

# Level 1B: Recertification

Education & Training Certification Requirements  
for Persons Involved in Land Disturbing Activities

Sponsored By





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# Education & Training Certification Requirements for Persons Involved with Land Disturbing Activity

## Level 1B Recertification

8:00 a.m.	2016 GESA & NPDES Updates
8:30 a.m.	2016 Green Book Updates
9:45 a.m.	Break
10:00 a.m.	Stream Impacts
11:15 a.m.	Role of the Inspector
12:00 p.m.	Adjourn



Insert Tab 1

2016 GESA/NPDES Updates

Back of Tab

GESA & NPDES



2016 UPDATES

**GSWCC** Level 1B Recertification July 2016

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Overview of Updates

2

**GESA**

- HB 397
- SB 101



**NPDES**

- 2013 Permit Updates
- 2016 Permit Revisions



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**GESA**

Summary of Changes

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### HB 397

- Amended the definition of “Manual for Erosion & Sediment Control in Georgia”
  - ‘Manual for Erosion and Sediment Control in Georgia’ or ‘manual’ means the published guidance of the commission governing the design and practices to be utilized in the protection of this state’s natural resources from erosion and sedimentation which shall be based foremost upon sound engineering principles and repeatable bench and field testing of structural and vegetative best management practices and which shall have the annual approval of the Erosion and Sediment Control Overview Council established pursuant to Code Section 12-7-7.1.

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### HB 397

- Revised subsection (f)
  - There shall be an Erosion & Sediment Control Overview Council which shall approve the Manual for Erosion & Sediment Control in Georgia prior to publication by the commission
  - The council shall provided guidance on the BMPs for implementing any erosion and sediment control plan
  - The council shall meet at all times necessary to approve any changes or updates to the manual
- Revised subsection (f)
  - The council is composed of nine (9) members
  - Chairperson
  - One member of the House
  - One member of the Senate
  - One employee from the each of the following:
    - GA DOT
    - GA EPD
    - State & Road Tollway Authority
    - Professional Engineer
    - Highway Contracting Industry Representative
    - Electric Utility Industry Representative

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### SB 101

- Added 3 new definitions
  - (2.1) Coastal marshlands
  - (10.1) Maintenance
  - (13.1) Serviceable
- Amended Code Section 12-7-6
  - (17)(A) There is established a 25 foot buffer along coastal marshlands, as measured from the coastal marshland-upland interface, as determined in accordance with O.C.G.A. 12-5-4(4), the ‘Coastal Marshlands Protection Act of 1970, and the rules and regulations

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## Maintenance

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- 'Maintenance' means actions necessary or appropriate for retaining or restoring a currently serviceable improvement to the specified operable condition to achieve its maximum useful life
- Includes emergency reconstruction of recently damaged parts of a currently serviceable structure so long as it occurs within a reasonable period of time after damage occurs
- Does not include any modification that changes the character, scope, or size of the original design

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## Serviceable

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- 'Serviceable' means usable in its current state or with minor maintenance but not so degraded as to essentially require reconstruction

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## NPDES

Summary of Changes – 2013  
Permit Revisions – 2016

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## Definitions

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<ul style="list-style-type: none"> <li>□ Revised Definitions                             <ul style="list-style-type: none"> <li>□ Common Development</li> <li>□ CPESC</li> <li>□ Design Professional</li> <li>□ Final Stabilization</li> <li>□ Infrastructure Construction</li> <li>□ Sub-contractor</li> <li>□ Tertiary Permittee</li> <li>□ Utility Company</li> <li>□ Warm Water Fisheries</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>□ New Definitions                             <ul style="list-style-type: none"> <li>□ Normal Business Hours</li> <li>□ Roadway Projects</li> </ul> </li> <li>□ Removed Definitions                             <ul style="list-style-type: none"> <li>□ Primary Trout Waters</li> <li>□ Secondary Trout Waters</li> </ul> </li> </ul>
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Please refer to the 2013 NPDES Fact Sheet in the Resource Information section for a complete listing of all of these definitions

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## Infrastructure Eligibility

11

- Coverage under this permit is not required for infrastructure construction projects that consist solely of routine maintenance for the original purpose of the facility that is performed to maintain the original line and grade and the hydraulic capacity
- Must comply with the following conditions:
  1. No mass grading
  2. Stabilized by the end of each day
  3. Duration of < 120 calendar days
  4. Final Stabilization at the end of the project

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## Impaired Stream Segment

12

Discharges into, or within One Mile Upstream of and within the Same Watershed as, Any Portion of a Biota Impaired Stream Segment



- Impaired Stream Segment(s) with criteria:
  - **Bio F** (Impaired Fish Community) and/or
  - **Bio M** (Impaired Macroinvertebrate Community) within
  - **Category 4a, 4b, or 5** and the potential cause is
  - Either "**NP**" (nonpoint source) or "**UR**" (urban runoff)

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### Impaired Stream Segment

13

- The ES&PC Plan must include at least four (4) BMPs from Part III.C.2. (a) – (u) for those areas of the site which discharge to the Impaired Stream Segment
- The requirements of Part III.C are not applicable to tertiary permittees with an Erosion, Sedimentation and Pollution Control Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre.

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### TMDL Implementation Plan

14

#### Total Maximum Daily Load

The ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan if the TMDL Implementation Plan for sediment was finalized at least 6 months prior to the permittee's submittal of the NOI

The list of TMDL Implementation Plans can viewed on the GA EPD website @ [www.epd.georgia.gov](http://www.epd.georgia.gov)

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### Stream Buffer Exemptions

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- Ephemeral Streams – excluding trout streams
- Construction of bulkheads on
  - Lake Oconee & Lake Sinclair
- Maintenance, repair and/or upgrade of SWCD watershed dams when under the technical supervision of USDA-NRCS

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### Stream Buffer Exemptions

16

- Right-of-Way Posts, Guy Wires, Anchors, Survey Markers and the replacement or maintenance of existing utility structures (1) undertaken by any EMC/MES or public utility under the regulatory jurisdiction of the PSC and/or FERC or (2) undertaken by DOT, GA Highway Authority, State Road & Tollway Authority or any municipality or county.

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### 7-Day Letter

17

- For Stand Alone, Common Development & non-linear Infrastructure construction activities, the “design professional” who prepared the ES&PC Plan must inspect the installation of **the initial sediment storage requirements and perimeter control BMPs within seven (7) days after installation.**
- The “design professional” must report the results of the inspection to the permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report.

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### 7-Day Letter

18

- Alternatively, for linear Infrastructure construction activities, the “design professional” who prepared the ES&PC Plan must inspect the installation of the sediment storage requirements and perimeter control BMPs for the **INITIAL PHASED SUB-PART OR SEGMENT (> 10% of total disturbed area but not < one (1) acre)** of the linear infrastructure project and **ALL SEDIMENT BASINS** within seven (7) days after installation.
- The “design professional” must report the results of the inspection to the permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report.

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### Surface Withdrawal

19

- When discharging from sediment basins and impoundments, all primary permittees and tertiary permittees are required to utilize outlet control structures that withdraw water from the surface, unless infeasible
- *If not feasible, a written justification explaining this decision must be included in the Plan*
- This requirement is not applicable for construction activities where the NOI was submitted prior to January 1, 2014

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### Inspections

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- Primary permittees and tertiary permittees must measure rainfall once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday until a Notice of Termination is submitted.
- For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, certified personnel (provided by the primary, secondary or tertiary permittees) must inspect these areas of the site at least once per month until a Notice of Termination (NOT) is submitted.

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### Qualified Sampling Events

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- (1) The first rain event that reaches or exceeds 0.5 inch with a storm water discharge that allows for sampling during normal business hours after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations.
- (2) The first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT.

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## Sampling Reports

22

- Reports should include the following:
  - The rainfall amount, date, location and time of sampling
  - The name of the certified personnel who performed the sampling
  - The date and time the analyses were performed
  - The name of the certified personnel who performed the analyses
  - References and written procedures
  - Results of the analyses, including instrument readouts
  - Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU"
  - Certification statement that sampling was conducted per the plan

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## NOT Submittal

23

- Infrastructure
  - The primary permittee may submit a Notice of Termination for each phase of the project, not to exceed four (4) phases
  - The disturbed acreage for each phase must be equal to or greater than 25% of the total estimated disturbed acreage for the infrastructure project. Except for the final phase, the disturbed acreage for the final phase must be equal to or greater than 10% of the total estimated disturbed acreage for the infrastructure project.

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## NOT Submittal

24

- The primary permittee of a **Common Development** may submit a Notice of Termination, even if all planned construction activities have not been completed, if and only if:
  - Construction activities have ceased for ninety (90) days
  - Final stabilization has been implemented by the primary and all secondary permittees
  - All secondary permittees have submitted a NOT
  - The site is in compliance with the Permit
  - All temporary BMPs have been removed

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## Tertiary Permittee

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- If the permittee's total land disturbance with the construction site is less than 5 acres and the total land disturbance within the individual lot(s) is less than 1 acre, the permittee may submit a single NOI and ES&PC Plan for a typical individual lot(s).
- If the total land disturbance within the tertiary permittee's construction site is less than five (5) acres, tertiary permittees may also submit a Notice of Termination for each individual lot resulting in land disturbance of less than one (1) acre with a Plan for a typical individual lot within the tertiary permittee's construction site.

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## NOI

26

- The NOI for primary permittees and tertiary permittees must include the following certification:
  - "I certify that to the best of my knowledge and belief, that the Erosion, Sedimentation and Pollution Control Plan (Plan) was prepared by a design professional, as defined by this permit, that has completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission in accordance with the provisions of O.C.G.A. 12-7-19 and that I will adhere to the Plan and comply with all requirements of this permit."

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## NOI

27

- The Notice of Intent form was updated in 2015 to include the permit fee form

**II. CONSTRUCTION SITE ACTIVITY INFORMATION AND FEE CALCULATIONS**

Start Date: \_\_\_\_\_ Completion Date: \_\_\_\_\_

Is this construction activity regulated by a certified Local Issuing Authority?  Yes  No

If Yes, Name of Local Issuing Authority: \_\_\_\_\_

**NOTE:** Instructions for fee calculations have been provided on Pages 6-7

	Acres	X	Fee	TOTAL FEE
Acres Disturbed on the project 11/6th acres regulated by a certified Local Issuing Authority	_____	X	\$60	_____
Acres Disturbed on the project 11/6th acres in an area with no certified Local Issuing Authority	_____	X	\$60	_____
Acres Disturbed on the project 11/6th acres by an entity or activity exempt from a certified local issuing authority's regulatory jurisdiction for a state	_____	X	Fee	\$600

**PLEASE MAKE CHECKS PAYABLE TO: Department of Natural Resources - EPD**

Do not mail cash. NAME ON CHECK/MONEY ORDER: \_\_\_\_\_

Do not include fees payable to the Local Issuing Authority. CHECK/MONEY ORDER NUMBER: \_\_\_\_\_

CHECK/MONEY ORDER AMOUNT: \_\_\_\_\_

Page 2

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### 2016 General Permit Revisions

28

- Established a 25 foot buffer along coastal marshlands, as measured from the coastal marshland-upland interface, as determined in accordance with O.C.G.A. 12-5-4(4), the 'Coastal Marshlands Protection Act of 1970, and the rules and regulations

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### Coastal Marshlands Exemptions

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- Public drinking water system reservoirs
- Utility line crossings
  - ▣ Not more than 50 ft. width of disturbance within the buffer
- Aerial utility line crossings
  - ▣ Does not exceed 100 linear ft.
  - ▣ Constructed to minimize the number of crossings
  - ▣ Disturbance to underlying vegetation is minimized
  - ▣ Vegetation is re-established in bare areas
- Fences

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### Coastal Marshlands Exemptions

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- Any lot for which the preliminary plat has been approved prior to December 31, 2015 if roadways, bridges, or water and sewer lines have been extended to such lot prior to the effective date of this Act and if the requirement to maintain a 25 foot buffer would consume at least 18% of the high ground of the platted lot otherwise available for development.
- Any land-disturbing activity conducted pursuant to and in compliance with a valid and effective land-disturbing permit issued subsequent to April 22, 2014, and prior to December 31, 2015.

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### Coastal Marshlands Exemptions

31

- Right-of-Way Posts, Guy Wires, Anchors, Survey Markers and the replacement or maintenance of existing utility structures (1) undertaken by any EMC/MES or public utility under the regulatory jurisdiction of the PSC and/or FERC or (2) undertaken by DOT, GA Highway Authority, State Road & Tollway Authority or any municipality or county.

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### Summary

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- GESA & NPDES are updated to reflect the constant growth and needs regarding land-disturbing activities in Georgia
- A complete detailing of all these changes can be found in the Resource Information section of your notebook

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### Questions?

GSWCC  
 Urban Program  
 P.O. Box 8024  
 Athens, GA 30603  
 (706) 552-4474




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Insert Yellow Sheet

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House Bill 397 (AS PASSED HOUSE AND SENATE)

By: Representatives Knight of the 130<sup>th</sup>, Roberts of the 155<sup>th</sup>, Houston of the 170<sup>th</sup>, Nimmer of the 178<sup>th</sup>, McCall of the 33<sup>rd</sup>, and others

A BILL TO BE ENTITLED  
AN ACT

1 To amend Article 2 of Chapter 6 of Title 2 of the Official Code of Georgia Annotated,  
2 relating to soil and water conservation districts, so as to revise provisions relating to the State  
3 Soil and Water Conservation Commission; to provide for administrative attachment; to  
4 provide for appointment to the commission; to remove authority related to funding of water  
5 supply reservoirs; to amend Chapter 7 of Title 12 of the Official Code of Georgia Annotated,  
6 relating to erosion and sedimentation control, so as to provide for erosion manual publication  
7 oversight; to provide for related matters; to provide for an effective date; to repeal conflicting  
8 laws; and for other purposes.

9 BE IT ENACTED BY THE GENERAL ASSEMBLY OF GEORGIA:

10 style="text-align:center">**SECTION 1.**

11 Article 2 of Chapter 6 of Title 2 of the Official Code of Georgia Annotated, relating to soil  
12 and water conservation districts, is amended by revising Code Section 2-6-23, relating to  
13 establishment of the State Soil and Water Conservation Commission, as follows:

14 "2-6-23.

15 (a) There is established, to serve as an agency of the state and to perform the functions  
16 conferred upon it in this article, the State Soil and Water Conservation Commission. The  
17 commission shall be assigned to the Department of Agriculture for administrative purposes  
18 only, as prescribed in Code Section 50-4-3.

19 ~~(b) Five district soil and water conservation supervisors, who shall be appointed by the~~  
20 ~~Governor as provided in this Code section, shall serve as members of the commission.~~  
21 ~~Commencing with appointments for the year 1977, the Governor shall appoint to the~~  
22 ~~commission one supervisor from each of the five Georgia Association of Conservation~~  
23 ~~District Supervisors' groups. Commencing with appointments for the year 2015, the~~  
24 ~~Governor shall appoint one at-large member from each of the five soil and water~~  
25 ~~conservation district regions to serve on the commission. Such initial appointments ~~were~~~~  
26 ~~shall be for terms of office of one, two, three, four, and five years, respectively. Thereafter,~~

27 successors shall be appointed for terms of office of five years and until their successors are  
28 duly appointed.

29 (c) The following persons shall serve ex officio in an advisory capacity to the State Soil  
30 and Water Conservation Commission:

31 (1) The ~~director of the Cooperative Extension Service~~ associate dean for extension of the  
32 College of Agricultural and Environmental Sciences of the University of Georgia;

33 (2) The commissioner of natural resources;

34 (3) The ~~director of experiment stations~~ associate dean of research of the College of  
35 Agricultural and Environmental Sciences of the University of Georgia;

36 (4) The executive director of the Agricultural Stabilization Conservation Service;

37 (5) The Georgia state director of the Farmer's Home Administration;

38 (6) The director of the Southern Piedmont Conservation Research Center;

39 (7) The president of the Georgia Association of Conservation District Supervisors;

40 (8) The director of the State Forestry Commission;

41 (9) The Georgia supervisor of national forests of the U.S. Forestry Service;

42 (10) The state conservationist of the ~~U.S. Soil Conservation Service~~ U.S. Natural  
43 Resources Conservation Service;

44 (11) The dean and director of the College of Agricultural and Environmental Sciences  
45 of the University of Georgia;

46 (12) The ~~state supervisor~~ state program manager of agricultural education ~~in this state;~~

47 (13) The Commissioner of Agriculture; and

48 (14) Such other representatives of state or federal agencies as the commission deems  
49 desirable.

50 (d) The commission shall adopt a seal, which shall be judicially noticed. It may perform  
51 such acts, hold such public hearings, and promulgate such rules and regulations as may be  
52 necessary for the execution of its functions under this article."

53

## SECTION 2.

54 Said article is further amended by revising Code Section 2-6-27, relating to additional duties  
55 and powers of the commission, as follows:

56 "2-6-27.

57 In addition to the duties and powers otherwise conferred upon the commission, it shall have  
58 the following duties and powers:

59 (1) To offer such assistance as may be appropriate to the supervisors of the soil and  
60 water conservation districts in the carrying out of any of their powers and programs;

- 61 (2) To keep the supervisors of each of the districts informed of the activities and  
62 experiences of all the other districts and to facilitate an interchange of advice, experience,  
63 and cooperation between such districts;
- 64 (3) To coordinate the programs of the districts so far as this may be done by advice and  
65 consultation;
- 66 (4) To secure the cooperation and assistance of the United States and any of its agencies  
67 and of the agencies and counties of this state in the work of such districts;
- 68 (5) To disseminate information throughout this state concerning the activities and  
69 programs of the districts and to encourage the formation of such districts in areas where  
70 their organization is desirable;
- 71 (6) To receive gifts, appropriations, materials, equipment, land, and facilities and to  
72 manage, operate, and disperse the same;
- 73 (7) To formulate such rules and regulations, to exercise such powers, and to perform  
74 such duties as are necessary to implement the administration of the federal Watershed  
75 Protection and Flood Prevention Act;
- 76 (7.1) To formulate such rules and regulations in consultation with the Environmental  
77 Protection Division of the Department of Natural Resources, to exercise such powers, and  
78 to perform such duties as are necessary to implement the administration of the education  
79 and training program established under Code Section 12-7-19;
- 80 (7.2) To formulate such rules and regulations and to exercise such powers as are  
81 necessary to perform its duties under subsection (m.1) of Code Section 12-5-31 and  
82 subsection (b.1) of Code Section 12-5-105;
- 83 (8) To enter into contracts and agreements with the districts, municipalities, and counties  
84 of this state, other agencies of this state, the United States and any agencies thereof, any  
85 association, any landowner or land occupier, or any person in order to carry out the  
86 purposes of this article; and
- 87 (9) To receive grants from any agency of the United States government or any agency  
88 of this state, and to make grants to districts, municipalities, or counties in this state, or  
89 other state agencies in order to:
- 90 (A) Fund up to 20 percent of the cost of obtaining permits for and constructing  
91 improvements to any dam that was originally constructed or financially assisted by the  
92 Natural Resources Conservation Service, formerly known as the Soil Conservation  
93 Service, of the United States Department of Agriculture; or
- 94 (B) ~~Fund up to 40 percent of the cost of obtaining a permit under Section 404 of the~~  
95 ~~federal Clean Water Act, 33 U.S.C. Section 1344, for the construction of any new~~  
96 ~~public water supply reservoir. In awarding any grants under this subparagraph, the~~  
97 ~~commission shall consider regional effects and water supply yield of the proposed~~

98 ~~reservoir, anticipated population growth, and local government funding commitment;~~  
 99 ~~or~~  
 100 ~~(E) Carry out other purposes of this article."~~

101 **SECTION 3.**

102 Chapter 7 of Title 12 of the Official Code of Georgia Annotated, relating to erosion and  
 103 sedimentation control, is amended in Code Section 12-7-3, relating to definitions, by  
 104 redesignating paragraph (10.1) as paragraph (10.2) and by adding a new paragraph to read  
 105 as follows:

106 "(10.1) 'Manual for Erosion and Sediment Control in Georgia' or 'manual' means the  
 107 published guidance of the commission governing the design and practices to be utilized  
 108 in the protection of this state's natural resources from erosion and sedimentation which  
 109 shall be based foremost upon sound engineering principles and repeatable bench and field  
 110 testing of structural and vegetative best management practices and which shall have the  
 111 annual approval of the Erosion and Sediment Control Overview Council established  
 112 pursuant to Code Section 12-7-7.1."

113 **SECTION 4.**

114 Said chapter is further amended in Code Section 12-7-7.1, relating to erosion and sediment  
 115 control plan preparation, completion, and implementation, by revising subsection (f) as  
 116 follows:

117 "(f)(1) There shall be an Erosion and Sediment Control Overview Council which shall  
 118 approve the Manual for Erosion and Sediment Control in Georgia prior to publication by  
 119 the commission. In addition, the council shall provide guidance on the best management  
 120 practices for implementing any erosion and sediment control plan for purposes of this  
 121 Code section. The council shall be composed of nine members, including one member  
 122 of the House of Representatives who shall be appointed by the Speaker of the House of  
 123 Representatives and serve at the pleasure thereof; one member of the Senate who shall  
 124 be appointed by the Lieutenant Governor and serve at the pleasure thereof; and seven  
 125 members who shall be appointed by the Governor and serve at the pleasure thereof,  
 126 including one employee each from the Department of Transportation, the Environmental  
 127 Protection Division of the Department of Natural Resources, and the Georgia Regional  
 128 Transportation State Road and Tollway Authority, a professional engineer licensed to  
 129 practice in this state from a private engineering consulting firm practicing environmental  
 130 engineering, ~~two representatives~~ one representative of the highway contracting industry  
 131 certified by the Department of Transportation, one representative of the electric utility  
 132 industry, and a chairperson. The council shall meet prior to December 1, 2015, to

133 approve the most current version of the manual and at all other times as necessary to  
134 approve any subsequent changes or updates to the manual prior to its implementation.  
135 Such meetings shall be held at the call of the chairperson. Each councilmember shall  
136 receive a daily allowance in the amount specified in subsection (b) of Code Section  
137 45-7-21; provided, however, that any full-time state employee serving on the council  
138 shall draw no compensation but shall receive necessary expenses. The commissioner is  
139 authorized to pay such compensation and expenses from department funds.  
140 (2) The council may develop recommendations governing the preparation of plans and  
141 the installation and maintenance of best management practices. If a dispute concerning  
142 the requirements of this Code section should arise, the Erosion and Sediment Control  
143 Overview Council shall mediate the dispute."

144 **SECTION 5.**

145 This Act shall become effective upon its approval by the Governor or upon its becoming law  
146 without such approval.

147 **SECTION 6.**

148 All laws and parts of laws in conflict with this Act are repealed.



Insert Yellow Sheet

Back of Yellow Sheet

ENROLLMENT

April 8, 2015  
The Subcommittee of the Senate on Enrolling and Journals has examined the within and finds the same properly enrolled.

[Signature]  
Chairman

[Signature]  
President of the Senate

[Signature]  
Secretary of the Senate

[Signature]  
Speaker of the House

[Signature]  
Clerk of the House

Received [Signature]  
Secretary, Executive Department

This 8<sup>th</sup> day of April 2015

Approved  
[Signature]  
Governor

This 6 day of May 2015

S.B. No. 101 Act No. 175

GENERAL ASSEMBLY

AN ACT

To amend Chapter 7 of Title 12 of the O.C.G.A., relating to the control of soil erosion and sedimentation, so as to provide for a buffer against coastal marshlands within which certain land-disturbing activities are prohibited; to provide for exceptions and variances; to provide for related matters; to provide for effective dates; and for other purposes.

IN SENATE

Read 1<sup>st</sup> time Feb. 11, 2015  
Read 2<sup>nd</sup> time Feb. 26, 2015  
Read 3<sup>rd</sup> time Mar. 2, 2015  
And Passed  
Yeas 46 Nays 4

[Signature]  
Secretary of the Senate

IN HOUSE

Read 1<sup>st</sup> time Mar. 3, 2015  
Read 2<sup>nd</sup> time Mar. 4, 2015  
Read 3<sup>rd</sup> time Mar. 26, 2015  
And Passed  
Yeas 164 Nays 0

[Signature]  
Clerk of the House

By: Senators Watson of the 1st, Jackson of the 2nd, Ligon of the 3rd, Williams of the 19th, Tolleson of the 20th and others

AN ACT

To amend Chapter 7 of Title 12 of the Official Code of Georgia Annotated, relating to the control of soil erosion and sedimentation, so as to provide for a buffer against coastal marshlands within which certain land-disturbing activities are prohibited; to provide for exceptions and variances; to provide for related matters; to provide for effective dates; to repeal conflicting laws; and for other purposes.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF GEORGIA:

**SECTION 1.**

Chapter 7 of Title 12 of the Official Code of Georgia Annotated, relating to the control of soil erosion and sedimentation, is amended in Code Section 12-7-3, relating to definitions, by redesignating paragraph (10.1) as paragraph (10.2) and by adding three new paragraphs to read as follows:

"(2.1) 'Coastal marshlands' shall have the same meaning as in Code Section 12-5-282."

"(10.1) 'Maintenance' means actions necessary or appropriate for retaining or restoring a currently serviceable improvement to the specified operable condition to achieve its maximum useful life. Maintenance includes emergency reconstruction of recently damaged parts of a currently serviceable structure so long as it occurs within a reasonable period of time after damage occurs. Maintenance does not include any modification that changes the character, scope, or size of the original design."

"(13.1) 'Serviceable' means usable in its current state or with minor maintenance but not so degraded as to essentially require reconstruction."

