

Public Comment as Submitted to GSWCC	GSWCC Response
Chapter 1	
<p>Page 1-1. Sediment in Georgia comes from many sources including agricultural operations, forestry practices, construction projects (revise sentence and add) <i>and other activities that convert land from one use to another.</i></p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 1-6. Within the block “Exemptions From The Act” add: spoil brought to the surface of any underground mineral extraction.</p>	<p>O.C.G.A. § 12-7-17 is specific in its language. In order to add this language a change in the law would be required.</p>
<p>Page 1-6 Concerning the new paragraph added to exempt “infrastructure construction projects of routine maintenance for the original purpose of the facility that is performed to maintain the original line and grade and the hydraulic capacity, as applicable”:</p> <ul style="list-style-type: none"> •Assuming the 4 listed criteria are met, does this include overlay projects, for example a uniform 2 inch overlay of a road? The line and grade would be modified, offset by 2 inches, but this doesn’t affect the hydraulics of the site, i.e., the impervious area and time of concentration won’t be altered. Would a mill and overlay project be exempt, where 0.5 inches of existing pavement is milled off and 2 inches of new pavement added? What about a 2 inch mill and 2 inch overlay, whereby the original line and grade would be maintained? <p>It may be that this paragraph is not meant to exempt an overlay as maintenance, and is meant for something like a crack-seal. I would argue that an overlay is often a heavy form of maintenance under the given definition (“defined as work of keeping something in proper condition; or upkeep) performed more to prevent further deterioration of a pavement than to improve its structural capacity.</p>	<p>Overlaying of asphalt is not a land disturbing activity. Please contact EPD for clarification.</p>
<p>Page 1-6 Exemption 10. This is only applicable if EMC is a secondary permittee within a common plan of development.</p>	<p>GSWCC revised section to include the exact language from O.C.G.A. § 12-7-17</p>
<p>Do not define "maintenance" in reference to the permit. It is not defined in the permit.</p>	<p>GSWCC revised material per recommendation.</p>
Chapter 2	
<p>Chapter 2, Table on 2-7, EFFECTIVENESS OF GROUND COVER ON EROSION AND SEDIMENT CONTROL ON CONSTRUCTION SITES</p> <ol style="list-style-type: none"> 1. Consider grouping the products correctly, seeding, sod, mulch, other....versus everything listed under seeding which is incorrect. 2. Fiberglass should never be used for ground cover due to its environmental and health risks. The application would not be safe, and once applied, it could pose significant risks to humans and wildlife. What is this product? 	<p>GSWCC revised material per recommendations.</p>

<p>3. Asphalt emulsion should be deleted as a form of ground cover; it can be effective as a tacking agent for mulch, but nothing beyond that.</p> <p>4. Define “fiber matting” or consider deleting “fiber matting and excelsior” and stating “stone, temporary erosion control blankets.”</p>	
<p>Chapter 2, 208, FI-CI Consider adding a statement like, “some flocculants (not coagulants) can be used in conjunction with mulch to enhance ground cover performance.” This statement should not be confused with the use of a tackifier...which is different. NCSU has a significant amount of research that proves using polyacrylamide, for example, with mulch, reduces sediment yield more than mulch alone, as well as increasing infiltration rates up to 30%. It seems incorrect to exclude flocculants from use with ground cover and only refer to them as a means to reduce suspended solids in water.</p>	<p>GSWCC corrected typo FI- CI to FI-Co Please refer to Chapter 6 of the Manual for further detail on BMPs</p>
<p>Chapter 2, Sd1 Sediment Barrier Delete “filtering;” sediment barriers act as dams to provide energy dissipation...they are not designed to filter anything. I would also consider adding a statement like “silt fence (or you can say sediment barriers) should always be installed along contour lines...and never across streams, etc...” Since you state no formal design is required, it should be pointed out that many silt barrier failures are due to installation down a slope which creates a concentrated flow...the exact opposite of what you’re trying to accomplish.</p>	<p>Testing results prove that sediment barriers do provide filtration.</p>
<p>Page 21-1. Remove T.N.T. or at least explain what this term means, (trinitrotoluene an explosive material also known as dynamite).</p>	<p>Replaced acronym T.N.T with the word dynamite.</p>
<p>Page 2-2 Figure 2-3. Curve for soil loss: Beginning of January point does not match value of end point of December.</p>	<p>The chart is only representing 11 months out of the year and the points would match if a full year was represented.</p>
<p>Page 2-3. Figure 2-7. Remove “to a minimum”. Justification: this is a value that cannot be determined.</p>	<p>The picture is to be replaced.</p>
<p>Page 2-4. Figure 2-9. Change “can assist” to read “promotes”.</p>	<p>The picture will be replaced and wording will be changed accordingly.</p>
<p>Page 2-7 Retitle table as: Ground Cover %Soil loss Compared Type to Bare Soil</p>	<p>The chart modified per this and other comments.</p>
<p>Page 2-8 Place a maximum time limit for Ds1 as you did for Ds2</p>	<p>Mulching is a completely different application from temporary seeding.</p>

<p>Page 2-8 Does F1- C1 include polymers?</p>	<p>Yes it does, please refer to Chapter 6 of the Manual for full BMP description.</p>
<p>Page 2-9. Tb – Tackifiers and binders. After the first sentence, add; Hay or straw will drift downslope unless anchored in place with tackifiers or binders.</p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 2-10 Fss ‘implies the use of the Faircloth Surface Skimmer’, whereas several other products perform the same function. You should not ‘endorse’ a specific product. Another alternative title could be “Surface Water Removal Device”</p>	<p>Changing coding symbol from Fss to Sk</p>
<p>Page 2-10 Rd is confusing as it blends reducing velocity and trapping sediment. These are two distinct and separate functions. Instead use: Rd-F for a rock filter dam that has two sizes of rock; and Rd-V for a velocity check dam that has only one size rock.</p>	<p>Rock dam and check dam are two separate BMPs. Please refer to Chapter 6 of the Manual for full BMP descriptions.</p>
<p>Page 2-10. Rt- Retrofitting. Need to also mention “rockpack” around the CMP.</p>	<p>Comment unclear</p>
<p>Page 2-11 Sd1 Sediment Barrier, It is nearly impossible to “prevent” sediment from leaving a site. Better word choice is to “minimize” sediment discharge.</p>	<p>Revised material to read “minimize and prevent”</p>
<p>Page 2-11 Rt “Retrofit” should also include the rockpack around the base of the discharge up to the height of the clean-out elevation.</p>	<p>Please refer to Chapter 6 of the Manual for full BMP description</p>
<p>Page 2-11 SpB Is this the same as a ‘level spreader’ (Lv)?</p>	<p>No a Seep Berm is not the same as a Level Spreader. Please refer to Chapter 6 of the Manual for full BMP descriptions.</p>
<p>Page 2-12 St “Storm Drain Outlet Protection” does not reduce velocity and will cause water back up in the pipe. Proper use is to reduce discharge flow energy.</p>	<p>St prevents erosion at the outlet of the pipe.</p>
<p>Page 2-6 add italicized text Vegetative practices may be applied singularly or in combination with other conservation measures. They may be either short lived or of a permanent nature. Sub-soils, mixtures of soils and soils with varying organic matter content will be encountered when soil surfaces are disturbed. Unfavorable growth conditions such as acidity, low fertility, compaction and adverse moisture contents are often prevalent. These conditions are difficult to overcome but must be eliminated if adequate plant growth is to be obtained. <i>A soil test will be essential to determining soil characteristics detrimental to plant growth.</i></p>	<p>GSWCC revised material per recommendation.</p>
<p>Table: EFFECTIVENESS OF GROUND COVER ON EROSION AND SEDIMENT CONTROL ON CONSTRUCTION SITES Comment 1: The data in this table is inconsistent with widely accepted industry values. Percent effectiveness (PE) is a measure of the ability of a cover to protect the soil from erosion due to rain drop impact and overland flow, and is a measure of the percent soil reduction compared to bare soil. Percent effectiveness is directly related to the cover (C) factor from the Modified Universal</p>	<p>The C-factor was adjusted to take into account terminal velocity. The new required C-factor is 0.080. Removed fiberglass per recommendation Added recommendation language on page 2-7.</p>

