

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

CONSERVATION COVER

(Ac.)

CODE 327

DEFINITION

Establishing and maintaining permanent vegetative cover

PURPOSE

This practice may be applied to accomplish one or more of the following:

- Reduce soil erosion and sedimentation.
- Improve water quality.
- Improve air quality
- Enhance wildlife habitat and pollinator habitat.
- Improve soil quality
- Manage plant pests

CONDITION WHERE PRACTICE APPLIES

This practice applies on all lands needing permanent vegetative cover. This practice does not apply to plantings for forage production or to critical area plantings.

CRITERA

General Criteria Applicable to All Purposes

Species planted shall be adapted to soil, ecological sites, and climatic conditions.

Species planted shall be suitable for the planned purpose and site conditions.

Seeding rates and methods shall be adequate to accomplish the planned purpose. Certified seed shall be used.

Planting dates, planting methods and care in handling and planting of the seed or planting stock shall ensure that planted materials have an acceptable rate of survival. Vegetative

planting material (e.g. sprigs, rhizomes, bulbs) shall be from a reliable supplier.

Site preparation shall be sufficiently adequate to eliminate weeds for establishment and growth of selected species.

Timing and use of equipment shall be appropriate for the site and soil conditions.

All nutrients shall be applied following the nutrient management requirements in the Field Office Technical Guide (FOTG). ***Refer to (590) Nutrient Management or other appropriate standards.***

Additional Criteria to Reduce Soil Erosion and Sedimentation

The amount of plant biomass and cover needed to reduce erosion to the planned soil loss objective shall be determined using the current approved wind and/or water erosion prediction technology.

Additional Criteria for Improving Air Quality

In perennial crop systems such as orchards, vineyards, berries and nursery stock, vegetation established shall provide full ground coverage in the alleyway during mowing and harvest operations.

To sequester carbon, plant cover established will result in a positive CO₂ equivalent value when determined by the current approved carbon prediction technology.

Additional Criteria for Enhancing Wildlife Habitat and Pollinator Habitat

Grasses, forbs, **trees**, shrubs and/or legumes shall be planted in a diverse mix to promote

bio-diversity and meet the needs of the targeted species of wildlife. **Species planted may consist of forbs, graminoids, trees or shrubs or any combinations.**

Where possible, vegetative species utilized under this standard shall be native.

For terrestrial wildlife, refer to those wildlife species listed in the West Virginia Wildlife Habitat Evaluation Technique (WVWHET).

For management of pollinator habitat and to create enhancements for pollinating insects, refer to the list of species and pollinator mixes found in the West Virginia Pollinator Handbook. Additionally, the list of trees and shrubs suitable for establishment in West Virginia (MOATSL) may provide suitable species for use in pollinator enhancements.

Herbaceous pollinator enhancements utilized under this standard shall be a minimum of one-half acre in size. Larger enhancements and blocks of cover (greater than 2 acres) provide exponentially more benefit to pollinators than smaller areas.

A minimum of ten (10) herbaceous species shall be established in pollinator enhancements with at least three species occurring in three consecutive bloom periods as follows:

Season	Bloom Time
Very Early	March (or earlier) to April
Early	March through May
Mid	May through July
Late	July through Sept (or later)

If planting only herbaceous plants (forbs and grasses) very early and early may constitute one blooming period.

Establishment of woody plantings for pollinators shall consist of a minimum of nine species (3 in each of the very early, early and mid season). Plantings should be a minimum of one-half acre in size and be of sufficient density to ensure that pollinator resources are provided in adequate quantities.

Establishment of woody and herbaceous plantings may require planting in multiple years and phases.

Site preparation, seeding rates, establishment methods and management shall follow the guidance outlined in the West Virginia Pollinator Handbook, Forage and Biomass Planting (512), Critical Area Planting (342), (490) Tree/Shrub Site Preparation (612 Tree/Shrub Establishment or other appropriate conservation practice or guidance.

If pollinator habitat is the primary purpose, the use of pesticide shall be prohibited unless it is required for establishment or to control noxious weeds or invasive organisms; at which the use of pesticides shall be limited to most restrictive application methods and rates.

If a native cover establishes (other than what was planted and is not noxious and/or invasive) and this cover meets the intended purpose and the landowner's objectives and intended bloom periods are satisfied, the cover should be considered adequate

Additional Criteria to Improve Soil Quality

Plants will be selected based on producing high volumes of organic material to maintain or improve soil organic matter. The amount of biomass needed will be determined using the current soil condition index procedure.

Contact the State Agronomist, NRCS Forester or other state staff specialist to determine which species are suitable.