**SECTION 2.**

Said chapter is further amended in subsection (b) of Code Section 12-7-6, relating to best management practices and minimum requirements for erosion and sedimentation control, by deleting "and" at the end of division (b)(15)(D)(ii), by replacing the period with "; and" at the end of division (b)(16)(C)(ii), and by adding a new paragraph to read as follows:

"(17)(A) There is established a 25 foot buffer along coastal marshlands, as measured horizontally from the coastal marshland-upland interface, as determined in accordance with Part 4 of Article 4 of Chapter 5 of this title, the 'Coastal Marshlands Protection Act of 1970,' and the rules and regulations promulgated thereunder, except:

(i) Where the director determines to allow a variance that is at least as protective of natural resources and the environment;

- (ii) Where otherwise allowed by the director pursuant to Code Section 12-2-8;
- (iii) Where an alteration within the buffer area has been authorized pursuant to Code Section 12-5-286;
- (iv) For maintenance of any currently serviceable structure, landscaping, or hardscaping, including bridges, roads, parking lots, golf courses, golf cart paths, retaining walls, bulkheads, and patios; provided, however, that if such maintenance requires any land-disturbing activity, adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented;
- (v) Where a drainage structure or roadway drainage structure is constructed or maintained; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented;
- (vi) On the landward side of any currently serviceable shoreline stabilization structure; and
- (vii) For the maintenance of any manmade storm-water detention basin, golf course pond, or impoundment that is located entirely within the property of a single individual, partnership, or corporation; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented.

(B) No land-disturbing activity shall be conducted within any such buffer and a buffer shall remain in its current, undisturbed state of vegetation until all land-disturbing activities on the construction site are completed, except as otherwise provided by this paragraph. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation so long as a protective vegetative cover remains to protect water quality and aquatic habitat; provided, however, that any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a buffer at any time so long as a protective vegetative cover remains to protect water quality and aquatic habitat.

(C) On or before December 31, 2015, the board shall promulgate rules and regulations that:

- (i) Contain criteria for the grant or denial by the director of requests for variances pursuant to this paragraph, including where an alteration within the buffer area has been authorized pursuant to a permit issued by the United States Army Corps of Engineers under Section 404 of the Federal Water Pollution Control Act of 1972, as amended, or Section 10 of the Rivers and Harbors Act of 1899; provided, however,

that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented; and

(ii) Provide for variances by rule, subject to specified conditions, for certain categories of activities within the buffer that will have minimal impact on the water quality or aquatic habitat of the adjacent marsh, including where the area within the buffer is not more than 500 square feet; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented.

(D) The board may adopt rules and regulations that provide for an expedited process for certain categories of activities within the buffer based on the size, scope, location, and character of the proposed activity within the buffer.

(E) The buffer requirements of this paragraph shall not apply to crossings for utility lines that cause a width of disturbance of not more than 50 feet within the buffer; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented.

(F) The buffer shall not apply to:

(i) Any land-disturbing activity conducted pursuant to and in compliance with a valid and effective land-disturbing permit issued subsequent to April 22, 2014, and prior to the effective date of this Act; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented; or

(ii) Any lot for which the preliminary plat has been approved prior to the effective date of this Act if roadways, bridges, or water and sewer lines have been extended to such lot prior to the effective date of this Act and if the requirement to maintain a 25 foot buffer would consume at least 18 percent of the high ground of the platted lot otherwise available for development; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented."

### **SECTION 3.**

Said chapter is further amended by revising division (b)(15)(A)(i) of Code Section 12-7-6, relating to best management practices and minimum requirements for erosion and sedimentation control, as follows:

"(i) As provided by paragraphs (16) and (17) of this subsection;"

**SECTION 4.**

This Act shall become effective upon its approval by the Governor or upon its becoming law without such approval for purposes of promulgating rules and regulations and shall become effective on December 31, 2015, for all other purposes.

**SECTION 5.**

All laws and parts of laws in conflict with this Act are repealed.

APPROVED

MAY 06 2015

BY GOVERNOR



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## FACT SHEET

### STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION

#### NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMITS NO. GAR100001, NO. GAR100002 and NO. GAR100003 FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

July 29, 2013

#### **EXECUTIVE SUMMARY**

The proposed permits will authorize storm water discharges to the waters of the State of Georgia from construction activities. Permit coverage may be obtained by submitting the applicable *Notice of Intent (NOI) - Version 2013* form which will be available on EPD's website upon issuance of the permits. Facilities with an existing storm water discharge associated with construction activity must submit a *NOI - Version 2013* form within ninety (90) days after the effective date of the permits.

#### **BACKGROUND**

The 1972 amendments to the Federal Clean Water Act (CWA), also referred to as the Federal Water Pollution Control Act (FWPCA), prohibit the discharge of any pollutant to the waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Initial efforts to improve water quality under the NPDES program focused on reducing pollutants in discharges of industrial process wastewater and from municipal sewage treatment plants.

In response to the need for comprehensive NPDES requirements for discharges of storm water, Congress amended the CWA in 1987 to require the U.S. Environmental Protection Agency (EPA) to establish phased NPDES requirements for storm water discharges. EPA published initial permit application and other requirements for certain categories of storm water discharges associated with industrial activity, including construction activities, on November 16, 1990 (50 FR 47990) and on April 2, 1992 (57 FR 11394). The Georgia Environmental Protection Division (EPD) amended the Georgia Rules and Regulations for Water Quality Control (Rules) in April 1990 to allow the issuance of general permits. EPD was granted the authority to issue NPDES general permits by EPA in January 1991. In September 1992, EPD issued the first of seven different general NPDES permits for construction activities. Each of these permits was administratively appealed and did not become effective. NPDES General Permit No. GAR100000 (permit) for storm water discharges associated with construction activity was issued on August 1, 2000 and regulated

construction activities that disturbed five (5) or more acres. That permit expired on July 31, 2003. The permit was reissued on August 13, 2003 as three general permits that regulate construction activities that disturb one (1) or more acres. No. GAR100001 regulates stand alone construction sites, No. GAR100002 regulates infrastructure construction sites, and No. GAR100003 regulates common development construction sites. These permits were reissued on August 1, 2008 and are scheduled to expire July 31, 2013.

### **REGULATED CONSTRUCTION ACTIVITIES**

NPDES General Permits No. GAR100001, No. GAR100002 and No. GAR100003 will authorize the discharge of storm water from sites where construction activities occur. The proposed permits define construction activities as those disturbing a land area greater than one (1) acre or tracts of less than one (1) acre that are part of a larger overall development with a combined disturbance one (1) acre or greater (i.e., common plan of development). EPD can require an applicant to submit a NPDES permit application for an individual NPDES permit upon written notification to the applicant. In addition to storm water discharges, the proposed general NPDES permits authorize certain non-storm water discharges such as fire fighting water and uncontaminated groundwater. The proposed general permits will expire July 31, 2018. The proposed permits comply with the anti-degradation requirements in the EPD Rules and Regulations for Water Quality Control, subparagraph 391-3-6-.03. The proposed permits are being issued pursuant to the authority contained in O.C.G.A. §§ 12-5-27 and 12-5-30.

### **PERMIT COVERAGE**

Permit coverage must be obtained by submitting a fully completed *Notice of Intent (NOI) - Version 2013* form supplied by EPD. The NOI will include basic information about the construction site and the receiving waters where the discharges occur. The permittee must specify on the NOI whether or not the facility discharges storm water associated with construction activity into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as “not supporting” its designated use(s) as shown on Georgia’s most current “305(b)/303(d) List Documents (Final).” Georgia’s 305(b)/303(d) List Documents may be reviewed on EPD’s website. All permittees are responsible for reviewing each new version of the 305(b)/303(d) List Documents during the term of the permits in order to check for new stream segment listings.

Existing construction sites must submit the new *NOI – Version 2013* within ninety (90) days after the effective date of the permits in order to obtain coverage. New

sites that begin construction activities after the issuance date of the permits must submit the NOI form at least fourteen (14) days prior to beginning construction activities. NOI forms must be submitted by return receipt certified mail or a similar service.

Upon issuance of the permits, the NOI forms will be available on EPD's website at <http://www.gaepd.org> (under "Documents, Publications and Forms," "Regulatory Forms," "Watershed Protection Branch" and "Storm Water"). Copies of the permits and the 305(b)/303(d) List Documents, sorted by county, will be available on the EPD website (under "Technical Guidance," "Watershed Protection Branch" and "Storm Water"). All of these documents may also be obtained by calling EPD at (404) 675-6240.

### **SUMMARY OF CHANGES TO PART I. COVERAGE UNDER THIS PERMIT**

The following definitions were revised as delineated below:

"Common Development" means a contiguous area where multiple, separate, and distinct construction activities will be taking place at different times on different schedules under one plan of development on or after August 1, 2000.

"CPESC" means Certified Professional in Erosion and Sediment Control with current certification by EnviroCert International, Inc. ([www.EnviroCertIntl.org](http://www.EnviroCertIntl.org)).

"Design Professional" means a professional licensed by the State of Georgia in the field of: engineering, architecture, landscape architecture, forestry, geology, or land surveying; or a person that is a Certified Professional in Erosion and Sediment Control (CPESC) with a current certification by EnviroCert International, Inc. provided said person is in compliance with applicable Georgia law governing professional licensure.

For stand alone and common development construction projects, "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and seeding of target crop perennials appropriate for the region).

For infrastructure construction projects, "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegetation and seeding of target crop perennials appropriate for the region).

"Infrastructure Construction" or "Infrastructure Construction Project" means construction activities that are not part of a common development that include the construction, installation and maintenance of roadway and railway projects and conduits, pipes, pipelines, substations, cables, wires, trenches, vaults, manholes and similar or related structures for the conveyance of natural gas (or other types of gas), liquid petroleum products, electricity, telecommunications (telephone, data, television, etc.), water, storm water or sewage.

"Infrastructure Company" or "Infrastructure Contractor" means, for the purposes of this Permit, an entity or sub-contractor that is responsible, either directly or indirectly, for infrastructure construction or an infrastructure construction project.

"Sub-contractor" means an entity employed or retained by the permittee to conduct any type of construction activity (as defined in this permit) at an infrastructure construction site. Sub-contractors must complete the appropriate certification course approved by the Georgia Soil and Water Conservation Commission in accordance with the provisions of O.C.G.A. 12-7-19.

"Tertiary Permittee" means either the Owner or Operator of a remaining lot(s) within a common development (as defined in this permit) conducting a construction activity where the primary permittee and all secondary permittees have submitted a Notice of Termination in accordance with Part VI.A.2. of this permit (excluding utility companies and/or utility contractors working under a Blanket NOI) or where a primary permittee no longer exists.

"Utility Company or Utility Contractor" means, for purposes of this Permit, an entity or sub-contractor that is responsible, either directly or indirectly, for the construction, installation, and maintenance of conduits, pipes, pipelines, cables, wires, trenches, vaults, manholes, and similar structures or devices for the conveyance of natural gas (or other types of gas), liquid

petroleum products, electricity, telecommunications (telephone, data, television, etc.), water, storm water or sewage.

“Waters Supporting Warm Water Fisheries” means all waters of the State that sustain, or have the potential to sustain, aquatic life but excluding trout streams.

Definitions for “Normal Business Hours” and Roadway Project(s)” were added and the definitions for “Primary Trout Waters” and “Secondary Trout Waters” were deleted.

The NOI for primary permittees and tertiary permittees must include the following certification:

“I certify that to the best of my knowledge and belief, that the Erosion, Sedimentation and Pollution Control Plan (Plan) was prepared by a design professional, as defined by this permit, that has completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission in accordance with the provisions of O.C.G.A. 12-7-19 and that I will adhere to the Plan and comply with all requirements of this permit.”

For infrastructure construction projects, contiguous areas of land disturbances include those areas of land disturbances solely separated by drilling and boring activities, waters of the State and adjacent State-mandated buffers, roadways and/or railways. In addition, contiguous areas of land disturbances include all areas of land disturbances at a sole roadway intersection and/or junction.

Coverage under the permit for infrastructure construction projects is not required for discharges of storm water associated with infrastructure construction projects that consist solely of routine maintenance for the original purpose of the facility that is performed to maintain the original line and grade and the hydraulic capacity. In order to be eligible for this exemption, the infrastructure construction project must comply with the following conditions: (1) no mass grading shall occur on the project, (2) the project shall be stabilized by the end of each day with temporary or permanent stabilization measures, (3) the project shall have a duration of less than 120 calendar days, and (4) final stabilization must be implemented at the end of the maintenance project.

## **SUMMARY OF CHANGES TO PART II. NOTICE OF INTENT REQUIREMENTS**

For sites where construction activities, subject to this permit, are occurring on the effective date of the permits, the owner or operator or both must submit a “re-issuance” NOI no later than ninety (90) days after the effective date of this permit.

Failure to comply with the requirements of Part II.A.2 and Part II.A.4 shall constitute a violation of the Georgia Water Quality Control Act for each day until the Owner or Operator or both submit an “initial” NOI for a new construction site in accordance with Part II.A.1., comply with the special conditions in Part III., prepare and submit a new Erosion, Sedimentation and Pollution Control Plan in accordance with Part IV., and pay all applicable fees in accordance with Part II.D.

### **SUMMARY OF CHANGES TO PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, PERMIT VIOLATIONS AND OTHER LIMITATIONS**

The permits prohibits the discharge of soaps or solvents used in vehicle and equipment washing and the discharge of wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.

Sites that discharge storm water associated with construction activity into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as listed as “not supporting” its designated use(s) as shown on Georgia’s most current “305(b)/303(d) List Documents (Final)” at the time of NOI submittal must satisfy the requirements of Part III.C of the permit if the Impaired Stream Segment has been listed for the criteria violated, “Bio F” (Impaired Fish community) and/or “Bio M” (Impaired Macroinvertebrate Community), within Category 4a, 4b or 5, and the potential cause is either “NP” (nonpoint source) or “UR” (urban runoff).

If a Total Maximum Daily Load (TMDL) Implementation Plan for sediment was finalized at least six (6) months prior to the permittee’s submittal of the NOI, the Erosion, Sedimentation and Pollution Control Plan (Plan) must address any site-specific conditions or requirements included in the TMDL Implementation Plan that are applicable to the permittee’s discharge(s) to the Impaired Stream Segment within the timeframe specified in the TMDL Implementation Plan.

In order to ensure that the permittee’s discharge(s) do not cause or contribute to a violation of State water quality standards, the Plan must include at least four (4) best management practices (BMPs) listed in Part III.C.2. of the permits for those areas of the site which discharge into, or within one (1) linear mile upstream and within the same watershed as, the Impaired Stream Segment.

The requirements of Part III.C are not applicable to tertiary permittees with an Erosion, Sedimentation and Pollution Control Plan(s) for a typical individual lot(s),

if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre.

In addition, the initial sediment storage requirements and perimeter control BMPs must be installed and implemented prior to conducting any other construction activities (e.g., clearing, grubbing and grading) within the construction site or when applicable, within phased sub-parts or segments of the construction site. Failure to comply shall constitute a violation of the permits for each day on which construction activities occur. The design professional who prepared the Plan must inspect the initial sediment storage requirements and perimeter control BMPs in accordance with Part IV.A.5. within seven (7) days after installation.

### **SUMMARY OF CHANGES TO PART IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN**

Exemptions from stream buffer requirements include construction activities along any ephemeral stream and where bulkheads and seawalls must be constructed to prevent the erosion of the shoreline on Lake Oconee and Lake Sinclair were added to the permits.

An exemption was added to the Stand Alone permit for the maintenance (excluding dredging), repair and/or upgrade of Soil and Water Conservation District watershed dams when under the technical supervision of the USDA Natural Resources Conservation Service.

Exemptions from stream buffer requirements were also added to the Stand Alone and Infrastructure permits for the following:

- (1) stream crossing for utility lines of any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that: (a) the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, (b) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (c) the entity is not a secondary permittee for a project located within a common development or sale under this permit;
- (2) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the current

- right-of-way undertaken or financed in whole or in part by the Department of Transportation, the Georgia Highway Authority or the State Road and Tollway Authority or undertaken by any county or municipality, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, and (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer; and
- (3) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the current right-of-way undertaken by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, and (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer.

For stand alone and common development projects, the primary permittees and tertiary permittees must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control Plan (Plan), or an alternative design professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within seven (7) days after installation. However, this requirement is not applicable to tertiary permittees with a Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre.

For infrastructure construction projects, the primary permittee must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control Plan (Plan), or an alternative design professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within seven (7) days after installation. Alternatively, for linear infrastructure construction projects, the primary permittee must retain the design professional who prepared the Plan, or an alternative design professional approved by EPD in writing, to inspect the installation of the sediment storage requirements and perimeter control BMPs for the initial phased sub-part or segment of the linear infrastructure project and all sediment basins within the entire linear infrastructure project within seven (7) days after installation. The disturbed acreage of the initial phased sub-part or segment must be equal to or greater than 10% of the total estimated disturbed acreage for the linear infrastructure project but not less than one (1) acre.

When discharging from sediment basins and impoundments, all primary permittees and tertiary permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. This requirement is not applicable for construction activities where the NOI is submitted prior to January 1, 2014.

All permittees are required to comply with all applicable State and local regulations of waste disposal, sanitary sewer, septic and petroleum storage systems and to minimize the discharge of pollutants from dewatering trenches and excavations. Discharges from dewatering trenches and excavations are prohibited unless managed by appropriate controls.

A detailed description and chart or timeline of the intended sequence of major activities, an estimate of the runoff coefficient or peak discharge flow of the site prior to the construction activities and after construction activities are completed, and existing data describing the soil or the quality of any discharge from the site are not requirements for tertiary permittees with Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each individual lot is less than one (1) acre.

Primary permittees and tertiary permittees must measure rainfall once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday until a Notice of Termination is submitted. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.

For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, certified personnel (provided by the primary, secondary or tertiary permittees) must inspect these areas of the site at least once per month until a Notice of Termination (NOT) is submitted.

Sampling by the primary permittees and tertiary permittees is required for the following qualifying events:

- (1) The first rain event that reaches or exceeds 0.5 inch with a storm water discharge that allows for sampling during normal business hours after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations.
- (2) The first rain event that reaches or exceeds 0.5 inch with a storm water discharge that occurs during normal business hours either 90 days after

the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT.

Where sampling is required but not possible (or not required because there was no discharge), the primary permittees and tertiary permittees must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the permittee of any subsequent sampling obligations.

All sampling reports must include the following information:

- (a) Rainfall amount, date, exact place and time of sampling or measurements;
- (b) Name(s) of the certified personnel who performed the sampling and measurements;
- (c) Date(s) analyses were performed;
- (d) Time(s) analyses were initiated;
- (e) Name(s) of the certified personnel who performed the analyses;
- (f) References and written procedures, when available, for the analytical techniques or methods used;
- (g) Results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
- (h) Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
- (i) Certification statement that sampling was conducted as per the Plan.

#### **SUMMARY OF CHANGES TO PART V. STANDARD PERMIT CONDITIONS**

An expired general permit continues in force and effect until a new general permit is issued, final and effective.

#### **SUMMARY OF CHANGES TO PART VI. TERMINATION OF COVERAGE**

For infrastructure construction projects, the permittee may also submit a Notice of Termination for each phase of the infrastructure project, not to exceed four (4) phases, that have undergone final stabilization and all storm water discharges associated with construction activity for that phase authorized by this permit have ceased. The disturbed acreage for each phase must be equal to or greater than 25% of the total estimated disturbed acreage for the infrastructure project. Except for the final phase, the disturbed acreage for the final phase must be equal to or greater than 10% of the total estimated disturbed acreage for the infrastructure project.

For common development construction projects, if the primary permittee decides not to proceed with all permitted construction activities, the primary permittee may submit a Notice of Termination, if and only if, (a) all construction activities have ceased for a minimum of 90 days; (b) final stabilization has been implemented by the primary permittee and by all secondary permittee(s); (c) all secondary permittees have submitted a NOT; d) the site is in compliance with this permit; and (e) all temporary BMPs have been removed .

The primary permittee must then notify the subsequent legal title holder of each remaining lot(s) that these lot owners or operators will become tertiary permittees. A tertiary permittee must prepare and submit a new Erosion, Sedimentation and Pollution Control Plan; however, if the total land disturbance within the tertiary permittee's construction site is less than five (5) acres and the total land disturbance within the individual lot(s) is less than one (1) acre, a tertiary permittee may submit a single Notice of Intent and a Plan(s) for a typical individual lot(s).

If the total land disturbance within the tertiary permittee's construction site is less than five (5) acres, tertiary permittees may also submit a Notice of Termination for each individual lot resulting in land disturbance of less than one (1) acre with a Plan for a typical individual lot within the tertiary permittee's construction site.

### **TERM OF PERMIT**

The proposed general permits will expire July 31, 2018. The EPD can require an applicant to submit an application for an individual NPDES permit or an alternative general NPDES permit upon written notification to the applicant.

### **PUBLIC NOTICE AND COMMENT PERIOD**

This notice is being distributed by newspapers in order to satisfy requirements of the Georgia Administrative Procedures Act and the Georgia Water Quality Control Act. The proposed general permits may be reviewed on EPD's website at [www.gaepd.org/npdes](http://www.gaepd.org/npdes). The proposed permits are provided in pdf format. Hard copies of the proposed general permit will be mailed upon request by calling (404) 675-6240 or by writing the EPD at the address provided below.

Persons wishing to comment on the proposed NPDES General Permits No. GAR100001, No. GAR100002 and No. GAR100003 are invited to submit written comments to Ms. Jan Sammons, Acting Program Manager, at the address provided below:

Georgia Environmental Protection Division  
Watershed Protection Branch  
NonPoint Source Program  
4220 International Parkway, Suite 101  
Atlanta, Georgia 30354

All written comments received on or before August 30, 2013 will be considered in the formulation of the final determinations regarding this permit.

Any person who is aggrieved or adversely affected by the issuance or denial of a permit by the Director of EPD may petition the Director for a hearing if such petition is filed in the office of the Director within thirty (30) days from the date of public notice of such permit issuance or denial. Such hearing will be held in accordance with the EPD Rules and Regulations for Water Quality Control, subparagraph 391-3-6-.01.

Petitions for a contested hearing must include the following:

1. The name and address of the petitioner;
2. The grounds under which the petitioner alleges to be aggrieved or adversely affected by the issuance or denial of the permit;
3. The reason or reasons why the petitioner takes issue with the action of the Director; and
4. All other matters asserted by the petitioner that are relevant to the action in question.

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- of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare or disturbed areas within the buffer
- (3) stream crossings for any utility lines of any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that:
    - (a) the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer,
    - (b) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and
    - (c) the entity is not a secondary permittee for a project located within a common development or sale under this permit,
  - (4) buffer crossing for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare or disturbed areas within the buffer
  - (5) stream crossings for aerial utility lines, provided that:
    - (a) the new utility line right-of-way width does not exceed 100 linear feet,
    - (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbances to the buffer,
    - (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized), and
    - (d) native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification,
  - (6) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the current right-of-way undertaken or financed in whole or in part by the Department of Transportation, the Georgia Highway Authority or the State Road and Tollway Authority or undertaken by any county or municipality, provided that:
    - (a) the area of land disturbance does not exceed 100 square feet per structure,
    - (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure,
    - (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and
    - (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit
  - (7) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the current right-of-way undertaken by any electric membership corporation or municipal electrical system or any public utility under the, provided that:
    - (a) the area of land disturbance does not exceed 100 square feet per structure,
    - (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure,
    - (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and
    - (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and
  - (8) Maintenance (excluding dredging), repair and/or upgrade of Soil and Water Conservation District watershed dams when under the technical supervision of the USDA Natural Resources Conservation Service.

(iii). Except as provided in Part IV(iv) below, no construction activities shall be conducted within a 25 foot buffer along coastal marshlands, as measured horizontally from the coastal marshland-upland interface, as determined in accordance with Part 4 of Article 4 of Chapter 5 of Title 12, the "Coastal Marshlands Protection Act of 1970, and the rules and regulations promulgated thereunder, except where the director determines to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7-6, or where otherwise allowed by the director pursuant to Code Section 12-2-8, or where an alteration within the buffer area has been authorized pursuant to Code Section 12-5-286, or for maintenance of any currently serviceable structure, landscaping, or hardscaping, including bridges, roads, parking lots, golf courses, golf cart paths, retaining walls,

bulkheads, and patios, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or where a drainage structure or roadway drainage structure is constructed or maintained, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or on the landward side of any currently serviceable shoreline stabilization structure, or for the maintenance of any manmade storm-water detention basin, golf course pond, or impoundment that is located entirely within the property of a single individual, partnership, or corporation, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented:

- (1) Public drinking water system reservoirs,
- (2) Crossings for utility lines that cause a width of disturbance of not more than 50 feet within the buffer
- (3) Any land-disturbing activity conducted pursuant to and in compliance with a valid and effective land-disturbing permit issued subsequent to April 22, 2014, and prior to December 31, 2015,
- (4) Any lot for which the preliminary plat has been approved prior to December 31, 2015 if roadways, bridges, or water and sewer lines have been extended to such lot prior to the effective date of this Act and if the requirement to maintain a 25 foot buffer would consume at least 18 percent of the high ground of the platted lot otherwise available for development,
- (5) Buffer crossings for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the Jurisdictional Line and cause a width of disturbance of not more than 50 feet within the buffer, and vegetation is re-established in any bare or disturbed areas within the buffer,
- (6) Crossings for aerial utility lines, provided that: (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of crossings and disturbances to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized), and (d) vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification;
- (7) Right-of-way posts, guy wires, anchors, survey markers and the replacement and maintenance of existing utility structures within the current right-of-way undertaken or financed in whole or in part by the Department of Transportation, the Georgia Highway Authority or the State Road and Tollway Authority or undertaken by any county or municipality, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit;
- (8) Right-of-way posts, guy wires, anchors, survey markers and the replacement and maintenance of existing utility structures within the current right-of-way by any electric membership corporation or municipal electrical system or any public utility under the regulator jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) vegetation is re-established in any bare or disturbed areas within the buffer

and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and

- (9) Maintenance (excluding dredging), repair and/or upgrade of Soil and Water Conservation District watershed dams when under the technical supervision of the USDA Natural Resources Conservation Service

(iii.iv.) Except as provided above, for buffers required pursuant to Part IV.(i), (ii) and (iii), no construction activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land-disturbing activities on the construction site are completed. During coverage under this permit, a buffer cannot be thinned or trimmed of vegetation and a protective vegetative cover must remain to protect water quality and aquatic habitat and a natural canopy must be left in sufficient quantity to keep shade on the stream bed or marsh.