Soil Loss Equation (MUSLE) and can be calculated by $PE = (1-C) \times 100\%$. The C factor is commonly evaluated using large-scale testing with rainfall simulators at universities and private test labs. It is the ratio of soil loss on the unprotected control slope versus soil loss on the treated slope when evaluated under identical conditions. Typical laboratory rainfall intensities range from 2-6 in/hr with testing durations ranging from 20-60 minutes. C factors can be variable and depend on duration of the rainfall event, intensity of the event, size of the raindrops, soil type, slope gradient, slope length and hydraulic matrix application rate. Unless field conditions match those evaluated in the laboratory, the use of this testing parameter to quantify actual field performance can be difficult and subjective. However, evaluating C factor in a controlled environment provides the ability to directly compare performance between different erosion control materials when tested under identical conditions at the same laboratory. It is important to note that not all C factors are created equal and various labs generate differing levels of kinetic energy in their rainfall simulators, resulting in varying levels of “destruction”, or erosion, and thereby product differentiation.

Profile has conducted extensive testing on our own wood fibers provide a 50% reduction in soil loss. It may be that the study used to generate the data is not supply sufficient kinetic energy to allow for test material differentiation. These numbers grossly misrepresent values generated in numerous other studies. The Table below presents acceptable values for three classes of HECPs based on laboratory testing at Utah Water Research Laboratory.

Property	Testing Method	Type 2 -
Engineered or Bonded Fiber Matrix (EFM)	Type 3 -	Flexible Growth
Medium (FGM)	Type 1 -	Hydraulic Mulch with
Tack (HM)		
Percent Effectiveness ^{1,2}	UWRL Protocol	> 50% > 95% >
99%		

Note 1: Intensity of 127 mm/hr, total duration of 60 minutes

Note 2: Percent effectiveness (PE) is related to the cover factor (“C” factor) by $PE = (1-C) \times 100$

Fiberglass and asphalt emulsion should be deleted from this table. as they are no longer relevant erosion control techniques.

At a minimum, a caveat needs to be added that these are laboratory derived numbers and field vegetation/seedlings cannot be expected to provide equivalent soil reductions without ideal growing conditions.

<p>Page 2-7 add italicized text Mulching. Due to time constraints, it may be impractical to stabilize an area with vegetation. Excellent temporary soil stabilization can be otherwise achieved using straw, hay, <i>mulch with tackifier</i>, rolled erosion control blankets (RECPs), <i>hydraulically-applied erosion control products (HECPs)</i> and synthetic fibers. Areas where final grade has been reached can be stabilized with mulch and over seeded at the proper time for permanent grasses. Mulches allow for greater infiltration of water into soil; reduce the amount of runoff; retain seeds, fertilizer and lime <i>soil amendments</i> in place; and improve soil moisture and temperature conditions. Mulch is essential in establishing good stands of grasses and legumes on disturbed areas. In order to prevent movement by wind or water, it is important that it be anchored to the soil</p>	
<p>Chapter 3</p>	
<p>Page 3-10 calls for a detailed conversion plan. Does this mean another required sheet in addition to the three phases? It is difficult for an engineer to know how the contractor intends to construct the site from a phasing and time standpoint. Most of the time contractors are not on board until the plans are permitted (Referring to, “The conversion plan should also be very specific about the timing and sequencing of the conversion activities with ongoing land disturbance and stabilization”) It could be detrimental for the engineer to dictate the phasing and timing.</p>	<p>The detailed conversion plan can be shown in the final phase. This is a recommendation and not a requirement.</p>
<p>Page 3-12 Table calls for temporary construction fencing at LOD. Is this chain link fence? I think some clarification on the type of fencing would be helpful.</p>	<p>The type of fence is at the discretion of the LIA and Design Professional.</p>
<p>Page 3-14 states, “Usually these areas should be outside of LOD (w/ exception of porous paving...) I’ve found Bio retention and infiltration facilities most definitely are inside the LOD. You have to excavate to put in gravel, engineered soil, etc. You can’t construct them otherwise.</p>	<p>This is only a recommendation, ultimately it is at the discretion of the Design Professional.</p>
<p>Page 3-19 refers to figure 2 for serious concerns, but only one photo seems to show detrimental effects.</p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 3-15 Blanket authority should not be given to the plan reviewer to determine that construction activities will compact and damage to underlying soils! They have a very limited knowledge of the project and how it will be constructed. They will also not assume any responsibility or liability for their decisions. At best they could require information supporting the designers plan.</p>	<p>This section contains only recommendations for the design professional to consider, and are not requirements of the Act, NPDES, or the Manual.</p>
<p>Pg 3-24 Spell out what CSO is.</p>	<p>CSO is spelled out on page 23 under Vegetated Roof Cover</p>
<p>Page 3-3 Inform readers that the original intent of the USLE was to provide a field comparison of management practices. It was NOT designed to provide a predictive value of soil loss. Too many people now use RUSLE as an absolute value for erosion control programs without knowing the</p>	<p>GSWCC recommends WinTR55 which is referenced in Appendix A.</p>

