



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

Practice Effect Designations:

NE – No Effect

NLAA – Not likely to adversely affect T & E species

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

BE - Not likely to adversely affect T & E species: *beneficial effect*

In some cases, practices may have multiple effect designations (i.e., NLAA, BE, and MA). 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 threatened and endangered species. For detailed standards and specifications on the practices listed within the table, refer to Section IV of the eFOTG. Numbers or symbols adjacent to Xs correspond to footnotes at the end of the table. Some practices are NLAA (X^{\emptyset}) with additional requirements above and beyond the definition of X^{\emptyset} , these practices have a specific footnote identifier ($X^{\emptyset, a-t}$) which is defined at the end of the table under X^{\emptyset} .

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 designation is identified along with a MA designation, then the MA designation takes precedence and consultation is required.

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.

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MA	BE
Above Ground, Multi-Outlet Pipeline	Ft.	431		X ⁰		
Access Control	Ac.	472		X ⁰		X ⁴ X ⁶
Access Road	Ft.	560			X ¹ X ³	X ⁴
Agrichemical Handling Facility	No.	309		X ⁰		
Alley Cropping	Ft.	311		X ⁰		X ⁶
Amendments for the Treatment of Agricultural Wastes	An. Unit	591	X			
Anaerobic Digester	No.	366		X ⁰		X ⁴
Animal Mortality Facility	No.	316		X ⁰		
Animal Trails and Walkways	Ft.	575		X ⁰		X ⁴
Anionic Polyacrylamide (PAM) Erosion Control	Ac.	450		X ^{0, a}		
Aquaculture Ponds	Ac.	397			X ¹ , X ³	
Atmospheric Resource Quality Management	Ac.	370	X			
Bedding	Ac.	310		X ⁰	X ¹ , X ³	
Brush Management	Ac.	314		X ^{0, b, k}	X ^{1, 2}	X ⁴ X ⁶ X ⁷
Channel Stabilization	Ft.	584			X ³	X ⁴
Clearing & Snagging	Ft.	326			X ³	
Closure of Waste Impoundments	No.	360	X			
Composting Facility	No.	317		X ⁰		X ⁴
Conservation Cover	Ac.	327		X ⁰		X ⁷
Conservation Crop Rotation	Ac.	328	X			
Constructed Wetland	No.	656			X ³	X ⁴
Contour Buffer Strips	Ac.	332		X ⁰		X ⁴

Practice	Practice	Practice	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MA	BE
Name	Unit	Code				
Contour Farming	Ac.	330		X ⁰		X ⁴
Cover Crop	Ac.	340		X ⁰		X ⁴
Critical Area Planting	Ac.	342		X ^{0, c}		X ⁴ X ⁶
Cross Wind Ridges	Ac.	588	X			
Dam	No./Ft.	402			X ³	
Dam, Diversion	No./Ft.	348			X ³	
Deep Tillage	Ac.	324		X ^{0, d}		
Dike	Ft.	356			X ³	X ⁴ , X ⁷
Diversion	Ft.	362		X ^{0, e}	X ³	X ⁴
Drainage Water Management	Ac.	554		X ^{0, f}		X ⁴ X ⁶ X ⁷
Dry Hydrant	No.	432	X			
Early Successional Habitat Development/Management	Ac.	647		X ⁰		X ⁴ X ⁶ , X ⁷
Evaporative Cooling Pads	Ac.	781	X			
Feed Management	No.	592	X			
Fence	Ft.	382		X ⁰		X ⁴ X ⁶ X ⁷
Field Border	Ft.	386		X ⁰		X ⁴ X ⁶ X ⁷
Filter Strip	Ac.	393		X ⁰		X ⁴
Firebreak	Ft.	394		X ^{0, g}		
Fishpond Management	No.	399	X			
Forage Harvest Management	Ac.	511		X ⁰		
Forest Slash Treatment	Ac.	384	X			
Forest Stand Improvement	Ac.	666			X ¹	X ⁷

