

NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD

**CRITICAL AREA PLANTING**

(Acre)  
Code 342



Examples of applicable areas are coastal areas, dams, dikes, ditches, channels, mine spoil, levees, cuts, fills, surface-mined areas, and denuded or gullied areas where vegetation is difficult to establish by conventional planting methods.

**CRITERIA**

**General Criteria Applicable To All Purposes**

Species selected for seeding or planting need to be suited to current site conditions and intended uses. Additionally, the species selected need to be able to achieve adequate density and vigor within an appropriate time frame to stabilize the site to the point where it can be used in an appropriate manner and normal management practices are applied.

Prior to planting desired species, rates of seeding or planting, minimum quality of planting stock, such as Pure Live Seed (PLS) or stem caliper, and method of establishment need to be specified. Use only viable, high quality seed or planting stock.

Planting date(s) and method(s) that maximize the probability of plant survival and growth need to be used. All plans need to include specifications of what constitutes successful establishment, e.g., minimum percent ground/canopy cover, percent survival, stand density, etc.

To accelerate establishment, fertilization, mulching, or other facilitating practices for plant growth need to be appropriately timed and applied. Mitigation practices to reduce risk of nutrient losses need to be installed if the recommended fertilizer rate exceeds the criteria in Florida NRCS Conservation Practice Standard Nutrient Management, Code 590.

**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.
- Restore degraded sites that cannot be stabilized through normal methods.

**CONDITIONS WHERE PRACTICE APPLIES**

On areas with existing or expected high rates of erosion or degraded sites that usually cannot be stabilized by ordinary conservation treatment and/or management, and if left untreated, could be severely damaged by erosion or sedimentation can cause significant off-site damage.

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact your Natural Resources Conservation Service [State Office](#) or visit the [electronic Field Office Technical Guide](#).

Impact to cultural resources, wetlands, and Federal and State protected species need to be avoided or minimized to the extent practical during planning, design, and implementation of this conservation practice in accordance with established National and Florida NRCS policy; General Manual (GM) Title 420-Part 401, Title 450-Part 401, and Title 190-Parts 410.22 and 410.26; National Planning Procedures Handbook (NPPH) FL Supplements to Parts 600.1 and 600.6; National Cultural Resources Procedures Handbook (NCRPH); and The National Environmental Compliance Handbook (NECH).

### **Additional Criteria to Restore Degraded Inland Sites**

#### **Site preparation**

To ensure proper equipment operation and ensure proper site and seedbed preparation, gullies or deep rills need to be treated prior to site preparation if feasible. Minor land shaping and grading along with loose rock and scattered brush and/or tree removal can be performed as deemed necessary. If major land shaping is required, it needs to be done in accordance with practice standards Florida NRCS Conservation Practice Standard Land Smoothing, Code 466, or Obstruction Removal, Code 500. Vertical banks need to be sloped to enable plant establishment. Salvage top soil, if present, during the shaping and grading operation and uniformly distribute back over the area prior to final seedbed preparation.

#### **Soil Amendments**

Add soil amendments as needed to ameliorate or eliminate physical or chemical conditions that inhibit plant establishment and growth. The 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 need to be detailed in the site specification with amounts, timing, and method of application.

If practical, a current soil test (< 3 yr old) processed by the IFAS Extension Soil Testing Laboratory (ESTL) or equivalent laboratory

should be used to determine the need for liming materials and plant nutrients. When a current soil test is not available, follow minimal fertilization recommendations outlined in Florida NRCS Critical Area Planting Guidance. Plant nutrients can be supplied from animal or poultry manure, agricultural by-products, or commercial fertilizer. Animal and poultry manure and other agricultural by-products (see <http://edis.ifas.ufl.edu/SS315>) can be sources of nutrients, but the material should be analyzed for nutrient content prior to use. When a laboratory analysis is not available, use the book values from the Florida NRCS Agricultural Waste Management Field Handbook, Chapter 4 – Agricultural Waste Characteristics, for estimated available nutrient content.

#### **Plant selection**

Only perennial plant species can be used. Plantings can consist of pure stands of perennial grasses, legumes, trees, shrubs, vines or mixtures of these classes of vegetations. Although Florida NRCS Conservation Practice Standard Critical Area Planting, Code 342, is not completed until perennial vegetation is established, a short term temporary cover (nurse crop) may be necessary. Suggested nurse crops suitable for the different areas of the state can be found in the Florida NRCS Critical Area Planting Guidance

Perennial warm season herbaceous species approved for use on critical areas are listed in Florida NRCS Critical Area Planting Guidance.

**At this time, there are no cool season perennial grasses recommended for Florida.** Recommended trees, shrubs and vines can be found on the Florida NRCS Plant List for Conservation Alternatives [FOTG Sect. II (g) (1)].

Consult Florida NRCS Conservation Practice Standards Pasture and Hayland Planting, Code 512, and Upland Wildlife Habitat Management, Code 645, as well as Florida NRCS Critical Area Planting Guidance for additional information regarding species, planting methods, and dates.

#### **CONSIDERATIONS**

When practical, use native species or mixes that are adapted to the site and have multiple

values. Select plant that will provide food and cover where wildlife is a prime concern. See "Management for wildlife: a supplement to wildlife standard and specifications for Florida" (NRCS, 1979) for recommended plants for wildlife.

Activities need to be scheduled to avoid critical periods (e.g., mating, nesting, denning, rearing of young, etc.) when sensitive or protected species are present.

Vegetative cover on critical areas will reduce sediments and sediment related pollutants in surface water and nutrients leaching into groundwater. Operations necessary to prepare site for vegetation establishment (i.e., grading, shaping, seedbed preparation) may result in large quantities of sediments and associated chemicals being washed into surface waters prior to vegetation establishment.

### PLANS AND SPECIFICATIONS

Specifications for applying this practice need to be prepared for each site and recorded and filed using the approved specification sheets or narrative statements in the conservation plan. A plan includes information about the location, construction sequence, vegetation, establishment, and management and maintenance requirements.

Minimally, specifications need to include:

- a) site preparation specifics including type and amount of soil amendments;
- b) species selection and seeding or planting rates;
- c) planting dates, care and handling of seed and/or planting material; and
- d) a statement that says only viable, high quality, and regionally adapted seed or planting material will be used.

### OPERATION AND MAINTENANCE

Manage the area as long as necessary to stabilize the site and achieve the intended purpose.

Control or exclude pests that will interfere with the timely establishment of vegetation. Mowing may be necessary to control the competition of weeds and/or nurse crop during the establishment period of the perennial plants. If herbicides are needed, refer to Florida NRCS Conservation Practice Standard Pest Management, Code 595; follow current Univ. Florida, IFAS recommendations (<http://edis.ifas.ufl.edu/WG006>); and adhere to label instructions.

Inspections, reseeding or replanting, fertilization, and pest control may be needed to ensure that this practice functions as intended throughout its expected life.

Maintenance should include a regular lime and fertilization program based on soil test recommendations. In the absence of soil tests, follow general lime and fertilization recommendations listed for establishment.

Sites seeded to suitable species may be grazed after established. At a minimum do not allow grazing until 18 months after planting and do not graze bermudagrass or bahiagrass stands less than 6 inches and switchgrass less than 12 inches.

### REFERENCES

NRCS, Florida Agronomy Field Handbook.

NRCS. 1979. Management for wildlife: a supplement to wildlife standard and specifications for Florida. Gainesville, FL. 89 pp.