

USDA - NATURAL RESOURCES CONSERVATION SERVICE
&
UNITED STATES FISH AND WILDLIFE SERVICE

Conservation Practice Effects on
Federal Listed Threatened & Endangered Species

Florida Ranchlands Environmental Services Program - Northern Everglades

Consultation Guidance

The goal of the proposed Florida Ranchlands Environmental Services Program (FRESP) – Northern Everglades is to develop a payment for environmental services (PES) program that contributes toward improving water quality entering Lake Okeechobee and associated watersheds. This program was developed following implementation of a federal and state supported grant to ascertain the feasibility of developing a PES program involving ranchers in the northern Everglades region known as the FRESP Project. The FRESP – Northern Everglades PES compensates landowners who develop Water Management Alternatives (WMA's) designed specifically to provide water and nutrient retention services on ranchlands. Throughout the 20th Century, ranchers in the northern Everglades were encouraged to install surface water drainage systems to facilitate the establishment and production of improved pasture forages. Native freshwater marshes, sloughs and wet prairies were drained and planted to “improved” domesticated forages in an effort to enhance forage quality and increase livestock production. As a result, thousands of miles of surface water drainage systems and other water control infrastructure were installed, resulting in accelerated drainage of both water and nutrients off local ranches into downstream water bodies.

The FRESP – Northern Everglades intends to create an incentive for ranch managers to utilize, modify and add to existing water management infrastructure and develop strategies to increase the provision of water retention and nutrient load reduction on ranches. Since 2005 the Florida Ranchlands Environmental Services Project and cooperating state and federal agencies have been field-testing elements of a pilot payment for environmental services program on 8 ranches within the northern Everglades region that were willing to test the retention of additional surface waters on their pastures.

As a result of implementation of this program, the amount of surface waters leaving heavily drained pasture lands from participating ranches will occur over a more natural period of time compared to their current drained pasture conditions, and thus, nutrient loads entering the public water management system and ultimately Lake Okeechobee will be reduced.

To be eligible to submit a proposal to the FRESP – Northern Everglades a landowner must meet the following four (4) criteria:

- 1) Enrolled lands must be located within the Northern Everglades and Estuaries Protection region as defined in Chapter 373.4595 Florida Statutes,

- 2) Enrolled lands must have an existing drainage system in place that contributes to the maintenance of “improved or semi-improved” pasture forages,
- 3) Landowner must have submitted a Notice of Intent (NOI) to implement BMP’s and conservation practices, and be in compliance with the schedule of implementation of those practices, and,
- 4) Enrolled lands must consist predominately of soils characterized as Very Poorly or Poorly Drained by USDA-NRCS, and shall not encompass highly drained soils that support existing scrub or sandhill vegetation.

Ranchers expressing a desire to submit a proposal to the FRESP – Northern Everglades program will establish a Water Management Alternative (WMA) on appropriate ranchlands by selecting from listed conservation practices. Conservation practices that may be used to develop and manage WMA’s are provided and referenced to potential direct and indirect effects to federally listed species on Table 1.

Direct Effects are defined as anticipated impacts that have a specific spatial and temporal effect on habitat features and/or species behavior.

Indirect Effects are defined as anticipated impacts that by virtue of the practice being installed or the management activity generated could pose a change in habitat and/or species behavior.

Table 1: Potential Direct and Indirect Effects to Federally Listed Species

NRCS Conservation Practices	NRCS Conservation Practice Definitions	Anticipated Payment for Environmental Services (PES) Conservation Practice Installation Objectives	Direct Effects	Indirect Effects
Access Control (Code 472)	The temporary or permanent exclusion of animals, people, vehicles, and/or equipment from an area.	Applied to prevent damage to WMA practices and their components.		✓
Critical Area Planting (Code 342)	Establishing Permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.	Planting treatments applied to prevent excessive soil erosion, sedimentation, and impacts to water quality where severe soil disturbance or soil degradation has occurred within the WMA.		✓
Dike (Code 356)	A barrier constructed of earth or manufactured	A structure applied to minimize anticipated impacts from	✓	