The Erosion, Sedimentation and Pollution Control Plan shall identify all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site. In addition, the Plan shall describe and the applicable permittee shall ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with construction activity at the site and to assure compliance with the terms and conditions of this permit. The applicable permittee must implement and maintain the provisions of the Plan required under this part as a condition of this permit.

Except as provided in Part IV.A.2., a single Erosion, Sedimentation and Pollution Control Plan must be prepared by the primary permittee for the stand alone construction project.

#### **A. Deadlines for Plan Preparation and Compliance.**

1. Except as provided in Part IV.A.2. and Part IV.A.6., the Erosion, Sedimentation and Pollution Control Plan shall be completed prior to submitting the NOI and prior to conducting any construction activity by any permittee.
2. For construction activities that began on or before the effective date of this permit and were subject to the regulations under the previous permit, the permittee(s) shall continue to operate under the existing Plan.
3. For construction activities that begin after the effective date of this permit, the primary permittee shall be required to prepare the Plan for that phase of the stand alone development that corresponds with the NOI being submitted and the primary permittee(s) shall implement the Plan on or before the day construction activities begin.
4. Additional Plan Submittals.

Athens, GA 30605-3129  
(706) 369-6376

**D. For facilities/construction sites located in the following counties:**  
Douglas, Fayette, Fulton, Gwinnett, Heard, Henry, Rockdale, Spalding

Carroll, Clayton, Coweta, DeKalb,

Information shall be submitted to:

Mountain District - Atlanta Satellite  
Georgia Environmental Protection Division  
4244 International Parkway, Suite 114

Atlanta, GA 30354-3906  
(404) 362-2671

**E. For facilities/construction sites located in the following counties:** Bartow, Catoosa, Chattooga, Cherokee, Cobb, Dade, Dawson, Fannin, Floyd, Forsyth, Gilmer, Gordon, Habersham, Haralson, Lumpkin, Murray, Paulding, Pickens, Polk, Rabun, Towns, Union, Walker, White, Whitfield

Information shall be submitted to: Mountain District - Cartersville Office  
Georgia Environmental Protection Division  
P.O. Box 3250  
Cartersville, GA 30120-1705  
(770) 387-4900

**F. For facilities/construction sites located in the following counties:** Appling, Atkinson, Bacon, Brantley, Bryan, Bulloch, Camden, Candler, Charlton, Chatham, Clinch, Coffee, Effingham, Evans, Glynn, Jeff Davis, Liberty, Long, McIntosh, Pierce, Tattnall, Toombs, Ware, Wayne

Information shall be submitted to: Coastal District - Brunswick Office  
Georgia Environmental Protection Division  
400 Commerce Center Drive  
Brunswick, GA 31523-8687  
(912) 264-7284

**G. For facilities/construction sites located in the following counties:** Baker, Ben Hill, Berrien, Brooks, Calhoun, Clay, Colquitt, Cook, Crisp, Decatur, Dodge, Dougherty, Early, Echols, Grady, Irwin, Lanier, Lee, Lowndes, Miller, Mitchell, Quitman, Randolph, Seminole, Stewart, Sumter, Telfair, Terrell, Thomas, Tift, Turner, Webster, Wilcox, Worth

Information shall be submitted to: Southwest District Office  
Georgia Environmental Protection Division  
2024 Newton Road  
Albany, GA 31701-3576  
(912) 430-4144

**H. For facilities/construction sites required to submit Plans required under Part IV.A.4.a. of this Permit:**

Information shall be submitted to: Watershed Protection Branch  
Environmental Protection Division  
4220 International Parkway, Suite 101  
Atlanta, Georgia 30354  
(404) 675-6240  
2 Martin Luther King Jr. Drive  
Suite 1152 East  
Atlanta, Georgia 30334  
404-463-1511

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- (1) public drinking water system reservoirs,
- (2) fences,
- (3) stream crossings for water lines and sewer lines, provided that the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare or disturbed areas within the buffer
- (4) stream crossings for any utility lines of any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that: (a) the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, (b) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (c) the entity is not a secondary permittee for a project located within a common development or sale under this permit,
- (5) stream crossings for aerial utility lines, provided that: (a) the new utility line right-of-way width does not exceed 200 linear feet, (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbances to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized), and (d) native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification; and
- (6) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the right-of-way undertaken or financed in whole or in part by the Department of Transportation, the Georgia Highway Authority or the State Road and Tollway Authority or undertaken by any county or municipality, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and
- (7) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the current right-of-way undertaken by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit.

(iii). Except as provided in Part IV(iv) below, no construction activities shall be conducted within a 25 foot buffer along coastal marshlands, as measured horizontally from the coastal marshland-upland interface, as determined in accordance with Part 4 of Article 4 of Chapter 5 of Title 12, the "Coastal Marshlands Protection Act of 1970, and the rules and regulations promulgated thereunder, except where the director determines to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7-6, or where otherwise allowed by the director pursuant to Code Section 12-2-8, or where an alteration within the buffer area has been authorized pursuant to Code Section 12-5-286, or for maintenance of any currently serviceable structure, landscaping, or hardscaping, including bridges, roads, parking lots, golf courses, golf cart paths, retaining walls,

bulkheads, and patios, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or where a drainage structure or roadway drainage structure is constructed or maintained, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or on the landward side of any currently serviceable shoreline stabilization structure, or for the maintenance of any manmade storm-water detention basin, golf course pond, or impoundment that is located entirely within the property of a single individual, partnership, or corporation, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented:

- (1) Public drinking water system reservoirs.
- (2) Crossings for utility lines that cause a width of disturbance of not more than 50 feet within the buffer
- (3) Any land-disturbing activity conducted pursuant to and in compliance with a valid and effective land-disturbing permit issued subsequent to April 22, 2014, and prior to December 31, 2015.
- (4) Any lot for which the preliminary plat has been approved prior to December 31, 2015 if roadways, bridges, or water and sewer lines have been extended to such lot prior to the effective date of this Act and if the requirement to maintain a 25 foot buffer would consume at least 18 percent of the high ground of the platted lot otherwise available for development.
- (5) Fences
- (6) Crossings for aerial utility lines, provided that: (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of crossings and disturbances to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized), and (d) vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification;
- (7) Right-of-way posts, guy wires, anchors, survey markers and the replacement and maintenance of existing utility structures within the current right-of-way undertaken or financed in whole or in part by the Department of Transportation, the Georgia Highway Authority or the State Road and Tollway Authority or undertaken by any county or municipality, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit;
- (8) Right-of-way posts, guy wires, anchors, survey markers and the replacement and maintenance of existing utility structures within the current right-of-way by any electric membership corporation or municipal electrical system or any public utility under the regulator jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and

(iii. iv.) Except as provided above, for buffers required pursuant to Part IV.(i), (ii) and (iii), no construction activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land-disturbing activities on the construction site are completed. During coverage under this permit, a buffer cannot be thinned or trimmed of vegetation and a protective vegetative cover must remain to protect water quality and aquatic habitat and a natural canopy must be left in sufficient quantity to keep shade on the stream bed or marsh.

The Erosion, Sedimentation and Pollution Control Plan shall identify all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site. In addition, the Plan shall describe and the applicable permittee shall ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with construction activity at the site and to assure compliance with the terms and conditions of this permit. The applicable permittee must implement and maintain the provisions of the Plan required under this part as a condition of this permit.

Except as provided in Part IV.A.2., a single Erosion, Sedimentation and Pollution Control Plan must be prepared by the primary permittee for the infrastructure construction project.

#### **A. Deadlines for Plan Preparation and Compliance.**

1. Except as provided in Part IV.A.2. and Part IV.A.6., the Erosion, Sedimentation and Pollution Control Plan shall be completed prior to submitting the NOI and prior to conducting any construction activity by any permittee.

2. For construction activities that began on or before the effective date of this permit and were subject to the regulations under the previous permit, the permittee(s) shall continue to operate under the existing Plan.

3. For construction activities that begin after the effective date of this permit, the primary permittee shall be required to prepare the Plan for that phase of the infrastructure development that corresponds with the NOI being submitted and the primary permittee(s) shall implement the Plan on or before the day construction activities begin.

4. Additional Plan Submittals.

c. coverage under this permit is not required for discharges of storm water associated with infrastructure construction projects that consist solely 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. The permittee shall, as a minimum, implement and maintain best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity is being conducted. In order to be eligible for this exemption the project must comply with the following conditions: (1) no mass grading shall occur on the project, (2) the project shall be stabilized by the end of each day with temporary or permanent stabilization measures, (3) the project shall have a duration of less than 120 calendar days, and (4) final stabilization must be implemented at the end of the maintenance project; and

d. coverage under this permit is not required for discharges of storm water associated with infrastructure road construction projects that consist solely of routine maintenance for the original purpose of the facility that is performed to maintain the original line and grade and vehicular capacity, as applicable. The permittee shall, as a minimum, implement and maintain best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity is being conducted. In order to be eligible for this exemption the project must comply with the following conditions: (1) no mass grading shall occur on the project, (2) the project shall be stabilized by the end of each day with temporary or permanent stabilization measures, (3) the project shall have a duration of less than 120 calendar days, and (4) final stabilization must be implemented at the end of the maintenance project; and

de. coverage under this permit is not required for discharge of storm water associated with railroad construction projects and emergency re-construction conducted pursuant to the Federal Railway Safety Act, the Interstate Commerce Commission Termination Act and which consist solely 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. The construction activity should, at a minimum, implement and maintain best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation consistent with the requirements of the Federal Railway Safety Act and applicable requirements of the Clean Water Act.

**2. Mixed Storm Water Discharges.** This permit may only authorize a storm water discharge from a construction site or construction activities mixed with a storm water discharge from an industrial source or activity other than construction where:

a. the industrial source or activity other than construction is located on the same site as the construction activity and is an integral part of the construction activity;

b. the storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and

c. storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring are covered by a different NPDES general

Athens, GA 30605-3129  
(706) 369-6376

**D. For facilities/construction sites located in the following counties:**  
Douglas, Fayette, Fulton, Gwinnett, Heard, Henry, Rockdale, Spalding

Carroll, Clayton, Coweta, DeKalb,

Information shall be submitted to:

Mountain District - Atlanta Satellite  
Georgia Environmental Protection Division  
4244 International Parkway, Suite 114  
Atlanta, GA 30354-3906  
(404) 362-2671

**E. For facilities/construction sites located in the following counties:**  
Cherokee, Cobb, Dade, Dawson, Fannin, Floyd, Forsyth, Gilmer, Gordon, Habersham, Haralson, Lumpkin, Murray, Paulding, Pickens, Polk, Rabun, Towns, Union, Walker, White, Whitfield

Bartow, Catoosa, Chattooga,

Information shall be submitted to: Mountain District - Cartersville Office  
Georgia Environmental Protection Division  
P.O. Box 3250  
Cartersville, GA 30120-1705  
(770) 387-4900

**F. For facilities/construction sites located in the following counties:** Appling, Atkinson, Bacon, Brantley, Bryan, Bulloch, Camden, Candler, Charlton, Chatham, Clinch, Coffee, Effingham, Evans, Glynn, Jeff Davis, Liberty, Long, McIntosh, Pierce, Tattnall, Toombs, Ware, Wayne

Information shall be submitted to: Coastal District - Brunswick Office  
Georgia Environmental Protection Division  
400 Commerce Center Drive  
Brunswick, GA 31523-8687  
(912) 264-7284

**G. For facilities/construction sites located in the following counties:** Baker, Ben Hill, Berrien, Brooks, Calhoun, Clay, Colquitt, Cook, Crisp, Decatur, Dodge, Dougherty, Early, Echols, Grady, Irwin, Lanier, Lee, Lowndes, Miller, Mitchell, Quitman, Randolph, Seminole, Stewart, Sumter, Telfair, Terrell, Thomas, Tift, Turner, Webster, Wilcox, Worth

Information shall be submitted to: Southwest District Office  
Georgia Environmental Protection Division  
2024 Newton Road  
Albany, GA 31701-3576  
(912) 430-4144

**H. For facilities/construction sites required to submit Plans required under Part IV.A.4.a. of this Permit:**

Information shall be submitted to: Watershed Protection Branch  
Environmental Protection Division  
4220 International Parkway, Suite 404  
Atlanta, Georgia 30354  
(404) 675-6240  
2 Martin Luther King Jr. Drive  
Suite 1152 East  
Atlanta, Georgia 30334  
404-463-1511



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the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications are implemented:

- (1) public drinking water system reservoirs,
- (2) stream crossings for water and sewer lines, provided that the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare or disturbed areas within the buffer,
- (3) buffer crossing for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and native riparian vegetation is re-established in any bare or disturbed areas within the buffer,
- (4) stream crossings for aerial utility lines, provided that: (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbances to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized); and (d) native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification.

(iii). Except as provided in Part IV(iv) below, no construction activities shall be conducted within a 25 foot buffer along coastal marshlands, as measured horizontally from the coastal marshland-upland interface, as determined in accordance with Part 4 of Article 4 of Chapter 5 of Title 12, the "Coastal Marshlands Protection Act of 1970, and the rules and regulations promulgated thereunder, except where the director determines to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7-6, or where otherwise allowed by the director pursuant to Code Section 12-2-8, or where an alteration within the buffer area has been authorized pursuant to Code Section 12-5-286, or for maintenance of any currently serviceable structure, landscaping, or hardscaping, including bridges, roads, parking lots, golf courses, golf cart paths, retaining walls, bulkheads, and patios, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or where a drainage structure or roadway drainage structure is constructed or maintained, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented, or on the landward side of any currently serviceable shoreline stabilization structure, or for the maintenance of any manmade storm-water detention basin, golf course pond, or impoundment that is located entirely within the property of a single individual, partnership, or corporation, provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented:

- (1) Public drinking water system reservoirs.
- (2) Crossings for utility lines that cause a width of disturbance of not more than 50 feet within the buffer
- (3) Any land-disturbing activity conducted pursuant to and in compliance with a valid and effective land-disturbing permit issued subsequent to April 22, 2014, and prior to December 31, 2015.
- (4) Any lot for which the preliminary plat has been approved prior to December 31, 2015 if roadways, bridges, or water and sewer lines have been extended to such lot prior to the effective date of this Act and if the requirement to maintain a 25 foot buffer would consume at least 18 percent of the high ground of the platted lot otherwise available for development.

- (5) Buffer crossings for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the Jurisdictional Line and cause a width of disturbance of not more than 50 feet within the buffer, and vegetation is re-established in any bare or disturbed areas within the buffer.
- (6) Crossings for aerial utility lines, provided that: (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of crossings and disturbances to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized), and (d) vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification;

(iii.iv.) Except as provided above, for buffers required pursuant to Part IV.(i), (ii) and (iii), no construction activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land-disturbing activities on the construction site are completed. During coverage under this permit, a buffer cannot be thinned or trimmed of vegetation and a protective vegetative cover must remain to protect water quality and aquatic habitat and a natural canopy must be left in sufficient quantity to keep shade on the stream bed or marsh.

The Erosion, Sedimentation and Pollution Control Plan shall identify all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site. In addition, the Plan shall describe and the applicable permittee shall ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with construction activity at the site and to assure compliance with the terms and conditions of this permit. The applicable permittee must implement and maintain the provisions of the Plan required under this part as a condition of this permit. Except as provided in Part IV.A.2., a single Erosion, Sedimentation and Pollution Control Plan must be prepared by the primary permittee for the common development construction project.

#### **A. Deadlines for Plan Preparation and Compliance.**

1. Except as provided in Part IV.A.2. and Part IV.A.6., the Erosion, Sedimentation and Pollution Control Plan shall be completed prior to submitting the NOI and prior to conducting any construction activity by any permittee.
2. For construction activities that began on or before the effective date of this permit and were subject to the regulations under the previous permit, the permittee(s) shall continue to operate under the existing Plan.
3. For construction activities that begin after the effective date of this permit, the primary permittee shall be required to prepare the Plan for that phase of the common development that corresponds with the NOI being submitted and the primary permittee(s) shall implement the Plan on or before the day construction activities begin.
4. Additional Plan Submittals.

(706) 369-6376

**D. For facilities/construction sites located in the following counties:**  
Douglas, Fayette, Fulton, Gwinnett, Heard, Henry, Rockdale, Spalding

Carroll, Clayton, Coweta, DeKalb,

Information shall be submitted to:

Mountain District - Atlanta Satellite  
Georgia Environmental Protection Division  
4244 International Parkway, Suite 114  
Atlanta, GA 30354-3906  
(404) 362-2671

**E. For facilities/construction sites located in the following counties:**  
Cherokee, Cobb, Dade, Dawson, Fannin, Floyd, Forsyth, Gilmer, Gordon, Paulding, Pickens, Polk, Rabun, Towns, Union, Walker, White, Whitfield

Bartow, Catoosa, Chattooga,  
Habersham, Haralson, Lumpkin, Murray,

Information shall be submitted to:

Mountain District - Cartersville Office  
Georgia Environmental Protection Division  
P.O. Box 3250  
Cartersville, GA 30120-1705  
(770) 387-4900

**F. For facilities/construction sites located in the following counties:**  
Bryan, Bulloch, Camden, Candler, Charlton, Long, McIntosh, Pierce, Tattnall, Toombs, Ware, Wayne

Appling, Atkinson, Bacon, Brantley,  
Chatham, Clinch, Coffee, Effingham, Evans, Glynn, Jeff Davis, Liberty,

Information shall be submitted to:

Coastal District - Brunswick Office  
Georgia Environmental Protection Division  
400 Commerce Center Drive  
Brunswick, GA 31523-8687  
(912) 264-7284

**G. For facilities/construction sites located in the following counties:**  
Calhoun, Clay, Colquitt, Cook, Crisp, Decatur, Dodge, Dougherty, Early, Echols, Grady, Irwin, Lanier, Lee, Lowndes, Miller, Mitchell, Quitman, Randolph, Seminole, Stewart, Sumter, Telfair, Terrell, Thomas, Tift, Turner, Webster, Wilcox, Worth

Baker, Ben Hill, Berrien, Brooks,  
Gordon, Habersham, Haralson, Lumpkin, Murray,  
Wilcox, Worth

Information shall be submitted to:

Southwest District Office  
Georgia Environmental Protection Division  
2024 Newton Road  
Albany, GA 31701-3576  
(912) 430-4144

**H. For facilities/construction sites required to submit Plans required under Part IV.A.4.a. of this Permit:**

Information shall be submitted to:

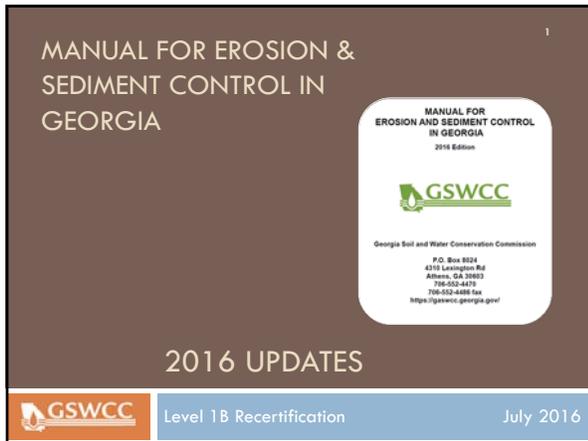
Watershed Protection Branch  
Environmental Protection Division  
4220 International Parkway, Suite 101  
Atlanta, Georgia 30354  
(404) 675-6240  
2 Martin Luther King Jr. Drive  
Suite 1152 East  
Atlanta, Georgia 30334  
404-463-1511



Insert Tab 2

2016 Green Book Updates

Back of Tab




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### Why Revise the Manual?

- On December 18, 2014, the GSWCC State Board took no official action on the Sixth Edition (2014) of the Manual because of areas of concern and uncertainty
- For the calendar year 2015, both the Fifth (2013) and Sixth Editions of the Manual were available for use
- Part of a continuing process of revisions

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### Major Changes: Testing

5<sup>th</sup> Edition

Did not include performance evaluation

6<sup>th</sup> Edition

Included performance evaluation

**Both in Effect**

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## Revision Process



4

- The Carl Vinson Institute of Government at the University of Georgia was brought in this summer to help consolidate and reconcile the Fifth and Sixth editions, along with a representative from:



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## Manual For Erosion and Sediment Control in Georgia

5

**Chapter 1 - The Erosion and Sedimentation Act of 1975**

- Minor revisions were made to content
- Existing pictures were replaced with new ones

**Chapter 2 – Sediment and Erosion Control Processes, Principles and Practices**

- Minor revisions were made to content
- Updated to include new Best Management Practices
- Existing pictures were replaced with new ones

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## Manual For Erosion and Sediment Control in Georgia

6

**Chapter 3 - Planning and Plans**

- Minor revisions were made to existing content
- Added two new sections:
  - “Coordination of Erosion and Sediment Control with Post-Construction Stormwater Management”
  - “Low Impact Development”
- The Erosion and Sedimentation and Pollution Control Plan has been updated to reflect requirements of O.C.G.A 12-7-1 and the NPDES Permits

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**Manual For Erosion and Sediment Control in Georgia**

**7**

**Chapter 4 - Local Programs: Principles and Processes**

- Minor revisions were made to existing content

**Chapter 5 – Sources of Assistance and Resource Information**

- Contact information and maps have been updated

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**Manual For Erosion and Sediment Control in Georgia**

**8**

**Chapter 6 – BMP Standards & Specifications**

- Revised existing BMPs
- Added new structural and vegetative BMPs
- Remove/added mandatory and advisory conditions (should vs. shall) for BMP criteria

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**Chapter 6 – BMP Standards and Specifications for Land Disturbing Activities**

**9**

**Revised BMPs**

- Tackifiers (Tac) - (Vegetative)
- Sediment barriers (Sd1) - (Structural)
- Construction Exit (Co) – (Structural)
- Matting & Blankets (Mb) - (Vegetative)
- Check Dam (Cd) - (Structural)
- Channel Stabilization (Ch) - (Vegetative)
- Temporary Downdrain Structure (Dn1) – (Structural)
- Retrofit (Rt) – (Structural)
- Temporary Stream Crossing (Sr) – (Structural)

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### Chapter 6 - Revised BMP

**Ss**

10

Matting and Blanket (Mb) –No longer a stand alone BMP, it is now called **Slope Stabilization (Ss)**

- This BMP now incorporates:
  - Hydraulic erosion control products (HECP)
  - Rolled erosion control products (RECP)



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### Chapter 6 - Revised BMP

**Tac**

11

- Tackifiers and Binders (Tb) was changed to **Tackifiers (Tac)**.
- Tackifiers are used as a tie-down for soil, compost, seed, straw, hay or mulch. Tackifiers hydrate in water and

Only anionic forms shall be used



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### Chapter 6 - Revised BMP

**Tac**

12

- There are five types of Tackifiers. These blends take into account different blends of synesthetic and/or organic polymers.
- 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 for specification.

Guar is annual legume. It is an organic tackifier



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## Chapter 6 - Revised BMP

Sd1

13

**Sediment Barriers (Sd1)**

- ▣ The 2016 Manual clarifies the use of Type A,B,C Silt Fences in Non-Sensitive and Sensitive Areas.
- ▣ Type C will be classified as Sensitive and Type A and B as Non-Sensitive.
- ▣ Type C definition was amended to include wire, or **equivalent**, reinforcement.
- ▣ The 2016 Manual clarifies that mulch berms and compost socks are types of sediment barriers.




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## Chapter 6 - Revised BMP

Sd1

14

- ▣ Two rows of type S sediment barrier is still to be used along all state water and sensitive areas but it **should be** placed at least 36 inches apart.
- ▣ Information is given about the static slicing and the traditional trenching method.
  - ▣ This information came directly from EPA.

Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining **80%** of its properly installed height.




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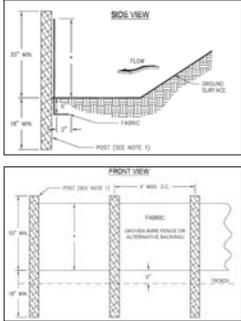
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## Chapter 6 - Revised BMP

Sd1

15

- ▣ Sediment Barriers (Sd1) incorporate bmps other than silt fence for perimeter control.
- ▣ When a Sediment Barrier is used, the product height in inches for each barrier being used must be shown on the plans.
- ▣ Sediment Barriers must be maintained at half their height regardless of size.



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## Chapter 6 - Revised BMP

Co

16

### Construction Exit (Co)

- ▣ Pad Length – The gravel pad shall have a minimum length of 50 feet. When the construction is **less than 50 feet** from the paved access, **the length shall be from the edge of existing pavement to the permitted building being constructed.**




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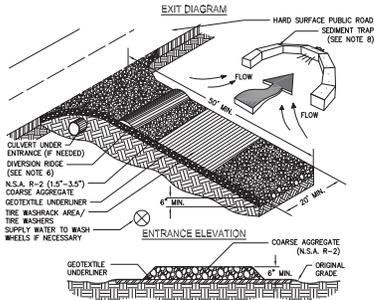
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## Chapter 6 - Revised BMP

Co

17

### CRUSHED STONE CONSTRUCTION EXIT




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## Chapter 6 - Revised BMP

Cd

18

### Check Dam (Cd)

- ▣ Practices will be categorized as follows
  - Stone Check Dams (Cd-S)
  - Straw-Bale Check Dams (Cd-Hb)
  - Compost Filter Sock (Cd-Fs)

**TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN**

1. cfs in the channel/ditch that the check dam is being used in: \_\_\_\_\_
2. Above 2.0 cfs: Yes \_\_\_\_\_ No \_\_\_\_\_
3. If Yes, list BMP being used in conjunction with check dams: \_\_\_\_\_

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### Chapter 6 - Revised BMP

Cd

19

Most notable change in check dams is the installation of the straw bale check dam.

