



United States Department of Agriculture
Natural Resources Conservation Service

Conservation Cover

Shrubland for Wildlife

Virginia Conservation Practice VA Job Sheet 327(b)



Definition

Establishing and maintaining an area with 20-30% shrubs within an area of native grasses and forbs to create wildlife habitat.

Purpose

This job sheet is provided as a component of a resource conservation plan. This practice may be applied to land taken out of agricultural production and dedicated to wildlife.

Conditions where practice applies

This practice applies on lands to be converted from agricultural production requiring permanent protective cover. This practice does not apply to plantings for forage production or to critical area plantings. This practice is not to be used as part of a planned rotation or grazing system.

General Criteria and Specifications

Planting

Shrubs shall be planted in clumps of mixed shrubs (5 clumps/acre at 5' x 10' spacing between plants) to promote diversity. The species selected should provide food at different seasons as well as cover throughout the year. A minimum of 4-5 species shall be planted to promote diversity. If planting native grass seed alone, the total seeding rate shall be 4-5 lbs/acre OR 6-8 lbs/acre when planted with both native grasses and forbs. A circular, clumped planting is a good choice where space permits as it provides more interior habitat. Shrub shelters at least 2' tall and mats shall be used at planting.

The species selected shall be chosen from the approved list in Table 1 (*OR from the Virginia Plant Establishment Guide version 2007 when approved*) of this job sheet. If planting a mix, the species selected shall be chosen from Table 2. A minimum of 7 different herbaceous species with at least 2 grasses shall be chosen for a mixed planting.

Seeding

Hand seed, broadcast, hydroseed, or drill seed.

Competition Control before Planting

Conventional seedbed preparation, herbicide application or both may be used to control competition prior to planting.

Several steps are required to get successful undesirable competition control when using herbicide especially on fescue stands. The first step in killing fescue is to mow the area in late summer for a fall herbicide burn down. If possible after mowing and prior to herbicide application, remove the cut vegetation by prescribed burn to provide a better seed bed and allow for better herbicide contact with vegetation.

If needed, a second herbicide application should be planned. This application should occur after the remaining vegetation has re-grown to a 4 – 6 inch height. All herbicide applications shall be made when vegetation is actively growing. Consider using a long lasting herbicide to facilitate rapid establishment of the grasses and forbs cover.

A second herbicide application is required for dense fescue or orchard grass stands and other areas where competition may not be controlled by one herbicide application. Be sure to control all invasive or aggressive species before planting.

Other Considerations

Consider rotating management and maintenance activities throughout the managed areas to maximize spatial and temporal diversity.

Maintenance practices must be adequate to control noxious and invasive species.

Operation and Maintenance

Monitoring and controlling weeds is very critical in the first and second years.

Shrublands require management to keep them from undergoing succession. Periodic disturbances such as prescribed burning, mowing, grazing, herbicide use and selective removal of trees shall occur about every 5 years at a minimum.

Specifications

Site-specific requirements are listed on the specifications sheet. Additional provisions may be contained in the conservation plan or other acceptable form of documentation. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See Conservation Practice Standard *Conservation Cover* (327).

Client:	Farm #:
Field(s):	Tract #:
Planned By:	Location:
Date:	Length of Fence:
Landowner Objectives:	

Field Number	Species Selected (Min. 6 shrubs OR 6 shrubs and 7 herbaceous sp.)	Seeding Date	Management	Date

Site preparation requirements _____

Installation shall be in accordance with the specified drawings, specifications, and special requirements. **No changes are to be made in the drawings or specifications without prior approval from the technical specialist developing the plan.**

Sketch of Layout

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Table 1. Selected list of Shrub cover species

