

## **DRAFT Procedures**

### **Georgia Soil and Water Conservation Commission The Manual for Erosion and Sediment Control in Georgia New Products Procedure POSTED SEPTEMBER 4, 2013, FOR PUBLIC COMMENT**

#### **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 publishing and 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 revise the manual and establish benchmark standards and procedures for accepting new practices and products into the Manual.

The GSWCC Approved Product List only pertains to the Manual for Erosion and Sediment Control.

#### **Submittal Process**

To be considered for product approval, manufacturers must 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 has approved the product.
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 are not environmentally compatible will not be allowed. After submission of proper documentation, products will be presented to the GSWCC Board for approval, denial or request for further information.

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

#### **Recertification**

Recertification of products, on a 3 year cycle, will be required for products to remain on the approved list. Manufacturers will be required to 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. An index test is a test that a manufacturer can easily conduct to prove that they are keeping their manufacturing process within preset limits and thereby producing a consistent product.

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

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## GSWCC Required Testing

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

### 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 follows:

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

### 2. Checkdams

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

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 checkdams, for complete testing procedures.

### 3. Inlet Sediment Traps – Is currently being tested to set benchmark(s) and will be updated when testing is complete.

### 4. Rolled and Hydraulic Erosion Control Products

To be approved as a RECP or HECF 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 pertaining to the installation methods required for HECFs and RECPs.

Products shall have a maximum C-factor ASTM 6459 – NTPEP for the following slope grades:

Slope (H: V)	C-Factor (max.)
3:1 or steeper	0.087

### 5. Sediment Barriers

Sediment Barriers are to be tested according to the procedures established 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 Georgia’s own test for sediment barrier (Sd1) products.

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

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Each product will be required to perform index testing for quality control purposes. The index testing required is 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 are not limited to state waters, wetlands, or any area the design professional designates as sensitive.

The Practice Management (P) Factor from the Revised Universal Soil Loss Equation (RUSLE) of the USDA – ARS Agricultural handbook 703 is reported performance measure for slopes determined through testing.

## **6. Tackifiers**

For general use, the tackifier must meet the existing specifications in the 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.

ASTM D6459 “Standard Test Method for Determination of Rolled Erosion Control Product (RECP) Performance in Protecting Hillslopes and Rainfall Induced Erosion”,

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

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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