

BMP C123: Plastic Covering

Purpose

Plastic covering provides immediate, short-term erosion protection to slopes and disturbed areas.

Conditions of Use

Plastic covering may be used on disturbed areas that require cover measures for less than 30 days, except as stated below.

- Plastic is particularly useful for protecting cut and fill slopes and stockpiles. Note: The relatively rapid breakdown of most polyethylene sheeting makes it unsuitable for long-term (greater than six months) applications.
- Due to rapid runoff caused by plastic covering, do not use this method upslope of areas that might be adversely impacted by concentrated runoff. Such areas include steep and/or unstable slopes.
- Plastic sheeting may result in increased runoff volumes and velocities, requiring additional on-site measures to counteract the increases. Creating a trough with wattles or other material can convey clean water away from these areas.
- To prevent undercutting, trench and backfill rolled plastic covering products.
- While plastic is inexpensive to purchase, the added cost of installation, maintenance, removal, and disposal make this an expensive material, up to \$1.50-2.00 per square yard.
- Whenever plastic is used to protect slopes install water collection measures at the base of the slope. These measures include plastic-covered berms, channels, and pipes used to convey clean rainwater away from bare soil and disturbed areas. Do not mix clean runoff from a plastic covered slope with dirty runoff from a project.
- Other uses for plastic include:
 1. Temporary ditch liner.
 2. Pond liner in temporary sediment pond.
 3. Liner for bermed temporary fuel storage area if plastic is not reactive to the type of fuel being stored.
 4. Emergency slope protection during heavy rains.
 5. Temporary drainpipe (“elephant trunk”) used to direct water.
- Plastic slope cover must be installed as follows:
 1. Run plastic up and down slope, not across slope.
 2. Plastic may be installed perpendicular to a slope if the slope length is less than 10 feet.
 3. Minimum of 8-inch overlap at seams.

Design and Installation Specifications

4. On long or wide slopes, or slopes subject to wind, tape all seams.
 5. Place plastic into a small (12-inch wide by 6-inch deep) slot trench at the top of the slope and backfill with soil to keep water from flowing underneath.
 6. Place sand filled burlap or geotextile bags every 3 to 6 feet along seams and tie them together with twine to hold them in place.
 7. Inspect plastic for rips, tears, and open seams regularly and repair immediately. This prevents high velocity runoff from contacting bare soil which causes extreme erosion.
 8. Sandbags may be lowered into place tied to ropes. However, all sandbags must be staked in place.
- Plastic sheeting shall have a minimum thickness of 0.06 millimeters.
 - If erosion at the toe of a slope is likely, a gravel berm, riprap, or other suitable protection shall be installed at the toe of the slope in order to reduce the velocity of runoff.
 - Torn sheets must be replaced and open seams repaired.
 - Completely remove and replace the plastic if it begins to deteriorate due to ultraviolet radiation.
 - Completely remove plastic when no longer needed.
 - Dispose of old tires used to weight down plastic sheeting appropriately.

Maintenance Standards

Approved as Equivalent

Ecology has approved products as able to meet the requirements of [BMP C123](#). The products did not pass through the Technology Assessment Protocol – Ecology (TAPE) process. Local jurisdictions may choose not to accept this product approved as equivalent, or may require additional testing prior to consideration for local use. The products are available for review on Ecology’s website at <http://www.ecy.wa.gov/programs/wq/stormwater/newtech/equivalent.html>