



NRCS Conservation Practice Effects on Federal Threatened & Endangered Species (T&E) The USFWS-NRCS Interagency Consultation Matrix

Practice Effect Designations:

NE – No Effect

BE - Beneficial Effect, including those that are immediate, realized during project implementation or, are realized over the life of the project and result in a net conservation benefit.

NLAA – Not Likely to Adversely Affect T & E species

MAA - May Adversely Affect T & E species (**Requires formal consultation with USFWS if additional avoidance and minimization measures cannot be implemented to avoid adverse impacts.**)

In some cases, practices may have multiple effect designations (i.e., **NLAA, BE, and MAA**). In these cases the final effect designation is determined by, location, site conditions, and which footnoted criteria are applied.

Use this table to assist in making planning decisions regarding federally listed threatened and endangered species*. For detailed standards and specifications on the practices listed within the table, refer to Section IV of the FOTG. Numbers or symbols adjacent to Xs correspond to footnotes at the end of the table. Some practices are NLAA (X^Ø) with additional requirements above and beyond the definition of X^Ø, these practices have a specific footnote identifier (X^{Ø, a-u}) which is defined at the end of the table under X^Ø.

In the event that some practices have more than one effect designation identified; refer to definitions for guidance as to which effect applies to your project. In the event that a NLAA, BE, and/or NE designation is identified along with a MAA designation, then the MAA designation takes precedence and consultation is required. BE designations includes effects that are immediate, realized during project implementation or, are realized over the life of the project and result in a net conservation benefit.

Note: Any formal consultation with USFWS that may identify a client, a species presence, or a species habitat location; requires written permission from the client.

***This table is based on adherence to the current NRCS Conservation Practice Standards.**

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MAA	BE
Access Control	Ac.	472		X ^Ø		X ⁴ X ⁶
Access Road	Ft.	560			X ¹ X ³	X ⁴
Agrichemical Handling Facility	No.	309		X ^Ø		X ⁴
Air Filtration and Scrubbing	No.	371	X			
Alley Cropping	Ac.	311		X ^Ø		X ⁶
Amendments for the Treatment of Agricultural Wastes	AU	591		X ^Ø		X ⁴
Anaerobic Digester	No.	366		X ^Ø		
Animal Mortality Facility	No.	316		X ^Ø		X ⁴
Anionic Polyacrylamide (PAM) Application	Ac.	450		X ^{Ø, a}		
Aquaculture Ponds	Ac.	397			X ¹ , X ³	
Bedding	Ac.	310		X ^Ø	X ¹ , X ³	
Brush Management	Ac.	314		X ^{Ø, b}	X ^{1, 2}	X ⁴ X ⁶ X ⁷
Channel Bed Stabilization	Ft.	584			X ³	X ⁴
Clearing & Snagging	Ft.	326			X ³	
Closure of Waste Impoundments	No.	360		X ^Ø		X ⁴
Combustion System Improvements	No.	372	X			
Composting Facility	No.	317		X ^Ø		X ⁴
Conservation Cover	Ac.	327		X ^Ø		X ⁷
Conservation Crop Rotation	Ac.	328		X ^Ø		X ⁴
Constructed Wetland	Ac.	656			X ³	X ⁴ X ⁶ X ⁷ X ⁸
Contour Buffer Strips	Ac.	332		X ^Ø		X ⁴

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MAA	BE
Contour Farming	Ac.	330		X ^Ø		X ⁴
Cover Crop	Ac.	340		X ^Ø		X ⁴
Critical Area Planting	Ac.	342		X ^{Ø, c}		X ⁴ X ⁶
Cross Wind Ridges	Ac.	588		X ^Ø		X ⁴
Dam	No./Ft.	402			X ³	
Dam, Diversion	No./Ft.	348			X ³	
Deep Tillage	Ac.	324		X ^{Ø, d}		
Dike	Ft.	356			X ³	X ⁴ , X ⁷
Diversion	Ft.	362		X ^{Ø, e}	X ³	X ⁴
Drainage Water Management	Ac.	554		X ^{Ø, f}		X ⁴ X ⁶ X ⁷
Dry Hydrant	No.	432	X			
Dust Control from Animal Activity on Open Lot Surfaces	Ac.	375		X ^Ø		
Dust Control on Unpaved Roads & Surfaces	Ft. ²	373		X ^{Ø, u}	X ³	
Early Successional Habitat Development/Management	Ac.	647		X ^Ø		X ⁴ X ⁶ , X ⁷
Evaporative Cooling Pads	Ac.	781	X			
Farmstead Energy Improvement	No.	374	X			
Feed Management	No.	592	X			
Fence	Ft.	382		X ^Ø		X ⁴ X ⁶ X ⁷
Field Border	Ac.	386		X ^Ø		X ⁴ X ⁶ X ⁷
Filter Strip	Ac.	393		X ^Ø		X ⁴
Firebreak	Ft.	394		X ^{Ø, g}	X ¹	
Fishpond Management	No.	399	X			

