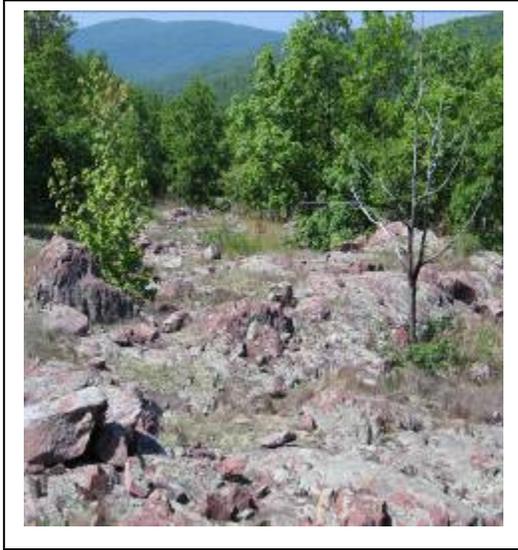


Animal Enhancement Activity – ANM 22 – *Restoration and Management of Rare or Declining Habitats*



Restoration of Rare and Declining Habitats

This enhancement consists of restoring habitats recognized by NRCS State Offices as rare or declining.

Land Use Applicability

This enhancement is applicable to cropland, pastureland, forest, and rangeland that can be restored to native vegetation. Must correspond to identified vegetative state or plant community phase of the Ecological Site Description where available.

Benefits

Restoring rare and declining habitats will provide food, cover, and nesting habitat for native adapted fish and wildlife species, especially grassland nesting

birds.

Criteria for Restoration of Rare and Declining Habitats

- ◆ NRCS State Offices will identify the kinds of habitats applicable as well as the criteria needed (e.g., plant species needed, water depth, etc) to achieve the desired outcome(s). For example, how many acres of undesirable herbaceous species and brush control are needed as well as the frequency of prescribed burning to achieve the desired condition.
- ◆ Acceptance of this enhancement requires that the client must comply with the requirements of Conservation Practice Standard, Restoration and Management of Rare or Declining Habitats (643).
- ◆ A pre-treatment habitat assessment of the affected area will be documented to provide a baseline for comparison with post-treatment conditions.
- ◆ A management plan covering the length of the contract will be developed for this enhancement activity.
- ◆ During the establishment period, periodic mowing can be used outside of the primary nesting and fawning seasons to help achieve the desired ecological outcome. Grazing may be permitted after establishment if grazing was a historical component of the ecological site. Other agricultural activities such as haying or cropping shall not be done on the site during the contract period.



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- ◆ All plant functional groups (species that respond in a similar way to environmental perturbations) native to a site must be restored.

Documentation Requirements for Restoration of Rare and Declining Habitats

Following implementation of this activity, the landowner must document the restoration of rare and declining habitat by providing a brief written description of the actions taken; size of the area (acres); providing receipts and seeding dates; and delineating on a map or aerial photograph the location of the restored habitat.

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In Tennessee there are five 'Rare Habitats' whereby restoration enables eligibility of this enhancement:

- A. Native Tallgrass prairies – applicable statewide
 - Minimum of 3 native warm season grasses and two native forbs/legumes established.
 - Maximum of 4 lbs. of native grass seed per acre and 2-5 lbs. of forb seed per acre.
- B. Cedar Glades - applicable in the Nashville Basin counties.
 - Minimum of 5 native forb/legume species established. 2-3 lbs. of forb seed per acre.
- C. Oak Savannahs – applicable from the Cumberland Plateau west.
 - Minimum of 3 native warm season grasses and two native forbs/legumes established.
 - Maximum of 4 lbs. of native grass seed per acre and 2-5 lbs. of forb seed per acre.
 - 10% of area established to at least 2 species of oaks. Oak plantings in small scattered blocks OR at very wide spacings.
- D. Barrens – applicable in the Highland Rim counties of the Interior Plateau.
 - Minimum of 3 native warm season grasses and two native forbs/legumes established.
 - Maximum of 4 lbs. of native grass seed per acre and 2-5 lbs. of forb seed per acre.
- E. Southern Appalachian bogs – applicable to the counties in the Blue Ridge Mountains.
 - No planting required. Required treatments will be hydrology restoration and woody control.

Grazing is allowed with a grazing management plan in all habitat types except Cedar Glades and Southern Appalachian bogs.