Species	Seeding Rate (% of mix; # seeds/lb) ^a	Max. Height (feet)	Bloom Period	Region ^b	Minimum Light	Flower Color	Berry, Seed or Nectar	Min. Soil Moisture Requirements
Alder (<i>Alnus serrulata</i>)	1-10% mix	26'	March – May	M, P, C	Shade – Full Sun	Yellow	Seeds	High
American Plum (<i>Prunus Americana</i>)	1-10% mix	15'	April – May	M, P, C	Part Sun	White	Fruit	Moderate
Arrow Wood (<i>Viburnum dentatum</i>)	5-10% mix	10'	May – Aug	M, P, C	Full – Part Sun	White-Pink	Berries	Low to Moderate
Black Chokeberry (<i>Aronia melanocarpa</i>)	1-10% mix; 256K/lb	12'	March – June	M, P, C	Full – Part Sun	White	Fruit	Low to High
Buttonbush (<i>Cephalanthus occidentalis</i>)	1-10% mix	6-9'	May – Aug	M, P, C	Full – Part Sun	White	Seeds, Nectar	Moderate to High
Chokecherry (<i>Prunus virginiana</i>)	5-20% mix; 5K/lb	20'	May – June	M	Part Sun	White	Fruit	Moderate
Elderberry (<i>Sambucus Canadensis</i>)	1-5% mix; 290K/lb	12'	June – July	M, P, C	Full sun	White- Yellow	Berries	Moderate to High
Flowering Dogwood (<i>Cornus amomum</i>)	5-20% mix; 12K/lb	10'	May – July	M, P, C	Full – Part Shade	White- Yellow	Fruit	Low to Moderate
Highbush Blueberry (<i>Vaccinium corymbosum</i>)	1-5% mix; 1M/lb	12'	April – July	M, P, C	Shade – Full Sun	White-Pink	Berries	Low to High
Inkberry (<i>Ilex glabra</i>)	5-15% mix	5-8'	May – June	C	Full – Part Shade	--	Berries	Low to Moderate
Northern Bayberry (<i>Morella pensylvanica</i>)	1-10% mix	8'	March – April	C	Full Sun	White	Berries	Low to Moderate
Red Chokeberry (<i>Aronia arbutifolia</i>)	1-10% mix; 256K/lb	3-15'	April – July	M, P, C	Shade – Part Sun	White	Fruit	Moderate to High
Serviceberry (<i>Amelanchier arborea</i>)	1-10% mix	30'	March – May	M, P, C	Full – Part Sun	White	Fruit	Moderate
Silky Dogwood (<i>Cornus amomum</i>)	5-20% mix; 12K/lb	10'	May – July	M, P, C	Full – Part Shade	White	Berries	Moderate to High
Southern Wax Myrtle (<i>Myrica cerifera</i>)	1-10% mix	10'	--	C	Full Sun	--	Berries	Low to Moderate
Spicebush (<i>Lindera benzoin</i>)	5-20% mix; 4K/lb	16'	March – May	M, P, C	Part Sun	Yellow- White	Berries	Moderate
Sweet Pepperbush (<i>Clethra alnifolia</i>)	1-10% mix	8'	July – Sept	C	Shade – Part Sun	White	Nectar	Moderate to High
Winterberry (<i>Ilex verticillata</i>)	1-10% mix; 92K/lb	16'	May – Aug	M, P, C	Full – Part Sun	Green-white	Berries	Moderate to High
Witch Hazel (<i>Hamamelis virginiana</i>)	5-15% mix; 11K/lb	30'	Sept – Nov	M, P, C	Full – Part Shade	Yellow	Nuts	Low to Moderate

