

Georgia Soil and Water Conservation Commission
The Manual for Erosion and Sediment Control in Georgia
New Products Procedure

Introduction

The Georgia Soil and Water Conservation Commission (GSWCC) was formed to protect, conserve and improve the soil and water resources of the State of Georgia. GSWCC's goal is to make Georgia a better place for its citizens through the wise use and protection of basic soil and water resources and to achieve practical water quality goals.

GSWCC is responsible for maintaining the Manual for Erosion and Sediment Control in Georgia (Manual). The Manual contains standards and specifications that are followed and practiced through out the state of Georgia. The Manual was first published in 1975. Since then the Manual has under gone five revisions with the last revision happening in 2001. Chapter 6 of the Manual focuses on the standards and specifications for planning, design and installation of erosion and sediment control measures. In February 2009, GSWCC received a Federal 319 Grant to establish benchmark standards and procedures for accepting new practices and products into the Manual.

The approved products list maintained by GSWCC is only for the Manual.

Submittal Process

To be considered for product approval, manufacturers will need to submit the following:

1. A completed GSWCC Product Approval Application
2. Product sample, product specifications, product literature, installation references, field performance data, and any other state agency that has testing in progress, tests completed and/or product approval.
3. Certified lab results from a qualified laboratory capable of performing the required GSWCC tests.
4. Private label identification: Provide a letter from the private labeler identifying his source and name of material along with a companion letter from the manufacturer. Material properties and identifying names shall be included in the letters of certification.

Products that meet GSWCC specified benchmarks are not guaranteed to be placed on the GSWCC Approved Products list. Products that are not environmentally compatible will not be allowed. All products must be approved by the GSWCC Board.

Product information submitted by the manufacturers to GSWCC will not be considered confidential unless otherwise noted.

Recertification

Recertification of products, on a 3 year cycle, will be required for products to remain on the approved list. Manufacturers will be required submit a letter certifying that the product is still being manufactured with the same quality and composition as the test material originally submitted for evaluation. The submission of index tests may also be required.

If modifications to an approved product have been made, manufacturers will have to have the current product retested and results submitted to GSWCC.

GSWCC Required Testing

GSWCC has outlined specific tests for each practice currently in the Manual. The required tests are as followed:

1. Channel Stabilization

Products seeking approval for channel stabilization applications must be tested according to ASTM D6460 Standard Test Method for Determination of Rolled Erosion Control Product (RECP) Performance in Protecting Earthen Channels from Stormwater-Induced Erosion.

Products will be categorized as followed:

1. Category 1 (0-5 ft/sec) Vegetated Lining with Blankets
2. Category 2 (5- 10 ft/sec) Vegetated Lining with TRM or Rip Rap Lining
3. Category 3 (> 10 ft/sec) Concrete Lining

Reports should include ft/sec and equivalent shear stress.

2. Check Dams

Products seeking approval for check dam applications must be tested using ASTM D7208 (Modified), as specified by GSWCC. The check dam must perform better than the unchecked channel 20% of control (i.e. 80% reduction in soil loss), and withstand a flow rate of 2.0 cfs.

The product shall be tested at 0.5cfs, 1.0cfs and 2.0cfs, using sandy clay soil as shown on the USDA soil triangle.

Please refer to GSWCC Approved Test Method for check dams, for complete testing procedures.

3. Inlet Sediment Traps

Products seeking approval for inlet sediment trap applications must be tested using ASTM D7351 – Modified (Proposed April 2013), as specified by GSWCC.

Inlet sediment traps shall meet 90% soil retention efficiency with a minimum seepage efficiency of 65% for unpaved areas and shall meet 75% soil retention efficiency with a minimum seepage of 85% for paved areas.

4. Rolled and Hydraulic Erosion Control Products (Slope Stabilization)

To be approved as a RECP or HECP the manufacturer must submit independent research data from rainfall simulated slope tests conducted through the National Transportation Product Evaluation Program (NTPEP) using ASTM D6459. With the only modifications allowed pertain to the installation methods required for HECPs and RECPs.

Products shall have a maximum C-factor ASTM D6459 –for the following slope grade:

Slope (H: V)	C-Factor (max.)
3:1 or steeper	0.080

5. Sediment Barriers

Sediment Barriers are to be tested according to the procedures by GSWCC. GSWCC is incorporating elements from the “Methods” and “Data Analyses” sections of the technical publication titled “Needed Information: Testing, Analyses, and Performance Values for Slope Interruption and Perimeter Control BMPs” authored by Kurt Kelsey, Tony Johnson, and Ryan Varva (IECA 2006) and portions of ASTM D6459 and ASTM WK 11340 (February 2012) to create its own test for sediment barrier (Sd1) products.

Please refer to GSWCC Approved Test Method for sediment barriers, for complete testing procedures.

Each product will be required to perform index testing for quality control purposes. The index testing are as follows:

Two Dimensional Products (Geotextile – type), will include, but not limited to:

- Mass /Area Thickness – ASTM D 5261 and ASTM D 5199
- Tensile Strength – ASTM D 4632
- Permittivity (flow) – ASTM D 4491
- Apparent Opening Size – ASTM D 4751
- Percent Open Area – Light Projection

Three Dimensional Products (Wattle – type), will include, but not limited to:

- Mass/Volume
- Circumference/Perimeter
- Relevant Component Properties, such as but not limited to netting tensile strength

If a product does not meet one of these categories, please contact GSWCC’s Urban Program to discuss what index tests would be required.

Products seeking approval must meet a P-factor of 0.030 for sensitive area applications and a P-factor of 0.045 for non sensitive area applications.

Sensitive areas can be defined as any area that needs additional protection, these areas include but not limited to state water, wetlands, or any area the design professional designates as sensitive.

6. Tackifiers

For general use, the tackifier must meet the specifications in Manual. To be used in other BMP applications such as Slope Stabilization or Channel Stabilization please refer to that BMP testing specification.

References:

ASTM D7208 “Standard Test Method for Determination of Temporary Ditch Check Performance in Protecting Earthen Channels from Stormwater Induced Erosion”,

ASTM D6460 Standard Test Method for Determination of Rolled Erosion Control Product (RECP) Performance in Protecting Earthen Channels from Stormwater-Induced Erosion.

ASTMD6459 “Standard Test Method for Determination of Rolled Erosion Control Product (RECP) Performance in Protecting Hillslopes and Rainfall Induced Erosion”,

References (continued)

ASTM D7208 “Standard Test Method for Determination of Temporary Ditch Check Performance in Protecting Earthen Channels from Stormwater Induced Erosion”,

ASTM D7351 (Modified) Determination of Inlet Sediment Trap Effectiveness in Inlet Protection Applications

WK11340 *Reprinted, with permission, from WK11340 “Standard Test Method for Determination of Sediment Retention Devices (SRDs) Performance in Reducing Soil Loss from Rainfall-Induced Erosion (December 2010),

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