<p>limitations of the equation.</p> <ul style="list-style-type: none"> - Suggest adding an introductory sentence such as: The Universal Soil Loss Equation (USLE) was an agricultural tool to compare management practices. With additional data, the currently used Revised Universal Soil Loss Equation (RUSLE2) provides meaningful information about other land-use practices. 	
<p>Page 3-6 The CPESC program is now under a larger organization of the name EnviroCert International, Inc. This should be noted in the second paragraph from the bottom. For your information the address is 49 State Street, Marion, NC 28752-4020, Phone 828-655-1600;, Fax 828-655-1622, or www.cpesc.org</p>	<p>Website address has been added to material.</p>
<p>Page 3-16 Table 3. The Conversion Guidance for “Grading To Blend Into Topography”. The last sentence did not fully print out.</p>	<p>Formatting corrected.</p>
<p>Page 3-21 Figure 1. What is the source for this figure? ALWAYS provide a ‘source’</p>	<p>Source has been added.</p>
<p>Chapter 4</p>	
<p>Page 4-1 It would be helpful for a “minimum size’ to be established uniformly. Many LIAs are selecting and using differing size values to determine if an LDP is required.</p>	<p>O.C.G.A § 12-7-8 allows LIAs to be more stringent with regards to project size.</p>
<p>Page 4-7 Last paragraph. It is extremely dangerous for a LIA to “give a detailed description of conservation measures necessary to assure compliance ...” If the owner/operator follows these measures and they do not work, this then places the LIA in a position of liability due to contributing to the problem. The LIA should identify the problem and require the owner/operator to solve it using his own resources.</p>	<p>GSWCC revised material per recommendation.</p>
<p>Chapter 6</p>	
<p>Page 6-57 You have Tb and Tac noted on 6-57 but only Tb listed on page 2-9. Care to explain the difference?</p>	<p>This was a typo and has been corrected.</p>
<p>Page 6-64 ADDED: “Appropriate sediment storage providing 67 cubic yards of storage per acre drained for each common drainage location shall be provided until final stabilization of the site. The appropriate sediment storage must be available on the site PRIOR to any land-disturbing activities.” - except those land-disturbing activities required to install the initial sediment storage requirements</p>	<p>Added “initial BMPs” to provide clarification.</p>
<p>Page 6-64 Section 5. Since a transmission line project requires only minimal grubbing, a majority of the clearing allows for the roots of vegetation to remain in place. Georgia Transmission is requesting that GSWCC reduce the sediment storage requirements to 33 CY per disturbed acre for infrastructure projects where there is no mass grading.</p> <p>In addition, it is impossible to install all sediment storage devices without some land disturbance. This is true no matter what type of project is being constructed. On long</p>	<p>State requirements require the 67 cubic yards, anything less would need to be looked at on a case by case basis.</p>

<p>transmission lines, sediment storage devices are installed within a drainage area and then the area draining to that point is cleared. Work is then repeated in a rolling progression along the transmission line right of way. We request that this statement be restated to allow for land disturbance to be conducted to install sediment storage devices and to allow for a rolling construction site as described above on linear infrastructure projects that don't have mass grading.</p>	
<p>Page 6-81 Care to identify a “width” for general buffers?</p>	<p>This is regulated by LIAs therefore the width will vary.</p>
<p>Page 6-95 Anchoring Mulch Straw or hay mulch spread with special blower-type equipment may be anchored with emulsified asphalt (Grade AE 5 or SS 1). The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifiers, binders <i>and hydraulic mulch with tackifier specifically designed for tacking straw mulch</i> can be substituted for emulsified asphalt. Please refer to specification Tac-Tackifiers and Binders</p>	<p>GSWCC revised material under guidance recommendation.</p>
<p>Page 6-97 Lime and Fertilizer add italicized text Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. - . <i>Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil.</i> Graded areas require lime application. Soils ean must be tested to determine required amounts of fertilizer is and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate. Mulching Temporary vegetation can, in most cases, be established without the use of mulch, <i>provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment.</i> Mulch without seeding should be considered for short term protection. Refer to Ds1 - Disturbed Area Stabilization (With Mulching Only).</p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 6-103 Lime and Fertilizer Rates and Analysis -add italicized text Lime spread by conventional equipment shall be “ground limestone.” Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve. <i>Fast-acting lime spread by hydraulic seeding equipment should be “finely ground limestone”</i></p>	<p>GSWCC revised material per recommendation, with the exception “shall” was replaced with “should”.</p>

<p><i>spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh sieve.</i></p>	
<p>Page 6-103 Lime and Fertilizer Application Finely ground limestone will be mixed with water and applied immediately after mulching is completed <i>can be applied in the mulch slurry</i> or in combination with the top dressing.</p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 6-105 Seedbed Preparation add italicized text Seedbed preparation may not be required (<i>but is strongly recommended for any seeding process when possible</i>) where hydraulic seeding and fertilizing equipment is to be used.</p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 6-106 add italicized text Planting Hydraulic Seeding Mix the seed (inoculated if needed), fertilizer, <i>soil amendments</i> and wood fiber mulch with water and apply in slurry uniformly over the area to be treated. <i>Minimum application rate of hydraulic mulch fiber should be 1,500 lbs per acre. Rates should range between 1,500 to 4,500 pounds per acre depending on severity of erosion potential and type of HECP. Hydraulically-applied mulch or straw mulch should not be applied in areas of concentrated channel flow.</i> Apply within one hour after the mixture is made.</p>	<p>GSWCC revised material per recommendation, with the exception of should (may)</p>
<p>Page 6-106 add italicized text Mulching Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve <i>75% to 100% soil cover</i>. Select the mulching material from the following and apply as indicated: 1. Dry straw or dry hay of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre. 2. Wood cellulose mulch or wood pulp fiber shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per <i>acre to tack straw</i>. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding. 3. One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper less. Comment for # 3: It would be beneficial for the State of Georgia to differentiate between the various hydraulically- applied mulches available. At a minimum mulches should be differentiated by their functional longevity, vegetation establishment enhancement and erosion control effectiveness. Please see my comments the Slope Stabilization Products (Ss) Section.</p>	<p>GSWCC revised material per recommendation. Added language: When selecting a mulch, DP should consider the mulch’s functional longevity, vegetation establishment enhancement, and erosion control effectiveness.</p>
<p>Page 6-107 add italicized text Anchoing Mulch Anchor straw or hay mulch immediately after application by one of the following methods:</p>	

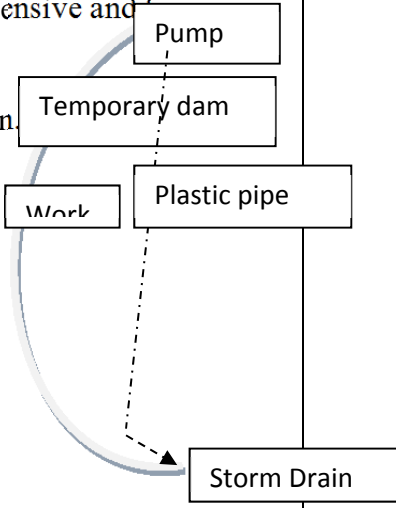
<p>1. Hay and straw mulch shall be pressed into the soil immediately after the mulch is spread. A special “packer disk” or disk harrow (crimper) with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.</p> <p>2. Synthetic tackifiers, binders <i>or hydraulic mulch specifically designed to tack straw</i> approved by GDOT shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer’s specifications. Refer to Tackifiers and Binders Tackifiers-Tac. <i>All tackifiers, binders or hydraulic mulch specifically designed to tack straw binders should be verified nontoxic through EPA 2021.0 testing.</i></p>	<p>GSWCC revised material per recommendation .Did remove GDOT as the approving agency.</p>
<p>Page 6-114 Emphasize even more, the importance of lime and fertilizer into the soil before placing sod on the surface.</p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 6-122 & 6-133 Revised BMP name “Slope Stabilization Products” does not accurately describe the BMP, as it is used not only to stabilize slopes, but channels and shorelines</p>	<p>The BMP name accurately describes is primary function of stabilizing slope, it’s secondary applications are listed in the definition.</p>
<p>Page 6-129 Partial Addition: “Please refer to GSWCC’s STREAMBANK AND SHORELINE STABILIZATION.” - unclear what document it’s referring to</p>	<p>Added Guidance Document, found on GSWCC website</p>
<p>Page 6-133 Slope Stabilization Products Ss add italicized text Performance Evaluation For a product or practice to be approved as a slope stabilization product, that product or practice must have a documented C- factor of 0.087, as specified by GSWCC.</p> <p>Comment 3: This is an arbitrary minimum C-factor and could result in either eliminating the use of cost-effective, lower performing products in the appropriate areas or alternatively result in excessive costs for the State of Georgia due to the use of high performing products where lower performing, more economical products may have sufficed. C-factors should vary based on site specific conditions, please see my comments below on material differentiation.</p> <p>CRITERIA Rolled Erosion Control Products (RECPs) and Hydraulic Erosion Control Products (HECPs):</p> <ul style="list-style-type: none"> • Installation and stapling of RECPs and application rates for the HECPs shall conform to manufacturer’s guidelines for application • Products shall have a maximum C-factor ASTM 6459 – NTPEP, <i>Texas Transportation Institute</i> 	<p>The C-factor was based on results of tacked straw testing as recommended by the TAC.</p> <p>NTPEP has been removed from Manual.</p>