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MA	BE
Forest Trails and Landings	Ac.	655			X ¹	
Fuel Break	Ac.	383		X ^{0.g}		
Grade Stabilization Structure	No.	410			X ³	X ⁴
Grassed Waterway	Ac.	412		X ⁰		X ⁴
Heavy Use Area Protection	Ac.	561		X ⁰		
Hedgerow Planting	Ft.	422		X ⁰		X ⁴ ,X ⁶
Herbaceous Weed Control	Ac.	315		X ^{0.k}	X ²	X ⁴ X ⁶ X ⁷
Herbaceous Wind Barrier	Ft.	603	X			
Integrated Pest Management	Ac.	595	X			
Irrigation Canal or Lateral	Ft.	320		X ^{0.h}	X ¹ ,X ³	
Irrigation Field Ditch	Ft.	388		X ^{0.h}	X ¹ ,X ³	
Irrigation Land Leveling	Ac.	464		X ⁰		
Irrigation Regulating Reservoir	No.	552		X ^{0.h}	X ¹ ,X ³	
Irrigation Storage Reservoir	No./Ac.- Ft.	436		X ^{0.h}	X ¹ ,X ³	
Irrigation System, Micro- irrigation	Ac.	441		X ⁰		X ⁴
Irrigation System, Sprinkler	Ac.	442		X ⁰		
Irrigation System, Surface & Subsurface	No.	443		X ^{0.h}	X ³	
Irrigation System, Tailwater Recovery	No.	447		X ⁰		X ⁴
Irrigation Ditch Lining	No.	428		X ⁰		
Irrigation Pipeline	No.	430		X ⁰		
Irrigation Water Management	Ac.	449	X			
Land Clearing	Ac.	460			X ¹	

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MA	BE
Land Reconstruction, Abandoned Mine Land	Ac.	543		X ⁰		X ⁷
Land Reconstruction, Currently Mined Land	Ac.	544		X ⁰		X ⁷
Land Smoothing	Ac.	466		X ^{0,i}	X ¹ ,X ³	
Lined Waterway or Outlet	Ft.	468			X ¹ ,X ³	
Livestock Cooling Pond	Ac.	779		X ⁰		
Livestock Shade Structure	No.	717	X			
Mole Drain	Ft.	484		X ⁰		
Monitoring Well	No.	353	X			
Mulching	Ac.	484	X			
Nutrient Management	Ac.	590		X ^{0,j}		X ⁴
Obstruction Removal	Ac.	500			X ¹	
Open Channel	Ft.	582			X ³	
Pasture & Hay Planting	Ac.	512		X ⁰		
Pipeline	Ft.	516		X ⁰		
Pond	No.	378		X ⁰	X ¹ ,X ³	
Pond Sealing or Lining	No.	521		X ⁰		
Precision Land Forming	Ac.	462		X ⁰		
Prescribed Burning	Ac.	338		X ^{0,l}	X ¹	X ⁴ X ⁶ X ⁷
Prescribed Forestry	Ac.	409	X			
Prescribed Grazing	Ac.	528		X ^{0,ll}		X ⁴ X ⁶ X ⁷
Pumping Plant	No.	533		X ^{0,m}	X ³	
Range Planting	Ac.	550		X ⁰		X ⁶

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MA	BE
Recreation Area Improvement	Ac.	562			X ¹	
Recreation Land Grading & Shaping	Ac.	566			X ¹	
Recreation Trail and Walkway	Ft.	568			X ¹	
Residue and Tillage Management, No-till & Strip-till/Direct Seed	Ac.	329		X ⁰		X ⁴
Residue and Tillage Management, Mulch Till	Ac.	345		X ⁰		X ⁴
Residue Management, Seasonal	Ac.	344		X ⁰		X ⁴
Restoration & Management of Rare or Declining Habitats	Ac.	643		X ⁰		X ⁷
Riparian Forest Buffer	Ac.	391		X ^{0, n}		X ⁴ X ⁷
Riparian Herbaceous Cover	Ac.	390		X ^{0, n}		X ⁴ X ⁷
Roof Runoff Structure	No.	558	X			
Row Arrangement	Ac.	557	X			
Seasonal High Tunnel System for Crops	Ft. ²	798	X			
Sediment Basin	No.	350		X ^{0, t}		X ⁴
Silvopasture Establishment	Ac.	381		X ^{0, o}	X ¹	
Sinkhole & Sinkhole Area Treatment	Ft.	527		X ⁰		X ⁴
Solid/Liquid Waste Separation Facility	No.	632		X ⁰		
Spoil Spreading	Ft.	572		X ^{0, p}		
Spring Development	No.	574			X ³	X ⁶ X ⁷
Storage Facility – Nursery Substrate	No.	782		X ⁰		
Stream Crossing	No.	578			X ³	X ⁴
Stream Habitat Improvement/Management	Ac.	395			X ³	X ⁴ X ⁷
Streambank & Shoreline Protection	Ft.	580			X ¹ , X ³	X ⁴