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MAA	BE
Forage and Biomass Planting	Ac.	512		X ⁰		X ⁴ X ⁶ X ⁷
Forage Harvest Management	Ac.	511		X ⁰		
Forest Stand Improvement	Ac.	666			X ¹	X ⁷
Forest Trails and Landings	Ac.	655			X ¹	X ⁴
Fuel Break	Ac.	383		X ^{0,g}	X ¹	X ⁷
Grade Stabilization Structure	No.	410			X ³	X ⁴
Grassed Waterway	Ac.	412		X ⁰		X ⁴
Ground Water Testing	No.	355	X			
Heavy Use Area Protection	Ac.	561		X ⁰		X ⁴
Hedgerow Planting	Ft.	422		X ⁰		X ⁴ ,X ⁶
Herbaceous Weed Control	Ac.	315		X ^{0,h}	X ²	X ⁶ X ⁷
Herbaceous Wind Barrier	Ft.	603		X ⁰		X ⁴
Integrated Pest Management	Ac.	595		X ⁰		X ⁴
Irrigation Canal or Lateral	Ft.	320		X ^{0,i}	X ¹ ,X ³	
Irrigation Ditch Lining	Ft.	428		X ⁰		
Irrigation Field Ditch	Ft.	388		X ^{0,i}	X ¹ ,X ³	
Irrigation Land Leveling	Ac.	464		X ⁰		
Irrigation Pipeline	Ft.	430		X ⁰		
Irrigation Reservoir	Ac.-Ft.	436		X ^{0,i}	X ¹ ,X ³	
Irrigation System, Micro-irrigation	Ac.	441		X ⁰		X ⁴
Irrigation System, Surface & Subsurface	Ac.	443		X ^{0,i}	X ³	
Irrigation System, Tailwater Recovery	No.	447		X ⁰		X ⁴

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MAA	BE
Irrigation Water Management	Ac.	449		X ^Ø		X ⁴
Karst & Sinkhole Treatment	No.	527		X ^Ø		X ⁴
Land Clearing	Ac.	460			X ¹	
Land Reclamation, Abandoned Mine Land	Ac.	543		X ^Ø		X ⁷
Land Reclamation, Currently Mined Land	Ac.	544		X ^Ø		X ⁷
Land Smoothing	Ac.	466		X ^{Ø, j}	X ^{1, X³}	
Lighting System Improvement	No.	717	X			
Lined Waterway or Outlet	Ft.	468		X ^Ø	X ^{1, X³}	
Livestock Cooling Pond	Ac.	779		X ^Ø		X ⁴
Livestock Pipeline	Ft.	516		X ^Ø		
Livestock Shelter Structure	No.	576		X ^Ø		X ⁴
Mole Drain	Ft.	482		X ^Ø		
Monitoring Well	No.	353	X			
Mulching	Ac.	484	X			
Nutrient Management	Ac.	590		X ^{Ø, k}		X ⁴
Obstruction Removal	Ac.	500			X ¹	
Open Channel	Ft.	582			X ³	
Pond	No.	378		X ^Ø	X ^{1, X³}	
Pond Sealing or Lining	No.	521		X ^Ø		
Precision Land Forming	Ac.	462		X ^Ø		
Prescribed Burning	Ac.	338		X ^{Ø, l}	X ¹	X ⁴ X ⁶ X ⁷
Prescribed Grazing	Ac.	528		X ^{Ø, m}		X ⁴ X ⁶ X ⁷

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MAA	BE
Pumping Plant	No.	533		X ^{ø,n}	X ³	
Range Planting	Ac.	550		X ^ø		X ⁶
Recreation Land Grading & Shaping	Ac.	566			X ¹	
Residue and Tillage Management, Mulch Till	Ac.	345		X ^ø		X ⁴
Residue and Tillage Management, No-till & Strip-till/Direct Seed	Ac.	329		X ^ø		X ⁴
Residue Management, Seasonal	Ac.	344		X ^ø		X ⁴
Restoration & Management of Rare or Declining Habitats	Ac.	643		X ^ø		X ⁷
Riparian Forest Buffer	Ac.	391		X ^ø		X ⁴ X ⁷
Riparian Herbaceous Cover	Ac.	390		X ^ø		X ⁴ X ⁷
Roof Runoff Structure	No.	558		X ^ø		X ⁴
Roofs and Covers	No.	367		X ^ø		
Row Arrangement	Ac.	557	X			
Seasonal High Tunnel System for Crops	Ft. ²	798	X			
Sediment Basin	No.	350		X ^{ø,t}		X ⁴
Short-term Storage of Animal Waste and Byproducts	CuYd.	350		X ^ø		X ⁴
Silvopasture Establishment	Ac.	381		X ^{ø,o}	X ¹	
Spoil Spreading	Ac.	572		X ^{ø,p}		
Spring Development	No.	574			X ³	X ⁶ X ⁷
Sprinkler System	Ac.	442		X ^ø		
Storage Facility – Nursery Substrate	No.	782		X ^ø		
Stormwater Runoff Control	No. & Ac.	570		X ^ø	X ³	X ⁴ X ⁸
Stream Crossing	No.	578		X ^ø	X ³	X ⁴
Stream Habitat Improvement/Management	Ac.	395			X ³	X ⁴ X ⁷

