

**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.
- 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 or could cause significant off-site damage.

**CRITERIA**

**General Criteria Applicable To All Purposes**

Species selected for seeding or planting shall be suited to current site conditions and intended uses. Selected species will have the capacity to achieve adequate density and vigor within an appropriate time frame 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 PLS or stem caliper, and method of establishment shall be specified before application. Only viable, high quality seed or planting stock will be used.

Plant species and their cultivars shall be selected based on:

- Climate conditions, such as annual rainfall, seasonal rainfall patterns, growing season length, temperature extremes.
- Species selected for use shall be in conformance with the respective Major Land Resource Area (MLRA) Vegetative Guide in Section II of the Field Office Technical Guide.
- Soil condition and position attributes such as soil texture, pH, available water holding capacity, slope, aspect, soil depth, restrictive pans, fertility, salinity and alkalinity, drainage class, flooding and ponding, and severe levels of toxic elements.
- Plant resistance to disease and insects common to the site or location.
- Plant compatibility with irrigation when applied.

All seed and planting materials shall be labeled and meet state seed quality law standards and use of certified seed, if available, will be encouraged.

Based on seed tags, adjust seeding rates to insure the required amount of pure live seed (PLS) is applied to site.

Fertilization, mulching, or other facilitating practices for plant growth shall be timed and

applied to accelerate establishment of selected species.

### **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.

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.

### **CONSIDERATIONS**

Critical area planting sites are generally severely eroded or disturbed and have low fertility and few, if any, resident seeds. High seeding and fertilizer rates are needed to insure adequate vegetative cover.

Sites reshaped with heavy equipment may have a smooth hard surface and soil compaction making it difficult to prepare a good seedbed. Disking, ripping or other treatment may be necessary to prepare the site for seeding.

The horizontal indentations left by tracked equipment may provide a suitable planting site on steep slopes.

Straw is the preferred mulch but needs to be anchored in place with equipment such as rollers and crimpers. Tackifiers, woven netting, and other covers can be used to anchor mulch when slopes are too steep to use equipment on the site. Wheat straw deteriorates less rapidly and results in less volunteer growth compared to barley straw. Use clean straw to minimize spread of noxious weeds. Woven, fabric, and artificial mulches can also be used.

Many soils in critical area planting sites are low in most plant nutrients and should be tested for

fertilizer recommendations. Consider initial and follow up applications of fertilizer to ensure stand establishment.

When soils are coarse sandy, gravelly or granitic, or when water quality will be adversely affected reduce fertilizer rates.

Consider using hydro planting and mulching on steep, inaccessible sites not suitable for straw mulch planting. Do not use when high winds or animal or foot traffic are expected to interfere. Consider the effective range of straw blowing equipment and hydro seeders when use is planned.

A split hydromulch, hydroplanting operation is recommended on sites suitable to hydromulch planting. Seed and fertilizer should be applied first to provide better seed to soil contact and then the mulch is hydromulched over the site.

When plantings are to be irrigated, use non-erosive methods to maintain adequate moisture in at least the upper six (6) inches of soil during the first four (4) weeks and then in the upper 12 inches until the end of the growing season. Seedlings may be susceptible to excessive irrigation during establishment.

Consider exclusion of domestic livestock and other disturbances.

Consider effects on erosion and the movement of sediment and soluble and sediment-attached substances carried by runoff including filtering effect of vegetation on movement of sediment and dissolved and sediment-attached substance.

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

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

### **CULTURAL RESOURCES CONSIDERATIONS**

NRCS policy is to avoid any effect to cultural resources and protect them in their original location. Determine if installation of this practice or associated practices in the plan could have an effect on cultural resources. The National Historic Preservation Act may require

consultation with the California State Historic Preservation Officer.

<http://www.nrcs.usda.gov/technical/cultural.html> is the primary website for cultural resources information. The California Environmental Handbook and the California Environmental Assessment Worksheet also provide guidance on how the NRCS must account for cultural resources. The e-Field Office Technical Guide, Section II contains general information, with Web sites for additional information.

Document any specific considerations for cultural resources in the design docket and the Practice Requirements worksheet.

### **ENDANGERED SPECIES CONSIDERATIONS**

If during the Environmental Assessment NRCS determines that installation of this practice, along with any others proposed, will have an effect on any federal or state listed Rare, Threatened or Endangered species or their habitat, NRCS will advise the client of the requirements of the Endangered Species Act and recommend alternative conservation treatments that avoid the adverse effects. Further assistance will be provided only if the client selects one of the alternative conservation treatments for installation; or with concurrence of the client, NRCS initiates consultations concerning the listed species with the U.S. Fish and Wildlife Service, National Marine Fisheries Service and/or California Department of Fish and Game.

Comply with all applicable federal, state, and local laws, rules, and regulations.

### **PLANS AND SPECIFICATIONS**

Specifications for applying this practice shall be prepared for each site and recorded and filed using the approved specification sheets or narrative statements in the conservation plan.

Site preparation and seeding or planting shall be done at a time and in a manner that best ensures survival 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.

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

### **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.

