storks and options that may be available to reduce the amount of incidental take. Actions that may be appropriate to minimize project specific effects could include habitat enhancement actions, muffling of equipment, less intrusive construction's methods, and other project specific recommendations. In this scenario, the Service recommends early consultation to identify issues and options available to reduce the project's adverse effects to wood storks.

As discussed in the SLOPES Process, when a request is received for formal consultation, the Service will provide within 30 days, acknowledgment that formal consultation has begun or that the Service believes that additional data are needed before formal consultation can begin. Formal consultation concludes 90 days following receipt of the initial request or following receipt of the additional data. An integral part of the initial data submittal is an analysis of the manner in which the action

may affect listed species. This analysis needs to also include an estimation of the extent of take. The Biological Opinion is completed within 45 days following conclusion of formal consultation. As defined in 50 CFR 402.14(c), the additional data is the best scientific or commercial data available that would assist the Service in formulating its Biological Opinion and is not to be a request for a special research project.

Report Guidelines

To assist in the preparation of the analysis of the manner in which the action may affect listed species, the Service has prepared a Biological Assessment/Biological Evaluation Guideline. The Biological Assessment/Biological Evaluation Guideline includes the typical data needs that the Service believes are necessary to prepare the Biological Opinion. In general, the report includes a project introduction, proposed action, project habitat descriptions, species effects, recommendations to minimize species effects, and conclusions and commitments. This document is the basis for the Corps determination of effect and needs to include sufficient information to support the determination.

References

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