<p><i>(TTI) or other acceptable large scale testing for the following slope grade:</i> Slope (H:V) 3:1 C-Factor (max.) 0.087</p> <p>Comment: This is an arbitrary minimum C-factor and could result in either eliminating the use of cost-effective, lower performing products in the appropriate areas or alternatively result in excessive costs for the State of Georgia due to the use of high performing products were lower performing, more economical products may have sufficed. Small changes in C-factor can mean large differences in annual soils loss. For instance a 0.01 C- factor results in 173 lb/ac of soils loss; 0.05 could mean close to 9,000 lb/ac and 0.087 could mean upwards of 17,000 lb/ac of soil loss. C-factors should vary based on site specific conditions, please see my comments below on material differentiation.</p>	
<p>Page 6-133 Materials – HECP Hydraulic Erosion Control products shall be prepackaged from the manufacturer. Field mixing of performance enhancing additives will not be allowed. Fibrous components should be all natural and (see Comment 5) biodegradable. Products shall be determined to be non-toxic in accordance with EPA-821-R-02-012, method 2021.0 (see Comment 6).</p> <p>Comment 5: The term “all natural” is ambiguous. Biodegradability of material can be established using ASTM 5338 Standard Test Method for Determining Aerobic Degradation of Plastic Materials under Controlled Composting Conditions.</p> <p>Comment 6: EPA-821-R-02-012 details testing methodology for numerous species to measure both the acute (24 – 96 hr test duration) and chronic (96-hr to 8-day test duration) toxicity of water samples (EPA 2002a and 2002b). Acute toxicity tests measure only mortality, while chronic methods measure both mortality and sub-lethal endpoints such as reproduction or growth/biomass. Because the duration of runoff events from even extreme precipitation events (~6 inches/hour) is commonly modeled to be four hours in duration, evaluation of the acute toxicity using exposure durations of 48 to 96 hours, depending on species, is appropriate and conservative. All acute erosion control product testing should be completed using U.S. EPA protocols (EPA 2002a) with the planktonic invertebrate, <i>Daphnia magna</i> (EPA method 2021.0) because this species is suitable for use in waters with a wide range of chemical characteristics (e.g., hardness), is quite sensitive to a variety of toxins, and is commonly used throughout the U.S. and Europe to monitor permitted discharges and test various products. Stormwater runoff samples for these tests are collected for erosion control products using ASTM</p>	<p>Changed “all natural and biodegradable” to “all natural or biodegradable”.</p> <p>Existing content in Manual and testing procedures address this comment.</p>

<p>D 7101-08 Determination of Unvegetated Rolled Erosion Control Product (RECP) Ability to Protect Soil from Rain Splash and Associated Runoff Under Bench-Scale Conditions. This Standard Method is commonly used to gather data on the bench-scale performance of erosion control products. Using this method, simulated rainfall is applied at a specified rate (e.g., 4 ± 0.2 in/hr) with uniform drops from a height of 2.0 m above an inclined (3:1 as h:v slope) test area. The inclined test area consists of a “runoff ramp” with a recessed area at the lower end of the ramp that contains a soil core covered with erosion control product. The rainfall both directly impacts the erosion control product and washes into and through the product from upslope. The water sample runs off the ramp and into a collection container and is then transported to an independent laboratory to perform EPA 2021.0.</p> <p>Following EPA method 2021.0 test completion, an LC50 is calculated for each sample. An LC50 is the standard test endpoint for acute testing and represents a point-estimate of the sample concentration expected to be lethal to 50% of the test organisms. Because an LC50 is a measure of the concentration of a given solution (or constituent of that solution) shown to cause a certain level of toxicity, the lower the LC50 value the greater the toxicity of the solution or compound. For erosion control products the 48-hour LC50 for D.magna should be >100%.</p>	
<p>Page 6-135 NOTES</p> <p>It is the intention of this section to allow interchangeable use of RECPs and HECPs for erosion protection on slopes. The project engineer should select the type of erosion control product that best fits the need of the particular site.</p> <p>Comment 6: Erosion control performance testing of HECPs on slopes has been successfully conducted for many years, using well conceived rainfall simulation and testing techniques at various university and private laboratories. However, the testing conditions have not been standardized across these laboratories, often resulting in confusion from inconsistent laboratory and product comparisons. Some of these tests have demonstrated close correlation with conditions encountered in the field during land disturbing and subsequent rehabilitation efforts; while others have not.</p> <p>Today, as environmental regulations and enforcement are becoming more prevalent and stringent; there is much more interest in evaluating protocol of the various testing laboratories and developing HECP specific performance testing standards. Key agencies such as the EPA and others are endorsing and even requiring use of the Revised Universal Soil Loss Equation (RUSLE) to estimate annual soil loss departing disturbed sites. With increased interest has come more scrutiny and input for improvements and consistency among the various laboratory testing standards.</p>	<p>Existing content in Manual and testing procedures address this comment.</p>