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MAA	BE
Streambank & Shoreline Protection	Ft.	580			X ¹ ,X ³	X ⁴
Stripcropping	Ac.	585	X			
Structure for Water Control	No.	587		X ^Ø	X ¹ ,X ³	X ⁴
Storage Facility-Nursery Substrate	No.	782		X ^Ø		
Subsurface Drain	Ft.	606		X ^{Ø, q}		
Surface Drainage, Field Ditch	Ft.	607		X ^{Ø, q}		
Surface Drainage, Main or Lateral	Ft.	608		X ^{Ø, q}		
Terrace	Ft.	600		X ^Ø		X ⁴
Trails and Walkways	Ft.	575		X ^Ø	X ¹	
Tree/Shrub Establishment	Ac.	612		X ^Ø		X ⁴ X ⁶ X ⁷
Tree/Shrub Pruning	Ac.	660	X			
Tree/Shrub Site Preparation	Ac.	490		X ^Ø	X ^{1, 2}	
Underground Outlet	Ft.	620		X ^{Ø, r}		
Upland Wildlife Habitat Management	Ac.	645		X ^Ø		X ⁶ X ⁷
Vegetated Treatment Area	Ac.	635		X ^Ø		X ⁴
Vegetative Barrier	Ft.	601		X ^Ø		X ⁴ X ⁶
Waste Recycling	Ac.	633		X ^{Ø, s}		
Waste Separation Facility	No.	632		X ^Ø		X ⁴
Waste Storage Facility	No.	313		X ^Ø		X ⁴
Waste Transfer	No.	634	X			
Waste Treatment	No.	629		X ^Ø		X ⁴
Waste Treatment Lagoon	No.	359		X ^Ø		X ⁴
Water Harvesting Catchment	No.	636		X ^Ø		

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MAA	BE
Water & Sediment Control Basin	No.	638		X ^{Ø, t}		X ⁴
Water Well	No.	642		X ^Ø	X ¹ , X ³	
Well Decommissioning	No.	351	X			
Watering Facility	No.	614	X			X ⁴
Well Plugging	No.	755	X			X ⁴
Wetland Creation	Ac.	658		X ^Ø		X ⁴ X ⁶ X ⁷
Wetland Enhancement	Ac.	659		X ^Ø		X ⁴ X ⁶ X ⁷
Wetland Restoration	Ac.	657		X ^Ø		X ⁴ X ⁶ X ⁷
Wetland Wildlife Habitat Management	Ac.	644		X ^Ø		X ⁴ X ⁶ X ⁷
Windbreak/Shelterbelt, Establishment	Ft.	380		X ^Ø		
Windbreak/Shelterbelt, Renovation	Ft.	650		X ^Ø		
Woody Residue Treatment	Ac.	384	X	X ^Ø	X ¹	
TOTALS			20	108	42	79

145 Practice Standards

Definitions for words in “quotations” are attached to the back of this document.

X[∅] – Practice is not likely to adversely affect (NLAA) threatened and endangered species WHEN:

- planned for
 - mines,
 - “cropland” already or “recently” producing an “agricultural commodity”,
 - “existing confined animal operations”,
 - existing orchards, nurseries and groves,
 - “actively managed” “pastureland” or “hayland” planted to “introduced forage species”,
- land already developed for “commercial” or “residential” purposes,
- repair of recently damaged existing facilities/structures;
- there are no adverse on-site, “off-site” or “indirect effects” to streams, wetlands or estuarine environments, including drainage and unnatural water retention as a result of practice implementation.

AND the following are included and/or followed in applicable plans:

- Follow all current eastern indigo snake minimization measures (FOTG, Section II(D)3(b)1-4). If there are gopher tortoise burrows where a snake could be buried or trapped and injured during project activities (such as earth moving, permanent structure placement, plowing below 6 inches), then maintain a 25 ft buffer around the entrance to the burrow(s). During habitat maintenance and restoration activities, treatment by hand within this 25ft buffer can improve gopher tortoise habitat and is encouraged.
- If the project occurs within the “nest protection zone” (FOTG, Section II(D)2(d)) of a federally listed avian species, then work must be performed outside of nesting season.
- Avoid known listed plant locations (refer to FNAI Biodiversity Matrix: <http://www.fnai.org/biointro.cfm> or utilize the FFWCC Environmental Resource Analysis). If the FNAI or ERA 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.

For each of the practices below, they are not likely to adversely affect (NLAA) threatened and endangered species WHEN all of the above parameters (X[∅]) are met AND the specific caveats stated are met. In addition, when planning on forestland, rangeland or native pasture, the following practices are NLAA when the parameters outlined below are met.

X^{∅, a} Anionic Polyacrylamide Erosion Control: Must have no movement of PAM off-site.

X^{∅, b} Brush Management: Must include Florida NRCS Practice Standard 595 Specifications as a supporting practice when chemical treatments are applied. Practice shall be implemented according to species specific recommendations:

- Red-cockaded woodpecker: Activities within an active RCW cluster (cluster includes all active cavity trees and a 200 ft. buffer surrounding these trees) are prohibited during the breeding season (breeding season is April 1-July 31). Outside of nesting season, limit activities to daylight hours and avoid activities within at least two hours of dawn and dusk. Prohibit the use of heavy machinery which may cause ground compaction and damage to tree roots.
- Bluetail Mole Skink and Sand Skink (skink):
The skink consultation area is defined by affirmation of all three factors: county, soil, and elevation.
 - If project area is not in the counties listed below--- no consultation is necessary
 - If project area does not contain the soils listed below -- no consultation is necessary.
 - If project area is lower than 80 feet, --no consultation is necessary, **with the exception** that, if project occurs within 70-80 feet in elevation and is contiguous with a ridge 80 foot or higher and has contiguous skink soils.

Counties: Highlands, Lake, Marion, Orange, Osceola, Polk, and Putnam.