ELIGIBLE NATIVE WARM SEASON GRASSES, FORBS, AND LEGUMES

SPECIES ¹	Seeding Rate Pounds per Acre ²	Seeding Date	Seeding Method Planned (Tilled or No-Till) ³
WARM SEASON GRASSES:			
Big Bluestem (P)	4	4/15 - 7/1	
Eastern Gamagrass (P)	4	4/15 - 7/1 12/1 – 3/1	
Indiangrass (P)	4	4/15 - 7/1	
Little Bluestem (P)	4	4/15 - 7/1	
Switchgrass (P)	2	4/15 - 7/1	
Sideoats grama (P)	4	4/15 – 7/1	
FORBS / LEGUMES			
Illinois Bundleflower (P)	1	4/15 - 7/1	
Purple Prairie Clover (P) (Dalea purpureum)	1	4/15 - 7/1	
Partridge Pea (A)	1	4/15 – 7/1	
Blackeyed Susan (P) (Rudbeckia hirta)	0.5	4/15 – 7/1	
Purple Coneflower (P) (Echinacea purpurea)	0.5	4/15 – 7/1	
Lanceleaf Coreopsis (P) (Coreopsis lanceolata)	0.5	4/15 – 7/1	
Maximilian Sunflower (P) (Helianthus maximiliana)	1	4/15 – 7/1	
Greyheaded coneflower (P) (Ratibida pinnata)	0.5	4/15 – 7/1	

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¹ (A) = Annual; (P) = Perennial

² Each grass species seeding rate listed is based on a pure stand planting. Grass mixture seeding rates need to be adjusted based on the number of grass species in the mixture. Example: For a 3 grass species mixture, the correct grass seeding rate could be 1/3 the above listed rate for each species in the mixture. Native forb and legume rates would be treated similarly.

³ See NRCS Job sheet for Fescue Eradication; leave drainageways and areas prone to erosion in permanent cover. **Tilled:** prepare seedbed no more than one month prior to seeding. Destroy all competing vegetation, cultipack, apply labeled pre-emerge herbicide (eastern gamagrass and switchgrass are not tolerant of imazapic herbicide), seed, cultipack. **No-till:** See NRCS Fescue Eradication Jobsheet.

OAK SAVANNAHS

Eligible trees for planting are: white oak, post oak, black oak, blackjack oak, persimmon, shagbark hickory, mockernut hickory, or other hardwoods associated with an oak/hickory forest with a thick bark capable of withstanding prescribed burning.

Oak plantings shall be according to one of the following patterns:

- Block planting on a 10 ft. by 10 ft. spacing; individual blocks no larger than 0.5 acres. Planted blocks constituting no more than 10% of the area. Planted blocks randomly scattered throughout the area.
- Trees planted throughout the area on a wide spacing of at least 32 ft. by 32 ft. spacing; approximately 25 seedlings planted per acre.

Existing oak/hickory forests within eligible areas of the state for this habitat type may be clearcut or otherwise treated in a manner to create one of the two above savannah hardwood patterns and qualify for this enhancement, subject to the maintenance of a native grassland plant community in the area after the tree clearing operation.

SOUTHERN APPALACHIAN BOG

BOG CREATION:

A shallow depression must be excavated in an area that meets the following conditions:

- a. upland flat to gently sloping areas, or near seep zones on valley floors or headwater stream bottoms.
- b. with soils sufficient to pond water or be connected to a groundwater discharge area.
- c. with sufficient upland drainage area to recharge the site if runoff is the primary source of water.

Construction and maintenance of bogs shall be according to the following guidelines:

- An average depth of 6-18 inches.
- Excavated depression should be at least 0.1 acre, up to 0.25 acre in size.
- A minimum average width of 100 feet of filter strip/border consisting of native herbaceous vegetation completely around the bog to provide water quality and habitat benefits.
- All spoil material safely disposed.
- Prior to excavation, topsoil removed and then re-spread in bottom of bog for seedbank.
- Woody encroachment controlled to maintain open sunny areas over the majority of the bog site. An Appalachian bog typically consists of a mosaic of open areas with patches of trees and/or shrubs. Control of woody vegetation should be by tree injection with herbicide, girdling, or

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- chainsaw, instead of by machine removal. Chainsaw treatment should be least preferable due to potential for multiple sprouting and lack of kill of the undesirable woody plant.
- No sediment delivery in runoff getting to the bog.
- All non-native plants controlled.
- No drainage features. The bog should dry up seasonally, primarily through evaporation.
- Consider a periodic prescribed burn if possible for woody control.

BOG RESTORATION:

- Remove all drainage features draining the historically natural depression or seep area.
- Eradicate all introduced grasses.
- Re-establish depth with shallow excavation of sedimentation or fill if necessary. Haul sediment from site.
- Eliminate woody vegetation by hand if the site is a wooded area with greater than 50% canopy cover. Eliminate less than 50% of the woody vegetation each year until the desired level of control is reached.
- Conduct a prescribed burn if possible after some tree removal (to develop a fuel load) to re-establish the site to an early successional plant community. Continue periodic burns to maintain the early successional plant community.

PRIMARY NESTING/FAWNING SEASON – NO GRAZING OR DISTURBANCE IS ALLOWED

April 15 - August 15

Producer Name:				Date:			
Tract Number:				County:			
Field Number	Planned Habitat Type *	Planned Habitat Acres	Planned Mixture	NWSG Seeding Dates	Date Seeded	Year Seeded	Need Graze Plan (Y or N)
				4/15 – 7/1			
				4/15 – 7/1			
				4/15 – 7/1			
				4/15 – 7/1			
				4/15 – 7/1			

* Prairie, Glade, Savannah, Barren, or Bog