<p>Index and performance properties are used to differentiate between different classes of hydraulic mulches. Index properties are measurements of product attributes indicative of performance characteristics while performance properties are direct measurements of these characteristics. As the hydraulic erosion control industry evolves in its adoption of testing protocols and procedures, several testing procedures have been adopted from the Rolled Erosion Control Product (RECP) industry, these include:</p> <table border="0" data-bbox="42 422 945 609"> <thead> <tr> <th>Physical Index Properties</th> <th>Test Method</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Mass/Unit Area</td> <td>ASTM D6566</td> <td>g/m2 (oz/yd2)</td> </tr> <tr> <td>Thickness</td> <td>ASTM D6525</td> <td>mm (in)</td> </tr> <tr> <td>Ground Cover</td> <td>ASTM D6567</td> <td>%</td> </tr> <tr> <td>Vegetation Establishment</td> <td>ASTM D7322</td> <td>%</td> </tr> </tbody> </table> <p>The following table breaks down index and performance properties for hydraulically applied erosion control products (HECPs) using widely accepted industry test procedures and product differentiation parameters, following the table are descriptions of each parameter and the industry accepted testing procedures' complete titles. See attachment</p>	Physical Index Properties	Test Method	Units	Mass/Unit Area	ASTM D6566	g/m2 (oz/yd2)	Thickness	ASTM D6525	mm (in)	Ground Cover	ASTM D6567	%	Vegetation Establishment	ASTM D7322	%	
Physical Index Properties	Test Method	Units														
Mass/Unit Area	ASTM D6566	g/m2 (oz/yd2)														
Thickness	ASTM D6525	mm (in)														
Ground Cover	ASTM D6567	%														
Vegetation Establishment	ASTM D7322	%														
<p>Page 6-142-147 Why is all this permittee stuff under structural practices?</p>	<p>This section has been deleted.</p>															
<p>Page 6-142. Primary Permittee: (Re: any type of construction) Is a blue card holder required when work is minimal, but inside work is active?</p>	<p>This section has been deleted. A blue card is required for any land disturbance being regulated by the O.C.G.A § 12-7-1 and/or the NPDES permits.</p>															
<p>Page 6-142 It may be best to reference the sections in the Permits regarding inspection & retention of records requirements since the requirements could be revised periodically</p>	<p>Inspections and records requirements have been removed.</p>															
<p>Page 6-143. Secondary Permittee: (Re: any type of construction) Is a blue card holder required when work is minimal, but inside work is active?</p>	<p>This section has been deleted.</p>															
<p>Page 6-145. Tertiary Permittee: (Re: any type of construction) Is a blue card holder required when work is minimal, but inside work is active?</p>	<p>This section has been deleted.</p>															
<p>Page 6-147 ADDED: "These records must be maintained at the permittee's primary place of business once the construction activity has ceased at the permitted site." - need to add "or at a designated alternative location" per the NPDES Permit.</p>	<p>This section has been deleted.</p>															
<p>Page 6-150 In paragraph Design Criteria, second line, add a space between the 2.0/ cfs</p>	<p>Corrected</p>															
<p>Page 6-150. In first paragraph Spacing. Last sentence, add a space between Figure/6-10.1)</p>	<p>Corrected</p>															
<p>Page 6-150. In Stone check Dams, Add a space between Figure/6-10.2)</p>	<p>Corrected</p>															

<p>Emphasize more strongly, that the buried ends of the ‘wings’ must be higher in elevation than the center of the dam. Water should not flow around the wings.</p>	<p>Comment addressed.</p>
<p>Page 6-152 It would be helpful to include list of BMPs to be used in conjunction w/check dams (other than a flock log I have no idea what these would be)</p>	<p>It would be up to the Design Professional.</p>
<p>Page 5-157. The organic nature of the filler in compost socks will cause the sock to float off the surface of the soil. You must provide more anchors. Five-foot spacing is too far apart.</p>	<p>Detail has been updated to require a maximum spacing of 4 ft.</p>
<p>Page 6-159 add italicized text Category 1 (0-5 efft/s)</p> <p>A vegetated lining may be used to stabilize channels with a velocity of 0 – 5 efft/s. Temporary erosion control blankets or sod shall be used on all channels and concentrated flow areas to aid in the establishment of the vegetated lining. Refer to specifications Ds3 - Disturbed Area Stabilization (With Permanent Vegetation), Ds4 - Disturbed Area Stabilization (With Sodding), and Mb - Matting and Blankets. SS – Slope Stabilization Products. Hydraulic Erosion Control Products (HECPs) are not intended to be applied in channels, swales or other areas where concentrated flows are anticipated, unless installed in conjunction with Rolled Erosion Control Products (RECPs). <i>HECPs used in conjunction with RECPs should have index and performance properties equal to a Type 3 Hydraulic Mulch, as defined in Slope Stabilization Products Ss.</i></p> <p>Category 2 (5 – 10 efft/s) Vegetated Lining</p> <p>If a vegetated lining is used in channels with velocities between 5 – 20 efft/sec or shear stresses between 2 – 16 psf (0.1-0.8 kN/m²), Turf Reinforcement Matting (TRM) shall be used. TRM is permanent geosynthetic erosion control matting that is used in channels to stabilize the soil while permanent vegetation is rooting, and to provide additional long-term protection. Velocities in channels when flowing at the bankfull discharge or the 25 year frequency discharge, whichever is the lesser, shall be used in determining the appropriate TRM for stabilization of the channels.</p> <p>Comment: Bankfull discharge is typically accepted to be around the 2-year frequency flow. It is recommended the more conservative higher flow be used, rather than the lesser.</p>	<p>Changed cfs to ft/s</p> <p>Manual does not reference a Type III Hydraulic Mulch</p> <p>Revised Manual to state:</p> <p>Velocities in channels when flowing at the bankfull discharge or the 25 year frequency discharge, whichever is the greater, shall be used in determining the appropriate TRM for stabilization of the channels</p>
<p>Page 6-162 ADDED: “Pad Length - The gravel pad shall have a minimum length of 50 feet for most stand alone or infrastructure projects. When the construction of a commercial or residential building is</p>	<p>Revised per comment.</p>

<p>less than 50' from the paved access, the length shall be from the edge of existing pavement to the permitted building being constructed.” - for simplicity, pad length should be the same for every project, unless it cannot be constructed due to existing pavement (no need to specify stand alone, infrastructure, commercial/residential building)</p>	
<p>Page 6-162. Washing. The location of the tire wash area should be well upslope from the street. Long trucks with trailers will extend out into the street while the rear wheels are being washed</p>	<p>All sites do not permit this.</p>
<p>Page 6-168 Stream Diversion Channel. This practice of digging another bypass route through an adjoining area results in even more disturbed area.. Further, the discharge end of this bypass will certainly cause stream bank erosion at the intersection. Far simpler, less expensive and less damaging would be to:</p> <ol style="list-style-type: none"> 1. Block the original stream upstream of the work area. 2. Use a pump and plastic pipe to channel the flow to a down stream location. <p>As these projects are short termed, this is a much more effective approach.</p> 	<p>This approach does not follow federal standards (EPA fish passage) and may require additional permits.</p>
<p>Page 6-168 ADDED: Stream Diversion Channel “A Stream Buffer Variance from the Georgia EPD is required” – may not be required (if project is less than one acre and exempt from the Act)</p>	<p>GSWCC revised material per recommendation.</p>
<p>Page 6-172 A 4' top width for a temporary diversion channel seems excessive. Between the 4' width, side slopes, channel and side slopes this becomes a very intrusive “structure”.</p>	<p>Has not changed from the current Manual.</p>
<p>Page 6-179 Downdrain Pipe and Inlet Detail. Needs more detail such as Storm Drain Outlet Protection on lower end</p>	<p>Please refer to the To Be Shown on the Erosion Control Plan under Dn1 specification.</p>