	materials.	downstream flows within WMA.		<u>1/</u>
Diversion (Code 362)	A channel constructed across the slope generally with a supporting ridge on the lower side.	A structure applied to intercept surface or shallow subsurface flows to reduce erosion and runoff to protect WMA practices and their components or to protect area outside the WMA.	✓	<u>1/</u>
Drainage Water Management (Code 554)	Control of water surface elevations and discharge from surface and subsurface drainage systems.	Management applied to appropriately manipulate drainage water to achieve WMA objective.		✓
Fence (Code 382)	A constructed barrier to animals or people.	A small fenced area about 48" high to protect monitoring equipment from livestock.		✓
Land Clearing (Code 460)	Removing trees, stumps, and other vegetation to achieve a conservation objective.	A conservation treatment applied only to facilitate installation of WMA conservation practice, practice components, and monitoring equipment.	✓	
Monitoring well/equipment (Code 353) (installation & monitoring activity)	A well designed and installed to obtain representative in-situ ground water quality samples and hydrogeologic information from an aquifer.	A small area about 6' X 6' to facilitate the controlled sampling of ground & surface water flow from WMA project areas.	✓	
Pond (Code 378)	A water impoundment made by constructing a dam or an embankment or by excavating a pit or dugout.	A water impoundment utilized to optimize water retention within an embankment designed WMA.	✓	
Pumping Plant (Code 533)	A pumping facility installed to transfer water for a conservation need.	A facility installed to manipulate water flows within the WMA that will entail about a 10' X 10' surface area of disturbance.	✓	<u>1/</u>
Spoil Spreading (Code 572)	Disposing of surplus excavated materials.	A conservation treatment applied only to properly dispose of excavated materials resulting from practice installation or to facilitate smoothing, grading or leveling within the WMA.	✓	
Streambank & Shoreline Protection	Treatment(s) used to stabilize and protect	A conservation treatment applied		

(Code 580)	banks of streams or constructed channels, and shorelines of lakes, reservoirs, or estuaries.	within the WMA to ensure appropriate stream or channel flows and to stabilize banks to prevent erosion.	✓	
Structure for Water Control (Code 587)	A structure in a water management system that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation or measures water.	A structure applied to appropriately manage the amount and rate of water flow from or within a WMA. This practice includes culverts with flashboard risers, earth embankment, and ditch-plugs.	✓	

1/ Initial practice installation may cause a direct affect, however, once installed application of these practices will facilitate the appropriate water management retention to meet WMA goals.

Although local, state and federal agencies have various roles related to assisting local ranchers become a FRESP-Northern Everglades program participant, NRCS is ultimately responsible for assurances under the Endangered Species Act (ESA). When providing technical and /or financial assistance to FRESP – Northern Everglades program participants, NRCS will use this key to assist in making decisions regarding the effects conservation practices may have on federally threatened or endangered species. For detailed guidance on the design and application of conservation practices, refer to Section IV of the USDA - Natural Resources Conservation Service (NRCS) Field Office Technical Guide (FOTG). Florida’s FOTG is located at http://efotg.nrcs.usda.gov/efotg_locator.aspx?map+FL. The NRCS consulted in accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. & 1531 et seq.)(Act), with the U.S. Fish and Wildlife (FWS) and Bald and Golden Eagle Protection Act of 1940 16 U.S.C. &&668-668(d) to analyze the effects of the NRCS conservation practices potentially used within the FRESP – Northern Everglades program on federally listed species.

Table 2, lists the effects determinations for the State listed bald eagle (*Haliaeetus leucocephalus*) and various federally listed species.

