

NATURAL RESOURCES CONSERVATION SERVICE  
MONTANA CONSERVATION PRACTICE STANDARD

## CRITICAL AREA PLANTING (ACRE)

### 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.
- Stabilize coastal areas, such as sand dunes and riparian areas.

#### 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 shall be conducted to identify any physical, chemical or biological conditions that could affect the successful establishment of vegetation.

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

No plants on the state noxious weeds list shall 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.

Species, rates of seeding or planting, minimum quality of planting stock, such as pure live seed (PLS) or stem caliper, method of seedbed preparation, and method of establishment shall be specified before application. Only viable, high quality seed or planting stock will be used.

**Seeding rates will be in accordance with the [Montana Technical Note Plant Materials MT-46, Seeding Rates and Recommended Cultivars dated April 2007](#). Seedbed preparation, timing, and planting techniques shall follow the [Montana Plant Materials Technical Note MT-58, Seedbed Preparation and Seeding dated April 2007](#).**

Seeding or planting shall be done at a time and in a manner that best ensures establishment and growth of the selected species. What constitutes successful establishment, e.g., minimum percent ground/canopy cover, percent survival, stand density, etc. shall be specified before application.

Planting dates shall be scheduled during approved dates for the species and to optimize soil moisture for germination and/or establishment.

Apply soil amendments (e.g., lime, fertilizer, compost) at rates necessary to insure stand establishment **and will follow the Montana State**

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**Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard contact the Natural Resources Conservation Service.**

**NOTE:** This type of font (**AaBbCcDdEe 123..**) indicates NRCS National Standards.  
This type of font (**AaBbCcDdEe 123..**) indicates Montana Supplement.

**University Extension Service Publication #EB 161,  
Fertilizer Guidelines for Montana.**

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

All soil amendment application and pest control shall follow the requirements in the Field Office Technical Guide (FOTG).

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

**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 shall be included in the site specification with amounts, timing, and method of application.

**Additional Criteria to Restore Sand Dunes and Coastal Sites**

Plants for sand dunes and coastal sites must be able to survive being buried by blowing sand, sand blasting, salt spray, salt water flooding, drought, heat, and low nutrient supply.

Local plant lists including appropriate species shall be developed and utilized.

Sand trapping devices such as sand fences or brush matting shall be included in the revegetation/ stabilization plans where applicable.

**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.

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

Plans should be in compliance with the Migratory Bird Treaty Act.

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.

If mulching is needed, follow the **Field Office Technical Guide (FOTG), Section IV, Practice Mulching (Code 484)** standard.

When planning nutrient and tillage applications, encourage soil carbon buildup while discouraging greenhouse gas emissions.

**Consider the effects of erosion and sediment movement and soluble and adsorbed substances carried by runoff.**

**Consider short-term and construction-related effects on downstream watercourse.**

**Consider selecting species that benefit wildlife and their habitat needs.**

**Use of the critical area planting should be avoided during periods of establishment and use thereafter should be limited and based on physiological condition of the vegetation.**

**The site may require permanent protection from domestic livestock and wildlife if the site is susceptible to degradation.**

**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 shall 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 shall be addressed in the plan, as applicable, to meet the intended purpose.

- Site Preparation
  - Topsoil
  - Fertilizer Application
  - Seedbed/Planting Bed Preparation
  - Methods of Seeding/Planting
  - Time of Seeding/Planting
  - Selection of Species
  - Seed/Plant Source
  - Seed Analysis
  - Rates of Seeding
  - Mulching
  - Planting Trees, Shrubs and Vines
  - Supplemental Water for Plant Establishment
  - Protection of Plantings
1. **Aerial photograph or map and a soil map of the site.**
  2. **Results of soil sample analyses (if sample was taken and analysis completed).**
  3. **Recommended nutrient rates, timing, form, and method of application and incorporation, if applicable.**
  4. **Critical Area Planting (Code 342) specification and job sheet is required.**

## OPERATION AND MAINTENANCE

Use of the area shall be managed 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.

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.

**Replant when climatic conditions—including drought, fire, insects, or other events—prevent adequate stand establishment.**

**Repair appurtenances and fences as appropriate.**

## REFERENCES

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

Montana State University Extension Service, Publication #EB 161

USDA, NRCS, **Plant Materials Technical Note MT-46, Seeding Rates and Recommended Cultivars, April 2007**

USDA, NRCS, **Plant Materials Technical Note MT-58, Seedbed Preparation and Seeding, April 2007**