<p>Page 6-186 Skimmers As mentioned earlier, the “Fss” implies a “Faircloth Surface Skimmer” This sounds like a GSWCC endorsement, something you don’t want to do. If the unit fails, the owner could say that you endorsed this particular product and thus are somewhat liable for any damages he might incur, including legal fees. So perhaps another name like “Pond Surface Skimmer” would be more safe.. Secondly, there are at least several other ‘similar’ skimmers. And Third, a totally different device the “Thirsty-duck” has been evaluated by the St. Anthony Falls Hydrology Lab, a nationally recognized group that does governmental evaluation of hydraulic products.</p> <p>One very important benefit of using skimmers is that it maintains the pond in a mostly “dry” condition, thus providing more storage capacity for new rainfall events. Thus the size (volume) could be reduced.</p>	<p>Changed code from Fss to Sk.</p>
<p>Page 6-186 Error in “CONDITIONS” paragraph, last two sentences are redundant, word-for-word restatements of the prior two sentences. Probably accidentally left in there. Additionally, the third to last sentence is a fragment, “traps and detains water in the basin.”</p>	<p>This section has been revised to address comments.</p>
<p>Page 6-187. Skimmers. Where is the Appendix A and Appendix B, ones I think were supplied by Joel Sprague of TRI-Environmental.</p>	<p>This section has been revised to address comments.</p>
<p>Page 188 requires <u>someone</u> to provide <u>somebody</u> a packing list, etc. This is confusing. Who provides and to whom? (top left)</p>	<p>This section has been revised to address comments.</p>
<p>Page 6-188. Skimmer. The addition of a valve to provide a variable flow rate is a very desirable feature. This ball-valve is added between the flexible coupling and the wall of the discharge system. I install a valve on all of my installations.. Thus flow can be controlled without having to lift the skimmer out of the water.</p>	<p>This section has been revised to address comments.</p>
<p>SKIMMER SPECIFICATION Definition It is good for controlling sediment that you require surface drains in all sediment ponds, traps and basins with outlet structures. I know that in North Carolina there are probably 20 or 30 sediment traps built for every sediment basin built. The nature of the topography is such that the drainage areas to trap locations is small enough as to not require an outlet structure. I know that several states have not required surface drains for trap and I believe they will not see much improvement in water quality as a result.</p> <p>Drain at a constant rate. I would say a “nearly constant rate” as stated in the next paragraph.</p>	<p>“Nearly” added to constant rate</p> <p>Requires an emergency spillway per design criteria</p> <p>Change to “relatively clean runoff”</p> <p>Time to drain is a requirement “to be shown on the</p>

Design Criteria

It is very important to have an over flow since the skimmer will drain the basin in a trickle and does not replace the riser or spillway for overflow.

I would not say “immediately begin removing relatively clear water” but say “clean” runoff. Georgia is like NC and has lots of clay soils that will make the outflow turbid even when drained from the surface.

I do not understand “thereby reduce the retention times as compared to using traditional outlets”. The skimmer should completely drain the basin in the required time. Is it that the stone used in conventional outlets clogs and so does not drain the basin? Or are you intending to drain the basin in just a few hours?

Product Design

I would stress that the designer should use the makers method of sizing the skimmer for a particular sediment basin or trap. Anything you publish could be out of date immediately or the maker may make changes.

Dewatering Rates

It is a good idea to state on the plans each basin’s volume and the time to drain it. The designer may also want to specify the particular brand and size. That way the contractor can check to make sure he is getting the correct size for the particular volume. Over the years I have encountered many examples where the contractor could not tell what size was needed or got the wrong size from the plans. In one case the generic illustration on the plan indicated a 6” when in fact he only needed a 2”.

I would emphasize that one maker’s size does not equal another maker’s size in terms of flow rate. It may only indicate an equal inlet size. It does not tell how deep under the water surface the inlet is or the flow characteristics of the skimmer: is it a constant rate regardless of the water depth (and the resulting angle of the barrel) or is it really a siphon where the flow rate varies and greatly increases as that angle changes? Siphons will drain most of the basin’s volume in just a few hours.

Floation Requirements

Just requiring vent holes will not insure gravity flow instead of a full pipe flow and the skimmer acting as a siphon. The vent holes have to be in the right location to achieve gravity flow.

plans under Sk and basin size as well.”

“Under” to be shown on the erosion control plan brand and size of skimmer are being included as well

Use floating surface skimmers of PVC material (schedule 40 or greater or other appropriate materials. added

Skimmer dimensions (including orifice and head size)

“The skimmer remains the property” deleted entire paragraph.

<p>“Inlet or orifices may be submerged not greater than 6 inches below the water surface”. Is this measurement the top, center, or bottom of the inlet? Is your intent to drain the best quality water at that depth? The formula for the flow through an orifice uses the head measured at the center of the inlet. For example, the skimmer I sell that seems to fit the most common basin volume has an inlet with the center of the inlet 4” under the water and the bottom of the inlet 6” under the surface. Large and huge basins to be drained in 3 days require larger inlets suspended deeper than 6” in order to create a rate of flow sufficient to drain it in 3 days. The alternative is to use multiple, smaller skimmers to provide the necessary capacity but that increase the cost. I suggest you ask those that have performed research on sediment basins if it matters. My visual observation has been that the currents generated by flow through the inlet can stir up sediment near the inlet and prevent it from settling.</p> <p>Materials- PVC plastic is good material for skimmers but I do not think you should exclude other, possibly more durable materials that may be harder for the makers to work with. Does that require that everything in the skimmer be made of PVC?</p> <p>Quality Assurance - What is included under the “skimmer dimensions”? The orifice and the head on it should be included.</p> <p>Additional Information - Is the shutoff valve to be used to control the flow rate?</p> <p>“The skimmer remains the property of the contractor...” Do you really want to get involved in this battle?</p> <p>Conclusion If you have not already done so, I recommend you contact researchers that have years of experience with sediment basin experiments and use, not just the surface drain but with other aspects of sediment basin design and use. They are Dr. Richard McLaughlin in the Soil Science Department at North Carolina State University and the staff of NCDOT Roadside Environmental. Will solid baffles still be used? Research at North Carolina State University has demonstrated that porous baffles provide superior settling efficiency.</p>	<p>Yes baffles can still be used.</p>
<p>In our opinion, using only a skimmer for the principle spillway is inadequate. The principle spillway should be designed to handle the 2-year 24-hour storm without causing the emergency spillway to overtop, as the current manual states. A 2-year storm would exceed the capacity of a skimmer and cause the emergency spillway to overtop. Routinely discharging over the emergency</p>	<p>A perforated riser pipe is not always used as the principle spillway for impoundments. Skimmer requirement is from EPA, please refer to the</p>