TYPICAL STRAW BALE CHECK DAM

PLAN

SEE DETAIL FOR PLACEMENT OF BALE

DOWNSTREAM STRAW BALE ROW

UPSTREAM STRAW BALE ROW

2" x 2" STAKE, OR #4 REBAR (2 PER BALE)

SECTION A-A

BALE PLACED FLAT SIDE DOWN

ORIGINAL GROUND

MIN. 6"

MIN. 18"

FLOW

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### Check Dam – Hay Bale

Cd

20

A photograph showing a hay bale check dam installed in a channel. The dam is constructed from several rows of hay bales held together by wooden stakes. The channel is lined with concrete, and the surrounding area is reddish-brown soil.

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### Chapter 6 - Revised BMP

Ch

21

Channel Stabilization (Ch)

Products will be categorized as followed:

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

A photograph of a channel with concrete lining. The channel is filled with water, and the concrete lining is visible. The surrounding area is grassy.

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Chapter 6 - Revised BMP Dn1

22

□ **Temporary Downdrain Structure (Dn1)**

- For slopes steeper than 2:1, slope drains should be placed **diagonally** across the slope, extending the drain beyond the toe of the slope. Curve the outlet uphill and adequately protect the outlet from erosion.



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Chapter 6 - Revised BMP Rt

23

□ **Retrofit (Rt)**

- "A device or structure placed in front of a permanent stormwater detention pond outlet **or roadway drainage structure** to serve as temporary sediment filter."

□ **Silt Control Gate (Rt-Sg)**

- May be used for temporary sediment storage on linear construction projects including roadway construction or maintenance, and utility line installation.
- Drainage area shall not exceed 50 acres.

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Chapter 6 - Revised BMP Rt

24



An approved Silt Fence has not been attached to the structure

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Chapter 6 - Revised BMP Sr

25

□ **Temporary Stream Crossing (Sr)**

□ Revised language



"Temporary stream crossings should not be used on streams with drainage areas greater than one square mile (640 acres), unless specifically designed to accommodate the additional drainage area by the design professional."

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Chapter 6 – BMP Standards and Specifications for Land Disturbing Activities

26

**New BMPs**

- Flocculants/Coagulants (FI-Co) - (Vegetative)
- Slope Stabilization (Ss) - (Vegetative)
- Filter Surface Skimmer (Sk) - (Structural)
- Seep Berm (SpB) - (Structural)
- Temporary Sediment Trap (Sd4) - (Structural)
- Turbidity Curtain (Tc) - (Structural)
- Tree Protection (Tr) - (Structural)

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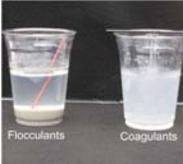
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Chapter 6 New BMPs FI-Co

27

- **Flocculants & Coagulants (FI-Co)**
- Formulated to assist in the solids/liquid separation of suspended particles.
- There will be no FI-Co on the Equivalent BMP List. Any product may be used as long as it conforms to the criteria set forth in the Manual.
- Only anionic forms shall be used.



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Flocculants FI-Co

28



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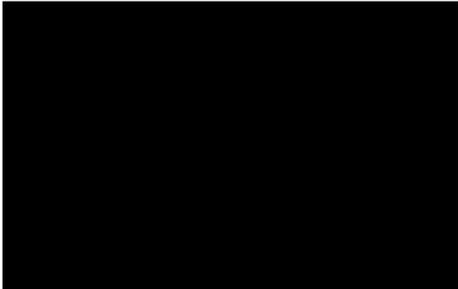
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Coagulants FI-Co

29



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Chapter 6 New BMPs Sk

30

- Floating Surface **Skimmer (Sk)**:
  - A skimmer drains the water from the top allowing cleaner less turbid water to discharge from the ponding area.
  - An emergency spillway is required when using a skimmer.
  - It should not be used in conjunction with Rt.
  - It can replace the riser pipe as the principal spillway.
  - If a skimmer cannot be used, a rationale/justification must be given.

Skimmers are 1 option to meet NPDES Part IV.D.3.a(3) requirement



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**Chapter 6 New BMPs** Sk

31

□ Floating Surface Skimmers require the following to be shown on the erosion control plan:

There is no min/max, shall be specified by design professional

**TO BE SHOWN ON THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN**

When a FLOATING SURFACE SKIMMER is used, show the following information along with each sediment pond, trap or basin being used on the site:

1. Pond, trap or basin size, length\* (top and bottom) width\* (top and bottom) and depth = \_\_\_\_\_
2. Time to Drain (hrs) = \_\_\_\_\_
3. Skimmer Dimensions (orifice and head size)\*\* \_\_\_\_\_
4. Manufacturer's name \_\_\_\_\_

\*feet, \*\* inches

There is not an equivalent list of manufacturers for skimmers. Any person utilizing a home-made skimmer, accepts liability for its use. Their name would be the manufacturer.

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**Floating Surface Skimmer** Sk

32




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**Chapter 6 New BMPs** SpB

33

□ **Seep Berm (SpB)**

- A seep berm is a linear control device constructed as a diversion perpendicular to the direction of the runoff to enhance dissipation and infiltration of runoff, while creating multiple sedimentation chambers with the employment of intermediate dikes.
- To allow the 2 year storm event, 24 hour design storm to seep out while allowing larger flows to be diverted to a sediment storage area.
- If a fill berm is utilized it is very important that it has proper compaction and stabilization.
- Berm storage volumes can be figured as function of berm height and watershed gradient.




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SpB

Chapter 6 New BMPs

34

- Seep Berm require the following to be shown on the erosion and sediment control plan:
  - ▣ Top of Berm Elevation\*
  - ▣ Bottom of Berm Elevation\*
  - ▣ Top of Berm Width \*
  - ▣ Height of the Berm\*
  - ▣ Seep Hole Diameter\*
  - ▣ Distance from the top of the berm to the seep to be placed in accordance with the 2yr-24hr storm\*
  - ▣ Type of Seep
    - ▣ PVC
    - ▣ Metal
    - ▣ Other(specify)
  - ▣ Spacing of Seep Along the Berm\*

\* shown in ft.

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Sd4

Chapter 6 New BMPs

35

- **Temporary Sediment Trap (Sd4)**
  - ▣ This BMP was added to provide sediment storage options for smaller sites.
  - ▣ This is effective against coarse sediment, not silt or clay particles that remain suspended.
  - ▣ All Sd4's are to be cleaned out at 1/3<sup>rd</sup> full
  - ▣ Provides three options
    - ▣ Overflow
    - ▣ Combination
    - ▣ Rock

$V = 0.4 \times A \times D$



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Sd4

Chapter 6 New BMPs

36

1. Temporary Sediment Trap - **Overflow (Sd4-A)**

- ▣ An overflow temporary sediment trap is limited to small areas less than 1 acre.
- ▣ The maximum life span of an overflow trap is 6 months.
- ▣ Silt fence, straw bale barriers or grass filter strips are used to "polish" the overflow water as it leaves the sediment trap.

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Sd4

## Chapter 6 New BMPs

40

### 3. Temporary Sediment Trap – Rock Outlet (Sd4-C)

- ▣ The rock outlet relies on filtering through layers of aggregate, rock or riprap material to dewater the sediment trap.
- ▣ It is the most sturdy of the sediment trap designs and generally requires less maintenance.
- ▣ It can be used for drainage area up to 5 acres and has a life span of 1 year.

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Sd4

## Sd4-C Detail

41

### ROCK OUTLET

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Sd4

## Sd4-C Detail

42

### PROFILE THROUGH EMBANKMENT

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### Chapter 6 New BMPs

Tc

43

#### Turbidity Curtain (Tc)

- A floating or staked barrier installed within the water. (It may also be referred to as a floating boom, silt barrier or silt curtain).
- Not to be used as sediment storage
- Turbidity Curtain is installed to minimize turbidity and silt migration from work occurring within the water or as a supplement to perimeter control BMPs at the water's edge.
- Silt or turbidity is confined to the area within the boundary created by the installation, such that suspended particles drop out of the water column over time.




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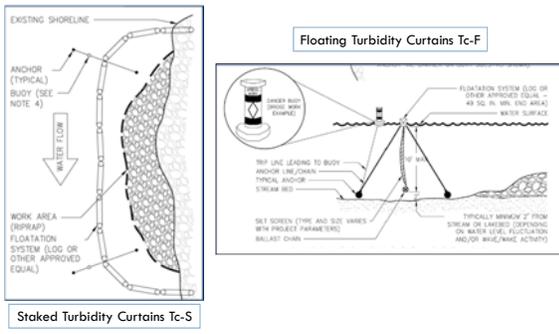
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### Chapter 6 New BMPs

Tc

44




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### Chapter 6 New BMPs

Tr

45

#### Tree Protection (Tr)

- To protect desirable trees from injury during construction activity.
- Tree Protection Zones:
  - Measure the diameter of the tree trunk in inches at 4.5 feet from the ground. This is called the Diameter Breast Height or DBH.
  - Multiply this value by 1.5. This result is the diameter of the root protection zone in feet. This is also considered the critical rooting distance.




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### "If it's green, it's clean"

46

- **BMPs are used in series to provide a defense against erosion on land disturbance sites using both vegetative and structural measures**



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### "If it's green, it's clean"

47



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48

### Questions?

GSWCC  
Urban Program  
P.O. Box 8024  
Athens, GA 30603  
(706) 552-4474



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Insert Yellow Sheet

Back of Yellow Sheet

## VEGETATIVE BEST MANAGEMENT PRACTICES

<b>Bf</b>	Buffer Zone
<b>Cs</b>	Coastal Dune Stabilization
<b>Ds1</b>	Disturbed Area Stabilization (With Mulching Only)
<b>Ds2</b>	Disturbed Area Stabilization (With Temporary Seeding)
<b>Ds3</b>	Disturbed Area Stabilization (With Permanent Vegetation)
<b>Ds4</b>	Disturbed Area Stabilization (With Sodding)
<b>Du</b>	Dust Control on Disturbed Area
<b>FI-Co</b>	Flocculants and Coagulants
<b>Sb</b>	Streambank Stabilization (With Permanent Vegetation)
<b>Ss</b>	Slope Stabilization
<b>Tac</b>	Tackifiers

*The products and practices presented in this Field Manual show the standard installation methods for each conventional BMP. New products and practices may not necessarily meet the requirements for each conventional BMP. Please see the Equivalent Best Management Practice List for specific manufacturer guidelines and specifications.*

## **Bf**

## BUFFER ZONE

### DEFINITION

A strip of undisturbed, original vegetation, enhanced or restored existing vegetation or the re-establishment of vegetation surrounding an area of disturbance or bordering streams, ponds, wetlands, lakes, and coastal waters



### PURPOSE

- Reduce storm runoff velocities
- Act as screen for “visual pollution”
- Reduce construction noise
- Improve aesthetics
- Filtering and infiltrating runoff
- Cooling rivers and streams by creating shade
- Provide food and cover for wildlife and aquatic organisms
- Flood protection
- Protect channel banks from erosion

### INSTALLATION

- Important factors, such as slope, hydrology, width, and structure shall be considered.
- The GA EPD enforces a 25 ft minimum undisturbed stream buffer requirement for warm water fisheries and a 50 ft minimum undisturbed stream buffer requirement for cold water fisheries.

**Bf**

- If any land-disturbing activity, exempt or non-exempt, occurs within a mandated stream buffer, all cut and fills shall be stabilized with appropriate slope stabilization.

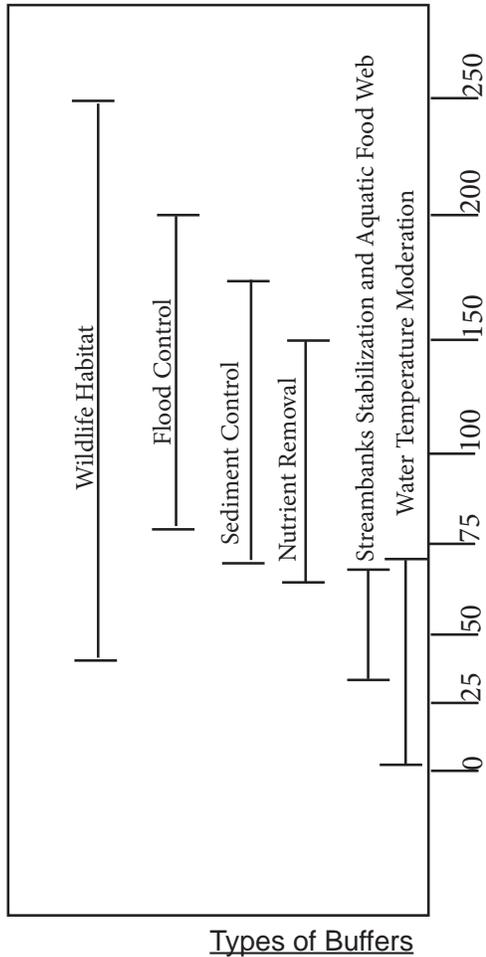


Figure 1. Range of Minimum Width (ft.) for Meeting Specific Buffer Objectives (Palone & Todd, draft)

Types of Buffers

**General Buffer**

- A strip of undisturbed, original land surrounding the disturbed site.
- A width should be selected to permit the zone to serve the purpose(s) listed above.

**Vegetated Stream Buffer**

- A vegetated stream buffer of 50 ft or greater can protect waters from excess sedimentation.

**Bf**

- The size of the stream and topography of the area must be considered to determine the appropriate width.
- The buffer should be increased 2 ft in width for every 1% slope.

**Planting Techniques**

- Plantings for buffer re-establishment and enhancement can consist of bare root seedlings, container-grown seedlings, container-grown plants, and balled and burlapped plants.
- Standard erosion control grasses and legumes may be used in denuded areas for quick stabilization.
- Refer to Tables 6-1.1 & 6-1.2 in the Manual for Erosion & Sediment Control in Georgia for complete listing of all Native Plants & Unrooted Hardwood Cuttings.
- Streambank stabilization techniques may be required if steep slopes and hydrologic patterns deem it necessary.
- Soil preparation and maintenance are essential for the establishment of planted vegetation.

Table 1. Effectiveness of Vegetative Buffer Strips

Purpose	Grass	Shrub	Tree
Filter Sediment	High	Low	Low
Filter Chemicals	Medium	Low	Low
Stabilize Stream Banks	Low	High	High
Improve Aesthetics	Low	Medium	High
Improve Habitat	Low	Medium	High
Reduce Noise	Low	Medium	High

**Bf**

### MAINTENANCE

- Areas closest to the stream should be maintained with minimal impact.
- During periods of drought, water as necessary in all buffer areas planted for enhancement.
- Remove weeds by hand or with careful spraying.
- Monitor to determine if plant material needs to be replaced.
- Fertilizer is unnecessary if the appropriate vegetation is chosen.

### REFERENCES

**Ds1**

Disturbed Area Stabilization  
(With Mulching Only)

**Ds2**

Disturbed Area Stabilization  
(With Temporary Seeding)

**Ds3**

Disturbed Area Stabilization  
(With Permanent Vegetation)

**Sb**

Streambank Stabilization  
(With Permanent Vegetation)

**Cs**

## COASTAL DUNE STABILIZATION (WITH VEGETATION)

### DEFINITION

Planting vegetation on dunes that are denuded, artificially constructed, or renourished.



### PURPOSE

- Stabilize soil on dunes allowing them to become more resistant to wind and waves.
- Allow development of dunes in areas where they have been damaged or destroyed.

### INSTALLATION

- Install in accordance with the approved plan.
- Install in accordance with all Federal, State and local regulations.
- Protect dunes from vehicular and human traffic.
- Provide crosswalks or crossover structures to allow for beach access.
- Irrigate during the first growing season in order to obtain good survival.
- Native plants commercially available that may be planted are included in Table 1.

# Cs

Table 1. Planting Requirements for Native Plants

Species	Stock	Date	Depth
Marshay Cordgrass (Spartina patens)	Plants	Spring	4"-5"
Bitter Panicum (Panicum amarum)	Rhizomes	Spring	~4"
Coastal Panigrass (Panicum amarum v. amarulum)	Seeds or Plants	Spring	1"-3"



Figure 1. Sand Fence and Native Plants

### Sand Fence

- Install according to approved plan.
- Use posts made of Black Locust, Red or White Cedar, or similarly durable wood.
- Use posts with minimum length of 7 ft and minimum diameter of 3".
- Space posts at a maximum of 10 ft.
- Entrench posts a minimum of 3 ft.
- Fasten fence to posts with four 12-gauge galvanized wires.
- Vegetation must be established immediately following development of the dunes.
- Use standard commercial 4-ft high snow fence that consists of wooden slats wired together with 1-1/4" spaces between the slats (See Figure 2)

# Cs

### Barrier Dune Construction

- Install sand fence a minimum of 100 ft from the mean high tide line.
- Space 2 or more parallel fences 30-40 ft apart.
- Locate fences as close to perpendicular with the prevailing winds, but as near parallel to the water line as possible
- When the winds are generally parallel to the water line, construct a single line of fence at least 140 ft from the mean high tide line with a shorter 30 ft section perpendicular to the original fence.
- Place these fences opposite the water side and space these fences about 40 ft apart.

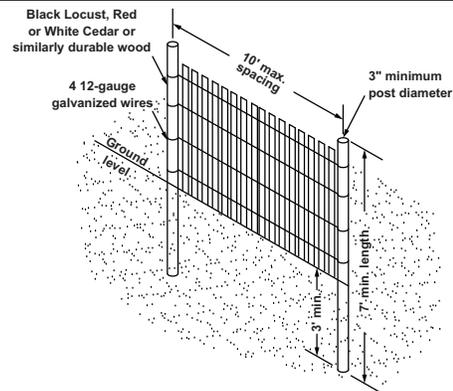


Figure 2. Sand Fence Installation Requirements

## MAINTENANCE

- Repair any blowouts, wash pits, or other natural or man-made damage quickly.
- Maintain fences and erect additional fences if needed until the eroding area is replenished.
- Replant lost or destroyed vegetation.
- Apply 50 lbs of nitrogen/acre/year.
- Protect dunes from traffic by using elevated walks, semi-permanent paved paths, and portable roll-up walkways .

Cs

Ds1

## **DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)**

### **DEFINITION**

A temporary cover of plant residues or other suitable materials, produced on site if possible, applied to the soil surface.



### **PURPOSE**

- Reduce runoff and erosion
- Modify soil temperature
- Conserve moisture
- Prevent surface compaction and crusting
- Control undesirable vegetation
- Increase biological activity in the soil

### **INSTALLATION**

- Apply mulch or temporary grassing to all exposed areas within 14 days of disturbance.
- Applicable to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover.
- Mulch can be used as a singular erosion control device for up to 6 months.
- Apply at the appropriate depth. Refer to Table 1 for specific materials.

#### Site Preparation

- Grade to permit the use of equipment for applying and anchoring mulch

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## Ds1

- Install needed erosion control measures such as dikes, berms, and sediment barriers.
- Loosen compacted soil to a minimum depth of 3".

### Applying Mulch

- Apply dry straw or hay and wood chips uniformly by hand or by mechanical equipment.
- Apply 20-30 lbs of nitrogen/acre if the area will eventually be covered with perennial vegetation.
- Apply polyethylene film on exposed areas.

### Anchoring Mulch

- Press straw or hay into the soil with a disk harrow immediately after application. Tackifiers may be used when spreading mulch with blower-type equipment.
- Anchor wood waste using the appropriate size netting
- Trench polyethylene at the top as well as incrementally as necessary.

Table 1. Mulching Application Requirements

Material	Rate	Depth
Straw or hay	-	2" to 4"
Wood waste, chips, sawdust, bark	-	2" to 3"
Polyethylene film	Secure with soil, anchors, weights	-
Geotextiles, jute matting, netting, etc.	See manufacturer's recommendations	-

## MAINTENANCE

- The appropriate depth and 90% cover shall be maintained at all times.

## REFERENCES

**Tac**

Tackifiers

## Ds2

## DISTURBED AREA STABILIZATION

(WITH TEMPORARY SEEDING)

### DEFINITION

The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.



### PURPOSE

- Reduce runoff and sediment damage of down stream resources
- Protect the soil surface from erosion
- Improve wildlife habitat
- Improve aesthetics
- Improve tilth, infiltration, and aeration as well as organic matter for permanent plantings

### INSTALLATION

- Apply mulch or temporary grassing to all exposed areas within 14 days of disturbance.
- Applicable to rough graded areas that will be exposed for less than 6 months.
- Coordinate with permanent measures to ensure economical and effective stabilization.
- Take note of which species are not appropriate for companion crop plantings.
- When the soil has been sealed by rainfall or consists of smooth cut slopes, scarify the soil in order to provide a place for the seed to lodge and germinate.

## Ds2

- Apply agricultural lime at the rate determined by soil test pH.
- Apply lime before land preparation and incorporate with a disk, ripper, or chisel.
- On steep slopes, apply fertilizer hydraulically.
- Select grass or grass-legume mixtures based on the area and season of the year.
- Apply seed uniformly by hand, cyclone seeder, drill, culti-packer-seeder, or hydraulic seeder.
- The appropriate depth of planting is 10x the seed diameter.
- Apply irrigation at a rate that will not cause runoff and erosion. Thoroughly wet the soil to insure germination of the seed.

### MAINTENANCE

- Re-seed areas where an adequate stand of temporary vegetation fails to emerge.
- If optimum conditions for temporary vegetation is lacking, mulch can be used a singular erosion control device.

### REFERENCES

**Ds1**

Disturbed Area Stabilization  
(With Mulching Only)

**Tac**

Tackifiers

## Ds2



Figure 2. Browntop Millet



Figure 3. Ryegrass



Figure 3. Rye

Table 1. Some Temporary Plant Species, Seeding Rates and Planting Dates

Species	Rates Per 1,000 sq. ft.	Rates per Acre	Planting Dates by Region		
			M-L	P	C
Barley Alone Barley in Mixtures	3.3 lbs. .6 lbs.	3 bu. .5 bu.	9/1-10/31	9/15-11/15	10/1-12/31
Lespedeza, Annual Lespedeza in Mixtures	0.9 lbs. 0.2 lbs.	40 lbs. 10 lbs.	3/1-3/31	3/1-3/31	2/1-2/28
Lovegrass, Weeping Lovegrass in Mixtures	0.1 lbs. .05 lbs.	4lbs. 2 lbs.	4/1-5/31	4/1-5/31	3/1-5/31
Millet, Browntop Millet in Mixtures	.9 lbs. .2 lbs.	40 lbs. 10 lbs.	4/15-6/15	4/15-6/30	4/15- 6/30
Millet, Pearl	1.1 lbs.	50 lbs.	5/15-7/15	5/1-7/31	4/15-8/15
Oats Alone Oats in Mixtures	2.99 lbs. .7 lbs.	4 bu. 1 bu.	9/15 -11/15	9/15-11/15	9/15-11/15

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DS2

Table 1. Some Temporary Plant Species, Seeding Rates and Planting Dates (continued)

Species	Rates Per 1,000 sq. ft.	Rates per Acre	Planting Dates by Region		
			M-L	P	C
Rye (Grain) Alone Rye in Mixtures	3.9 lbs. .6 lbs.	3 bu. .5 bu.	8/15-10/31	9/15/-11/30	10/1-12/31
Ryegrass	0.9 lbs.	40 lbs.	8/15-11/15	9/1-12/15	9/15-12/31
Sudangrass	1.4 lbs.	60 lbs.	5/1-7/31	5/1-7/31	4/1-7/31
Triticale Alone Triticale in Mixtures	3.3 lbs. .6 lbs	3 bu. .5 bu.	NA	NA	10/15-11/30
Wheat Alone Wheat in Mixtures	4.1 lbs. .7 lbs.	3 bu. .5 bu.	9/15 -11/30	10/1-12/15	10/15-12/31

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DS2

1. Unusual site conditions may require heavier seeding rates.
2. Seeding dates may need to be altered to fit temperature variations and local conditions.
3. For Major Land Resource Areas (MLRAs), see page 60.
4. Seeding rates are based on pure live seed (PLS).

Table 2. Fertilizer Requirements for Temporary Vegetation

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	N Top Dressing Rate (lbs./acre)
Cool season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	1000	---
	Maintenance	10-10-10	400	30
Cool season grasses & legumes	First	6-12-12	1500	0-50
	Second	0-10-10	1000	---
	Maintenance	0-10-10	400	---
Temporary cover crops seeded alone	First	10-10-10	500	30
Warm season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	800	50-100
	Maintenance	10-10-10	400	30

DS2

Ds3

## DISTURBED AREA STABILIZATION

(WITH PERMANENT SEEDING)

### DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization.



### PURPOSE

- Protect the soil surface from erosion
- Reduce damage from sediment and runoff to down-stream areas
- Improve wildlife habitat and visual resources
- Improve aesthetics

### INSTALLATION

- Use conventional planting methods where possible.
- Final Stabilization means that 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the plan (uniformly covered landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures.
- Select plants species based on site and soil conditions, planned use and maintenance of the area, time of year, method of planting, and the needs of the land user. (Refer to Table 1)

Ds3

- Apply agricultural lime at a rate of 1-2 tons/acre unless soil tests indicate otherwise. Please refer to Table 2 for initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species.
- Apply seed hydraulically. If using conventional methods, use a culti-packer seeder, drill, rotary seeder, or by hand.
- Cover the seed lightly with 1/8"-1/4" of soil for small seed and 1/2"-1" of soil for large seed when using a cultipacker.
- Check seed tags for % germination & % purity in order to calculate Pure Live Seed (PLS), which is the percentage of the seeds that are pure and will germinate.
- Mulch is required for all permanent vegetation applications. Please refer to **Ds1** for application rates and anchoring methods for different materials.
- Irrigate when the soil is dry and at a rate that will not cause runoff.

