

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

CRITICAL AREA PLANTING

(Ac.)

CODE 342

DEFINITION

Establishing permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.

PURPOSE

- Stabilize areas with existing or expected high rates of soil erosion by water.
- Stabilize areas with existing or expected high rates of soil erosion by wind.
- Rehabilitate and revegetate degraded sites that cannot be stabilized through normal farming practices.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to highly disturbed areas such as active or abandoned mined lands, urban conservation sites, road construction areas, conservation practice construction sites, areas needing stabilization before or after natural disasters such as floods, hurricanes, tornados and wildfires and other areas degraded by human activities or natural events.

CRITERIA

General Criteria Applicable To All Purposes

A site investigation will be conducted to identify any physical, chemical or biological conditions that could affect the successful establishment of vegetation.

Species selected for seeding or planting will be suited to current site conditions and intended uses.

No plants considered noxious weeds by the Kentucky Department of Agriculture will be planted.

Selected species will have the capacity to achieve adequate density and vigor within an appropriate period to stabilize the site sufficiently to permit suited uses with ordinary management activities.

Plant species, seedbed preparation, seeding rates, seeding dates, seeding depths, fertility requirements, and planting methods will be consistent with appropriate sections and tables in the "Establishing Vegetative Practices in Kentucky" document located in Section IV of the FOTG. Only viable, high quality seed or planting stock will be used.

Seeding or planting will be done at a time and in a manner that best ensures establishment and growth of the selected species and is consistent with appropriate sections and tables in the "Establishing Vegetative Practices in Kentucky" document.

Planting dates will be scheduled during approved dates for the species and to optimize soil moisture for germination and/or establishment. What constitutes successful establishment, e.g. minimum percent ground/canopy cover, percent survival, stand density, etc. will be specified before application.

Apply soil amendments (e.g. lime, fertilizer, compost) at rates necessary to insure stand establishment. All nutrients shall be applied according to the *Soil Fertility* section in the

“Establishing Vegetative Practices in Kentucky” document.

Plantings will be protected from pests (e.g. weeds, insects, diseases, livestock, wildlife) as necessary to ensure stand establishment..

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

All critical area plantings will require the additional, Mulch companion practice (practice standard (484) unless seeding is performed during the dormant seeding period into live vegetation or vegetation that has recently been killed and provides adequate residue cover for establishment.

Livestock and vehicular traffic shall be excluded at least until the vegetation is well established

Additional Criteria to Restore Degraded Sites

If gullies or deep rills are present, they will be treated, if feasible, to allow equipment operation and ensure proper site and seedbed preparation.

Based on a soil test, soil amendments will be added as necessary to ameliorate or eliminate physical or chemical conditions that inhibit plant establishment and growth. Required amendments, such as compost or manure to add organic matter and improve soil structure and water holding capacity; agricultural limestone to increase the pH of acid soils; or elemental sulfur to lower the pH of calcareous soils will be included in the site specification with amounts, timing, and method of application.

CONSIDERATIONS

Species or mixes that are adapted to the site and have multiple values should be considered. Native species should be considered when appropriate to site treatment.

Avoid species that may harbor pests. Species diversity should be considered to avoid loss of function due to species-specific pests.

Planning and installation of other conservation practices such as Diversions, Land Smoothing, Obstruction Removal, Surface and Subsurface Drains or Underground Outlets may be necessary to prepare a critical area for planting.

For mine spoils, follow the University of Kentucky’s AGR-40 Lime and Nutrient Recommendations for Reclamation of Surface-Mined document.

PLANS AND SPECIFICATIONS

Prepare plans and specifications for each field or management unit according to the criteria and operation and maintenance sections of this standard. Specifications will describe the requirements for applying this practice to meet the intended purpose.

Record practice specifications using approved specification sheets, job sheets or other acceptable documentation.

The following elements will be addressed in the plan, as applicable, to meet the intended purpose.

- Site Preparation
- Topsoil
- Fertilizer Application
- Selection of Species
- Seedbed/Planting Bed Preparation
- Methods of Seeding/Planting
- Time of Seeding/Planting
- Rates of Seeding
- Mulching
- Sod Establishment
- Supplemental Water for Plant Establishment
- Protection of Plantings
- Mine Spoils

OPERATION AND MAINTENANCE

Use of the area will be managed as long as necessary to stabilize the site and achieve the intended purpose. Livestock and vehicular traffic may need to be excluded not just during the establishment period but also for the life of the practice if these activities destabilize the planted vegetation.

Control or exclude pests that will interfere with the timely establishment of vegetation.

Inspections, reseeding or replanting, fertilization, and pest control may be needed to insure that this practice functions as intended throughout its expected life. Observation of establishment progress and success should be performed at regular intervals until the practice has met the criteria for successful establishment and implementation.

Where establishment of vegetation creates potential habitat for grass-nesting birds, the

impacts of vegetative disturbance upon these birds and their nests should be considered and included in operation and maintenance plans. Maintenance activities that result in disturbance of vegetation will not be conducted during the primary nesting season for grass-nesting birds where occupied habitat for these species exists.

REFERENCES

USDA, NRCS. 2006. The PLANTS Database (<http://plants.usda.gov>, 19 October 2006). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Establishing Vegetative Practices in Kentucky (A complimentary document to KY FOTG 327, 340, 342, 386, 412, 643 & 645 practice standards). August 2008. Section IV of the KY FOTG