



- Erosion Control
- Sediment Control
- Habitat/Wildlife Protection

### ***Description***

Methods to properly revegetate sites after site disturbance to reduce bank erosion potential.

### ***Applicability***

- Areas within a site where no further construction or maintenance activities will occur.
- Sensitive areas where natural vegetation existed prior to disturbance (especially steep slopes, watercourses, and building sites in wooded areas).
- Areas where local, state, or federal government requires preservation or mitigation.

### ***Approach and Standards***

#### **Vegetation**

- The project site should be revegetated as soon as feasible after construction.
- Use native Bay Area plants and grasses in revegetation projects.
- Revegetation should be regularly monitored for survival for at least three years.
- Take cuttings and seeds from existing native vegetation before disturbance and cultivate. Use to replant so plants are genetically similar and acclimated to the specific area.
- Revegetate at ratio of at least 1½:1. Overplanting is recommended because some initial mortality is expected.
- If soil moisture is deficient, new vegetation should be supplied with supplemental water until firmly established.
- Cut or mow grasses to encourage the establishment and spread of grass.

#### **Mulch**

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- Use mulch, composed of bark, other wood products, straw, or erosion-control blankets, to form a protective blanket over the seeds and hold them in place and retain soil moisture. Erosion control blankets must be applied to planting areas where slopes are 2:1 or steeper.
- The choice of mulch should be based on the size of the area, site slopes, surface conditions such as hardness and moisture, weed growth, and availability of mulch materials.
- Type of mulch, binders, and application rates should be as recommended by the manufacturer.

### ***Limitations***

- Requires planning, and long-term monitoring.
- For sites with diverse topography, satisfactory revegetation can be difficult and expensive.
- May need area to cultivate cuttings and seeds to be used for revegetation efforts.
- Mulches tend to lower soil surface temperature, and may delay germination of some seeds.
- May require additional plantings or seeding if monitoring shows that revegetation efforts are not successful.

### ***Requirements***

#### **Maintenance**

- Cultivate cuttings and seeds.
- During construction, clearly mark the limits of grading or disturbance at all times.
- Ensure that irrigation or maintenance of native trees or vegetation conforms to specifications on the landscape plan.
- Perform monitoring for three to five years, as specified in the landscape or project mitigation plan.
- Inspect all seeded areas periodically for failures. If failures are found, reseed, fertilize, and mulch the areas within the planting season, using half of the original application rates.
- Inspect the mulch periodically and after rain for damage and deterioration.
- Maintain the longevity and integrity of the mulch until vegetation is established.

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### **Costs**

- Costs would result from hiring a vegetation specialist, and for performing ongoing monitoring.
- There could be an extra cost to cultivate cuttings and seeds and to irrigate and for additional planting or seeding.

### **Training**

- A vegetation specialist may be necessary.
- Train vegetation crews in the correct methods for collecting cuttings and seeds, and for removing and replanting vegetation.
- Training should be provided on the use and maintenance of native Bay Area plants and grasses for revegetation projects.
- Train design and maintenance staff on planning for revegetation after construction.

### **References**

California Regional Water Quality Control Board, San Francisco Bay Region, *Erosion and Sediment Control Field Manual*, 1998.

California Storm Water Quality Task Force, *Stormwater Best Management Practices Construction Handbook*, ESC2, ESC 10, ESC 11, March, 1993.

Caltrans, *Caltrans Storm Water Quality Handbooks, Construction Contractor's Guide and Specifications*, prepared by Camp Dresser & McKee, Woodward-Clyde, Aguilar Engineering, Psomas & Associates, MK Centennial, CD 24B(2 ), 25(2), April 1997.

Caltrans, *Caltrans Storm Water Quality Handbooks, Planning and Design Staff Guide*, prepared by Camp Dresser & McKee, Woodward-Clyde, Aguilar Engineering, Psomas & Associates, MK Centennial, CD 24A(1), 25(1), April 1997.