

The Storm Water Pollution Prevention Bulletin is prepared by the Storm Water Compliance Review Task Force to aid all projects and operations in maintaining compliance with the National Pollutant Discharge Elimination System (NPDES) permit requirements.

**V**egetative Buffer Strips can provide effective and economical construction site soil stabilization and sediment control. Details of the BMP can be found in the *Caltrans Storm Water Quality Handbooks, Construction Contractors Guide and Specifications, CD30(2) – Sodding, Grass Plugging, and Vegetative Buffer Strips*.

## Storm Water Benefits

Vegetative cover plays an important role in controlling erosion by shielding the soil surface from impacts of rainfall and runoff. A vegetative buffer strip can improve storm water quality by slowing the velocity of runoff; thereby permitting greater water infiltration, maintaining the soil's capacity to absorb water, and holding soil particles in place.

Vegetative buffer strips also help filter storm water that may contain certain pollutants including sediment and floatable materials.

- **CD23(2) – Preservation of Existing Vegetation:** Review project staging to determine if vegetation can be preserved without limiting or impacting construction activities.
- **CD24(2) – Permanent Seeding per Standard Specifications:** Implement permanent landscaping early in the project to allow the new vegetation to function as a buffer strip. (Additional erosion controls may be required during the establishment of the vegetation.)

## Appropriate Uses

- ✓ Vegetative buffer strips are particularly effective on flood plains, adjacent to wetlands or other sensitive water bodies, where there may be restrictions on limits of clearing and grubbing.
- ✓ To improve the function of the sediment controls and reduce maintenance, sites with significant erodible slopes and high run-off velocities can benefit from the use of a vegetative buffer strip in conjunction with other sediment controls.

## Additional Benefits

The use of existing vegetation for buffer strips may have additional benefits to the project. Cost savings in labor and materials may be achieved by not having to install other types of soil stabilization and sediment control BMPs. Another potential saving is in the cost to re-establish vegetation that has been removed from the site. With proper planning, existing vegetation can be left in place as a buffer strip, and not have to be replaced or re-established. In addition, the use of existing vegetative buffer strips reduces the total active disturbed area of the site.

## Final recommendations:

- Inspect buffer strips during the bi-weekly inspection activities.
- Inspect after significant storm events.
- Repair eroded or damaged areas as needed, to maintain original purpose and effectiveness of the buffer strip.

Stabilizing Soils on Construction Projects Using Vegetative Buffer Strips



The use of existing ice plant for a buffer strip aids significantly in containing the disturbed soil for the reconstruction of this freeway ramp.

## Implementation

Vegetative buffer strips can be implemented wherever a site will support vegetation, and are most economical where existing vegetation can be used. Effective buffer strips consist of dense grassy or leafy ground cover. Trees and shrubs can reduce the effects of rainfall impact on the soil surface, but may not provide enough ground cover to sufficiently minimize or eliminate soil erosion. Buffer strips may be created through seeding, but this is generally not cost-effective unless implemented in conjunction with permanent seeding and planting.

Additional BMPs that may apply for creating a buffer strip include:

- **CD22(2) – Scheduling:** Ensure that the vegetative buffer strip is established before the onset of the rainy season.



Additional information is available in the Caltrans Storm Water Quality Handbooks. Questions or comments may be directed to:

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