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MA	BE
Stripcropping	Ac.	585	X			
Structure for Water Control	No.	587		X ⁰	X ¹ ,X ³	X ⁴
Subsurface Drain	Ft.	606		X ^{0,q}		
Surface Drainage, Field Ditch	No.	607		X ^{0,q}		
Surface Drainage, Main or Lateral	Ft.	608		X ^{0,q}		
Terrace	Ft.	600		X ⁰		X ⁴
Tree/Shrub Establishment	Ac.	612		X ⁰		X ⁴ X ⁶ X ⁷
Tree/Shrub Site Preparation	Ac.	490		X ⁰	X ^{1,2}	
Tree/Shrub Pruning	Ac.	660	X			
Underground Outlet	Ft.	620		X ^{0,r}		
Upland Wildlife Habitat Management	Ac.	645		X ⁰		X ⁶ X ⁷
Vegetated Treatment Area	No.	635		X ⁰		X ⁴
Vegetative Barrier	Ft.	601		X ⁰		X ⁴ X ⁶
Waste Facility Cover	No.	367	X			
Waste Storage Facility	No.	313		X ⁰		
Waste Transfer	No.	634	X			
Waste Treatment	No.	629		X ⁰		
Waste Treatment Lagoon	No.	359		X ⁰		
Waste Utilization	Ac.	633		X ^{0,s}		
Water Harvesting Catchment	No.	636		X ⁰		
Watering Facility	No.	614	X			X ⁴
Water & Sediment Control Basin	No.	638		X ^{0,t}		X ⁴

Practice Name	Practice Unit	Practice Code	Practice Effects Designation, Rationale, and Criteria			
			NE	NLAA	MA	BE
Water Well	No.	642		X ⁰	X ¹ ,X ³	
Well Decommissioning	No.	351	X			
Well Plugging	No.	755	X			
Well Water Testing	No.	355	X			
Wetland Creation	Ac.	658		X ⁰		X ⁴ X ⁶ X ⁷
Wetland Enhancement	Ac.	659		X ⁰		X ⁴ X ⁶ X ⁷
Wetland Restoration	Ac.	657		X ⁰		X ⁴ X ⁶ X ⁷
Wetland Wildlife Habitat Management	Ac.	644		X ⁰		X ⁴ X ⁶ X ⁷
Windbreak/Shelterbelt, Establishment	Ft.	380		X ⁰		
Windbreak/Shelterbelt, Renovation	Ft.	650		X ⁰		
TOTALS			28	92	39	59

142 practice standards

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

X^Ø – 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 wetlands, 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 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) OR the burrow(s) must be evacuated prior to site manipulation in the vicinity. Follow Excavation Guidelines found in the Minimization Measures if burrow evacuation is the only alternative.
- 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>). 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.

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

X^{Ø, b} Brush Management: 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.

- 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 $\leq 50\%$ of the habitat in any one period (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: In Dry Prairie habitat, deforested flatwoods, native rangeland or frequently burned fallow pastures within 30km radius

(18.6 miles) of the following Conservation Areas in the associated counties (refer to map layer XXX in Toolkit):

- Three Lakes WMA (Osceola County)
- Kissimmee Prairie (Okeechobee County)
- Avon Park Bombing Range (Highlands and Polk Counties)
- Lykes Bros. Ranch (Glades County)

May conduct practice outside of the nesting season (nesting season is March-August)

o OR

May implement practice during the nesting season, when a survey is completed in the habitat types and county locations noted above, prior to practice implementation and no evidence of sparrow nesting is found. 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.

o 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, use techniques that treat targeted plants only and do not negatively impact hydrology

X⁰, 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 Layer

("7mussels_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 Layer ("7mussels_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 Layer ("7mussels_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 Layer ("7mussels_a_fl###.lyr" in the "ENDANGERED_HABITAT" geodata folder) in the Customer Service Toolkit.

