



**DWR – NPDES-SOP – G – 16 –Erosion Prevention and Sediment Control Handbook – 01092026**  
**Erosion Prevention and Sediment Control Handbook**

**4.2.6.8 Stabilization with Plastic Covering: Emergency**



Source: TNWRRRC

**Definition and Purpose**

Plastic sheeting is a temporary measure used to protect disturbed soils, slopes, and stockpiles from erosion caused by wind or stormwater. It provides immediate stabilization by creating a physical barrier that prevents soil displacement.

**Appropriate Applications**

Plastic sheeting is a stabilization measure providing immediate and short-term stabilization by protecting disturbed soils from raindrop impact and wind. This practice may assist in stabilizing stockpiles or slopes that are actively being worked on or when a large storm event is projected or imminent. Furthermore, plastic sheeting is a method to stabilize areas when they cannot be vegetated due to soil conditions, steepness, or seasonal limitations.

**Limitations and Maintenance**

Use of plastic sheeting on stockpiles and slopes is not intended to prevent erosion in scenarios with concentrated flows or large disturbances. Careful planning and implementation is needed as the impermeable surface can yield high velocity sheet flow causing down gradient erosion issues (City of Albany, 2024). Therefore, proper installation and use of perimeter controls in conjunction with plastic sheeting is recommended. Plastic sheeting is to be inspected regularly for tears, degradation, displacement, anchor failings, vandalism, and undercutting (CalTrans, 2017). Damaged sheeting must be disposed of properly and replaced. Further, plastics degrade and leach chemical additives, microplastics,



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and macroplastics, posing environmental concerns and threats. Therefore, plastic covers are not ideal for long term stabilization.

#### **Planning and Design Considerations**

Polyethylene, six mil plastic sheeting is advised for use. Once the sheeting is laid over the stockpile or slope, it needs to be weighed down. This can be done with gravel-filled bags, anchor pins, or other weights. Anchoring points are recommended not to exceed six feet in distance. Where multiple sheets are required, it is best to overlap the seams by 12 to 24 inches and secure the seams with tape or a continuous anchoring systems. All edges of the plastic sheeting are to be entrenched a minimum of six inches in the soil. When used as slope stabilization, a diversion berm or dike (Section 4.2.1) at the top of the slope is strongly recommended to divert concentrated flows away from the plastic. This reduces the chance of undermining the plastic on the slope. Additionally, energy dissipation (Section 4.3.4), is advisable around the perimeter of the slope or stockpile toe in order to prevent erosion as the stormwater runs off the plastic (City of Albany, 2024).

#### **Example Application**

No formal design or quantities are required for this measure and therefore are not presented here.

#### **References**

City of Albany. (2024). *Erosion Prevention and Sediment Control Manual*.  
CalTrans. (2017). *Construction Site Best Management Practices (BMP) Manual*.