



Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

CONSERVATION COVER

CODE 327

(ac)

DEFINITION

Establishing and maintaining permanent vegetative cover.

PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Reduce sheet, rill, and wind erosion.
- Reduce sediment transport to surface water.
- Reduce ground and surface water quality degradation by nutrients.
- Reduce emissions of particulate matter.
- Provide wildlife, pollinator, and other beneficial organism habitat.
- Improve soil health by maintaining or increasing soil organic matter quantity.
- Improve soil health by increasing soil aggregate stability.
- Improve soil health by enhancing habitat for soil organisms.
- Improve soil health by reducing compaction.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on most lands needing permanent vegetative cover. This practice may be used to conserve and stabilize archeological and historic sites. This practice does not apply to plantings for forage production or to critical area plantings that require special measures to ensure successful establishment. If the soil and water resource concerns meet minimum planning criteria and the only purpose of the planting is to provide wildlife habitat, Wildlife Habitat Planting (CPS 420) may be implemented.

CRITERIA

General Criteria Applicable to All Purposes

Select species that are adapted to the soil, ecological sites, and climatic conditions and are suitable for the planned purpose and site conditions.

Ensure that planting dates, seeding rates, planting methods, and care in handling and planting seed or planting stock are used to accomplish the planned purpose.

If the specific Rhizobium bacteria for selected legumes are not present in the soil, treat the seed with the appropriate available inoculum. Inoculate legumes at time of planting based on conservation objectives and site history. See USDA NRCS Plant Materials Technical Note No. 5 (Title 190), Using the Appropriate Legume Inoculant for Conservation Plantings.

Prepare the site by eliminating weeds that will impede the establishment and growth of selected species.

Apply nutrients and amendments as needed to ensure vegetation establishment and planned growth. Nutrients and amendments are not always needed for native plant establishment.

The established stand will produce a positive soil conditioning index (SCI) value. Use the SCI results available in the current NRCS erosion prediction technology.

For organic and transitioning-to-organic operations, all seeds, planting stock, materials, and methods used in the implementation of this practice standard must comply with the National Organic Program (NOP) Rules. See the USDA Organic Regulations and the NRCS resource page Conservation for Organic Farmers.

Additional Criteria to Reduce Sheet, Rill and Wind Erosion

Determine and maintain the amount of plant biomass and cover needed to reduce wind and water erosion to the planned soil loss objective by using the current NRCS erosion prediction technology. Soil erosion must not exceed the tolerable soil loss value for the critical dominant soil in the planning area.

Additional Criteria to Reduce Emissions of Particulate Matter

Establish plants that can tolerate the impacts of routine operations (e.g., orchard and vineyard alleys during mowing, spraying, or harvest operations) and provide sufficient ground cover in the planted area to minimize the generation of particulate matter.

Additional Criteria to Provide Wildlife, Pollinator, and Beneficial Organism Habitat

Plant a diverse mixture of tree, shrub, grass, and forb species to meet the habitat needs of the targeted species using approved habitat evaluation tools for the respective state.

Reduce pesticide exposures that could harm wildlife, pollinators, and other beneficial organisms.

Additional Criteria to Improve Soil Health

To maintain or improve soil organic matter, select plants that produce high volumes of organic material. Determine the amount of biomass needed by using the current soil conditioning index procedure.

CONSIDERATIONS

General Considerations

Use certified seed and planting stock that is adapted to the site when it is available.

When restoring or repairing sites, consider use of inoculant for native species when available.

When using Conservation Cover as a prairie strip, design a minimum width of 30 feet.

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

To mitigate for greenhouse gas emissions, select species that will store carbon in the soil via extensive root systems or in woody biomass.

Location of this practice in orchard/vineyard alleys can significantly reduce the particulate matter emissions associated with tractor traffic in the alleys when compared to bare alleys.

If nitrogen fertilizer is used on sites where nitrogen-responsive weeds are present, delay N application until the planted species are well established to avoid expected weed problems. If the site has poor or low-fertility soil, consider using slow-release nutrient sources in lieu of soluble fertilizer to improve the site without stimulating weeds.

To maximize spatial and temporal diversity, rotate management and maintenance activities (e.g., mow only one-fourth or one-third of the area each year) throughout the managed area.

Where wildlife management is an objective, encourage plant species and structural diversity to maximize wildlife use. Habitat evaluation tools can aid in selecting plants for food and cover.

As long as soil loss is within tolerable soil loss limits, use less dense seeding rates where ground-nesting pollinator and wildlife habitat are the primary purposes.