<p>spillway is not good practice; therefore we recommend using a traditional perforated riser pipe in conjunction with a skimmer. The upper half of the riser pipe should be perforated and surrounded by #57 stone. The discharge end of the skimmer should be coupled to the riser pipe below the bottom of the basin.</p>	<p>NPDES permit.</p>
<p>Page 6-191 Gabions, Typical Installations Gabions are not used for “river training (whatever that means), Instead they are used to stabilize underwater stream channels and also stream banks having steep slopes subject to intense wave erosion.</p>	<p>“River training” was removed</p>
<p>Page 6-194 Grade Stabilization Structure (Straight Drop Spillway) Be sure to mention that an extension of the underlying fabric out beyond the end of the pad will reduce scour at that point</p>	<p>The design professional is responsible to design bmp’s that work on site in accordance with site conditions.</p>
<p>Page 6-203 entire is spelled wrong (top right) Also the top width of the rock dam should be included along with rip rap size.</p>	<p>Typo addressed. Figure 6-18.1 shows a minimum of 6 feet.</p>
<p>Page 6-203</p> <ul style="list-style-type: none"> • Under “PURPOSE” paragraph I believe the new text should be worded “or as an outlet for sediment traps”, if that is the intent. Is this intended to reference new practice Sd4? • Under “CONDITIONS”, the added text “on project sites disturbing 5 acres or less” seems to indicate that you wouldn’t be able to use this on a project that disturbs 6 acres. It seems to me that a more applicable measurement would be the area draining to the filter dam, not necessarily the acreage of the project site. My sites are often much larger than 5 acres but drain to multiple locations, each drainage area being less than 5 acres. 	<p>Wording being changed to suggestion “or as an outlet for sediment traps” This is intended to reference Sd4.</p> <p>“CONDITIONS”, has been revised and now states, “This practice is applicable for use in small channels which drain 50 acres or less.”</p>
<p>Page 6-209 Retrofitting – Design Criteria. The top of the rockpak should be elevation as the height of the sediment storage elevation</p>	<p>Please refer to Chapter 6 of the Manual for full BMP description.</p>
<p>In Chapter 6 page 6-209 and 6-211 where it says "Structures are temporary and shall be removed when disturbed areas have been permanently stabilized." Please remove that stipulation. It does more harm and disturbs more earth removing the RT than it would to just leave it. What possible benefit other than aesthetic can removing it offer?</p>	<p>Removal ensures compliance with state requirements.</p>
<p>Page 6-210 Under Silt Control Gate (f) discharges should be discharge. Also (see figure 6-19.4) is shown under Silt Control Gate, but there is no figure 6-19.4</p>	<p>Typo addresses. Control gate detail will be added. Figures & numbers corrected.</p>
<p>Pages 6-226 – 6-229 Sediment Barrier: New types of sediment barriers specified for sensitive areas, etc. Are Sd1-A, Sd1-B and Sd2-C no longer applicable?</p>	<p>Sd1-A,B,C have been changed to be represented by Sd1-S and SD1-NS for sensitive and nonsensitive areas. Testing has shown different results from prior requirements.</p>
<p>Page 6-226 Sediment Barrier Performance Evaluation. Define sensitive and non-sensitive areas. What is the source for the 0.045 P value for non-sensitive and 0.030 values for sensitive areas?</p>	<p>The source is the BMP testing is TRI under specification from the Technical Advisory Committee (TAC). The P-factors are results of testing.</p>

<p>The most important factor in sediment barrier installation is that the path MUST be on the contour. ANY deviation of this layout will result in water accumulating at the lowest point. And fully utilizes the entire length of the fabric. Wings on the ends are desirable. If an irregular terrain is encountered, then the fence must be broken up into small sections, again, each on a separate constant contour.</p> <p>A wedge of straw, hay or other fibrous material placed immediately upslope of the sediment barrier will trap most of the heavy sediment, and reduce the potential problem of tip-over. The goal is to remove the horizontal earth –pressure from against the fabric</p>	<p>Manual still states sediment barriers are to be installed on the contour.</p>
<p>Page 6-226 This page provides what seems like extraneous information about P-factor. This is confusing. Who specifies what kind of product, who verifies it? The documentation refers you to www.gaswcc.org under documents, but does not say what to look for. There is no info under P (for p-factor) or S for Sediment barrier.</p>	<p>The GSWCC approves BMP’s based specified testing procedures. The list will be maintained on our website due to ever evolving BMP’s.</p>
<p>Page 6-226 (bottom right) refers you to figure 6-20.2 for overlap criteria, but the figure is for a brush barrier.</p>	<p>Figures to be redone and overlapping figure to be inserted</p>
<p>Page 6-226</p> <ul style="list-style-type: none"> • Has any consideration been given to allowing silt fence to be used as a sediment storage device, and incorporating an acceptable calculation to be shown in the plans? There are some projects, specifically long linear ones where much of the runoff sheet flows off-site, with minimal disturbed area per linear foot of silt fence, where using one of the allowable sediment storage devices (Sd2 (excavated inlet sediment trap), Sd3, Sd4, Rt) does not make any sense, would involve actually disturbing more area than would otherwise be disturbed, and would be cost prohibitive. Even if there is a requirement for more than just a single row of silt fence, say two rows of type S silt fence when used as a sediment storage device, or include a requirement for a buffer zone after the silt fence, this would greatly improve design flexibility for some of my projects. • Under “DESIGN CRITERIA”, second paragraph “For longer slope lengths, slope interrupters must be used”. What is a slope interrupter? Is this just another row of silt fence or something else? 	<p>The NPDES permits allow for alternative methods of sediment storage certified by a design professional.</p> <p>Yes another row of silt fence would be considered a slope interrupter.</p>
<p>Page 6-227</p> <p>Are the coding symbols “Sd1-A”, “Sd1-B”, and “Sd1-C” dropped, replaced by “Sd1-Ns” and “Sd1-S”? Will the term type-A/B/C silt fence be dropped from the details as well, or are these material requirements and are thus still relevant? If so, will they be coordinated with “Sd1-Ns” and “Sd1-S”?</p>	<p>There will be no reference to types A,B and C silt fence. Coding symbols will be updated to reflect the change.</p>

