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Cost Saving Tips – Part 1: Soil Stabilization Practices

After conducting more than 3,000 compliance inspections, the Storm Water Task Force has identified a number of storm water pollution prevention practices that meet compliance requirements with the added benefit of reducing overall costs. This bulletin is the first in a series that describes these practices and the financial incentives for implementing them. Part I addresses soil stabilization, a subject of concern on nearly every construction project. Parts II and III will focus on cost saving tips for sediment controls and non-storm water practices.

Clear Vegetation Only as Needed

Typically, one of the first items of work on a project is to clear and grub the existing vegetation. The contractor will clear the necessary area or will employ a subcontractor to perform the work. In either case, this work is generally performed one time to avoid paying additional mobilization costs. Some of the cleared area will see immediate construction activity while the rest will sit inactive until a later stage of construction. This inactive disturbed soil area (DSA) may now require temporary soil stabilization. Typical costs for installed soil stabilization* are as follows:

Measure	$/Hectare	Longevity
Mulches	2,100–13,600	1-12 months
Temporary Seeding	750-4,000	>12 months
Impervious Covers	14,800	17,000 3-12 months
Hydraulic Stabilizers	1,000-3,000	1-12 months

The more cost-effective approach? Clear only the necessary vegetation for each construction stage, rather than all vegetation at once. In many cases, the cost of mobilization for additional clearing and grubbing is less than the cost of temporary stabilization measures.

Final Stabilization – Now or Later?

During the rainy season soil stabilization is an important practice for the protection of DSAs. In some regions of the state this requirement can be year-round. For such DSAs where work has been completed, why not consider implementing the final erosion control measures as defined in the contract plans and specifications? At first glance, the use of temporary stabilization on finished DSAs appears more advantageous. There are no additional mobilization costs and it is easier to schedule a sub-contractor once rather than multiple times. However, installing final erosion control measures on an area by area basis rather than applying temporary stabilization controls provides potential cost savings:

- Temporary measures often require frequent and costly re-applications during the rainy season.
- Temporary stabilization measures will eventually need to be replaced by final controls.
- Final erosion control requires only one application, if installed properly.

This practice may not be feasible for every project, especially those with extensive planting and irrigation requirements, but it is something for the contractor to consider.

The vegetated area below the slope remains intact and undisturbed while construction continues up above.

Upon completion of work on this slope, the contractor placed permanent seeding per the contract plans for erosion control. Typical costs for final erosion control are $7,500 per hectare.

Cut Maintenance Costs

Implementation of final measures has an additional cost benefit. Once an adequate vegetative cover has been established or equivalent stabilization measures have been employed, the need for sediment controls may be eliminated. This also eliminates the costs associated with maintenance and repair of these items. To ensure ompliance with local requirements, always check with the area Maintenance Supervisor before removing sediment controls, as policies vary from District to District.

**Soil Stabilization for Temporary Slopes*, Field Guide, November 30, 1999, Table 2-1, Page 1-3

The silt fence at the toe of this slope can be removed now that the permanent erosion control measure (grass) is established..

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