Soils: Apopka, Arredondo, Archbold, Astatula, Candler, Daytona, Duette, Florahome, Gainesville, Hague, Kendrick, Lake, Millhopper, Orsino, Paola, Pomello, Satellite, St. Lucie, Tavares, and Zuber

- If within the consultation area based on the above factors, practice shall be limited to a 4-inch depth of soil disturbance without consultation following **X^Ø**. If soil disturbance is planned deeper than 4-inches, determine whether skinks are present based on Skink Survey Guidelines; positive presence shall require consultation and negative presence shall require **X^Ø**. Contact the NRCS State Biologist for assistance in completing surveys.
- Flatwoods Salamander: Establish and maintain a 1500 ft. undisturbed buffer between practice footprint and known Flatwoods Salamander ponds. Refer to the FNAI Biodiversity Matrix: <http://www.fnai.org/biointro.cfm> for locations of the “Frosted” Flatwoods salamander (*Ambystoma bishopi*) west of the Apalachicola River and “Reticulated” Flatwoods Salamander (*Ambystoma cingulatum*) east of the Apalachicola River.
- Florida Scrub Jay: If scrub habitat is suspected to be occupied or utilized by scrub jays, conduct practice outside of the nesting season (nesting season is March-June), limit mechanical treatment to ≤ 50% of the habitat
Within a 12-month period, and apply in an irregular pattern, creating a mosaic of different vegetative heights.
Or,

If implemented during the nesting season (March-June), planner must identify nesting locations and establish a 150 ft. undisturbed buffer between nesting tree and practice footprint. Refer to the USFWS survey protocol found in FOTG, Section II(D)2(a)8(ii); OR contact the Jacksonville USFWS office directly for assistance in completing survey.

- Audubon's Crested Caracara: Establish and maintain 1000ft. undisturbed buffer between active nesting trees and practice footprints during the nesting season (nesting season is November through April). Outside of the nesting season, do not implement practices that negatively impact known nest trees.
- Florida Grasshopper Sparrow: Nesting Season (March – August)
 - If the project area falls **outside** the Consultation Area (refer to map in the FOTG, Section II, (D), 2(a), 6(iii)), no further consultation with USFWS is necessary. Follow X⁰ requirements.
 - If the project area falls **within** the Consultation Area refer to map in the FOTG, Section II, (D), 2(a), 6(iii)), there are two options.

Survey Option

- When a survey is completed in the Consultation Area noted above and no evidence of Florida grasshopper sparrow nesting is found, Brush Management can be implemented year-round following X⁰ requirements. Use USFWS survey protocol found in FOTG, Section II, (D), 2(a), 6(ii); OR contact the Vero Beach USFWS office directly for Assistance in completing survey.

No Survey Option

- Habitat can be evaluated in the field to determine the suitability for Florida grasshopper sparrows based on four parameters.

Parameters that would indicate habitats that are NOT LIKELY suitable for FGSP, are as follows:

- Less than 25 acres and surrounded by unsuitable habitat.
 - Composed of saw palmetto or shrubs taller than 3 feet, on average
 - Contains more than 1 tree per 100 acres or any trees on tracts < 100 acres.
 - Bare ground coverage is less than 5%
- If project area meets two or more of the parameters listed above, then the area is not considered FGSP habitat. No further consultation with USFWS is necessary. Follow X⁰ requirements.
 - If project area meets only one or none of the parameters listed above, contact the Florida NRCS State Biologist for further assistance. Consultation with USFWS may be necessary prior to implementing Brush Management.
 - If Florida grasshopper sparrows are detected further coordination is necessary, please contact Florida NRCS State

Biologist to facilitate discussions with the USFWS.

- Florida Panther: For pasture, native pasture and rangeland within the USFWS Panther Focus Area (refer to the Panther Focus Area Map in FOTG, Section II(D)2(a)7(ii)) in the following counties: Miami-Dade, Monroe, Broward, Palm Beach, Collier, Lee, Charlotte, Hendry, Glades, Highlands; design application treatments to control brush species on no more than 70% – 80% of the project area leaving 20% - 30% untreated for panther cover habitat. Untreated brush habitat shall consist of patches or travel corridors that consist of a minimum of 2 acres in size.
 - If conducting mechanical removal of invasive tree species adjacent to or within wetlands, streams, or estuarine environments, use techniques that treat targeted plants only and do not adversely impact hydrology.

X^{Ø, c} Critical Area Planting: Must establish and maintain a 100 ft. undisturbed buffer adjacent to streams within USFWS designated Gulf Sturgeon Critical Habitat and the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{Ø, d} Deep Tillage: Must establish and maintain a 100 ft. undisturbed buffer adjacent to streams within USFWS designated Gulf Sturgeon Critical Habitat and the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{Ø, e} Diversion: Natural stream must NOT be diverted. Establish and maintain a 100 ft. undisturbed buffer adjacent to streams within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{Ø, f} Drainage Water Management: Installed practice shall not be hydrologically connected to any stream within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{Ø, g} Firebreak and Fuel Break:

- Bluetail Mole Skink and Sand Skink (skink):

The skink consultation area is defined by affirmation of all three factors: county, soil, and elevation.

- If project area is not in the counties listed below--- no consultation is necessary
- If project area does not contain the soils listed below -- no consultation is necessary.

- If project area is lower than 80 feet, --no consultation is necessary, **with the exception** that, if project occurs within 70-80 feet in elevation and is contiguous with a ridge 80 foot or higher and has contiguous skink soils.