- Audubon’s crested caracara (*Polyborus plancus audubonii*)
- Eastern indigo snake (*Drymarchon corais couperi*) *
- Everglades snail kite (*Rostrhamus sociabilis plumbeus*)
- Florida grasshopper sparrow (*Ammodramus savannarum floridanus*)
- Florida panther (*Puma concolor coryi*)
- Florida scrub-jay (*Aphelocoma coerulescens*)
- Red-cockaded woodpecker (*Picoides borealis*)
- Wood stork (*Mycteria americana*)

* Existing minimization measures will be followed as outlined in the Florida NRCS Field Office Technical Guide, Section II D.

These species may be potentially affected by NRCS conservation practices that FRESP – Northern Everglades participants may employ. The effect determinations are defined as:

NLAA – May affect, not likely to adversely affect threatened and endangered (T&E) species

LAA – May affect, likely to adversely affect T&E species

BE - Beneficial effect to the species (not likely to adversely affect T&E species)

NE – No effect

NLAA, LAA and BE are all forms of the May Affect determination. However, for the purposes of this programmatic consultation guidance key, conservation practices planned that indicate a LAA determination will require additional consultation with the FWS. Also, under any condition and for any conservation practice, where there is question or uncertainly, additional consultation with the FWS shall be sought.

Table 2 : Effect Determination for Listed Species Potentially Affected by FRESP

Resource Conservation Service Conservation Practice	Bald Eagle (nest)	Bald Eagle	Caracara nests1	Caracara (2)	Everglade Snail Kite (2)	F1 Grasshopper Sparrow1 (3)	F1 Panther	F1 Scrub Jay	Red-cockaded Woodpecker	Wood Stork (2)
Access Control (Code 472)	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA
Critical Area Planting Code 342	NE	NE	NE	NE	NLAA	NLAA	NE	NE	NE	NLAA
Dike (Code 356)	NLAA	NE	NLAA	NE	NLAA	NLAA	NE	NE	NE	NLAA
Diversion (Code 362)	NLAA	NE	NLAA	NE	NLAA	NLAA	NE	NE	NE	NLAA
Drainage Water Management (Code 554)	NLAA	NE	NLAA	NE	NLAA	NLAA	NE	NE	NE	BE
Fence (Code 382)	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA
Land Clearing (Code 460)	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA
Monitoring Well (Code 353) – Installation & monitoring activity	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA
Pond (Code 378)	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA
Pumping Plant (Code 533)	NE	NLAA	NE	NE	NLAA	NE	NE	NE	NE	NLAA
Spoil Spreading (Code 572)	NLAA	NLAA	NLAA	NLAA	NLAA	NLAA	NE	NLAA	NLAA	NLAA
Streambank &										

Shoreline Protection (Code 580)	NLAA	NLAA	NE	NE	NLAA	NE	NE	NE	NE	NLAA
Structure for Water Control (Code 587)	NLAA	NLAA	NLAA	NE	NLAA	NLAA	NE	NE	NE	NLAA

All NLAA determinations must meet the stipulations listed in the species or conservation practice footnotes described below.

For a given project that has multiple conservation practices, there may be different effects determinations per any given species. In the event that a NLAA, BE designation is identified along with a LAA designation, the LAA designation takes precedence and consultation is required.

For conservation practices listed in this programmatic consultation guidance key, FRESP – Northern Everglades program participants must adhere to the following conservation measures and footnotes.