Page 6-227 Construction Specifications – Type Ns Sediment Barrier Capitalize the Ns to NS	Typo corrected.
Table 6-20.1 It appears that this table only applies when a storm water disposal system is not part of the project. This seems rather excessive that on a 5:1 slope, sediment barriers would need to be placed every 15 ft, particularly on a transmission line project where no mass grading is proposed.	It would not be 15ft it would be 25ft. This requirement has not changed.
Page 6-227 Georgia Transmission Corporation (GTC) has successfully used mulch berms on both substation and transmission line projects as sediment barriers. Mulch berms are made of coarsely shredded vegetation from the clearing operations installed in the same way as brush barriers. Rather than waste this material, it is used quite successfully in conjunction with silt fence on our substation projects and alone on transmission line projects. GTC requests that you consider adding this BMP to the Manual for use. Mulch berms should also be allowed to remain after the project completion to improve post construction storm water conditions. Unlike man-made products, this BMP decomposes and therefore does not become a hazard, etc.	Please refer to Chapter 6 of the Manual for full BMP description.
Page 6-228 Installation AGAIN, the path Must be “on the contour”	Under installation First sentence added “Sediment barriers should be installed along the contour. “
Page 6-228 Trenching Method Since when is the ‘trench’ 6 inches wide?	Added 2”- 6” wide. (Under trenching method second sentence in the paragraph.)
Page 6-229 References: Skip a row between the Carpenter and the Fifield entries.	Typo corrected.
Pages 6-231-232 After all the discussion about Sd1-Ns and Sd1-S there are details for Sd1-type A figure 6-20.3 and Sd1 type C figure 6-20.4 What about a detail for Ns and S?	These are being replaced with Sd1-S and Sd1-NS. Details will be updated as well.
Page 6-236 It seems like adding performance requirements would be confusing? How do you verify performance?	Performance based testing as specified in the GSWCC testing procedures.
Page 6-236 <ul style="list-style-type: none"> Consider adding a separate coding symbol and a detail for excavated inlet sediment traps. 	Any approved structural sediment trap could be de-excavated for storage. The design professional is responsible for the detail.
Page 6-242 Sketch of Pigs in Blanket A gap must be left between the pigs and the curb to permit water overflow to enter the drain. Otherwise the street will impound water creating a driving hazard. Water can also overflow the top of the catch basin and exit on the back side.	Is shown in detail redraw.
Page 6-243 Figure 6-21.6 Does Virginia still endorse this BMP? If not, then remove it.	This is still in the Virginia E&S Control Handbook.
Page 6-247 Seems unclear if Perforated Risers are still allowed or if Skimmers must be installed.	See NPDES permits as of Sept 24, 2013.
Pg 6-247 through 6-251 refer you to figures that aren’t shown – there is no figure 6-22.4, 6-22.5, 6-22.6 , 6-22.7, 6-22.8, 6-22.9	Figures are in the process of being redrawn and will be numbered accordingly.
Page 6-257 Second paragraph of “VOLUME” section, a couple of spelling errors in the last sentence on page 6-257.	Typos corrected.

<p>Page 6-257(bottom right) Something seems wrong with the last sentence in addition to spelling errors (other, lower). I'm not sure what it is trying to tell me.</p>	<p>Sentence has been corrected.</p>
<p><u>Page 6-258</u></p> <ul style="list-style-type: none"> • If the reference in the “PURPOSE” paragraph for filter dams (page 6-203) as outlets for sediment traps is indeed with reference to Sd4, may want to mention this in new practice Sd4 somewhere, maybe in the “ROCK OUTLET” section. • First sentence on the page has a spelling error 	<p>Typo corrected.</p>
<p>Page 6-260 Why does a seep berm (permanent?) need a top width of 12 inches and a temporary diversion dike needs 4'?</p>	<p>Seep berms and diversions are two separate BMPs serving two different functions, therefore the design is different.</p>
<p>Appendix A – Does this mean the Rational method is no longer a valid determination of flows for small watersheds?</p>	<p>Yes they can still be used but NRCS now supports Win Tr55 and the revised manual provides you with a link.</p>
<p>Page A-2-58 to a-2-60 I think you delete this too. Who deals with “small” <2000 acre drainage basins in this manner?</p>	<p>Pages are being removed.</p>
<p>Page 6-269 In a three-pipe culvert system, the middle pipe should be installed at a slightly lower depth, so as to keep the main flow in the middle of the channel.</p>	<p>Width and stream channel may not always allow this to happen.</p>
<p>Page 6-284</p> <ul style="list-style-type: none"> • Under “CONDITIONS”, second paragraph: if a turbidity curtain can't be used for perimeter control in inundated areas, such as a wetlands, than what can be used as perimeter control? • Under “DESIGN CRITERIA”, second paragraph: reference is made to “Sd1-C”. Is this coding symbol still applicable as it appears to have been removed from the Sd1 section? 	<p>It can be used as a supplement to perimeter control BMPs at the water's edge.</p> <p>Sd1-C changed to Sd1-S (Sensitive)</p>
<p>We would like you to consider adding additional slope application criteria for the HECP section (could be placed under materials as a requirement).</p> <p>4:1 or flatter slopes = C-factor of 0.087 4:1 – 3:1 slopes = 0.05 C-factor 3:1- 2:1 slopes = 0.02 C-factor 2:1 slopes or greater = 0.01 C-factor</p> <p>Slope C-factor tested through NTPEP on a 3:1 slope test ASTM D6459</p> <p>We would suggest this change to avoid issues where standard mulches are used on steep slopes (because they meet 0.087) but would typically fail under those conditions. By expanding the HECP categories you can assure that the proper products with the correct performance are used, thus reducing failures.</p>	<p>As in above comment the TAC decided to use tacked straw as the standard for setting a c-factor. The test was on a 3:1 slope. The GSWCC specification gives a minimum number for slopes of 3:1 or greater at .080 with the readjustment for terminal velocity. It is up to the design professional to specify slope stabilization on lesser slopes.</p>

<p>Should add a bmp for concrete washout that gives details on the best methods and that can then be incorporated into the plans and it would make it easier for the jurisdictions to enforce. It is a common practice on construction sites to washout on the ground or even sometimes in a storm basin but here in Newnan we require them to use a bag or other type of containment. The only problem I have is there are so many different methods and no one is testing these and giving good direction on which is best. We prefer the roll off containers that are made especially for concrete but there also needs to be a bmp for smaller sites as well and one that filters.</p>	<p>See NPDES permits as of Sept 24, 2013.</p>
<p>In the current draft manual, Section Sd3 still allows the option of using a stand-alone riser pipe as the principle spillway. We consider Section Sd3 as currently written to be good practice.</p>	<p>Reference the Sd3 permit for skimming off the top.</p>
<p>On the construction exit. Can the committee provide some language about alternate methods to a Construction exit for really small sites? Sometimes for small areas, the manual will still want a construction exit, but the land or small project size doesn't lend itself to provide one. Maybe an alternate BMP for a reduced Co, like a 20x15 stone pad for a wash down area so mud can be washed off before the truck leaves on sites less than 0.5 acre, etc</p>	<p>See new language under Co</p>
<p>I do not have any connections to these products, but as a Land Disturbance Instructor wanted to see if any of the following products might have any erosion/sediment control applications in N GA:</p> <ol style="list-style-type: none"> 1. Porous baffles for Sediment basins and traps (see attached NC State article). 2. Mulch pillows/bag stacked for check dams or as Sd1 on asphalt (like compost sock). Has PVC coated nylon w 0.25" openings 32"x32" w handles and skirt for trenching in (like silt fence) and staking w sod pins. Estimated cost @ \$15 ea and reportedly handles 50 gpm/sqft flow rates. Produced by Robert Hood & Sons 770-887-3063, 565 Hood Drive, Cumming Dr, 30041. Stanley Sam Hood 404-886-9690 & Karen Karen@hoodslandscaping.com HoodLandscaping_Erosion@yahoo.com, . 3. Gator guard foam log (see attached literature and www.gatorguard.com or 877-GATORME or 877-428-6763). 	<ol style="list-style-type: none"> 1. As long as a baffle serves its purpose it does not matter what it is made from as long as it has the appropriate design on the plans. 2,3. For check dams or sediment barriers if they pass the required testing they can be used, otherwise must be certified as an alternative BMP.
<p>Any shot at offering up useful commentary on tree protection?</p>	<p>Tree protection BMP will be added.</p>