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Counties: Highlands, Lake, Marion, Orange, Osceola, Polk, and Putnam.

Soils: Apopka, Arredondo, Archbold, Astatula, Candler, Daytona, Duette, Florahome, Gainesville, Hague, Kendrick, Lake, Millhopper, Orsino, Paola, Pomello, Satellite, St. Lucie, Tavares, and Zuber

- If consultation factors are affirmative, unless surveys indicate the absence of skinks, practice shall be limited to soil disturbance of no more than 4" in depth to avoid adverse impacts to presumed skink presence. Contact the NRCS State Biologist for assistance.

- Must NOT place breaks through Red-cockaded Woodpecker clusters at any time of the year.
- Must be at least 1500 ft. from known Flatwoods Salamander ponds. Refer to the FNAI Biodiversity Matrix: <http://www.fnai.org/biointro.cfm> for locations of the "Frosted" Flatwoods salamander (*Ambystoma bishopi*) west of the Apalachicola River and "Reticulated" Flatwoods Salamander (*Ambystoma cingulatum*) east of the Apalachicola River.
- Do not establish plow or disked lines through known listed plant locations.
- Establish and maintain a 100 ft. undisturbed buffer adjacent to streams within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers ("7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr" in the "ENDANGERED_HABITAT" geodata folder) in the Customer Service Toolkit.
- In cases where fire breaks are needed to tie into wetlands, streams, and estuarine environments to contain fires, use methods to prevent soil erosion and runoff including, but not limited to, constructing hand lines or using wet lines (a temporary fireguard created by wetting vegetation adjacent to the fuel to be ignited) where practicable. When using wet lines (a temporary fireguard created by wetting vegetation adjacent to the fuel to be ignited), avoid the use of foam or other retardants that may affect stream water quality.

X^{0, h} Herbaceous Weed Control:

- Must include Florida NRCS Practice Standard 595 Specifications as a supporting practice when chemical treatments are applied.
- Time treatment application(s) to have the least effect on listed species nesting seasons. Refer to the Avian Nesting Zone Table (FOTG, Section II(D)2(d)).
- Must establish and maintain a 100ft. buffer adjacent to wetlands, streams and estuarine environments within USFWS designated Gulf Sturgeon Critical Habitat and the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers ("7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr" in the "ENDANGERED_HABITAT" geodata folder) in the

Customer Service Toolkit.

- In other locations adjacent to wetlands, streams, and estuarine environments, if unable to implement a 100ft. buffer, then use the following minimization measures:
 - Chemical must be labeled for aquatic use
 - Apply chemicals directly to target pest/invasive species. Spot treatment techniques suggested include “hack and squirt”, “basal bark”, “cut stump” and direct foliar spray.
 - Follow label instructions for chemical drying times, do not apply chemical too close to a rain event.
- Windows Pesticide Screening Tool (WIN-PST) results MUST be less than “Intermediate” when planning area within USFWS designated Gulf Sturgeon Critical Habitat and the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.
 - When practice is implemented in **South and Central Florida** habitats and WINPST result is higher or equal to “Intermediate” use the following minimization measures: Apply chemicals directly to target pest/invasive species. Spot treatment techniques suggested include “hack and squirt”, “basal bark” and direct foliar spray.
 - Follow label instructions for chemical drying times, do not apply chemical too close to a rain event.

X^{0, i} Irrigation Canal, Field Ditch, Reservoirs, and Systems: Practice shall not be implemented within NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{0, j} Land Smoothing:

- Establish and maintain a 100 ft. undisturbed buffer adjacent to streams within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.
- Must have NO measurable adverse change in wetland hydrology

X^{0, k} Nutrient Management:

- Must follow Florida NRCS Practice Standard 590 Specifications.
- Must establish appropriate buffer widths between practice areas and any wetland, stream, estuarine environment or other sensitive area when nutrients consist of manures and organic by-products. Refer to Table 1 in the

conservation practice standard for required setback distances.

- When applying commercial fertilizer the minimum setback buffer width will be based on the criteria found in the conservation practice standard for the type of conservation buffer used. (e.g., Filter Strip (Code 393), Riparian Forest Buffer (Code 391), Contour Buffer Strips (Code 332), Grassed Waterway (Code 412), and Field Border (Code 386).
- Must establish and maintain a 100ft. buffer adjacent to streams within USFWS designated Gulf Sturgeon Critical Habitat and the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers ("7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr" in the "ENDANGERED_HABITAT" geodata folder) in the Customer Service Toolkit.

X⁰, I Prescribed Burning:

- When project area already undergoing a Prescribed Burn Plan AND there are no changes to the season (i.e. dormant vs. growing season), location or size of burn area, then practice implementation is NLAA. This language does not apply to habitat of the Florida Grasshopper Sparrow. Refer to Florida Grasshopper Sparrow specific discussion below.
- When there is a NEW prescribed burn plan, then MUST follow species specific recommendations:
 - Red-cockaded woodpecker: Providing that burning can be conducted safely and with all other considerations, prescribed burning may be conducted during the RCW breeding season (breeding season is April 1- July 31)). RCW cavity trees will be protected by a variety and combination of methods including employing small preparation burns around cavity trees, raking fuels away from the base of the tree, mowing, weed whipping (use of a "weed whacker" as a low impact alternative) and use of wet lines (a temporary fireguard created by wetting vegetation adjacent to the fuel to be ignited). When mowing or implementing other mechanical treatment practices, be aware that heavy machinery can compact soils and damage tree roots. To reduce these negative impacts, avoid repeated mowing and use of heavy equipment. The use of plow lines for cavity tree protection is prohibited. Pages 201-205 in the RCW Recovery plan provide more detailed guidance and considerations for burning within RCW clusters and associated foraging habitat. The RCW recovery plan is available at http://www.fws.gov/rcwrecovery/recovery_plan.html
 - Florida Scrub Jay: Prescribe burning prohibited during the nesting season (nesting season is March to June).
 - Bluetail Mole Skink and Sand Skink (skink):
The skink consultation area is defined by affirmation of all three factors: county, soil, and elevation.
 - If project area is not in the counties listed below--- no consultation is necessary
 - If project area does not contain the soils listed below -- no consultation is necessary.
 - If project area is lower than 80 feet, --no consultation is necessary, **with the exception** that, if project occurs within 70-80 feet in elevation and is

contiguous with a ridge 80 foot or higher and has contiguous skink soils.

Counties: Highlands, Lake, Marion, Orange, Osceola, Polk, and Putnam.

Soils: Apopka, Arredondo, Archbold, Astatula, Candler, Daytona, Duette, Florahome, Gainesville, Hague, Kendrick, Lake, Millhopper, Orsino, Paola, Pomello, Satellite, St. Lucie, Tavares, and Zuber

Prescribed burning during any season must be evaluated through consultation when planned within the skink consultation area. Contact the NRCS State Biologist for assistance.

- Bald Eagle: Prescribed burning shall not be implemented within 660 feet of any nest tree during the nesting season (nesting season is October 1-May 15). Establish and maintain a fire buffer around the nest tree to prevent crown or ladder fires which may damage the tree. "Preparation" of the fire buffer shall occur outside of the breeding season. If it is determined that a burn during the breeding season would be beneficial, conduct the burn only when neither adult eagles nor young are present at the nest tree (i.e. either before the particular nest is active or after the young have fledged from the nest). Contact an NRCS biologist before any prescribed burning is conducted during the breeding season.
- Audubon's Crested Caracara, Establish and maintain a 100ft. fire buffer around the nest tree if an active nest is present during nesting season (nesting season is November through April). If fledglings are present on the ground, a 500ft. fire buffer shall be established and maintained around the nest tree.
- Florida Grasshopper Sparrow:
 - If the project area falls **outside** the Consultation Area (refer to map in the FOTG, Section II, (D), 2(a), 6(iii)), no further consultation with USFWS is necessary. Follow X^Ø requirements.
 - If the project area falls **within** the Consultation Area refer to map in the FOTG, Section II, (D), 2(a), 6(iii)), there are two options

Survey Option

- When a survey is completed in the Consultation Area noted above and no evidence of Florida grasshopper sparrow nesting is found, Prescribed Burning can be implemented year-round following X^Ø requirements. Use USFWS survey protocol found in FOTG, Section II, (D), 2(a), 6(ii); OR contact the Vero Beach USFWS office directly for Assistance in completing survey.

No Survey Option

- Habitat can be evaluated in the field to determine the suitability

for Florida grasshopper sparrows based on four parameters.

Parameters that would indicate habitats that are NOT LIKELY suitable for FGSP, are as follows:

- Less than 25 acres and surrounded by unsuitable habitat.
 - Composed of saw palmetto or shrubs taller than 3 feet, on average
 - Contains more than 1 tree per 100 acres or any trees on tracts < 100 acres.
 - Bare ground coverage is less than 5%
- If project area meets two or more of the parameters listed above, then the area is not considered FGSP habitat. No further consultation with USFWS is necessary. Follow X^o requirements.
 - If project area meets only one or none of the parameters listed above, contact the Florida NRCS State Biologist for further assistance to determine suitability.
 - When burning areas containing FGSP habitat, use low intensity fire to produce a mosaic of burned and unburned areas within the burn unit. When planning for burning in adjacent units, allow habitat to recover at least 3 weeks prior to burning the adjacent units to produce a mosaic pattern across the larger landscape. Burning may be planned year-round, but special provisions must be followed during specific times of the year. Consult with the NRCS State Biologist for all burning in FGSP occupied or potential habitat.

Burn Periods in occupied or suitable FGSP habitat

Time Period	Provisions	Conservation Notes
April 1-June 15	Refer to all other Conservation measures for FGSP	Preferred & Encouraged
June 15-August 15	Burn only when: prairie habitat is not ponded & no major rain even is forecast one week after the burn.	Ponding after burning may discourage regrowth of grasses & herbaceous vegetation preferred by the FGSP.
August 15-January 31	Do NOT burn unless burning has not occurred within the unit for the last 3 consecutive years. For subsequent burning, aim to burn during other times.	Repeated burning during this time frame will not restore or maintain FGSP habitat on many tracts.
February 1-April 1	Burn only when a cold snap or freeze resulting in a one day low of 28 degrees F or a low of 32 degrees F for 3 consecutive days within one week of burning is NOT forecast.	Freezing temperatures immediately following a burn may discourage regrowth of grasses and herbaceous vegetation preferred by the FGSP.