Conservation Measures and Footnotes:

1. For all projects, follow the eastern indigo snake minimization measures (FOTG, Section II (D)3(b) 1-4). If gopher tortoise burrows are present, then a 25 foot buffer must be maintained around the entrance to the burrow(s) or the burrow(s) must be excavated prior to site manipulations. Follow Excavation Guidelines found in the Minimization Measures if burrow excavation is the only alternative.
2. If the project occurs within the “nest protection zone” (FOTG, Section II (D)2(d) of the federally listed avian species, work must be performed outside of nesting season and all specific zone measurements must be followed. This applies to the bald eagle, caracara, Everglades snail kite, Florida grasshopper sparrow, Florida scrub jay, red-cockaded woodpecker nests and wood stork colonies for all practices.
3. Avoid known listed plant locations (refer to FNAI Biodiversity Matrix: <http://fnai.org/biointro.cfm>). If the FNAI records indicate plants are “Documented”, Documented Historic”, or Likely to Occur”, contact a NRCS or FWS biologist for Assistance in determining how to avoid locations.
4. Access Control (code 472) Practice applied only to prevent damage to WMA practices, their components, and associated monitoring equipment. (Current programmatic consultation matrix does not have any LAA possibilities for this practice). NLAA for all T+E species.
5. Critical Area Planting (code 342) Practice applied only to stabilize land surfaces disturbed by WMA construction activities and shall use only approved perennial non-invasive plant species. NLAA for all T+E species.

6. Dike (code 356) Practice applied only to prevent adverse effects of water attenuation during storm events; including the increased hydroperiod of non-hydric soils, damage to structures on the property or off-site impacts. When necessary, dike footprint shall be installed on hydric soil line with one-way drainage provided for drainage outside the WMA, preventing the degradation of upland ecosystems (e.g., dry prairie). NLAA for all T+E species.
7. Diversion (code 362) Practice applied only in on-ranch artificial waterways, ditches or canals. No natural streams shall be diverted with this practice. Diverted waters shall not increase hydroperiod of upland ecosystems, such as dry prairie. NLAA for all T+E species.
8. Drainage Water Management (code 554) Practice applied only in a manner to meet WMA goals of increasing on-ranch water retention and to encourage hydroperiods similar to pre-drained conditions. NLAA for all T+E species.
9. Fence (code 382) Practice applied only to protect the integrity of WMA water monitoring equipment. NLAA for all T+E species.
10. Land Clearing (code 460) Practice applied only to facilitate the installation of WMA conservation practices, practice components, and monitoring equipment. The area of potential effect (APE) resulting from clearing will be minimized to only the most limited footprint required to meet WMA objectives. If it is determined that the planned APE could adversely affect federally listed threatened and endangered species, the WMA practice will be redesigned, relocated, or another alternative will be selected. NLAA for all T+E species.
11. Monitoring Well (code 353) Monitoring equipment will be installed in such a manner to facilitate assessment of ground and surface water flow from WMA areas. It is anticipated that these areas will reside within an approximate 6' X 6' area.. NLAA for all T & E species.
12. Pond (code 378) Practice will be applied only on pre-existing pasture lands and typically applied where the former native wetlands present on the site were deep water marshes or forested swamp ecological sites. This practice will facilitate restoring water depths and durations similar to native conditions, and provide the protection to adjacent properties or other environmentally sensitive areas. Practice will not be applied on any intact native plant community. The average water depths shall not exceed 36 inches or inundate the

WMA longer than would have occurred under natural pre-drained conditions. NLAA for all T & E species.

13. Pumping Plant (code 533) Practice applied only when needed to facilitate conveyance of water within the WMA to meet goals and objectives, reduce sedimentation and promote nutrient retention. NLAA for all T+E species.
14. Spoil Spreading (code 572) Practice applied only to facilitate the safe disposal of spoil material generated from installation of WMA practices. Will not be applied on any intact native plant community or within a jurisdictional wetland. Must establish and maintain a minimum of 100 foot undisturbed buffer between practice and any stream or jurisdictional wetland. NLAA for all T+E species.
15. Streambank and Shoreline Protection (code 580) Practice applied only along artificial drainages to prevent erosion of banks with elevated water levels resulting from WMA conservation practices. NLAA for all T+E species.
16. Structure for Water Control (code 587) Practice applied only within on-ranch artificial drainages at or near natural ground level or lower to retain surface waters. Practice shall not be installed within natural drainages. NLAA for all T+E species.