Table 2. Selected list of herbaceous cover species

Species	Seeding Rate (% of mix; # seeds/lb) ^a	Max. Height (feet)	Bloom Period	Region ^b	Minimum Light	Flower (seed) Color	Min. Soil Moisture Requirements
Grasses							
Little bluestem (<i>Schizachyrium scoparium</i>)	10-30% mix; 200K/lb	2-3'	July – Oct	M, P, C	Full – Part Sun	Purple	Low
Big bluestem (<i>Andropogon gerardii</i>)	5-10% mix; 144K /lb	5-7'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Low to Moderate
Indiangrass (<i>Sorghastrum nutans</i>)	10-30% mix; 175K/lb	6'	Aug – Oct	M, P, C	Full – Part Sun	Red-yellow	Low to Moderate
Eastern gamagrass (<i>Tripsacum dacyloides</i>)	10-40% mix; 7K/lb	10'	June	M, P, C	Full – Part Sun	Straw	Moderate to High
Broomsedge (<i>Andropogon virginicus</i>)	5-25% mix; 800K/lb	1.5-3'	Aug – Oct	M, P, C	Full – Part Sun	Straw	Low to High
Switchgrass (<i>Panicum virgatum</i>)	10-20% mix; 250K/lb	4-6'	July – Sept	M, P, C	Full – Part Sun	Straw	Low to High
Coastal Panicgrass (<i>Panicum amarum amarulum</i>)	5-25% mix; 325L/lb	3-6'	Sept	C	Full Sun	Straw	Low
Sideoats Grama (<i>Bouteloua curtipendula</i>)	5-25% mix; 159K/lb	2'	July – Sept	M	Full sun	Straw	Low
Wildflowers							
Appalachian Beard Tongue (<i>Penstemon laevigatus</i>)	1-5% mix	4'	May – June	M, P, C	Shade to Full Sun	violet	Moderate
Black-eyed Susan (<i>Rudbeckia hirta</i>)	2-10% mix; 1.5M/lb	1-3'	June – Oct	M, P, C	Full – Part Sun	Yellow	Low to Moderate
Bee Balm (<i>Monarda didyma</i>)	1-5%	2-4'	June – Aug	M	Full Sun	Scarlet	Moderate
Black Cohosh (<i>Cimicifuga racemosa</i>)	1-5% mix	3-8'	June – August	M, P, C	Full – Part Shade		Moderate
Blazing Star (<i>Liatris spicata</i>)	2-10% mix; 100K/lb	1-5'	July – Sept	M	Full – Part Sun	Pink-purple	Moderate
Blue Vervain (<i>Verbena hastate</i>)	2-10% mix; 1.5M/lb	2-5'	June – Oct	M, P	Full – Part Sun	Violet	Moderate to High
Boneset (<i>Eupatorium perfoliatum</i>)	2-10% mix; 2.8M/lb	5'	July – Oct	M, P, C	Full – Part Sun	White	Moderate to High
Butterflyweed (<i>Asclepias tuberosa</i>)	3-15% mix; 70K/lb	1-3'	June – Aug	M, P, C	Full Sun	Orange	Low
Cardinal Flower (<i>Lobelia cardinalis</i>)	1-5% mix; 11.3M/lb	2-6'	July – Oct	M, P, C	Full – Part Sun	Red	High
Eastern Rosemallow (<i>Hibiscus moscheutos</i>)	1-5% mix; 200K/lb	6'	June – Sept	M, P, C	Full Sun	White	High
Fall Phlox (<i>Phlox paniculata</i>)	1-5% mix	1.5-6'	July – Oct	M, P, C	Full – Part Sun	Pink-Purple	Moderate
Great Blue Lobelia (<i>Lobelia siphilitica</i>)	1-2% mix; 7.7M/lb	1-5'	Aug – Sept	M, P, C	Full – Part Shade	Blue	High
Heart-lvd Aster (<i>Aster cordifolius</i>)	2-10% mix; 2M/lb	2-3'	Aug – Sept	M, P, C	Full – Part Sun	Blue-purple	Moderate
Hoary Mountain Mint (<i>Pycnanthemum incanum</i>)	1-2% mix	3'	July to Sept	M, P, C	Shade	White	Low
Heath Aster (<i>Aster pilosus</i>)	2-10% mix; 700K/lb	2-5'	Oct - Nov	M, P, C	Full Sun	Pale Purple	Low
Joe-Pye Weed (<i>Eupatorium fistulosum</i>)	2-10% mix; 1.4M/lb	7'	July – Sept	M, P, C	Full – Part Sun	Pink-Purple	Moderate
Milkweed (<i>Asclepias syriaca</i>)	5-15% mix; 70K/lb	4'	June – Aug	M, P, C	Full Sun	Purple	Low
Mistflower (<i>Eupatorium coelestinum</i>)	1-2% mix; 1.5M/lb	1-3'	July – Oct	M, P, C	Shade – Full Sun	Purple	Moderate