X^{o, m} Prescribed Grazing: Practice shall be implemented according to species specific recommendations:

- Florida Grasshopper Sparrow:

Nesting Season (March – August)

- If the project area falls **outside** the Consultation Area (refer to map in the FOTG, Section II, (D), 2(a), 6(iii)), no further consultation with USFWS is necessary. Follow X^Ø requirements.
- If the project area falls **within** the Consultation Area refer to map in the FOTG, Section II, (D), 2(a), 6(iii)), there are two options.

Survey Option

- When a survey is completed in the Consultation Area noted above and no evidence of Florida grasshopper sparrow nesting is found, Prescribed Grazing can be implemented year-round following X^Ø requirements. Use USFWS survey protocol found in FOTG, Section II, (D), 2(a), 6(ii); OR contact the Vero Beach USFWS office directly for Assistance in completing survey.

No Survey Option

- Habitat can be evaluated in the field to determine the suitability for Florida grasshopper sparrows based on four parameters.

Parameters that would indicate habitats that are NOT LIKELY suitable for FGSP, are as follows:

- Less than 25 acres and surrounded by unsuitable habitat.
 - Composed of saw palmetto or shrubs taller than 3 feet, on average
 - Contains more than 1 tree per 100 acres or any trees on tracts < 100 acres.
 - Bare ground coverage is less than 5%
- If project area meets two or more of the parameters listed above, then the area is not considered FGSP habitat. No further consultation with USFWS is necessary. Follow X^Ø requirements.
 - If project area meets only one or none of the parameters listed above, contact the Florida NRCS State Biologist for further assistance.
 - If the project appears to be potential FGSP habitat (i.e.; habitat size greater than 25 acres, with greater than 5% bare ground, with a saw palmetto/shrub component of less than three feet in height, and less than 1 tree per 100 acres) then grazing may be conducted outside of the nesting season provided that the minimum vegetation height/parameters below are outlined in the prescribed grazing plan and maintained by the producer:

Prescribed Grazing Requirements (minimum vegetation height/parameters below to be maintained):

- **8 inches: Grasses** such as Wiregrass (*Aristida* spp.), bluestems (*Andropogon* spp.), beak-rushes (*Rhynchospora* spp.), toothache grass (*Ctenium romaticum*), Indiangrasses (*Sorghastrum* spp.),

and other grass species outlined in the Florida Natural Areas Inventory Guide to the Natural Communities of Florida 2010 edition, Dry Prairie, pg. 67.

http://www.fnai.org/pdf/nc/FNAI_NatComGuide_2010.pdf

- **6 inches: Forbs** such as deer-tongue (*Carphephorus* spp.), blazing star (*Liatrus* spp.), bachelor's buttons (*Polygala* sp.), lilies, and other grass species outlined in the Florida Natural Areas Inventory Guide to the Natural Communities of Florida 2010 edition, Dry Prairie, pg. 67.

http://www.fnai.org/pdf/nc/FNAI_NatComGuide_2010.pdf

- **10% saw palmetto/shrub cover.** If the saw palmetto/shrub cover component is less than 10%, then an increase in the average height of grasses and forbs is necessary to provide year-round protective cover for the FGSP. An average minimum vegetation height of 11 inches for grasses and forbs is required. Contact the Florida NRCS State Biologist to discuss.

- If Florida grasshopper sparrows are detected further coordination is necessary, please contact Florida NRCS State Biologist to facilitate discussions with the USFWS.

X^{Ø, n} Pumping Plant: Installed practice shall not be hydrologically connected to any stream within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers ("7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr" in the "ENDANGERED_HABITAT" geodata folder) in the Customer Service Toolkit.

X^{Ø, o} Silvopasture Establishment:

- NLAA, when landuse is currently pastureland and there is no Florida grasshopper sparrow or Audubon's crested caracara habitat present.
- MA, when changing landuse from range or forestland to pastureland—consultation required.

X^{Ø, p} Spoil Spreading: Must establish and maintain a 100 ft. undisturbed buffer between practice footprint and any wetland, stream, or estuarine environment.

X^{Ø, q} Subsurface and Surface Drains: Installed practice shall not be hydrologically connected to any stream within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers ("7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr" in the "ENDANGERED_HABITAT" geodata folder) in the Customer Service Toolkit.

X^{Ø, r} Underground Outlet: Installed practice shall not be hydrologically connected to any stream within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers ("7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr" in the "ENDANGERED_HABITAT" geodata folder) in the Customer Service Toolkit.

X^{Ø, s} Waste Recycling: Must establish and maintain a 100 ft. undisturbed buffer between practice footprint and any wetland, stream, or estuarine environment.

X^{0, t} Sediment Basin and Water and Sediment Control Basin:

- Installed practice shall not be hydrologically connected to any stream
- Practice shall not result in a measurable change to the wetland hydrology in the area where activities are being implemented.
- Must establish and maintain a 100 ft. undisturbed buffer between practice footprint and any stream within the NW and NC Florida Listed Mussel Habitat. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{0, u} Dust Control on Unpaved Roads and Surfaces:

- In locations where runoff from a treated surface could enter streams designated as critical habitat for Gulf Sturgeon or NW and NC Florida Mussels, the practice must be implemented using only water as the palliative. If palliatives other than water will be used, further coordination with the FWS will be required. Refer to the list of Hydrologic Unit Areas (HUA) in the FOTG, Section II(D)2(a)11(ii) and apply the corresponding HUA Map Layers (“7mussels_a_fl###.lyr and 8mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.
- Where roads occur adjacent to known locations of other rare and listed plant and animal species, consider direct impacts resulting from runoff of palliatives containing petroleum emulsion, bituminous additives, or other substances as well as indirect impacts, e.g. changes in soil chemistry and water quality. Contact the Florida NRCS biologist to facilitate discussions with the FWS.