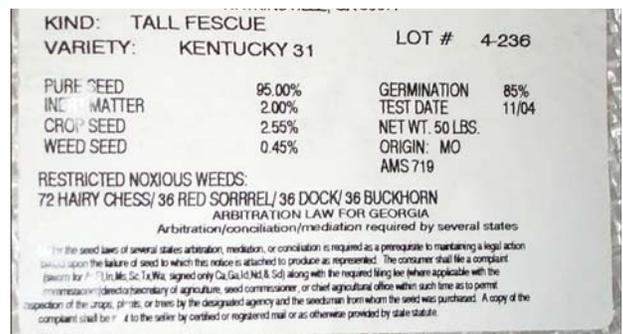


Figure 1. Typical Tag on a Bag of Seed

### PLS Example

Tall Fescue

85% germination & 95% purity

PLS = 0.85 germination x 0.95 purity

PLS = 80.75%

Seeding rate = 50 lbs. PLS/acre = 61.92 lbs/acre

PLS 80.75% PLS

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Table 1. Some Permanent Plant Species, Seeding Rates, and Planting Dates

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M- L	P	C	
Bahia, Pensacola Alone or with temporary cover With other perennials	60 lbs. 30 lbs.	1.4 lbs. 0.7 lb.	---	4/1 -5/31	3/1-5/31	Low growing; sod producing; will spread into Bermuda lawns.
Bahia, Wilmington Alone or with temporary cover With other perennials	60 lbs. 30 lbs.	1.4 lbs. 0.7 lb.	3/15-5/31	3/1-5/31	—	Same as above
Bermuda, Common (Hulled seed) Alone With other perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	---	4/1-5/31	3/15-5/31	Quick cover; low growing; sod forming; needs full sun.
Bermuda, Common (Unhulled seed) With temporary cover With other perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	---	10/1-2/28	11/1-1/31	Plant with Winter annuals. Plant with Tall Fescue

DS3

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Table 1. Some Permanent Plant Species, Seeding Rates, and Planting Dates (continued)

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M- L	P	C	
Bermuda Springs Common lawn and forage hybrids	40 cu. ft.	0.9 cu.ft.	4/15-6/15	4/1-6/15	4/1-5/31	1 cu. ft. = 650 sprigs 1 bu. = 1.25 cu. ft. or 800 sprigs
	Sod plugs 3' x3'					
Centipede	Block Sod Only	Block Sod Only	---	11/1-5/31	11/1-5/31	Drought tolerant. Full sun or partial shade.
Crown Vetch With winter annuals or cool season grasses	15 lbs.	0.3 lb.	9/1-10/15	9/1-10/15	--	Mix with 30 lbs. Tall Fescue or 15 lbs. Rye; inoculate seed; plant only North of Atlanta.
Fescue, Tall Alone With other perennials	50 lbs. 30 lbs.	1.1 lbs. 0.7 lb.	3/1-4/15 or 8/15-10/15	9/1-10/15	---	Can be mixed with perennial Lespedezas or Crown Vetch; not for droughty soils or heavy use areas

DS3

Table 1. Some Permanent Plant Species, Seeding Rates, and Planting Dates (continued)

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M- L	P	C	
Lespedeza, Sericea						Widely adapted and low maintenance; takes 2-3 years to establish; inoculate seed with EL inoculant; mix with Weeping lovegrass, Common Bermuda, Bahia or Tall Fescue.  Mix with Tall Fescue or winter annuals.  Cut when seed is mature but before it shatters. Add Tall Fescue or winter annuals.
Scarified	60 lbs.	1.4 lbs.	4/1-5/31	3/15-5/31	3/1-5/15	
Unscarified	75 lbs.	1.7 lbs.	9/1-2/28	9/1-2/28	9/1-2/28	
Seed-bearing hay	3 tons	138 lbs.	10/1-2/28	10/1-1/31	10/15-1/15	

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Table 1. Some Permanent Plant Species, Seeding Rates, and Planting Dates (continued)

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M- L	P	C	
Lespedeza Ambro Virgata or Appalow						Spreading growth with height of 18"-24"; good in urban areas; slow to develop good stands; mix with Weeping Lovegrass, Common Bermuda, Bahia Tall Fescue or winter annuals; do not mix with Sericea Lespedeza; inoculate seed with EL inoculant.
Scarified	60 lbs.	1.4 lbs.	4/1-5/31	3/15-5/31	3/1-5/15	
Unscarified	75 lbs.	1.7 lbs.	9/1-2/28	9/1-2/28	9/1-2/28	
Lespedeza, Shrub (Lespedeza Bicolor or Lespedeza Thumbergii) Plants	3' x 3' spacing		10/1-3/31	11/1-3/15	11/15-2/28	Plant in small clumps for wildlife food and cover.

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Table 1. Some Permanent Plant Species, Seeding Rates, and Planting Dates (continued)

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M- L	P	C	
Lovegrass, weeping Alone With other perennials	4 lbs. 2 lbs.	0.1 lb. 0.05 lb.	4/1-5/31	3/15-5/31	3/1-5/31	Quick cover; drought tolerant; grows well with Sericea Lespedeza on road-banks and other steep slopes; short lived.
Maidencane sprigs	2' x 3' spacing		2/1-3/31	2/1-3/31	2/1-3/31	For very wet sites such as river banks and shorelines. Dig sprigs locally.
Panicgrass, Altantic Coastal	20 lbs.	0.5 lb.	---	3/1-4/30	3/1-4/30	Grows well on coastal sand dunes; mix with Sericea Lespedeza but not on sand dune.
Red Canary Grass With other perennials	50 lbs. 30 lbs.	1.1 lbs. 0.7 lb.	8/15-10/15	9/1-10/15	---	Grows similar to Tall Fescue; for wet sites

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DS3

Table 1. Some Permanent Plant Species, Seeding Rates, and Planting Dates (continued)

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M- L	P	C	
Sunflower, Aztec Maximillian	10 lbs.	0.2 lb.	4/15-5/31	4/15-5/31	4/1-5/31	Mix with Weeping Lovegrass or other low growing grasses or legumes.

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1. Rates are for broadcasted seed. If a seed drill is used, reduce the rates by one-half.
2. PLS is an abbreviation for Pure Live Seed. Refer to Glossary for an explanation of this term.
3. The resource areas are defined in the Glossary. See page 60 for Resource Area.
4. Seeding rates are based on pure live seeds (PLS).

DS3

Table 2. Fertilizer Requirements for Permanent Vegetation

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./ acre)	N Top Dressing Rate (lbs./acre)
Cool season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	1000	---
	Maintenance	10-10-10	400	30
Cool grasses and legumes	First	6-12-12	1500	0-50
	Second	0-10-10	1000	---
	Maintenance	0-10-10	400	---
Warm season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	800	50-100
	Maintenance	10-10-10	400	30
Warm season grasses and legumes	First	6-12-12	1500	50
	Second	0-10-10	1000	---
	Maintenance	0-10-10	400	---

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DS3

DS3

Ds3



Figure 2. Weeping Lovegrass



Figure 3. Sericea Lespedeza



Figure 4. Common Bermuda

Ds3

## MAINTENANCE

- Re-seed areas where an adequate stand of vegetation fails to emerge or where a poor stand exists.
- Maintain at least 6" of top growth under any use and management.
- Exclude traffic until the plants are well established.
- Please refer to Table 2 for second year and maintenance fertilizer rates.
- Apply one ton of agricultural lime every 4-6 years or as indicated by soil tests.
- Mow Bermudagrass, Bahiagrass, and Tall Fescue as desired.
- Mow Sericea Lespedeza only after frost to ensure that the seeds are mature.

## REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ss** Slope Stabilization

## DISTURBED AREA STABILIZATION (WITH SODDING)

### DEFINITION

A permanent vegetative cover using sods on highly erodible or critically eroded lands.



### PURPOSE

- Establish immediate ground cover
- Reduce runoff and erosion
- Improve aesthetics and land value
- Reduce dust and sediments
- Stabilize waterways and critical areas
- Filter sediments, nutrients and bugs
- Reduce downstream complaints
- Reduce likelihood of legal action
- Reduce likelihood of work stoppage due to legal action
- Increase “good neighbor” benefits

### INSTALLATION

- Bring soil surface to final grade. Clear surface of trash, woody debris, stones and clods larger than 1”. Apply sod to soil surfaces only and not frozen surfaces, or gravel type soils.

- Topsoil properly applied will help guarantee a stand. Don’t use topsoil recently treated with herbicides or soil sterilants.
- Mix fertilizer into soil surface. Fertilize based on soil tests or Table 1. For fall planting of warm season species, half the fertilizer should be applied at planting and the other half in the spring.
- Agricultural lime should be applied based on soil tests or at a rate of 1-2 tons/acre.
- Lay sod with tight joints and in straight lines. Don’t overlap joints. Stagger joints and do not stretch sod.

Table 1. Fertilizer Requirements for Soil Surface Application			
Fertilizer Type (lbs./acre)	Fertilizer Rate (lbs./sq.ft.)	Fertilizer Rate	Season
10-10-10	1000	.025	Fall

- On slopes steeper than 3:1, sod should be anchored with pins or other approved methods.
- Installed sod should be rolled or tamped to provide good contact between sod and soil.
- Irrigate sod and soil to a depth of 4” immediately after installation.
- Sod should not be cut or spread in extremely wet or dry weather.
- Irrigation should be used to supplement rainfall for a minimum of 2-3 weeks.

### MATERIALS

- Sod selected should be certified. Sod grown in the general area of the project is desirable.
- Sod should be machine cut and contain 3/4” (+ or - 1/4”) of soil, not including shoots or thatch.

# Ds4

- Sod should be cut to the desired size within  $\pm 5\%$ . Torn or uneven pads should be rejected.
- Sod should be cut and installed within 36 hours of digging.
- Avoid planting when subject to frost heave or hot weather, if irrigation is not available.
- The sod type should be shown on the plans or installed according to Table 2. See page 60 for your Resource Area.

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tiflawn	M-L, P,C P,C P,C P,C	Warm weather
Bahiagrass	Pensacola	P,C	Warm weather
Centipede	—	P,C	Warm weather
St. Augustine	Common Bitterblue Raleigh	C	Warm weather
Zoysia	Emerald Myer	P,C	Warm weather
Tall Fescue	Kentucky 31	M-L, P	Cool weather

## MAINTENANCE

- Re-sod areas where an adequate stand of sod is not obtained.
- New sod should be mowed sparingly. Grass height should not be cut less than 2"-3" or as specified.
- Apply one ton of agricultural lime as indicated by soil test or every 4-6 years.

# Ds4

- Fertilize grasses in accordance with soil tests or Table 3.

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	Nitrogen Top Dressing Rate (lbs./acre)
Cool season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	1000	---
	Maintenance	10-10-10	400	30
Warm season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	800	50-100
	Maintenance	10-10-10	400	30

## REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ss** Slope Stabilization

Du

## DUST CONTROL ON DISTURBED AREAS

### DEFINITION

Controlling surface and air movement of dust on construction sites, roads, and demolition sites.



### PURPOSE

- Prevent surface and air movement of dust from exposed soil surfaces.
- Reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

### MATERIALS

#### Temporary Methods

- Mulches - See **Ds1 - Disturbed Area Stabilization** (with Mulching only). Refer to specification **Tac - Tackifiers** for the use of synthetic resin to bind mulch material.
- Vegetative Cover - See **Ds2 - Disturbed Area Stabilization** (with Temporary Seeding).
- Spray-on Adhesives - For use on mineral soils, not muck soils. Refer to specification **Tac - Tackifiers**.

Du

- Tillage - Designed to roughen and bring clods to the soil surface. Begin plowing on windward side of site. Use chisel-type plows, spring-toothed harrows, or similar plows to achieve desired effect. This is an emergency measure to be used before wind erosion starts.
- Irrigation - Sprinkle the site with water until the surface is wet. Repeat as needed.
- Barriers - Use solid board fence, snow fence, burlap fence, crate walls, bales of hay, or similar material to control air currents and soil blowing. Place barriers at right angles at intervals of 15x their height to control wind erosion.
- Calcium Chloride - Apply at a rate to keep the surface moist.

#### Permanent Methods

- Permanent Vegetation - See **Ds3 - Disturbed Area Stabilization** (with Permanent seeding). Existing trees and large shrubs may afford valuable protection if left in place.
- Topsoiling - See specification **Tp - Topsoiling**.
- Stone - Cover surface with crushed stone or coarse gravel. See specification **Cr - Construction Road Stabilization**.

### MAINTENANCE

- Prohibit traffic on surface after spraying.
- Supplement surface covering as needed.

**REFERENCES**

- Ds1** Disturbed Area Stabilization  
(With Mulching Only)
- Ds2** Disturbed Area Stabilization  
(With Temporary Seeding)
- Ds3** Disturbed Area Stabilization  
(With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization  
(With Sodding)
- Tac** Tackifiers
- Cr** Construction Road Stabilization
- Tp** Topsoiling

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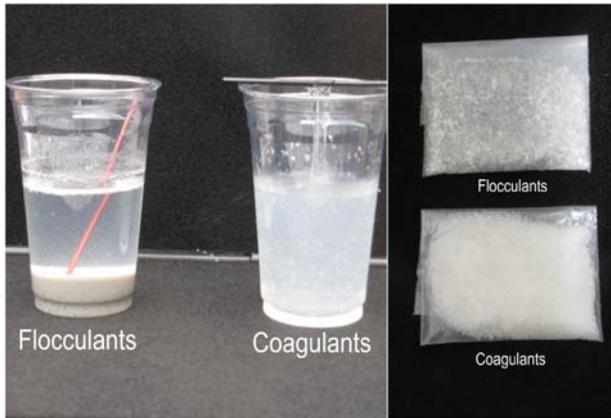
## FLOCCULANTS & COAGULANTS

### DEFINITION

Formulated to assist in the solids/liquid separation of suspended particles in solution.

Coagulant - Required to help give body to the water. A coagulant neutralizes the repulsive electrical charges surrounding particles allowing them to “stick together” creating clumps or flocs that form a small to mid-size particle.

Flocculent - Facilitate the agglomeration or aggregation of the coagulated particles to form larger floccules and act as a net where it gathers up the smaller coagulated particles making a larger particle. This larger particle will slowly drop out of suspension.



### PURPOSE

- Settle suspended sediment, heavy metals and hydrocarbons (TSS) in runoff water from construction sites for water clarification.

### INSTALLATION

- Application shall conform to manufacturer’s instructions and guidelines. FI-Co applications shall comply with all federal and local laws.
- Only anionic forms of FI-Co shall be used.

- This practice is not intended for application to surface waters of the state. It is intended for application within construction storm water ditches and storm drainage systems that feed into pre-constructed ponds or basins.

### MAINTENANCE

- Maintenance shall consist of reapplying FI-Co via the measures above when turbidity levels are no longer met or the FI-Co is used up. Bricks, blocks, socks, logs and bags shall be maintained when sediment accumulates on the products.

**Sb**

## STREAMBANK STABILIZATION

(USING PERMANENT VEGETATION)

### DEFINITION

The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.



### PURPOSE

- Lessen the impact of rain directly on the soil.
- Trap sediment from adjacent land.
- Form a root mat to stabilize and reinforce the soil on the streambank.
- Provide wildlife habitat.
- Enhance the appearance of the stream.
- Lower summertime water temperatures for a healthy aquatic population.

**NOTE:** Careful thought, planning and execution is required to assure that the streambank stabilization project is done efficiently and correctly. Please refer to GSWCC's [Guidelines for Streambank Restoration](#) for more detailed information.

**Sb**

### SELECTED PRACTICES

- Revegetation includes seeding and sodding of grasses, seeding in combination with erosion control fabrics, and the planting of woody vegetation (shrubs and trees).
- Use jute mesh and other geotextiles to aid in soil stabilization and revegetation.

#### Live Stake

- Fresh, alive woody plant cuttings tamped into the ground as stakes, intended to root and grow into mature shrubs that will stabilize soils and restore the riparian zone habitats.
- Willow species work best.
- Provides no immediate streambank stabilization.

#### LIVE STAKING CROSS-SECTION

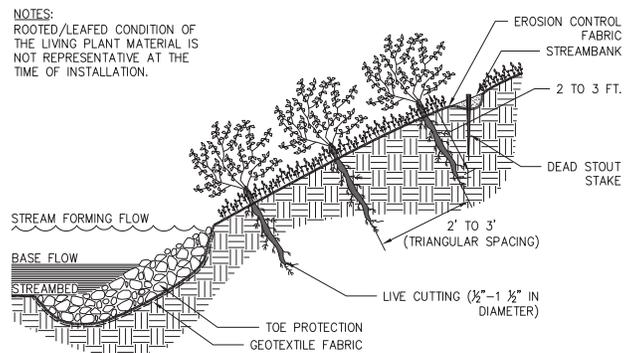


Figure 1. Illustration of a Live Stake

#### Joint Planting

- Installation of live willow stakes between rock previously placed along the streambank.
- Rock needs to be loosely dumped or hand placed and no thicker than 2 ft.
- Enables a bank previously installed with conventional rip-rap to become naturalized.

NOTES:  
ROOTED/LEAFED CONDITION OF THE LIVING PLANT MATERIAL IS NOT REPRESENTATIVE AT THE TIME OF INSTALLATION.

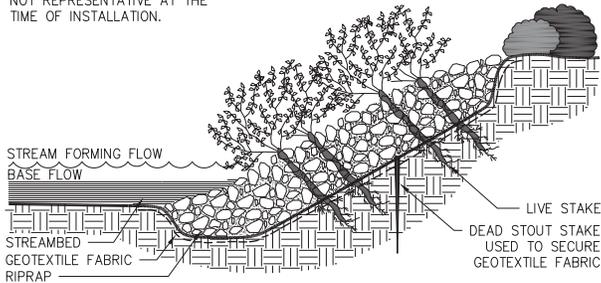
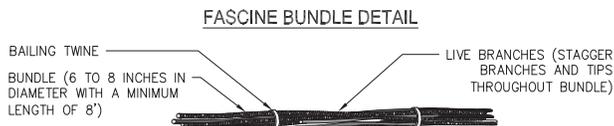


Figure 2. Illustration of Joint Planting

Live Fascine

- Sausage-like bundles of live cut branches placed into trenches along the streambank.
- Willow species work best.
- Provides immediate protection from erosion when properly used and installed.
- Creates very little site disturbance as compared to other systems.
- Works especially well when combined with surface covers such as jute mesh or coir fabrics.



LIVE FASCINE CROSS-SECTION DETAIL

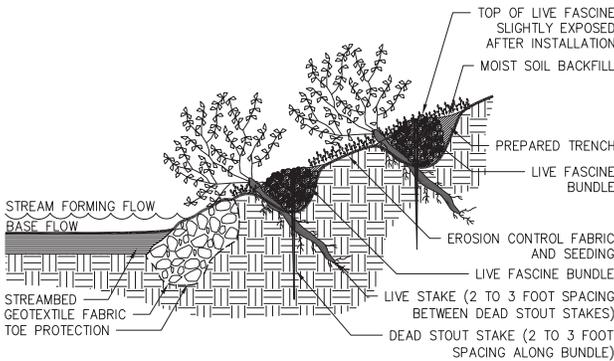


Figure 3. Illustration of a Live Fascine

Brushmattress

- Combination of living units that form an immediate protective surface cover over the streambank.
- Living units used include live stakes, live fascines, and a mattress branch cover (long, flexible branches placed against the bank surface).
- Requires a great deal of live material.
- Complicated and expensive to evaluate, design, and install.
- Captures sediment during flood conditions.
- Produces habitat rapidly, and quickly develops a healthy riparian zone.

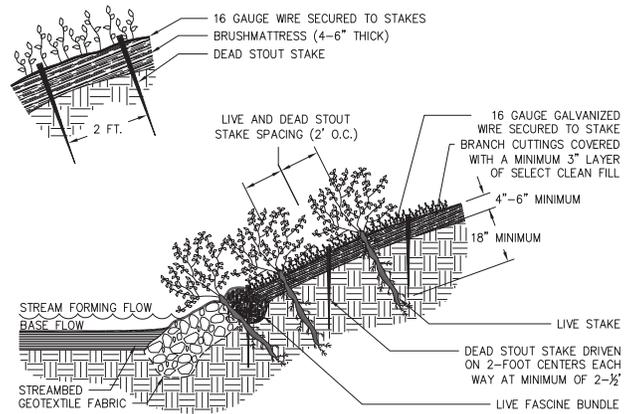


Figure 4. Illustration of a Brushmattress

Live Cribwall

- A rectangular framework of logs or timbers, rock, and woody cuttings.
- Requires a great deal of assessment and understanding of stream behavior.
- Can be complicated and expensive if a supply of wood and some volunteer help is not available.
- Develops a natural streambank or upland slope appearance after it has begun to grow.

- Provides excellent habitat for a variety of fish, birds, and animals.
- Very useful where space is limited on small, narrow stream corridors.

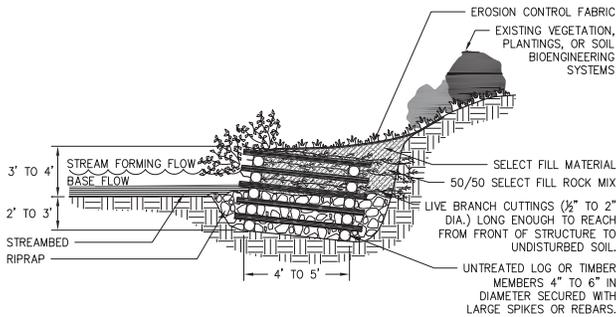


Figure 5. Illustration of a Live Cribwall

Branchpacking

- Process of alternating layers of live branches and soil, incorporated into a hole, gully, or slumped-out area in a slope or streambank.
- Moderate to complex level of difficulty for construction.
- Produces an immediate filter barrier, reducing scouring conditions, repairing gully erosion, and providing habitat cover and bank reinforcement.

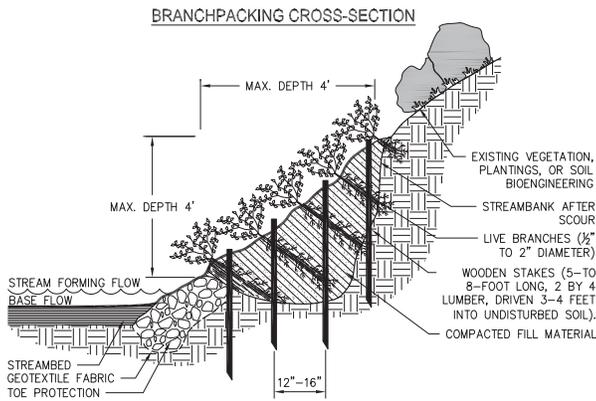


Figure 6. Illustration of Branchpacking

- One of the most effective and inexpensive methods for repairing holes in earthen embankments along small stream sites.

Measure	Relative Cost	Relative Complexity
Live stake	Low	Simple
Joint planting	Low*	Simple*
Live fascine	Moderate	Moderate
Brushmattress	Moderate	Moderate to Complex
Live cribwall	High	Complex
Branchpacking	Moderate	Moderate to Complex
Conventional vegetation	Low to Moderate	Simple to Moderate
Conventional bank armoring (riprap)	Moderate to High	Moderate to Complex

\*Assumes rock is in place

**MAINTENANCE**

- Check banks after every high-water event, fixing gaps in the vegetative cover at once with structural materials or new plants, and mulching if necessary.
- Fresh cuttings from other plants may be used for repairs.
- When fertilizer is applied on the surface, it is best to apply about one-half at planting, one-fourth when new growth is about 2” tall, and one-fourth about six weeks later.

**REFERENCES**

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)
- Ss** Slope Stabilization

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Guidelines for Streambank Restoration,  
Georgia Soil and Water Conservation  
Commission

# SLOPE STABILIZATION

## DEFINITION

A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.

### Rolled Erosion Control Products (RECP)

- A natural fiber blanket with single or double photodegradable or biodegradable nets.

### Hydraulic Erosion Control Products (HECP)

- HECP shall utilize straw, cotton, wood or other natural based fibers held together by a soil binding agent which works to stabilize soil particles. Paper mulch should not be used for erosion control.



## PURPOSE

- Provide a cover layer that stabilizes the soil and acts as a rain drop impact dissipater while providing a microclimate which protects young vegetation and promotes its establishment.

## INSTALLATION

- Installation and stapling of RECPs and application rates for the HECPs shall conform to manufacturer’s guidelines for application.
- 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 or biodegradable.



Figure 1. Hydroseeding on disturbed areas

## MAINTENANCE

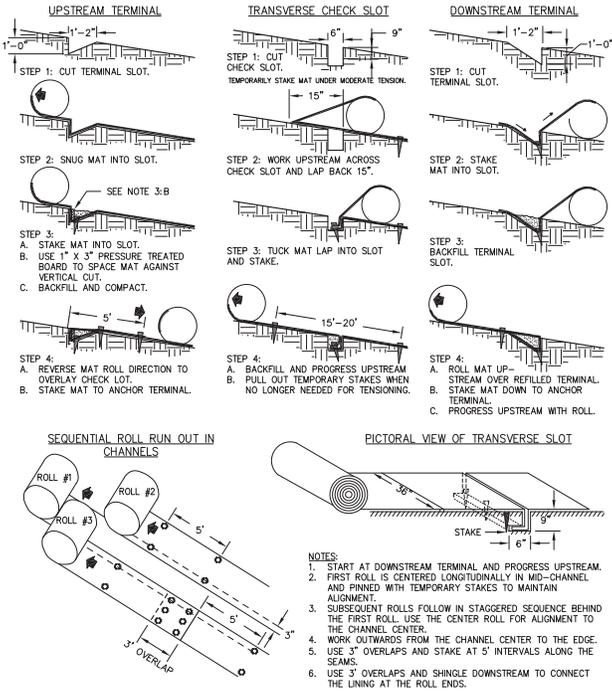
- Inspect all erosion control blankets and matting periodically after installation. Inspect immediately after rainstorms to check for erosion and undermining.
- Repair all dislocations and failures immediately.
- Re-install all materials after washouts or breakage occurs. Repair damage to the slope or ditch first.
- Monitor all areas until they are permanently stabilized.