Species	Seeding Rate (% of mix; # seeds/lb) ^a	Max. Height (feet)	Bloom Period	Region ^b	Minimum Light	Flower (seed) Color	Min. Soil Moisture Requirements
Wildflowers							
Monkey Flower (<i>Mimulus ringens</i>)	1-5% mix; 22.9M/lb	2-4'	June – Sept	M, P, C	Full Sun	Purple- White	High
Narrow-ldd Mountain Mint (<i>Pycnanthemum tenuifolium</i>)	1-2% mix	3'	July to Sept	M, P, C	Full – Part Sun	White	Low to Moderate
Narrow-ldd Sunflower (<i>Helianthus angustifolius</i>)	2-10% mix; 500K/lb	1.5-5'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Moderate to High
New England Aster (<i>Aster novae-angliae</i>)	2-10% mix; 1.1M/lb	2-6'	July – Sept	M	Full – Part Sun	Purple	Low to Moderate
New York Ironweed (<i>Vernonia voveboracensis</i>)	1-5% mix; 300K/lb	3-7'	July – Sept	M, P, C	Full – Part Sun	Purple	High
New York Aster (<i>Aster novi-belgii</i>)	1-10% mix; 700K/lb	5'	July – Oct	C	Full – Part Sun	Violet	Moderate
Nodding Bur Marigold (<i>Bidens cernua</i>)	1-15% mix; 130K/lb	3'	July – Oct	M, P, C	Full – Part Sun	Yellow	Low to High
Ox Eye Sunflower (<i>Heliopsis helianthoides</i>)	2-10% mix; 102K/lb	4'	July – Aug	M, P, C	Full – Part Sun	Pale Yellow	Low to Moderate
Rough Goldenrod (<i>Solidago rugosa</i>)	1-5% mix; 1M/lb	1-3.5'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Moderate
Showy Goldenrod (<i>Solidago speciosa</i>)	1-5% mix; 1.3M/lb	4'	Sept – Oct	M, P, C	Full – Part sun	Yellow	Moderate
Showy Tick Trefoil (<i>Desmodium canadense</i>)	2-10% mix; 80K/lb	2-4'	July – Aug	M, P, C	Full Shade	Pink-Violet	Low
Spotted Joe-Pye Weed (<i>Eupatorium Maculatum</i>)	2-10% mix; 1/4M/lb	5'	July – Sept	M	Full Sun	Pink-Purple	High
Smooth Blue Aster (<i>Aster laevis</i>)	1-10% mix; 1M/lb	1-4'	Aug – Oct	M	Full Sun	Blue-Violet	Low
Sneezeweed (<i>Helenium autumnale</i>)	1-5% mix; 1.5M/lb	5'	Aug – Sept	M, P, C	Shade – Full Sun	Yellow	Moderate
Swamp Milkweed (<i>Asclepias incarnate</i>)	5-15% mix; 70K/lb	6'	June – Aug	M, P, C	Full – Part Sun	Pale purple	High
Tall Coreopsis (<i>Coreopsis tripteris</i>)	1-5% mix; 200K/lb	3'	July – Sept	M, P, C	Full – Part Sun	Yellow	Moderate
Ten-petaled Sunflower (<i>Helianthus decapetalus</i>)	1-5% mix	5'	Aug – Oct	M, P, C	Full – Part Sun	Yellow	Moderate
Tickseed (<i>Coreopsis tinctoria</i>)	3-15% mix; 3.2M/lb	3'	July – Sept	M, P, C	Full – Part Sun	Yellow	Low
Virginia Mountainmint (<i>Pycnanthemum virginianum</i>)	1-2% mix; 3.8M/lb	1-3'	July – Sept	M, P, C	Full Sun	White	Low
White Tuttlehead (<i>Chelone glabra</i>)	1% mix; 1,472K/lb	2-7'	July – Sept	M, P, C	Full – Part Shade	White	High
Wild Bergamot (<i>Monarda fistulosa</i>)	1-5% mix; 1.2M/lb	2-4'	June – Aug	M, P, C	Full – Part Sun	Lavender	Low to Moderate
Wild Blue Indigo (<i>Baptisia australis</i>)	1-5% mix	3-5'	May – Aug	M, P	Full – Part Sun	Blue	Low
Wild Blue Lupine (<i>Lupinus perennis</i>)	5-20% mix; 19L/lb	1-3'	May – June	M, P, C	Full – Part Sun	Pink-blue	Low
Wild Columbine (<i>Aquilegia Canadensis</i>)	1-5%; 504K/lb	2'	April – June	M, P, C	Full – Part Shade	Red-yellow	Low to Moderate
Bush Clover (<i>Lespedeza capitata</i>)	1-5% mix; 144K/lb	2-4'	Aug – Sept	M, P, C	Full Sun	Yellow	Low
Partridge Pea (<i>Chamaecrista fasciculata</i>)	2-20% mix; 65K/lb	3'	July – Sept	M, P, C	Full Sun	Yellow	Low to Moderate

^a K – 1,000; M – Million

^b M – Mountain, P – Peidmont, C – Coastal Plain