To provide habitat for natural enemies of crop pests, select a mix of plant species that provide year-round habitat or food (accessible pollen or nectar) for the desired beneficial species. Use a diverse mix of plant species that come into bloom at different times and provide a sequence of bloom throughout the year (e.g., plant at least three flowering species from each of the three bloom periods—spring, summer, and fall). Use habitat requirements of predatory and parasitic insects, spiders, insectivorous birds and bats, raptors, and predators of terrestrial rodents. Consult land grant university integrated pest management recommendations for beneficial habitat plantings to manage the target pest species. See USDA NRCS Agronomy Technical Note No. 9 (Title 190), Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators using IPM and Other Conservation Practices.

Use native species that are appropriate for the identified resource concern and management objectives with the aim of reestablishing the native plant community for the site. It should be considered adequate if a native cover other than what was planted establishes and addresses the resource concern and landowner objectives .

During vegetation establishment, natural mulches, such as wood products or hay, can be used to conserve soil moisture, support beneficial soil life, and suppress competing vegetation.

Including a diverse mix of species enhances the above- and below ground ecosystem biodiversity.

Additional Considerations to Improve Soil Health

The effects of this practice are enhanced when it is integrated into a soil health management system. Refer to NRCS Soil Health Technical Note No. 4 (Title 450), “The Basics of Addressing Resource Concerns with Conservation Practices within Soil Health Management Systems on Cropland” for more information.

PLANS AND SPECIFICATIONS

Develop plans and specifications for each field or treatment unit according to the criteria and operation and maintenance requirements of this standard. Specifications must describe the requirements to apply this practice to achieve the intended purpose. Record the following specification components in an approved NRCS Conservation Practice Standard Conservation Cover (Code 327) implementation requirements document:

- All applicable purposes for the installation of this practice.
- Field numbers and installation locations referenced on the conservation plan map.
- Recommended plant species.
- Seeding rates and dates.
- Seedbed preparation procedures.
- Establishment methods.
- Management actions needed to ensure an adequate establishment.
- Soil loss estimates and SCI results, if applicable.

When applying this practice to perennial systems, such as orchards and vineyards, the establishment and management requirements apply only to the areas planted with this practice (e.g., the grassed alleyways are seeded and managed under this practice, but the vine row or tree row is managed separately).

OPERATION AND MAINTENANCE

Prepare an operation and maintenance plan for this practice. Planned activities may include, but are not limited to, the following:

- Protect the cover from irreversible damage by traffic, implements, and herbicides.
- Periodic removal of some products (such as high value trees, medicinal herbs, nuts, and fruits) is permitted provided the conservation purpose is not compromised by the loss of vegetation or harvesting disturbance.
- Mowing and harvest operations in a perennial crop system (such as orchards, vineyards, berries, and nursery stock), will be accomplished in a manner that minimizes the generation of particulate matter.
- Mowing may be needed during the establishment period to reduce competition from weeds.
- Control noxious weeds and invasive species.
- If wildlife habitat enhancement is a purpose, maintenance practices and activities will occur during periods of the day or season to minimize negative impacts of disturbance.
- If wildlife habitat is a purpose, include the procedures necessary to conserve the cover's wildlife habitat functions.
- To support insects eaten by grassland nesting birds, spot treat noxious weeds to protect other forbs and legumes that benefit native pollinators and other wildlife.
- Revegetate bare spots when they occur.

REFERENCES

USDA AMS. Organic Regulations. Washington, D.C. Accessed July 22, 2022.

<https://www.ams.usda.gov/rules-regulations/organic>

USDA ARS. 1997. Agricultural Handbook Number 703. Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE). Washington, D.C. Accessed July 22, 2022. https://www.ars.usda.gov/ARSUserFiles/64080530/RUSLE/AH_703.pdf

USDA NRCS. Conservation for Organic Farmers. Accessed July 22, 2022.

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/organic/>

USDA NRCS. "Water Erosion (RUSLE2)." Accessed December 16, 2020. [Water Erosion \(RUSLE2\) | Natural Resources Conservation Service \(usda.gov\)](#)

USDA NRCS. "Wind Erosion (WEPS)." Accessed December 16, 2020.

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/tools/weeps/>

USDA NRCS. 2014. Agronomy Technical Note No. 9 (Title 190), Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators using IPM and Other Conservation Practices. Washington, D.C. Accessed July 22, 2022.

[595 KY GD Agronomy Tech Note 9 Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators 2014 \(usda.gov\)](#)

USDA NRCS. 2019. Soil Health Technical Note No. 4 (Title 450). The Basics of Addressing Resource Concerns with Conservation Practices within Soil Health Management Systems on Cropland. Washington, D.C.

USDA NRCS. 2020. Plant Materials Technical Note No. 5 (Title 190), Using the Appropriate Legume Inoculant for Conservation Plantings. USDA, NRCS, Plant Materials Program. Washington, D.C. Accessed February 28, 2024. [National Plant Materials Technical Note 5: Using the Appropriate Legume Inoculant for Conservation Plantings \(usda.gov\)](#)