Figure 2. Installation of Jute Matting

Ss

BLANKET AND MATTING CROSS-SECTIONS



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Figure 2. Typical Installation Guidelines for RECP

## TACKIFIERS

### DEFINITION

A substance used as tie-down for soil, compost, seed, straw, hay or mulch. They hydrate in water and readily blend with other slurry materials to form a homogenous slurry.



### PURPOSE

The purpose of tackifiers are to reduce soil erosion from wind and water on construction sites. It also increases the performance of the mulching material, so that it can:

- Increase infiltration.
- Increase soil fertility
- Control undesirable vegetation.
- Reduce runoff stormwater turbidity and loss of topsoil.
- Modify soil temperature.
- Increase soil cohesion and stabilization.
- Enhance seed germination

### CONDITIONS

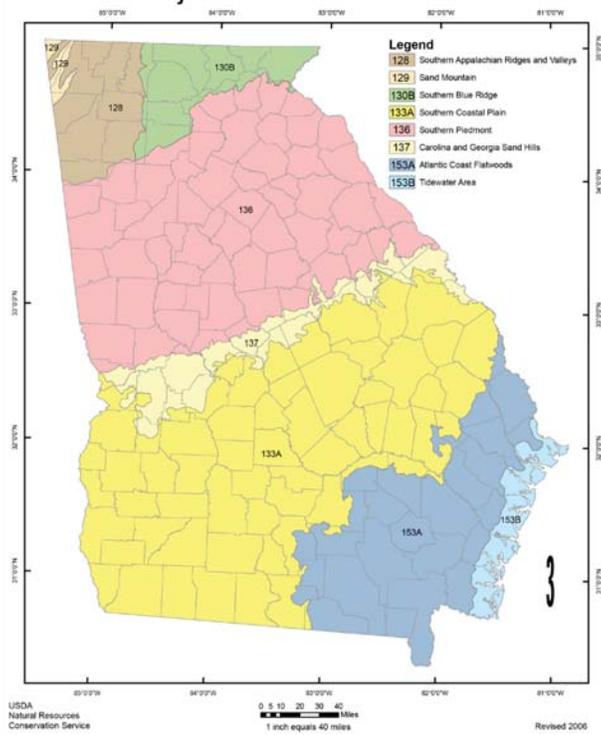
This practice is intended for direct soil surface application to sites where the timely establishment of vegetation may not be feasible or where vegetative cover is absent or inadequate.

### CRITERIA

- All organic mulching materials shall be anchored by tackifiers/binders or matting/netting. Tackifiers and binders are used to anchor wood cellulose, wood pulp fiber, and other mulch materials applied with hydroseeding equipment.
- Only anionic forms of PAM shall be used. Not harmful to plants, animals, and aquatic life.
- Application rates shall conform to manufacturer's guidelines for application.
- Shall not reduce infiltration rates.
- All organic tackifiers must be derived from natural plant sources.
- Contain no growth or germination inhibiting materials.
- Synthetic fibers shall be of nylon or polyester blends.
- There are 5 types of tackifiers:
  - **Tac-1** Synthetic Polymers
  - **Tac-2** Organic Polymers
  - **Tac-3** Synthetic/Organic Blends
  - **Tac-4** Organic Polymers w/ Synthetic Fibers
  - **Tac-5** Synthetic/Organic Blends w/ Synthetic Fibers

# GEORGIA

## Major Land Resource Areas



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## STRUCTURAL BEST MANAGEMENT PRACTICES

- (Cd)** Check Dam
- (Ch)** Channel Stabilization
- (Co)** Construction Exit
- (Cr)** Construction Road Stabilization
- (Dc)** Stream Diversion Channel
- (Di)** Diversion
- (Dn1)** Temporary Downdrain Structure
- (Dn2)** Permanent Downdrain Structure
- (Fr)** Filter Ring
- (Ga)** Gabion
- (Gr)** Grade Stabilization Structure
- (Lv)** Level Spreader
- (Rd)** Rock Filter Dam
- (Re)** Retaining Wall
- (Rt)** Retrofit
- (Sd1)** Sediment Barrier
- (Sd2)** Inlet Sediment Trap
- (Sd3)** Temporary Sediment Basin
- (Sd4)** Temporary Sediment Trap
- (Sk)** Floating Surface Skimmer
- (SpB)** Seep Berm
- (Sr)** Temporary Stream Crossing

- (St)** Storm Drain Outlet Protection
- (Su)** Surface Roughening
- (Tc)** Turbidity Curtain
- (Tp)** Topsoiling
- (Tr)** Tree Protection
- (Wt)** Vegetated Waterway or Stormwater Conveyance Channel

*The products and practices presented in this Field Manual show the standard installation methods for each conventional BMP. New products and practices may not necessarily meet the requirements for each conventional BMP. Please see the Equivalent Best Management Practice List for specific manufacturer guidelines and specifications.*

**Cd**

## CHECK DAM

### DEFINITION

A small temporary barrier constructed across a swale, drainage ditch, or area of concentrated flow.



### PURPOSE

- Reduce velocity.
- Filter sediment.
- Stabilize grade.

### INSTALLATION

- Install according to the approved plan.
- Place in small, open channels, not in live streams.
- Construct center at least 9" lower than outer edges.
- Extend across entire width of ditch or swale.
- Make side slopes 2:1 or flatter.
- Toe of the upstream dam should be at the same elevation as the top of the downstream dam.
- Seed and mulch area beneath the dam after its removal.
- Check dams may be used in conjunction with other BMPs for any flows exceeding 2.0 cfs.

**Cd**

Stone Check Dams

**Cd-S**

- Drainage area not to exceed 2 acres.
- Constructed of graded size 2"-10" stone.
- The center of the check dam should be at least 9" lower than the outer edges.
- The dam height should be a maximum of 2 ft from the center to the rim edge.
- Place a suitable geotextile between the graded stone and the soil base and abutments.

### STONE CHECK DAM

#### SPACING BETWEEN CHECK DAMS

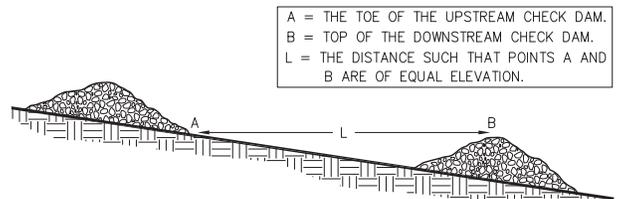


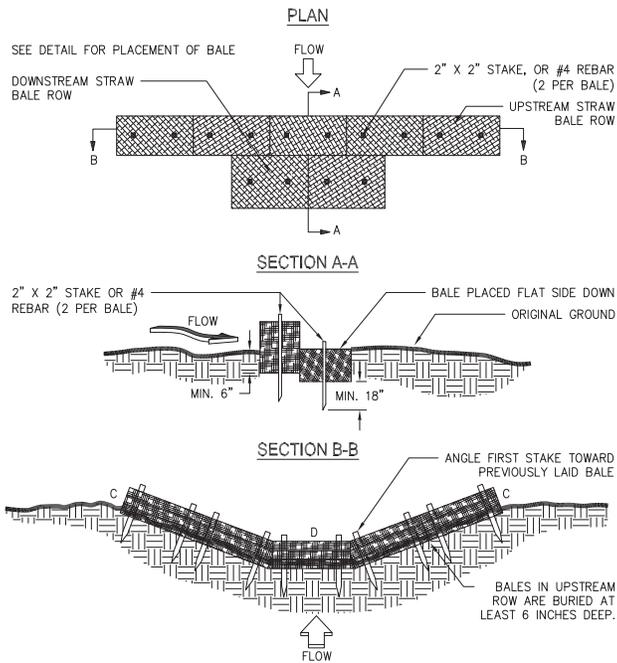
Figure 1. Stone Check Dam Spacing Requirements

Straw Bale Check Dams

**Cd-Hb**

- Drainage area not to exceed 1 acre.
- Bales should be bound with wire or nylon string.
- Bales should be placed in rows with bale ends tightly abutting the adjacent bales.
- A trench shall be dug across the channel deep enough that the wide side of the 2nd bale is level with the ground.
- Drive the standard 2x2 stakes or #4 rebar through the bales into the ground 18"-24" for anchorage. The first stake in each bale should be driven toward a previously laid bale in order to force bales together.

Cd



- NOTES:
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
  2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
  3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

Figure 1. Straw Bale Check Dam Installation Requirements

Compost Filter Sock **Cd-Fs**

- Drainage area not to exceed 1 acre.
- Place one stake in the filter sock at the center of the ditch/ channel.
- Place stakes at the bed/bank junction and at the end of the device not spaced more than 2 ft apart.
- Compost filter sock to be at least 18" in diameter
- Minimum staking depth is 18".
- Can be seeded at the time of installation.

Cd

COMPOST SOCKS FOR CHECK DAMS

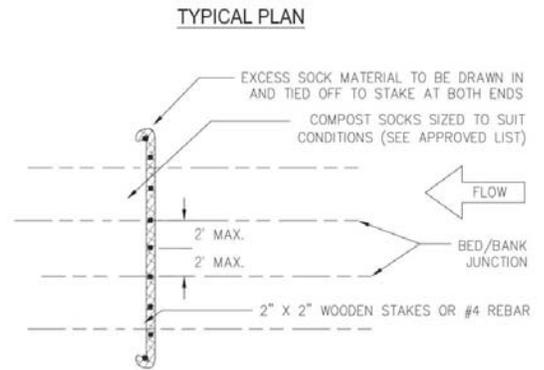


Figure 1. Compost Filter Sock Installation Requirements

**MAINTENANCE**

- Periodically inspect and maintain all structures.
- Remove sediment when it reaches a depth of one-half the original dam height.
- May remain in place permanently.

**REFERENCES**

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)

Ch

## CHANNEL STABILIZATION

### DEFINITION

Improving, constructing, or stabilizing an open channel or waterway.



### PURPOSE

- Prevent erosion and sediment deposition.
- Provide adequate capacity for flood water, drainage, or other water management practices.

### INSTALLATION

- Install according to the approved plan.
- Drainage area not to exceed one square mile.
- This applies only to channels conveying intermittent flow, not to channels conveying a continuous, live stream.

#### Category 1 ( $\leq 5$ ft/sec) Ch-1

##### Vegetative Lining

- Temporary erosion control blankets or sod shall be used to aid in the establishment of the vegetated lining.
- Hydraulic Erosion Control Products are not intended to be applied in channels, swales, or other areas where concentrated flows are anticipated.

Ch

#### Category 2 ( $\geq 5$ ft/sec to $< 10$ ft/sec)

Ch-2

##### Turf Reinforcement Matting (TRM)

- Permanent geosynthetic erosion control matting that is used in channels to stabilize the soil while permanent vegetation is rooting.

##### Rock Riprap Lining

- Slopes should be 1.5:1 or less.
- Place a filter blanket, at least 6 inches thick, of sand, gravel, and/or geotextile material between the riprap and the base material.

#### Category 3 ( $\geq 10$ ft/sec) Ch-3

##### Concrete Lining

- A separation geotextile should be placed under concrete linings to prevent undermining.
- Provide adequate outlet protection for discharge point.

##### Grade Stabilization Structure

- Constructed of concrete, rock, masonry, steel, aluminum or treated wood.
- Provide adequate outlet for discharge.
- Do not compromise the environmental integrity of the area.
- Vegetate all disturbed areas immediately.



Figure 1. Concrete Lining

**MAINTENANCE**

- Periodically inspect and maintain all structures.

**REFERENCES**

- Gr** Grade Stabilization Structure
- St** Storm Drain Outlet Protection
- Ds1** Disturbed Area Stabilization  
(With Mulching Only)
- Ds2** Disturbed Area Stabilization  
(With Temporary Seeding)
- Ds3** Disturbed Area Stabilization  
(With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization  
(With Sodding)

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## CONSTRUCTION EXIT

### DEFINITION

A stone-stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk, or parking area.



### PURPOSE

- Reduce or eliminate the transport of mud from the construction area onto public right-of-ways.

### INSTALLATION

- Install according to the approved plan.
- Use 1.5"-3.5" stone.
- Minimum pad thickness of 6".
- Minimum pad width of 20 ft.
- Minimum pad length of 50 ft.
- When the construction is less than 50 ft from the paved access, the length shall be from the edge of the existing pavement to the permitted building being constructed.
- When washing is required, conduct on an area stabilized with crushed stone and route runoff to an approved sediment trap or sediment basin.
- Place the geotextile liner the full length and width of the entrance.

### CRUSHED STONE CONSTRUCTION EXIT

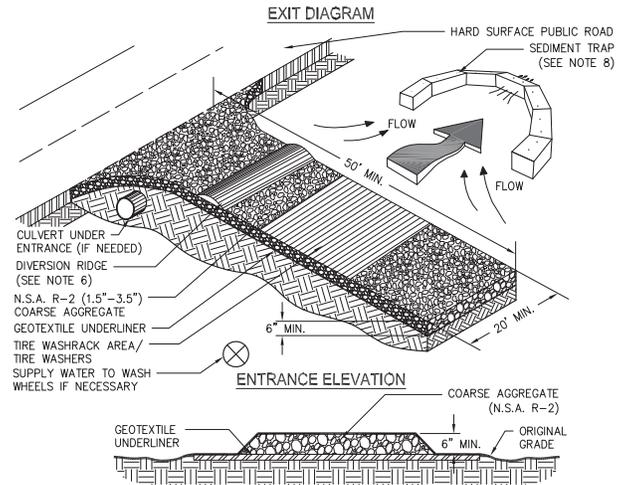


Figure 1. Crushed Stone Construction Exit Installation Requirements



Figure 2. Geotextile Underliner

### MAINTENANCE

- Periodically dress with 1.5"-3.5" stone.
- Maintain in a condition that will prevent tracking or flow of mud onto public rights-of-way.
- Immediately remove mud and debris tracked or spilled onto roadways.

Cr

## CONSTRUCTION ROAD STABILIZATION

### DEFINITION

A travel way constructed as part of a construction plan including access roads, subdivision roads, parking areas, and other on-site vehicle transportation routes.



### PURPOSE

- Provide a fixed route of travel for construction traffic.
- Reduce erosion and subsequent regrading of permanent roadbeds between time of initial grading and final stabilization.

### INSTALLATION

- Install according to the approved plan.
- Temporary roads shall follow the contours of the natural terrain to minimize disturbance of drainage patterns.
- If a temporary road must cross a stream, the crossing must be designed, installed and maintained according to specification **Sr - Temporary Stream Crossing**.
- Grades for temporary roads should not exceed 10% except for short lengths but maximum grades of 20% or more may be used for special uses.

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Cr

- Temporary roadbeds shall be at least 14 ft wide for one-way traffic, 20 ft wide for two-way traffic. The width for two-way traffic shall be increased approximately 4 ft for trailer traffic.
- Provide a minimum shoulder width of 2 ft on each side.
- All cut and fills shall be 2:1 or flatter. Side slopes shall be no steeper than 3:1 if mowing
- Drainage channels shall be designed to be on stable grades or protected with structures or linings for stability.
- Apply geotextile to the roadbed for additional stability according to the design manual specifications.
- Apply a 6" layer of coarse aggregate immediately after grading. For "heavy-duty" traffic situations, place stone at a depth of 8"-10".
- Stabilize all roadside ditches, cuts, fills, and other disturbed areas adjacent to parking areas and roads with appropriate temporary or permanent vegetation

### MAINTENANCE

- Periodically top dress roads and parking areas with gravel to maintain the gravel depth at 6".
- Check vegetated areas periodically to ensure a good stand of vegetation is maintained.
- Remove any silt or other debris causing clogging of roadside.

### REFERENCES

- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Sr** Temporary Stream Crossing

77

Dc

## STREAM DIVERSION CHANNEL

### DEFINITION

A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed in the stream channel.



### PURPOSE

- Protect the streambed from erosion and allow work “in the dry”.

### INSTALLATION

- Install according to the approved sediment plan.
- Drainage area shall not exceed one square mile (640 acres).
- The bottom width of the stream diversion shall be a minimum of six feet or equal to the bottom width of the existing streambed, whichever is greater.
- Side slopes of the stream diversion channel shall be no steeper than 2:1.
- Depth and grade of the channel shall be sufficient to ensure continuous flow of water in the diversion.
- The channel shall be lined to prevent erosion of the channel and sedimentation in the stream.
- The lining is selected based upon the expected velocity of bankfull flow. Please refer to Table 1.

Dc

Table 1. Stream Diversion Channel Linings

Lining Materials	Symbol	Acceptable Velocity Range
Geotextile, polyethylene film, or sod	Dc-A	0-2.5 fps
Geotextile alone	Dc-B	2.5-9.0 fps
Class I RipRap & Geotextile	Dc-C	9.0-13.0 fps

### STREAM DIVERSION CHANNEL

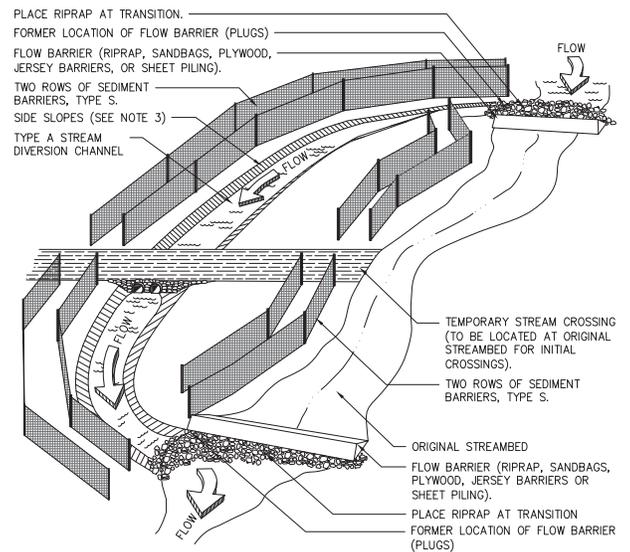


Figure 1. Stream Diversion Channel (Perspective View)

## Dc

- The channel shall be excavated, constructing plugs at both ends.
- Sediment barriers or berms shall be placed along the sides of the channel to prevent unfiltered runoff from entering the stream.
- The channel surface shall be smooth (to prevent tearing of the liner) and lined with the material specified in the plans.
- The plugs are removed when the liner installation is complete, removing the downstream plug first.
- As soon as construction in the streambed is complete, the diversion shall be replugged and backfilled.
- Upon removal of the lining, the stream shall immediately be restored and properly stabilized.
- A Stream Buffer Variance from the GA EPD may be required and all other appropriate agencies, including the U.S. Army Corps of Engineers, must be contacted to ensure compliance with other laws.

### MAINTENANCE

- Inspect the stream diversion channel at the end of each day to make sure that the construction materials are positioned securely.
- Ensure that the work area stays dry and that no construction materials float downstream.
- All repairs shall be made immediately.

### REFERENCES

#### Ss

Slope Stabilization

## Dc

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**Di**

## DIVERSION

### DEFINITION

A ridge of compacted soil, constructed above, across, or below a slope.



### PURPOSE

- Reduce slope lengths.
- Intercept and divert storm runoff to a stable outlet at a non-erosive velocity.

### INSTALLATION

- Install according to the approved plan.
- Remove trees, brush, stumps and other objectionable material.
- Compact all fills.
- Channel cross-section should be trapezoidal or parabolic in shape.
- Side slopes should be 2:1 or flatter.
- Excavate narrow, deep channels on steep slopes and broad, shallow channels on gentle slopes.
- Adequate outlet must be present.
- Stabilize channel and outlet with vegetation (mulch required for all seeded or sprigged channels), riprap, or concrete.
- Dispose of and/or stabilize unneeded excavated material.

**Di**

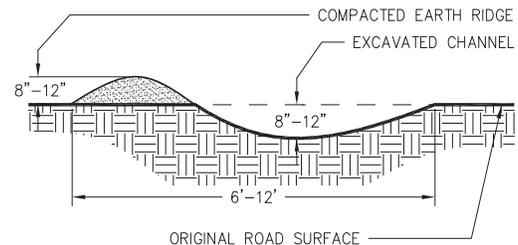


Figure 1. Typical Diversion Across Road

### MAINTENANCE

- Inspect frequently and after each rainfall and make necessary repairs.

### REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)
- Ch** Channel Stabilization

**Dn1**

# TEMPORARY DOWNDRAIN STRUCTURE

**Dn1**

## DEFINITION

A temporary structure used to convey storm water down the face of cut or fill slopes.



## PURPOSE

- Transport storm runoff from one elevation to another.
- Reduce slope erosion.

## INSTALLATION

- Install according to the approved plan.
- Install heavy-duty, flexible materials such as non-perforated, corrugated plastic pipe, or specifically designed flexible tubing.
- Place on undisturbed soil or well-compacted fill.
- Slightly slope the section of pipe under the dike toward its outlet.
- Install Tee, "L" or flared end section inlet at the top of the slope.
- Slope the entrance 1/2" per foot toward outlet.
- Compact a dike ridge no less than 1 ft above the top of the pipe.
- Use reinforced, hold-down grommets or stakes to anchor the pipe at intervals not to exceed 10 ft.

Table 1. Pipe Diameter for Temporary Down drain

Maximum Drainage Area per Pipe (acres)	Pipe Diameter (inches)
0.3	10
0.5	12
1.0	18

- Ensure that fill over the drain at the top of the slope meets the minimum dimensions.
- Ensure connections are watertight.
- Extend pipe beyond the toe of the slope.
- For steep slopes, drains should be placed diagonally across the slope.
- Curve the outlet uphill.
- Stabilize outlet with rock riprap. A Tee outlet, flared end section, or other suitable device may be used for additional protection.
- Direct all flows into a sediment trap if drains convey sediment-laden runoff.
- Stabilize all disturbed areas immediately.

## MAINTENANCE

- Inspect drain and diversion after every rainfall and promptly make necessary repairs.
- Remove once the protected area has been stabilized and the permanent water disposal system is fully functional.

## REFERENCES

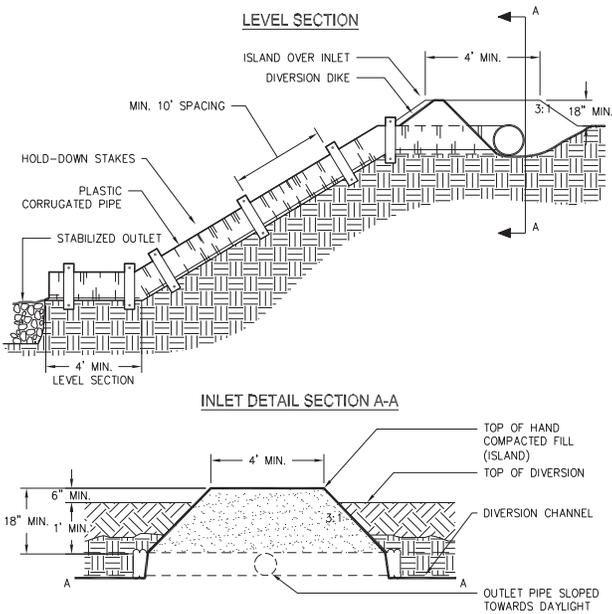
**St**

Storm Drain Outlet Protection

Dn1

Dn1

### DOWNDRAIN PIPE AND INLET DETAIL



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MAKE ALL PIPE CONNECTIONS WATERTIGHT AND SECURE SO THAT THE JOINTS WILL NOT SEPARATE IN USE.

Figure 1. Temporary Downdrain and Inlet Detail



Figure 2. Diagonally Placed Downdrain

**Dn2**

## PERMANENT DOWNDRAIN STRUCTURE

### DEFINITION

A permanent structure to safely convey surface runoff from the top of a slope to the bottom of the slope.



### PURPOSE

- Convey storm runoff safely down cut or fill slopes to minimize erosion.

### INSTALLATION

- Install according to the approved plan.
- Slopes must have sufficient grade to prevent sediment deposition.
- Stabilize outlet according to plan.
- Vegetate all disturbed areas immediately.

#### Types of Structures

- Paved flume - parabolic, rectangular, or trapezoidal cross section.
- Pipe - steel, plastic, etc.
- Sectional - a prefabricated sectional conduit of half-round or third-round pipe.

**Dn2**

### MAINTENANCE

- Inspect periodically and maintain structure after each rainfall.

### REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)
- St** Storm Drain Outlet Protection

Fr

## FILTER RING

### DEFINITION

A temporary stone barrier constructed at storm drain inlets and pond outlets.



### PURPOSE

- Reduce flow velocity.
- Prevent the failure of other sediment control devices.
- Prevent sediment from leaving the site or entering drainage systems.

### INSTALLATION

- Install according to the approved plan.
- Use in conjunction with other sediment control measures, except where other practices defined in this Manual are not appropriate.
- Surround all sides of the structure receiving runoff from disturbed areas.
- Place the ring a minimum of 4 ft from the structure.
- If the ring is utilized above a retrofit structure, place a minimum of 8-10 ft from the retrofit.
- When utilized at inlets with diameters less than 12", the filter ring shall be constructed of stone no smaller than 3"-5" (15-30 lbs).

Fr

- When utilized at pipes with diameters greater than 12", the filter ring shall be constructed of stone no smaller than 10"-15" (50-100 lbs).
- Construct the ring at a height no less than 2 ft above grade.
- Mechanically or hand place the stone uniformly around the structure.