Additional Criteria to Manage Plant Pests

In perennial crop systems such as orchards, vineyards, berries and nursery stock, permanent vegetative cover shall be established and managed according to Land Grant University Integrated Pest Management (IPM) recommendations for the target pest species.

CONSIDERATIONS

It is preferable to install this practice in blocks for pollinators as opposed to narrow

strips of cover. Linear shaped enhancements should utilize other practices such as Hedgerow Planting (422), Windbreak (380), Riparian Herbaceous Cover (390) or Riparian Forest Buffer (391).

Consider using this practice alone or in combination with other practices to create a minimum pollinator enhancement of at least one-half acre.

Consider the commercial availability of seed and species selected.

Consider the effect on non-target wildlife species.

Consider utilizing Plant Materials Centers for help in determining suitable plant species.

Consider the affect of deer browse and mortality of planted species with respect to associated costs. Exclusion methods should be considered where feasible.

Consider shade tolerance and placement of plants when establishing woody and herbaceous cover in the same area.

Consider multiple phases of plantings in larger more complex areas to allow for plant establishment prior to initiating other plantings in the same area.

Certified seed and planting stock that is adapted to the site should be used when it is available.

Inoculating legume seed with the proper Rhizobium bacteria should be considered on sites where the legumes to be planted have not been previously grown.

Mowing may be needed during the establishment period to reduce competition from broadleaf annual weeds.

On sites where annual grasses are an expected weed problem it may be necessary to postpone nitrogen fertilizer application until the planted species are well established.

Where applicable this practice may be used to conserve and stabilize archeological and historic sites.

Use native species that are appropriate for the identified resource concern and management objective. Consider trying to re-establish the native plant community for the site.

If a native cover (other than what was planted) establishes, and this cover meets the intended purpose and the landowner's objectives, the cover should be considered adequate.

Wildlife Considerations

This practice may be used to promote the conservation of wildlife species in general, including threatened and endangered species.

Where wildlife management is an objective, the food and cover value of the planting can be enhanced by using a habitat evaluation procedure to aid in selecting plant species and providing or managing for other habitat requirements necessary to achieve the objective. Refer to the West Virginia Pollinator Handbook for a habitat evaluation for pollinators and the West Virginia Wildlife Habitat Evaluation technique (WVWHET).

Where pollinator and wildlife habitat are primary purposes consider less dense seeding rates as long as soil loss is within tolerable limits.

PLANS AND SPECIFICATIONS

Specifications for this practice shall be prepared for each site. ***Specifications shall be recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.*** They shall include, but are not limited to:

- purpose
- species
- seeding rates and dates
- ***site preparation***
- establishment ***methods*** and procedures

- other management actions needed to ensure an adequate stand
- ***type of plant material (seedling, plug, containerized, etc)***
- ***CPA-52 or similar acceptable environmental evaluation***

OPERATION AND MAINTENANCE

Mowing and harvest operations in perennial crop systems such as orchards, vineyards, berries and nursery stock shall be done in a manner which minimizes the generation of particulate matter.

If wildlife habitat enhancement is a purpose, maintenance practices and activities shall not disturb cover during the reproductive period for the desired species. Exceptions should be considered for periodic burning or mowing when necessary to maintain the health of the plant community.

Maintenance measures must be adequate to control noxious weeds and other invasive species.

To benefit insect food sources for grassland nesting birds, spraying or other control of noxious weeds shall be done on a "spot" basis to protect forbs and legumes that benefit native pollinators and other wildlife.

If wildlife (including pollinators) is a primary purpose and where feasible and appropriate, management and maintenance activities should be rotated (e.g. mow only one-fourth or one-third of the area each

year) throughout the managed area to maximize spatial and temporal diversity. Also apply any measures required to achieve appropriate stand density. For woody plantings, follow the operation and maintenance identified in (612) Tree and Shrub Establishment.

For warm season grasses or mixes which include warm season species:

Control competition and prevent weed seed formation by clipping, or the application of post-emergent herbicide to control competition during the establishment period.

Do not apply nitrogen during the planting year. This encourages cool season grass and weed competition. Lime may be applied at recommended levels.

REFERENCES

Renard, K.G., G.R. Foster, G.A. Weesies, D.K. McCool and D.C. Yoder. 1997. Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE), Agricultural Handbook Number 703.

Revised Universal Soil Loss Equation Version 2 (RUSLE2) website (checked September 2010):
http://fargo.nserl.purdue.edu/rusle2_dataweb/

**** Bold italics is information added to the national standard by West Virginia.***