X^{Ø, g} Firebreak and Fuel Break:

- Must avoid open sandy areas along the Lake Wales Ridge unless surveys show the absence of skinks (refer to Sand Skink and Bluetail Mole Skink locations as outlined in the species range map and the USFWS survey protocol found in the FOTG, Section II(D)2(a)12(ii) and (iii); OR contact the Vero Beach USFWS office directly for assistance in completing survey).
- 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 Layer (“7mussels_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 and streams 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.

X⁰, h 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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X⁰, i 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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.
- Must have NO measurable adverse change in wetland hydrology

X⁰, j Nutrient Management:

- Must follow Florida NRCS Practice Standard 590 Specifications.
- Must establish appropriate buffer widths between practice areas and any stream, wetland 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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{0, k} Pest Management / Chemical Application:

- Must follow Florida NRCS Practice Standard 595 Specifications.
- 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 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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.
- In other locations adjacent to streams or wetlands, 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 Layer (“7mussels_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^{0,1} Prescribed Burning:

- When project area already undergoing a Prescribed Burn Plan AND there are no changes to the season, location or size of burn area, then practice implementation is NLAA.
- 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).
- 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, In Dry Prairie habitat, deforested flatwoods, native rangeland or frequently burned fallow pastures within 30km radius of the following Conservation Areas in the associated counties (refer to map layer XXX in Toolkit):
 - Three Lakes WMA (Osceola County)
 - Kissimmee Prairie (Okeechobee County)
 - Avon Park Bombing Range (Highlands and Polk Counties)
 - Lykes Bros. Ranch (Glades County)

May conduct practice outside of the nesting season (nesting season is March-August)

OR

May implement practice during the nesting season, when a survey is completed in the habitat types and county locations noted above, prior to practice implementation and no evidence of sparrow nesting is found. 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.

- Bluetail Mole Skink and Sand Skink, If practice area is within the Lake Wales Ridge (as outlined on the species range map in the FOTG, Section II(D)2(a)12(iii)), determine whether skinks are present based on Skink Survey Guidelines, if species are present no burning shall be conducted without consultation. Use USFWS survey protocol found in FOTG, Section II(D)2(a)12(ii);OR contact the Vero Beach USFWS office directly for assistance in completing survey.

X⁰, " Prescribed Grazing: Practice shall be implemented according to species specific recommendations:

- Florida Grasshopper Sparrow: In Dry Prairie habitat, deforested flatwoods, native rangeland or frequently burned fallow pastures within 30km radius of the following Conservation Areas in the associated counties (refer to map layer XXX in Toolkit):
 - Three Lakes WMA (Osceola County)
 - Kissimmee Prairie (Okeechobee County)
 - Avon Park Bombing Range (Highlands and Polk Counties)
 - Lykes Bros. Ranch (Glades County)

May conduct practice outside of the nesting season (nesting season is March-August), when the following parameters are met:

- light to moderate stocking density and
- Defer grazing when vegetation is below specified heights:

- **8 inches:** Grasses such as Wiregrass (*Aristida spp.*), bluestems (*Andropogon spp.*), beak-rushes (*Rhynchospora spp.*), toothache grass (*Ctenium aromaticum*), Indian grasses (*Sorghastrum spp.*)
 - **6 inches:** Forbs such as deer-tongue (*Carphephorus spp.*), blazing star (*Liatrus spp.*), bachelor's buttons (*Polygala sp.*), lilies
- Must implement grazing deferment after prescribed burns (as outlined in the FL NRCS Conservation Practice Standard Prescribed Burning , Code FL338)

OR

May implement practice under above outlined parameters during the nesting season, when a survey is completed in the habitat types and county locations noted above and no evidence of sparrow nesting is found. 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.

X^{0, m} 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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{0, n} Riparian Forest Buffer and Herbaceous Cover: Buffer width must be a minimum of 100 ft. when 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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

X^{0, 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 stream or wetland.

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 Layer (“7mussels_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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

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

X^{Ø, 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 Layer (“7mussels_a_fl###.lyr” in the “ENDANGERED_HABITAT” geodata folder) in the Customer Service Toolkit.

“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.

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.

X³ – Practices proximal to or within wetlands, constructed wetlands, wetland restoration, wetland enhancement, wetland creation, natural ponds, lakes, streams, or artificial waterways 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:

X⁴ – Practice will have a beneficial effect if installed on existing cropland or grazed land adjacent to or on a stream or wetland with known aquatic 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.

* 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) 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 Woodstork, 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.

Hayland: An area used primarily for the production of hay.

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.

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.