“May Adversely Affect” Determinations:

X¹ – When a land use conversion is planned, the placement and/or timing of earthmoving, tree removal, land clearing or removal of vegetation, ground disturbance, construction, tillage, fire and smoke, and/or water management and the potential off-site or indirect effects associated with these practices may adversely affect threatened and endangered species. Contact a NRCS, USFWS or FFWCC biologist for assistance when a threatened or endangered species is identified or likely to exist* in or adjacent to the project area and one of the aforementioned conditions applies. When prescribed burning and other CPS facilitating prescribed burning are planned, T+E species may be adversely affected. Programmatic Formal Consultation has already been completed. To document fulfillment of ESA requirements contact the NRCS State Biologist for further guidance.

X² – Herbicide/Pesticide application or chemicals used as part of this practice may adversely affect threatened and endangered species. Contact a NRCS, USFWS or FFWCC biologist for assistance when a threatened or endangered species is identified or likely to exist* in or adjacent to the project area. When prescribed burning and other CPS facilitating prescribed burning are planned such as chemical application, T+E species may be adversely affected. Programmatic Formal Consultation has already been completed. To document fulfillment of ESA requirements contact the NRCS State Biologist for further guidance.

X³ – Practices proximal to or within wetlands, constructed wetlands, restored wetlands, enhanced wetlands, created wetlands, ponds, lakes, streams, artificial waterways, and estuarine or marine environments may adversely affect threatened and endangered species. Contact a NRCS, USFWS or FFWCC biologist for assistance when a threatened or endangered species is identified or likely to exist* in or adjacent to the project area.

“Beneficial Effect” Determinations: Beneficial effects include those that are immediate, realized during project implementation or, are realized over the life of the project and result in a net conservation benefit.

X⁴ – Practice will have a beneficial effect if installed on existing cropland or grazed land adjacent to or upstream of a stream or wetland with known aquatic/marine threatened or endangered species. This practice will also provide beneficial effects when planned around sinkholes, if applicable, in counties noted to have the squirrel chimney cave shrimp.

X⁵ – Practice will have a beneficial effect when installed in counties known to contain the gray and/or Indiana bat. *Note:* contact a NRCS, USFWS or FFWCC biologist if an exclusion grate is to be installed at a cave entrance.

X⁶ – Practice will have a beneficial effect when installed on land “recently” in agricultural production and the native ecological community for the site is to be restored.

X⁷ – Practice will have a beneficial effect when installed for native vegetation restoration and/or management.

X⁸ – Practice will have a beneficial effect of controlling negative impacts from developed

or developing sites and other constructed or unnatural surfaces by reducing the impacts of accelerated stormwater runoff, erosion, sedimentation, and other pollutants.

* How to determine if species are “likely to exist in or adjacent to the project area” - Use any or all of the following resources:

- 1) Refer to NRCS County List of Listed Species (eFOTG, Section II (D)1(c)). Each listed species found within your county is associated with specific habitat type(s). These habitat types correspond to those currently outlined in the 26 Ecological Communities of Florida (eFOTG, Section II (F)).
- 2) Refer to the Florida Natural Areas Inventory (FNAI) data in FWC’s Environmental Resource Analysis or to the FNAI Biodiversity Matrix: <http://www.fnai.org/biointro.cfm> . If the FNAI records indicate species are “*Documented*”, “*Documented Historic*”, or “*Likely to Occur*”, then they are likely to exist within the project area.
- 3) Review the Environmental Resources Analysis (ERA) available through Florida Fish and Wildlife partner biologists to determine listed species occurrence potential.
- 4) Use species occurrence information obtained from landowner and/or during site visit.

Glossary of Terms

Actively Managed: Land receiving annual management treatments which include, but are not limited to: grazing, tillage, crop rotation, fertilization, mowing, weed control, and may be irrigated.

Agricultural Commodity: Any crop planted and produced by annual tilling of the soil including tilling by one-trip planters, or sugarcane. [FSA Manual, Part 525]

Nest Protection Zone: For Audubon’s Crested Caracara, Bald Eagle, Everglades Snail Kite, Florida Scrub Jay, Red-cockaded Woodpecker and Wood stork, see Avian Nesting Zone Table in FOTG, Section II(D)2(d), for zone measurements.

Commercial: Land on which a dwelling or dwellings are constructed or placed for the interchange of goods or commodities.

Cropland: An area used primarily for the production of cultivated crops.

Hay: Herbage of grasses, legumes, or comparatively fine-stemmed forbs cut and cured for later use as livestock feed.

Indirect Effects: Those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur. [50 CFR §402.02]

Introduced Species: Species of plant that are not part of the original flora of the area in which they are planted.

Off-site effects: Those effects which are reasonably certain to occur outside the immediate boundaries of the site or property as a result of the proposed action.

On-site effects: Those effects which are reasonably certain to occur within the immediate boundaries of the site or property as a result of the proposed action.

Pastureland: Grazing lands comprised of introduced or domesticated forage species that are used primarily for the production of livestock.

Recently: Within 12 months.

Residential: Land on which a dwelling or dwellings are constructed or placed for human inhabitation.