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## Vegetative Stabilization



### DESCRIPTION/GOALS

Vegetative stabilization is the process of establishing vegetation on a construction site to prevent erosion. Establishing vegetation as fast as possible is the next alternative to limiting clearing, and should be used to at least some extent on every construction site. The approach is a relatively inexpensive and effective (up to 99% erosion reduction) erosion control. In addition, permanent vegetation adds to the value of both commercial and residential properties.

### TECHNIQUES

Two options available for establishing vegetation are seeding and sodding. Regardless of which technique is used, some basic requirements need to be met to ensure good vegetative establishment. Seeding is the least expensive option, and is almost always the method used for temporary vegetation (e.g., vegetation that will be paved over or disturbed during subsequent phases of construction). Seeds can be hand-applied (known as "broadcast seeding"), usually to seed relatively small areas of less than one acre. When broadcast seeding is used, straw or some other cover is needed to protect the seeds (See Fact Sheets 7 and 9).

In hydroseeding, often used on larger areas, seeds are mixed with water, fertilizer, lime and a fiber mulch (See Fact Sheet 7) and sprayed onto the soil. An advantage to this technique is that seeding and mulching are completed in the same step, saving time.



Source: The Construction BMP Handbook - State of CA  
California State Water Resources Control Board

**APPROXIMATE  
Cost:** \$40 - \$90/ly\*

\* Cost for fiber mulch, seed and fertilizer

### EFFECTIVENESS

	Low	Mid	High
Erosion/ Sediment Control			✓
Long Term Pollution Reduction		✓	
Utilities/ Stream Protection			✓

### EASE OF APPLICATION

	Difficult	Average	Easy
Installation		✓	
Maintenance			✓

### RESTRICTIONS

- Arid Climates
- Infertile soils
- Steep slopes
- Outside the growing season

Sodding provides immediate vegetative cover and can withstand higher flow velocities. This technique is used for final landscaping and in drainageways, where high velocities would prevent grass seed from establishing. Although sodding is relatively expensive (\$46/y), it is often incorporated in the landscaping costs of construction.

#### **LIMITATIONS/CHALLENGES**

The two greatest challenges to successfully establishing vegetation are extreme climates (e.g., cold or arid) and poor soil conditions. In arid areas, irrigation is almost always needed and drought tolerant species should be selected where possible. Because of these challenges, designers in these areas may choose non-vegetative erosion controls (see Fact Sheets 7 and 9). In cold regions, the greatest challenge is the relatively short growing season, which shortens the window of opportunity for planting. In cold climates, a heavy mulch application is preferable to vegetative stabilization when construction continues into the fall season (see Fact Sheet 7).

The poor soil conditions found at many construction sites also make establishing vegetation challenging. Soil amendments such as organic matter, fertilizer and lime often need to be added to the soil to make it more fertile. Alternatively, topsoil can be imported to a construction site.

#### **INNOVATIONS/IMPROVEMENTS**

The use of a soil test to determine fertilizer application can improve plant growth and reduce nitrogen and phosphorous pollution. Soil and Water Conservation Districts or university extension offices can help apply these tests. Another option is to use alternative species, such as wildflowers or low maintenance ground cover, instead of grass as a cover because of wildlife and aesthetic value. Unfortunately, many of these species, particularly wildflowers, do not establish as quickly as grass (Johnson, 1992).

**SEED/PLANT SUPPLIERS**  
**Nationwide**  
Briargreen International  
Kent, WA  
(206) 639-3024

**Northeast/Mid-Atlantic**  
Jonathan Green, Inc.  
Farmingdale, NJ  
(908) 938-7007

**South/Southeast**  
Red River Hydro-Seeding, Inc.  
Tombigana, AR  
(501) 772-3028

**Midwest/Plains**  
CRM Systems-Prarie Ridge Nursery  
Mt. Horeb, WI  
(608) 437-3243

**Southwest/Mountain**  
Arkansas Valley Seed Co.  
Denver, CO  
(303) 320-7500

**West Coast**  
L&H Seed Co.  
Connell, WA  
(509) 234-4433

For more information contact the International Erosion Control Association at (800) 455-4322 or ask your county Soil and Water Conservation District about local suppliers.

#### **REFERENCES**

Johnson, A.M. 1992. *Turf Establishment and Erosion Control*. Braun Intertec Pavement, Minnesota Local Road Research Board. St. Paul, MN. 21 pp.