Compost Blanket and Filter Berm (CB)

Description

A compost blanket is a layer of compost uniformly applied to the soil in disturbed areas to control erosion, facilitate revegetation, and retain sediment resulting from sheet-flow runoff.

A compost filter berm is a dike of compost or a compost product that is placed perpendicular to runoff to control erosion in disturbed areas and retain sediment. Compost berms can be placed at regular intervals to help reduce the formation of rill and gully erosion when a compost blanket is stabilizing a slope.

Appropriate Uses

Compost blankets can be used as an alternative to erosion control blankets and mulching to help stabilize disturbed areas where sheet flow conditions are present. Compost blankets should not be used in areas of concentrated flows. Compost provides an excellent source of nutrients for plant growth, and should be considered for use in areas that will be permanently vegetated.

Design and Installation

See Detail CB-1 for design details and notes.

Do not place compost in areas where it can easily be transported into drainage pathways or waterways. When using a compost blanket on a slope, berms should be installed periodically to reduce the potential for concentrated flow and rilling. Seeding should be completed before an area is composted or incorporated into the compost.

Compost quality is an important consideration when selecting compost blankets or berms. Representative compost quality factors include pH, salinity, moisture content, organic matter content, stability (maturity), and physical contaminants. The compost should meet all local, state, and federal quality requirements. Biosolids compost must meet the Standards for Class A biosolids outlined in 40 CFR Part 503. The U.S. Composting Council (USCC) certifies compost products under its Seal of Testing Assurance (STA) Program. Compost producers whose products have been certified through the STA Program provide customers with a standard product label that allows comparison between compost products. Only STA certified, Class I compost should be used.

<table>
<thead>
<tr>
<th>Compost Blankets and Berms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functions</strong></td>
</tr>
<tr>
<td>Erosion Control</td>
</tr>
<tr>
<td>Sediment Control</td>
</tr>
<tr>
<td>Site/Material Management</td>
</tr>
</tbody>
</table>
Maintenance and Removal

When rills or gullies develop in an area that has been composted, fill and cover the area with additional compost and install berms as necessary to help reduce erosion.

Weed control can be a maintenance challenge in areas using compost blankets. A weed control strategy may be necessary, including measures such as mechanical removal and spot application of targeted herbicides by licensed applicators.

For compost berms, accumulated sediments should be removed from behind the berm when the sediments reach approximately one third the height of the berm. Areas that have been washed away should be replaced. If the berm has experienced significant or repeated washouts, a compost berm may not be the appropriate BMP for this area.

Compost blankets and berms biodegrade and do not typically require removal following site stabilization.
**Compost Blanket and Filter Berm (CB)**

**EC-5**

**November 2010 Urban Drainage and Flood Control District CB-3**

**Urban Storm Drainage Criteria Manual Volume 3**

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**TABLE CB-1. CLASS 1 COMPOST**

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>CHARACTERISTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINIMUM STABILITY INDICATOR</td>
<td>STABLE TO VERY STABLE</td>
</tr>
<tr>
<td>SOLUBLE SALTS</td>
<td>MAXIMUM 5 mmhos/cm</td>
</tr>
<tr>
<td>PH</td>
<td>6.0 – 8.0</td>
</tr>
<tr>
<td>AG INDEX</td>
<td>&gt; 10</td>
</tr>
<tr>
<td>MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR</td>
<td>80+/80+</td>
</tr>
<tr>
<td>MATURITY INDICATOR EXPRESSED AS AMMONIA N/NITRATE N RATIO</td>
<td>&lt; 4</td>
</tr>
<tr>
<td>MATURITY INDEX AS CARBON TO NITROGEN RATIO</td>
<td>20:1</td>
</tr>
<tr>
<td>TESTED FOR CLOPYRAUD</td>
<td>YES/NEGATIVE RESULT</td>
</tr>
<tr>
<td>MOISTURE CONTENT</td>
<td>30–60%</td>
</tr>
<tr>
<td>ORGANIC MATTER CONTENT</td>
<td>25–45% OF DRY WEIGHT</td>
</tr>
<tr>
<td>PARTICLE SIZE DISTRIBUTION</td>
<td>3&quot; (75mm) 100% PASSING</td>
</tr>
<tr>
<td>PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENTS</td>
<td>MUST BE REPORTED</td>
</tr>
<tr>
<td>TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS</td>
<td>STA + CLOPYRAUD</td>
</tr>
<tr>
<td>ORGANIC MATTER PER CUBIC YARD</td>
<td>MUST REPORT</td>
</tr>
<tr>
<td>CHEMICAL CONTAMINANTS</td>
<td>COMPLY WITH US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 &amp; 3 LEVELS</td>
</tr>
<tr>
<td>MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT</td>
<td>FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION</td>
</tr>
<tr>
<td>RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH</td>
<td>LOW</td>
</tr>
</tbody>
</table>

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**CB-1. COMPOST BLANKET AND COMPOST FILTER BERM**
COMPOST FILTER BERM AND COMPOST BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   - LOCATION OF COMPOST FILTER BERM(S).
   - LENGTH OF COMPOST FILTER BERM(S).

2. COMPOST BERMS AND BLANKETS MAY BE USED IN PLACE OF STRAW MULCH OR
   GEOTEXTILE FABRIC IN AREAS WHERE ACCESS TO LANDSCAPING IS DIFFICULT DUE TO
   LANDSCAPING OR OTHER OBJECTS OR IN AREAS WHERE A SMOOTH TURF GRASS FINISH IS
   DESIRED.

3. FILTER BERMS SHALL RUN PARALLEL TO THE CONTOUR.

4. FILTER BERMS SHALL BE A MINIMUM OF 1 FEET HIGH AND 2 FEET WIDE.

5. FILTER BERMS SHALL BE APPLIED BY PNEUMATIC BLOWER OR BY HAND.

6. FILTER BERMS SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS
   PREVAIL AND NOT IN AREAS OF CONCENTRATED FLOW.

7. COMPOST BLANKETS SHALL BE APPLIED AT A DEPTH OF 1 - 3 INCHES (TYPICALLY 2
   INCHES), FOR AREAS WITH EXISTING VEGETATION THAT ARE TO BE SUPPLEMENTED BY
   COMPOST, A THIN 0.5-INCH LAYER MAY BE USED.

8. SEEDING SHALL BE PERFORMED PRIOR TO THE APPLICATION OF COMPOST. ALTERNATIVELY,
   SEED MAY BE COMBINED WITH COMPOST AND BLOWN WITH THE PNEUMATIC BLOWER.

9. WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL
   TAKE PLACE PRIOR TO COMPOST APPLICATION.

10. COMPOST SHALL BE A CLASS 1 COMPOST AS DEFINED BY TABLE CB-1.

COMPOST FILTER BERM MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.
   MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS
   POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE
   EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN
   EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE
   DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON
   DISCOVERY OF THE FAILURE.

4. COMPOST BERMS AND BLANKETS SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF
   RILLING IN THE COMPOST SURFACE OCCURS.

(DETAILS ADAPTED FROM ARAPAHOE COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS.
CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN
DIFFERENCES ARE NOTED.