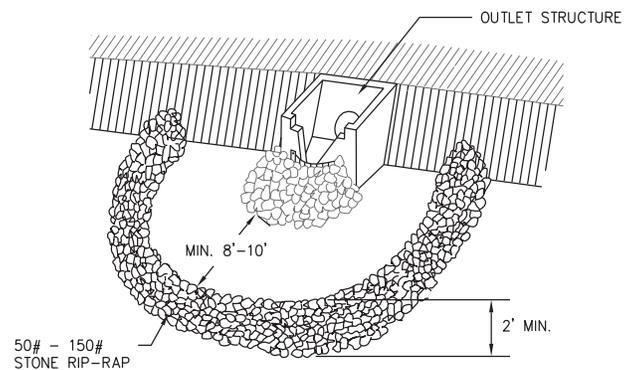


Figure 1. Filter Ring Placement

### MAINTENANCE

- Keep clear of trash and debris.
- Continuously monitor and maintain the structure.
- Remove sediment when it reaches one-half full.
- Remove structure when the project has reached final stabilization.

### REFERENCES

- (Rt) Retrofit
- (Sd3) Temporary Sediment Basin
- (St) Storm Drain Outlet Protection

**Ga**

## GABION

### DEFINITION

Large, multi-celled, welded wire or rectangular wire mesh boxes, used in channel revetments, retaining walls, abutments, check dams, etc.



### PURPOSE

- Construction of erosion control structures.
- Stabilize steep or highly erosive slopes.

### INSTALLATION

- Install according to the approved plan.
- Foundations must be smooth and level.
- Use only galvanized or PVC coated wire. For highly corrosive conditions, the PVC coating must be used over the galvanizing.
- Set individual baskets into place, wire them together in courses, and fill with rock to form flexible monolithic building blocks.
- Rock should be durable and adequately sized (typically 4"-8") to be retained in the baskets.
- Hand-pack the basket in order to completely fill.
- "Key" structure securely into foundations and abutment surfaces.
- Geotextiles should be used behind all gabion structures.

**Ga**

### MAINTENANCE

- Periodically inspect for signs of undercutting or excessive erosion at transition areas.
- Make any necessary repairs immediately.

Gr

## GRADE STABILIZATION STRUCTURE

### DEFINITION

A structure to stabilize the grade in natural or artificial channels.



### PURPOSE

- Stabilize the grade in natural or artificial channels.
- Prevent the formation or advancement of gullies.
- Reduce erosion and sediment pollution.

### INSTALLATION

- Install according to the approved plan.
- Construct with concrete, rock, masonry, steel, aluminum, or treated wood or by soil bioengineering methods.
- Dewater excavations prior to filling.
- Construct embankment with a minimum top width of 10 ft and side slopes of 3:1 or flatter.
- Construct materials in 6"-8" horizontal lifts
- Place structure on compacted earth-fill. Compact fill to approximately 95% of standard density.
- Construct keyway 8 or more ft wide and 2 ft deep along centerline of the structure and embankment.
- Provide adequate outlet for discharge.

Gr

- Place geotextile, such as revetment mats and riprap, under stabilization structure.
- Apply protective cover immediately after completion of the structure.
- Vegetate all disturbed areas immediately.
- All appropriate agencies, including the GAEPD & U.S. Army Corps of Engineers, must be contacted to ensure compliance with other Laws.

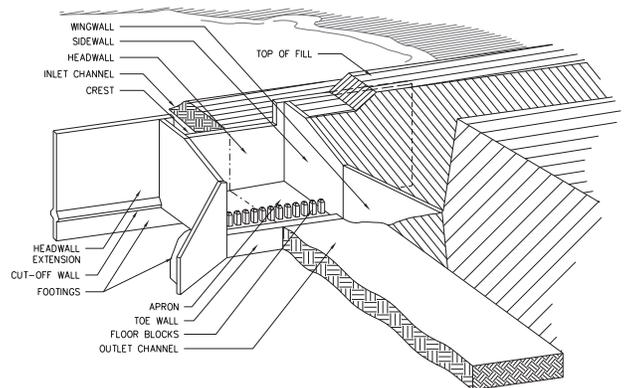


Figure 1. Straight Drop Spillway Structure

### MAINTENANCE

- Periodically inspect and maintain all structures.

### REFERENCES

- St Storm Drain Outlet Protection
- Ds1 Disturbed Area Stabilization (With Mulching Only)
- Ds2 Disturbed Area Stabilization (With Temporary Seeding)
- Ds3 Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4 Disturbed Area Stabilization (With Sodding)

Lv

## LEVEL SPREADER

### DEFINITION

A storm flow outlet device constructed at zero grade across the slope whereby concentrated runoff may be discharged at non-erosive velocities onto undisturbed areas stabilized by existing vegetation.



### PURPOSE

- Dissipate storm flow energy at the outlet.
- Convert storm runoff into sheet flow.
- Discharge storm runoff onto areas stabilized by existing vegetation.

### INSTALLATION

- Install according to the approved plan.
- Grade the channel no greater than 1% for the last 15 ft of the dike or diversion.
- Construct on undisturbed soil that is stabilized with vegetation.
- Minimum width of 6 ft.
- The depth of the level spreader from the lip shall be a minimum of 6".
- The depth shall be uniform across the entire length.

96

Lv

- Construct level lip at 0% grade.
- Discharge converted sheet flow onto undisturbed stabilized areas.
- Provide a smooth outlet.
- Prevent water from concentrating below point of discharge.
- Vegetate all disturbed areas immediately.

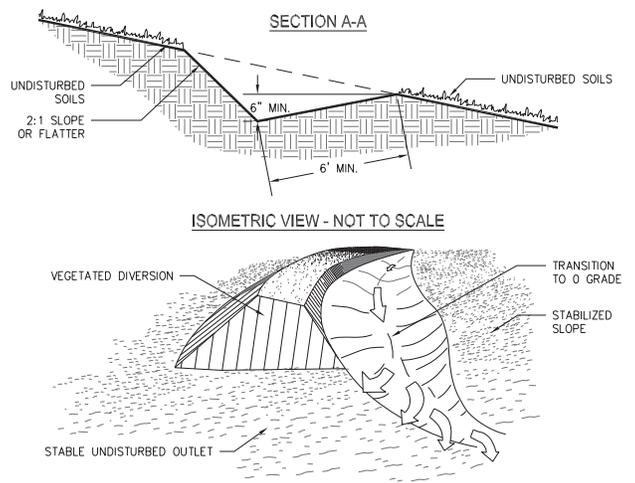


Figure 1. Level Spreader Installation Requirements

### MAINTENANCE

- Periodically inspect and maintain all structures.

### REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)

97

Rd

## ROCK FILTER DAM

### DEFINITION

A temporary stone filter dam installed across drainageways or in conjunction with a temporary sediment trap.



### PURPOSE

- Serve as a sediment filtering device.
- Reduce velocity of stormwater flow through a channel.
- Not intended to substantially impound water.

### INSTALLATION

- Install according to the approved plan.
- The drainage area shall not exceed 50 acres.
- Must be used in conjunction with other appropriate sediment control measures.
- The dam should be located as close to the source of sediment as possible.
- The dam should not be higher than the channel banks or exceed the elevation of the upstream property line.
- The center of the dam should be at least 9" lower than the outer edges of the dam at the channel banks.

98

Rd

- Side slopes should be 2:1 or flatter.
- The width across the top should be 6 ft. or greater.
- Refer to plan for stone size.
- Geotextiles should be used as a separator between the graded stone, soil base, and abutments.
- Extend completely across the channel and securely tie into both channel banks.
- All other appropriate agencies, including the GAEPD & U.S. Army Corps of Engineers, must be contacted to ensure compliance with other Laws.

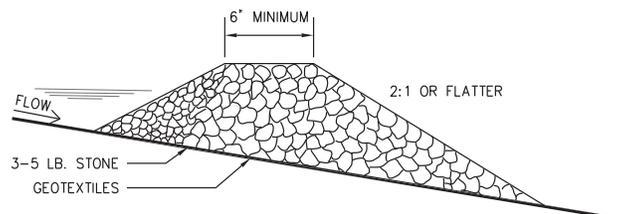
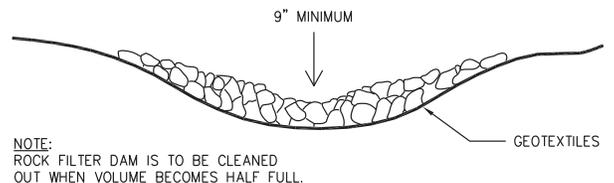


Figure 1. Rock Filter Dam Installation Requirements

### MAINTENANCE

- Periodically inspect and maintain all structures.
- Remove sediment when it reaches a depth of one-half of the original height of the dam.
- Remove once disturbed areas have been stabilized.

99

Re

## RETAINING WALL

Re

### DEFINITION

A constructed wall of one or more of the following: concrete masonry, reinforced concrete cribbing, treated timbers, steel pilings, gabions, stone drywall, rock riprap, etc.



### PURPOSE

- Assist in stabilizing cut or fill slopes where stable slopes are not obtainable without the use of a wall.

### INSTALLATION

- Retaining walls require a specific design that is within the capabilities of the design professional.
- Many factors must be taken into account during the design process.
- Close supervision is required to ensure proper installation.
- Depending on the Local Issuing Authority's ordinance, a design professional certificate may be required prior to construction.

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Rt

## RETROFIT

### DEFINITION

A device or structure placed in front of a permanent stormwater detention pond outlet or roadway drainage structure to serve as a temporary sediment filter.



### PURPOSE

- Allows a permanent stormwater detention basin structure to function as a temporary sediment retention basins.
- Allows a roadway drainage structure to be used for temporary sediment storage.

### INSTALLATION

- Install according to the approved plan.
- Prohibited in basins on live streams.
- The height of the retrofit should be approximately one-half the height of structure.

Rt-P

#### Perforated Half-Round Pipe with Stone Filter

- Drainage area shall not exceed 30 acres.
- Never use on exposed pipe end or winged headwall.
- Diameter of half-round pipe should be 1.5x the diameter of the principal pipe outlet or wider than the greatest width of the concrete weir.

Rt

- Shall be affixed by means to the concrete outlet structure.

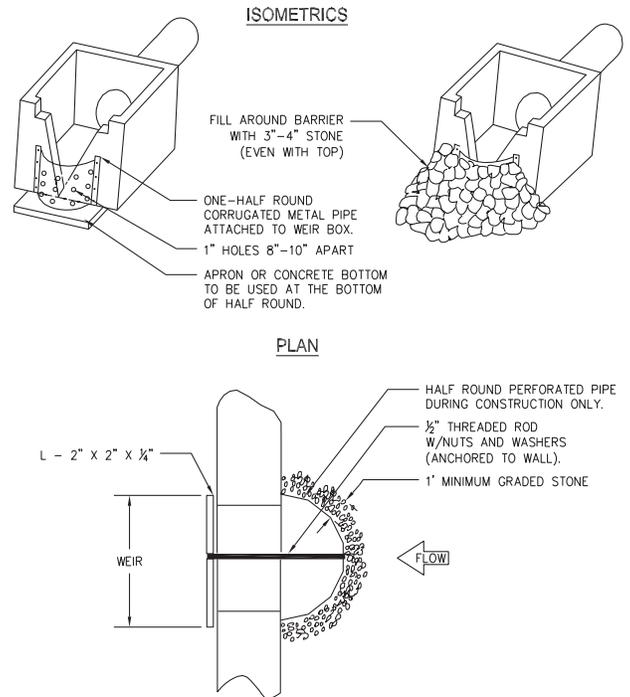


Figure 1. Perforated Half-Round Pipe Retrofit with Stone Filter.



Figure 2. Affixed to Concrete Structure

Rt



Figure 3. Slotted Board Dam

Slotted Board Dam with Stone **Rt-B**

- For use in detention ponds with drainage areas up to 100 acres and on roadway drainage structures with a drainage area of 30 acres or less.
- Can be used with open end pipe outlets, winged headwalls, or concrete weir outlets.
- Install with minimum 4x4" posts.
- Install boards with a 0.5"-1.0" space between them.
- Install a minimum of 3"-4" stone or approved filter fabric around the upstream side of the board dam.

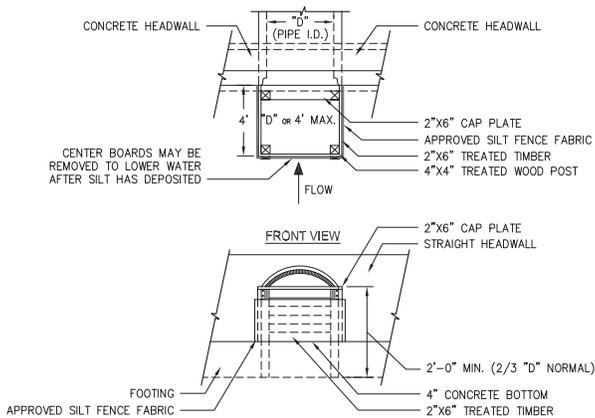


Figure 3. Slotted Board Dam Installation Requirements  
104

Rt

Silt Control Gate **Rt-Sg**

- Use only on roadway drainage structures with the following structures: winged headwalls, tapered headwalls, straight headwalls, open end pipes, flared end sections.
- Drainage area shall not exceed 50 acres and the disturbed area of the basin shall not exceed 5 acres.
- Use 4"x4" treated posts & 2"x6" treated face boards with no spacing between the boards.
- Fasten an approved silt fence fabric to the front of the structure with staples or nails.

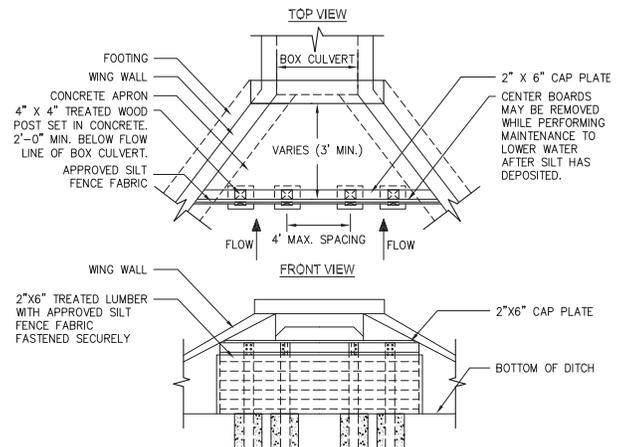


Figure 3. Silt Control Gate Installation Requirements

**MAINTENANCE**

- Clean-out when one-third sediment storage capacity is lost. Indicate this elevation with a mark on the outlet structure or a post inserted in the pond.
- Remove all trash and debris.
- Remove retrofit and accumulated sediment when the project is completed.
- Stabilize all disturbed areas immediately with permanent vegetation.

Sd1

## SEDIMENT BARRIER

### DEFINITION

A temporary structure made up of porous material typically supported by steel or wood posts. Types include silt fence, brush piles, mulch berms, compost filter socks or other filtering material.



### PURPOSE

- Minimize and prevent sediment carried by sheet flow from leaving the site.
- Retain the sediment on the disturbed area.
- Filter sediment from runoff.

### INSTALLATION

- Install according to the approved plan.
- Do not install across streams, ditches, waterways, or other concentrated flow areas.
- The type of sediment barrier depends on whether the area is sensitive or non-sensitive.
- For silt fence, Type C will be classified as sensitive and Type A & B will be classified as non-sensitive.
- Install along the contour.
- Along all state waters and other sensitive areas, 2 rows of Type S shall be used. The 2 rows shall be placed a minimum of 36" apart.

Sd1

- Overlap barriers 18" when using multiple types of sediment barriers in a single run on a site.
- When storing runoff behind the sediment barrier, the maximum continuous slope length behind the sediment barrier shall not exceed those found in Table 1.
- Provide a riprap splash pad or other protection device at any point where flow may overtop the sediment barrier.

### Installation Methods

#### Static Slicing Method

- Using a machine, pull a narrow blade through the ground to create a 12" deep slit, and simultaneously insert the silt fence fabric into the slit behind the blade.
- Roll a tractor wheel along both sides of the slit in the ground 2-4 times to achieve compaction
- Drive posts 18" into ground and attach fabric.



Figure 1. Static Slicing Machine

#### Trenching Method

- Dig a 2"-6" wide trench with a 6" excavation.
- Drive posts 18" into ground and attach fabric.
- The best trenching method typically requires triple the time and effort to achieve results comparable to the static slicing method.

**Sd1**

Sensitive Areas

**Sd1-S**

Sediment barriers being used as Type S shall have a support spacing of no greater than 4 ft on center, with each being driven into the ground a minimum of 18".

Type C Silt Fence

- 36" wide with wire reinforcement or equivalent backing
- To be used where runoff velocities are particularly high or where slopes exceed a vertical height of 10 ft.

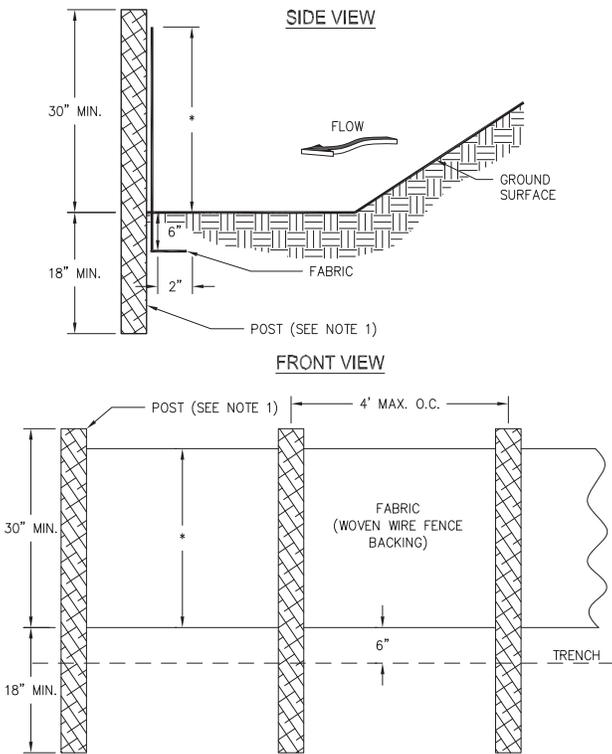


Figure 1. Type "C" Silt Fence

**Sd1**

**Sd1-NS**

Non-Sensitive Areas

Sediment barriers being used as Type NS shall have a support spacing of no greater than 6 ft on center, with each being driven into the ground a minimum of 18".

Type A Silt Fence

- 36" wide fabric
- To be used where the life of the project is greater than or equal to 6 months.

Type B Silt Fence

- 22" wide fabric
- Limit to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than 6 months.
- Same flow rate as Type A.

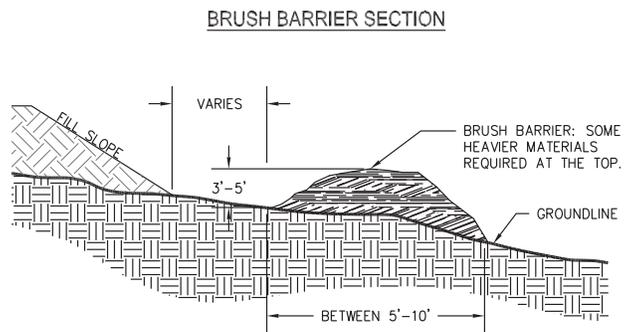


Figure 1. Brush Barrier (Sd1-BB)

Brush Barrier (only during timber clearing)

- Intermingle brush so as not to form a solid dam.
- Should be wind-rowed on the contour as nearly as possible.
- Minimum base width is 5 ft and should be no wider than 10 ft.
- The height should be between 3-5 ft.

**Sd1**

**Sd1**

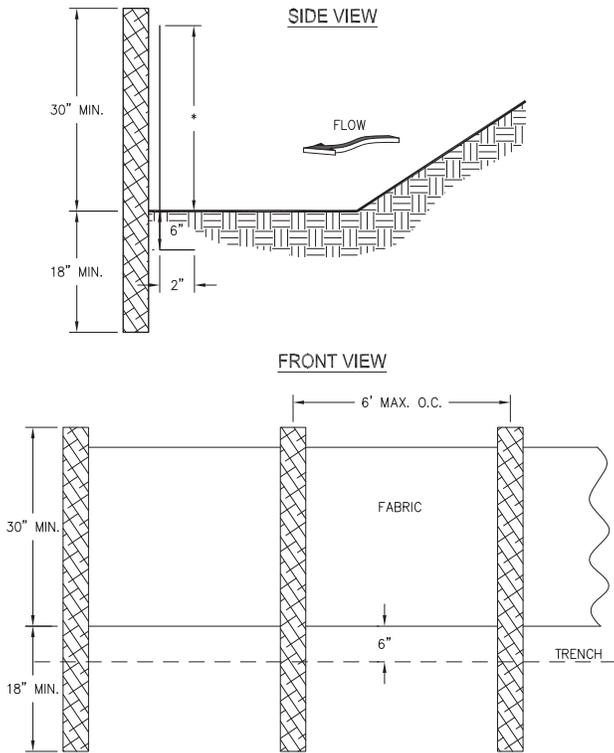


Figure 2. Type "A" & "B" Silt Fence

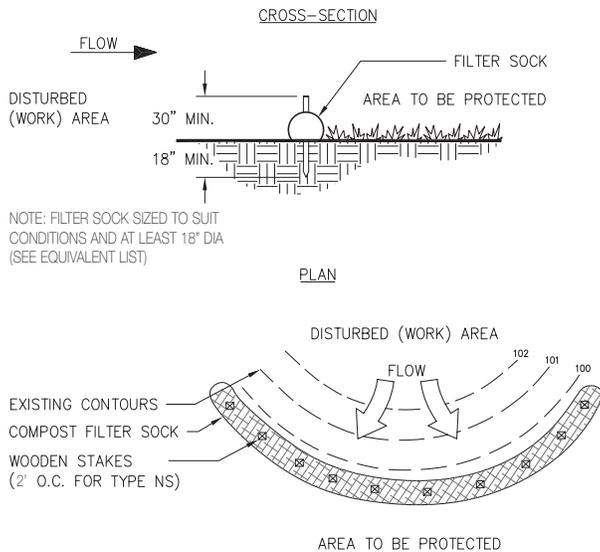


Figure 3. Compost Filter Sock - Type "B"

Table 1. Criteria for Sediment Barrier Placement

Land Slope (%)	Maximum Slope Length Behind Fence (ft)
<2	100
2-5	75
5-10	50
10-20	25
>20	15

**MAINTENANCE**

- Remove the sediment once it has accumulated to one-half the original height of the barrier.
- Replace barrier whenever it has deteriorated to such an extent that the effectiveness of the product is reduced (~ 6 months) or the height of the product is not maintaining 80% of its properly installed height.
- Remove and dispose of all accumulated sediment at the barrier before it is removed.
- Leave in place until all disturbed areas are permanently stabilized.

Table 2. Post Size

Type	Min. Length	Type of Post	Size of Post
NS	4'	Oak Steel Soft Wood	1.5"x1.5" 1.15lb/ft min 3" or 2"x4"
S	4'	Oak Steel	2"x2" 1.15lb/ft. min

Figure 1. Thomas Carpenter, CPESC, Carpenter Erosion Control.

**Sd2**

## INLET SEDIMENT TRAP

### DEFINITION

A temporary protective device formed at or around an inlet to a storm drain to trap sediment.



### PURPOSE

- Prevent sediment from entering a storm drainage system prior to permanent stabilization of the disturbed area draining to the inlet.

### INSTALLATION

- Install according to the approved plan.
- Do not install on paved surfaces where safety is a concern.
- Sediment traps must be self-draining unless otherwise protected.
- Install at or around all storm drain drop inlets that receive runoff from disturbed areas.
- Construct on natural ground surface, excavated surface, or on machine compacted fill.

#### Excavated Sediment Traps

- An excavation created around the inlet to provide additional sediment storage.
- Provide a minimum depth of 1.5 ft for sediment storage.
- The side slopes shall not be steeper than 2:1.
- The drainage area entering the trap shall be no greater than 1 acre.

**Sd2**

#### Filter Fabric with Supporting Frame

**Sd2-F**

- Applicable where the inlet drains a relatively flat area (<5% slope).
- Use Type S steel posts.
- Space stakes evenly around perimeter at a maximum of 3 ft apart.
- Drive stakes into the ground ~18" deep.
- The fabric shall be 36" tall and entrenched at least 12" and backfill with crushed stone or compacted soil.
- Securely fasten the fabric and wire to the posts.

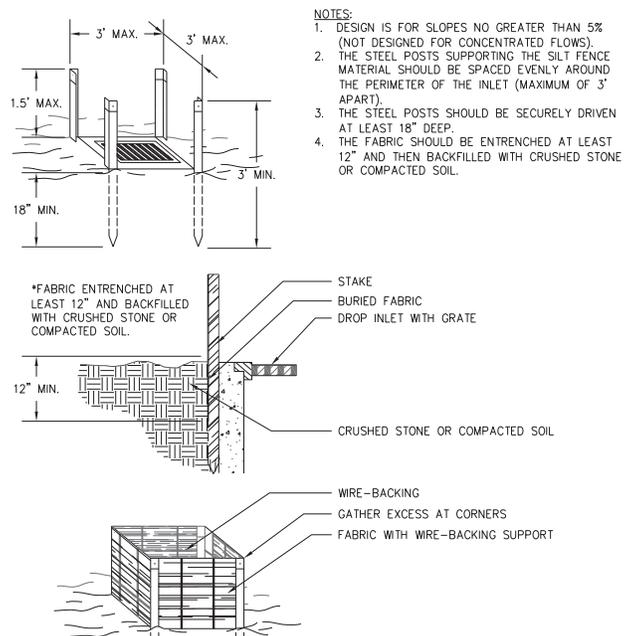


Figure 1. Filter Fabric with Supporting Frame Installation Requirements (Sd2-F)

#### Block and Gravel Drop Inlet Protection

**Sd2-Bg**

- Applicable where heavy flows are expected and an overflow capacity is necessary to prevent excessive ponding.

**Sd2**

- Excavate foundation at least 2" below the crest of the storm drain.
- On each side of the structure, place one block in the bottom row on its side to allow pool drainage.
- Place the bottom row of blocks against the edge of the storm drain.
- Add support by placing 2"x4" wood studs through block openings.
- Fit hardware cloth or wire mesh with 1/2" openings over all block openings to hold gravel in place.
- Place clean gravel 2" below the top of the block on a 2:1 or flatter slope and smooth it to an even grade.
- GADOT #57 stone is recommended.

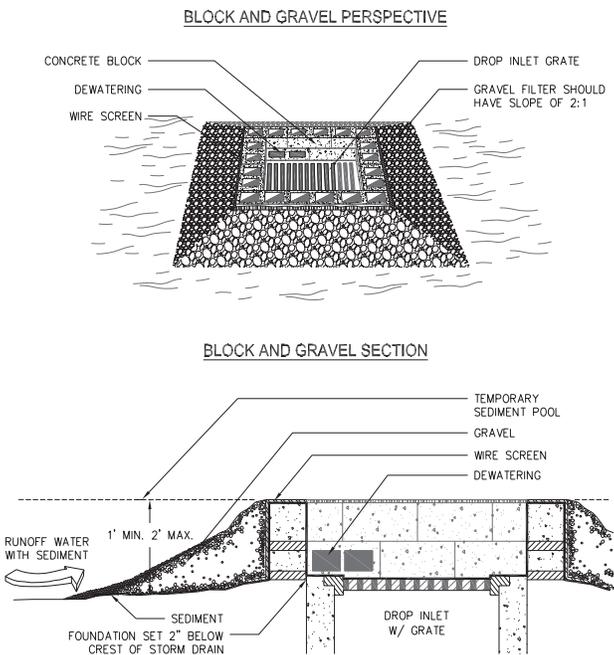


Figure 2. Block and Gravel Drop Inlet Protection Installation Requirements (Sd2-Bg)

**Sd2**

**Sd2-B**

Baffle Box

- Applicable for inlets receiving a higher volume or velocity.
- Construct 2"x4" boards spaced a maximum of 1" apart OR of plywood with weep holes 2" in diameter.
- Place weep holes ~6" on center vertically or horizontally.
- Place gravel outside of the box and around the inlet at a depth of 2-4".
- Wrap entire box in Type C filter fabric and trench at a depth of 12".

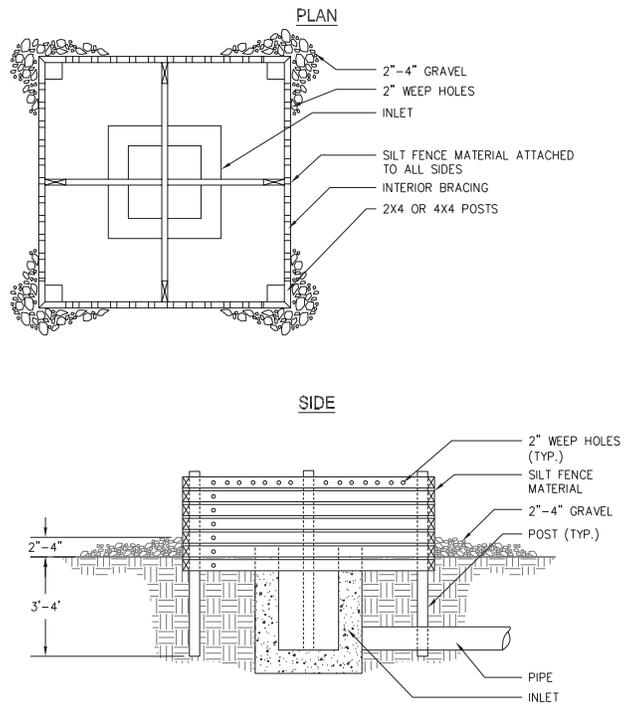


Figure 3. Baffle Box Installation Requirements (Sd2-B)

**Sd2-G**

Gravel Drop Inlet Protection

- Applicable where heavy concentrated flows are expected.
- 3:1 or flatter slope toward the inlet.

**Sd2**

- Leave a minimum 1 ft wide level stone area between the structure and the inlet to prevent gravel from entering the inlet.
- Place stone 3" in diameter or larger on the slope toward the inlet.
- Place 1/2" to 3/4" gravel on the slope away from the inlet at a minimum thickness of 1 foot.

**Sd2-S**

Sod Inlet Protection

- Applicable only at the time of permanent seeding in order to protect the inlet from sediment and mulch material.
- Place the sod to form a turf mat covering the soil for a distance of 4 ft from each side of the inlet.
- Stagger sod strips so that adjacent ends are not aligned.

SOD STRIPS PROTECT INLET AREA FROM EROSION  
(SOURCE: VA SWCC)

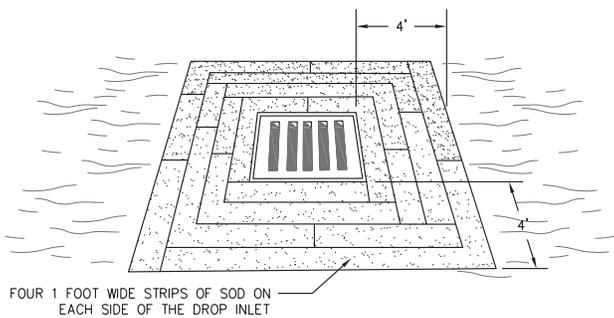


Figure 4. Sod Inlet Protection Installation Requirements (Sd2-S)

Curb Inlet Protection **Sd2-P**

- Applicable once pavement has been installed.
- The method of inlet protection shall be removed if a safety hazard is created.

**Sd2**

- For the “pigs-in-a-blanket” method, wrap 8” concrete blocks in filter fabric and span across catch basin inlet.
- Face openings in blocks outward.
- Leave a gap of ~4” between the inlet filter and the inlet to allow for overflow and prevent hazardous ponding in the roadway.
- Another method uses gravel bags constructed by wrapping GADOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

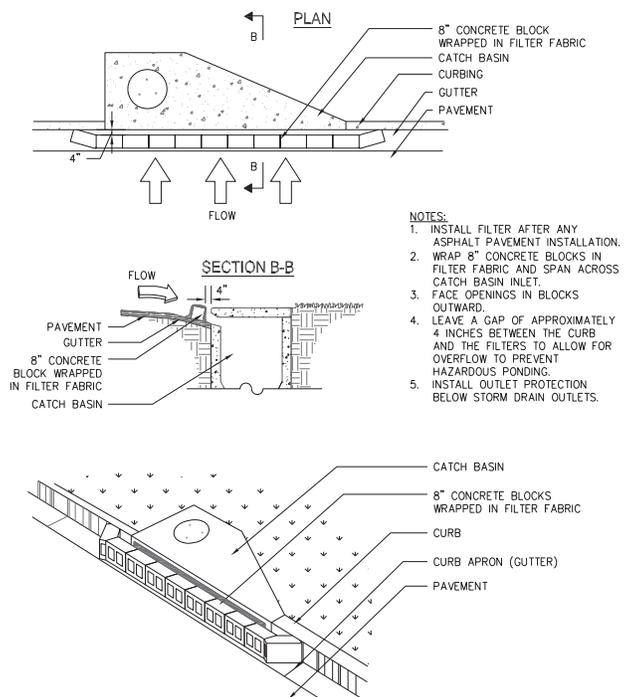


Figure 5. Curb Inlet Protection Installation Requirements (Sd2-P)

**Sd2**

**Sd2**

**MAINTENANCE**

- Inspect, clear, and/or repair trap at the end of each working day.
- Do not remove inlet protection and wash sediment into the inlet.
- Remove sediment when accumulation has reached one-half the height of the trap.
- Remove sediment from curb inlet protection immediately.
- Remove all materials and any sediment once the contributing drainage area has been permanently stabilized.
- Appropriately stabilize all disturbed areas around the inlet.

**REFERENCES**

**Ds4**

Disturbed Area Stabilization  
(With Sodding)

**Sd1**

Sediment Barrier

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Sd3

## TEMPORARY SEDIMENT BASIN

Sd3

### DEFINITION

A basin created by the construction of a barrier or dam across a concentrated flow area, or by excavating a basin, or by a combination of both.



### PURPOSE

- Detain runoff waters and trap sediment from erodible areas.
- Protect properties and drainage ways below the installation from damage by excessive sedimentation and debris.

### INSTALLATION

- Construct all basins according to the approved plan unless modified by the design professional.
- Remove all trees, vegetation, roots, and other objectionable material.

#### Location

- Never place basin in a live stream.
- Storm drains should discharge into the basin.
- Install on sites where (1) failure will not result in loss of life or interruption of use or service of public utilities and (2) the drainage area does not exceed 150 acres.

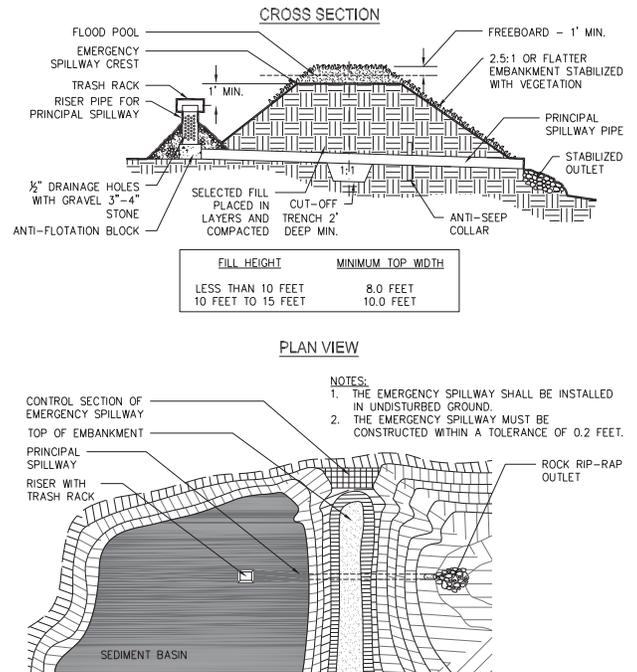


Figure 1. Components of a Typical Temporary Sediment Basin

#### Shape

- Length to width ratio shall be greater than 2:1
- The basin should be wedge shaped with the inlet at the narrow end.
- Install baffles and diversions when necessary.

#### Principal Spillway

- Join vertical pipe or box type riser to a pipe that extends through the embankment and exits beyond the downstream toe of the fill.
- The crest elevation of the riser should be 1 ft below the elevation of the control section of the emergency spillway.
- The riser and all pipe connections shall be completely watertight.
- Install pipe with a minimum diameter of 8".

**Sd3**

- If using the conventional method for dewatering a sediment basin, Perforate lower half of riser with 1/2" holes spaced approximately 3", and cover with 2 ft of 3"-4" stone.
- If constructing the basin with a skimmer outlet, please refer to the specification **Sk - Floating Surface Skimmer**.
- Install a trash rack and anti-vortex device securely on top of the riser.
- Attach riser to the base with a watertight connection. Embed riser 9" into an 18" thick concrete base.
- Provide an adequate outlet that allows discharge in an erosion free manner.
- Place the fill material around the the pipe spillway in 4" layers and compact to at least the same density as the adjacent embankment.
- A minimum depth of 2 ft of hand compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.

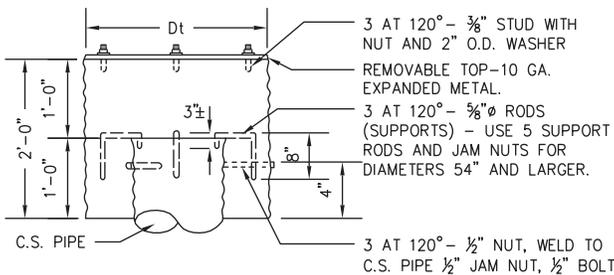


Figure 2. Typical Sediment Basin Trash Rack

**Emergency Spillway**

- Construct on undisturbed ground (not fill).
- Excavate a trapezoidal channel with minimum bottom width of 8 ft.

**Sd3**

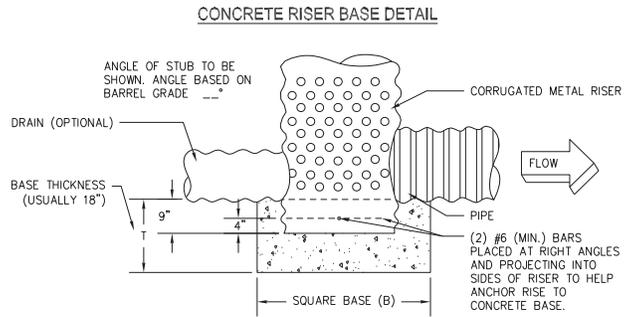


Figure 3. Concrete Riser Base Detail

- Construct a channel with a straight control section of at least 20 ft in length and a straight outlet section that is at least 25 ft in length.
- Stabilize with vegetation, asphalt, riprap or concrete.

**Entrance of Runoff into Basin**

- Install dikes, swales, or other water control devices to direct runoff into the basin.
- Locate points of entry as far away from the riser as possible.

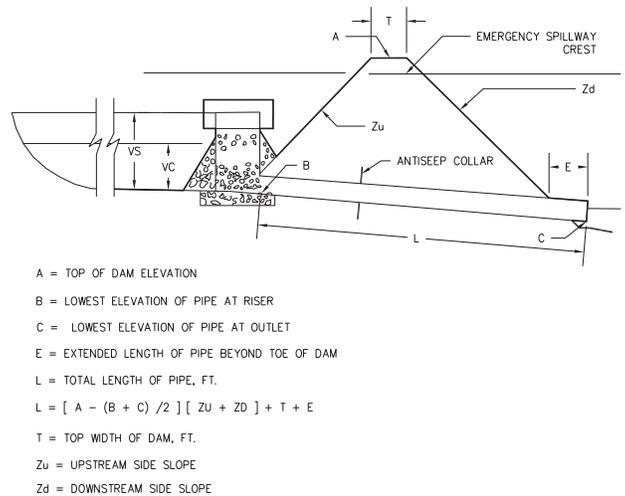


Figure 4. Principle Spillway

**Sd3**

- Stabilize the embankment and all other disturbed areas in accordance with the appropriate permanent vegetative measure, Ds3, immediately following construction.



Figure 5. Clean-out marker

**Cut-off Trench**

- Excavate a cut-off trench with a minimum depth of 2 ft along the center-line of the earth-fill embankment.
- Extend both abutments up to the riser crest with a minimum bottom width of 4 ft in order to permit operation of compaction equipment.
- Side slopes shall be no steeper than 1:1

**Embankment**

- Place fill material in 6"-8" thick continuous layers over entire length of fill.
- Construct the embankment to an elevation 5% higher than the design height to allow for settlement.
- Fill material shall be free of rocks, woody vegetation, oversized stones, rocks, etc.

Table 1. Dam Width Requirements

Fill Height (ft)	Minimum Top Width (ft)
<10	8
10-15	10

**Sd3**

**MAINTENANCE**

- Repair all damages caused by soil erosion or construction equipment at or before the end of each working day.
- Remove sediment from the basin when one-third of the storage volume has been lost to accumulation.
- Do not allow sediment to enter adjacent streams or drainage ways during the sediment removal process.
- Do not deposit sediment downstream from the embankment, adjacent to a stream or floodplain.
- Dispose of all temporary structures when they have served their intended purpose and the contributing drainage basin has been properly stabilized.

**REFERENCES**

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)
- Ch** Channel Stabilization
- Sk** Floating Surface Skimmer
- St** Storm Drain Outlet Protection

**Sd4**

## TEMPORARY SEDIMENT TRAP

### DEFINITION

A small temporary pond that drains a disturbed area so that sediment can settle out.



### PURPOSE

- Collect and store sediment from uphill sites cleared and/or graded during construction.
- For use on small tributary areas with no unusual drainage features.

### INSTALLATION

- Install according to the approved plan.
- Sediment traps are effective against coarse sediment, but not against silt or clay particles.
- The maximum drainage area is 5 acres depending on the type of installation.
- The maximum depth of a trap is 4 ft as measured from the bottom of the trap to the invert of the emergency spillway.
- Ensure the length to width ratio is great than 2:1.
- The height of the embankment shall not exceed 5.5 ft from the downstream toe to the top of the berm. The top width shall be at least 3 ft.
- Slopes shall not exceed 2:1.

**Sd4**

- Construct side slopes 3:1 or flatter to allow people and equipment to enter the trap.

### Methods

#### Overflow Outlet

**Sd4-A**

- Limited to small drainage areas less than 1 acre with gentle slopes(1-2%).
- The maximum life span is 6 months.
- Silt fence, straw bale barriers or grass filter strips are used to “polish” the overflow water as it leaves the sediment trap.

#### Combination Outlet

**Sd4-B**

- A combination of straw bales and silt fence are used to dewater the trap.
- Properly install and stake the straw bales and ensure the silt fence has a wire backing so that the materials can resist 1 ft or more of ponded water.
- The maximum drainage area is 1 acre.
- The life span is less than 1 year.
- Requires frequent maintenance and adjustments.

#### Rock Outlet

**Sd4-C**

- This type relies on filtering through layers of aggregate, rock or riprap material to dewater the sediment trap.
- This is the sturdiest design of the three and requires less maintenance.
- The maximum drainage area is 5 acres.
- The life span is typically 1 year.

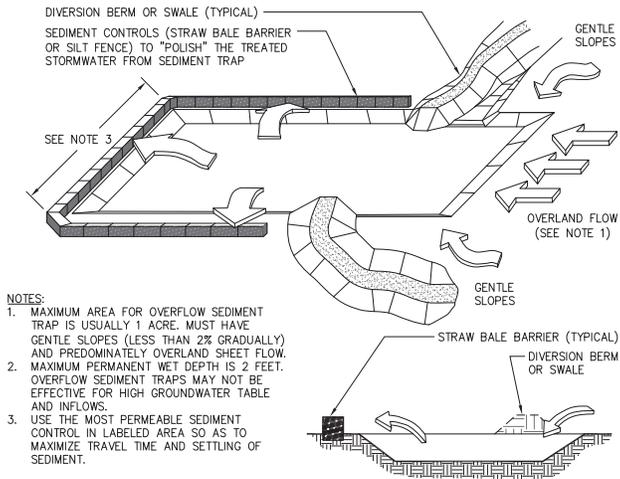


Figure 1. Overflow Outlet

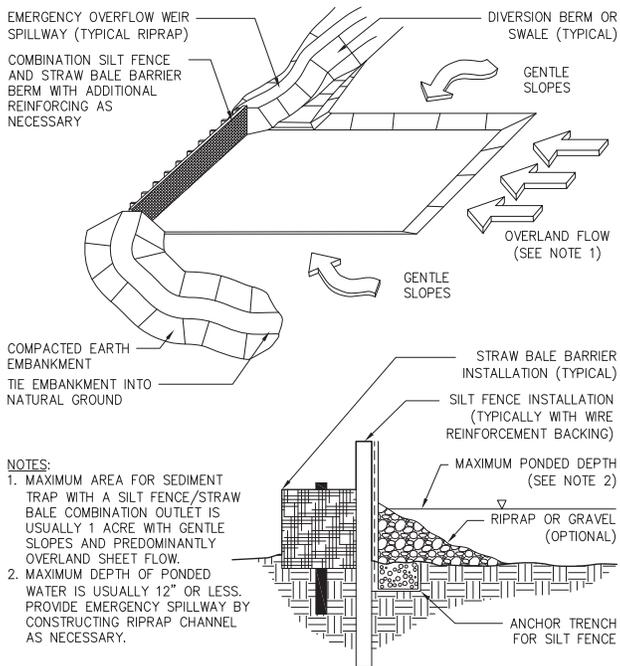


Figure 2. Combination Outlet

Emergency Spillway

- Stabilize with rock, geotextile, vegetation, or another suitable material that is resistant to erosion.
- Must be able to convey the 10-year storm event.

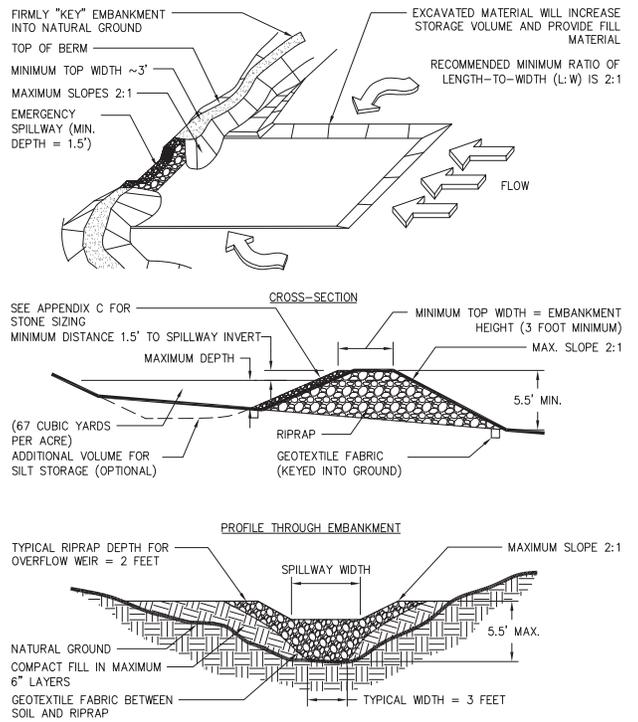


Figure 3. Rock Outlet

**MAINTENANCE**

- Repair all damages caused by soil erosion or construction equipment at or before the end of each working day.
- The cleanout volume for a temporary sediment trap is one-third of the total storage volume.

Sk

## FLOATING SURFACE SKIMMER

### DEFINITION

A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.



### PURPOSE

- Discharge clearer water from the surface of a sediment pond, trap, or basin at relatively uniform rate.
- Reduce the retention time associated with meeting a desired water quality standard for discharge from a sediment pond, trap or basin.

### INSTALLATION

- Install according to the approved plan.
- It can replace the riser pipe as the principal spillway, but does **not** replace the emergency spillway.
- A portion of the skimmer must be visible above the water surface at all times.
- Excavate a pit filled with riprap under the floating surface skimmer to account for sediment accumulation around the device.
- At a minimum, the pit has dimensions of 4x4 ft with a minimum depth of 2 ft.

Sk

- Ensure the pit is lower than the invert of the outlet barrel from the riser.
- Use floating surface skimmers constructed of PVC (Schedule 40 or greater) or other appropriate materials.
- Install the device according to the approved plan and manufacturer’s instructions.

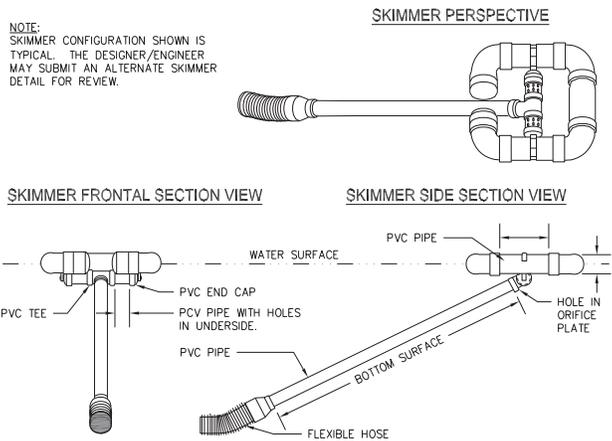


Figure 1. “Typical” Skimmer Design

### MAINTENANCE

- Inspect Floating Surface Skimmers together with the Sediment Basin (Sd3) inspections.
- Inspect for any structural damage, clogging, or excessive sediment accumulation.
- Install trash guard to prevent larger debris from entering the skimmer and cause internal blocking.
- Use a floatable maintenance rope to remove trash and debris that accumulates on the outside of the trash guard.
- Free the skimmer from being stuck in the mud at the bottom of the basin to allow for normal operation.

**DEFINITION**

A linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.



**PURPOSE**

- Allows the 2 year, 24-hour storm to seep out while allowing larger flows to be diverted to a sediment storage area.

**INSTALLATION**

- Install according to the approved plan.
- Install where runoff can be stored behind the seep berm without damaging the berm or submerged area behind the intermediate dike points.
- Do not use above fill slopes that have not achieved permanent stabilization.
- Do not install across streams, ditches, or waterways.
- The top of the berm shall have a minimum width of 12” and a height of 4 ft.

- Maximum spacing between the dikes should be such that the toe of the upstream dike is at the same elevation as the top of the downstream dike.
- Install clean out markers at each intermediate dike using a sediment storage calculation.
- Compact the earthen berm by using a skid-loader with a full bucket, tracking with a dozer and applying pressure with the bucket, or rubber tired backhoe.
- Compaction must meet a minimum of 90% standard proctor density test.
- Apply seed at 70% germination or better prior to other land disturbing activities taking place.

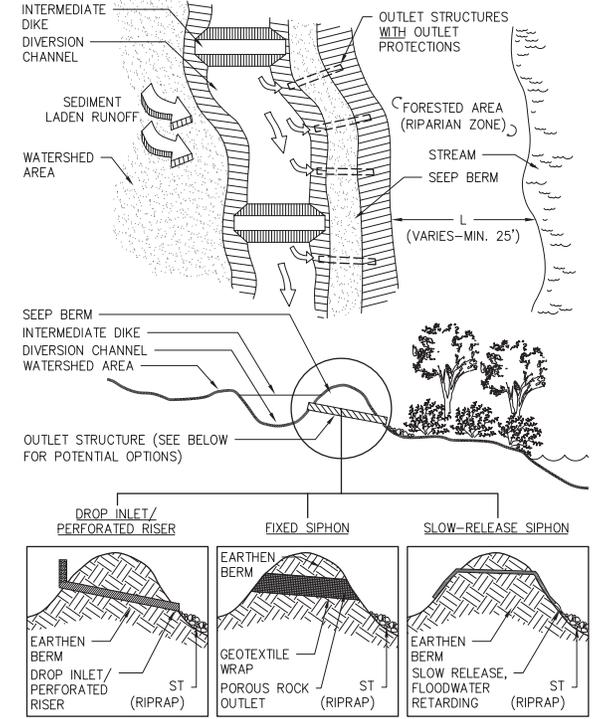


Figure 1. "Typical" Seep Berm System

**SpB**

- Seeps can be placed 3 different ways:
  - During the construction of the berm,
  - After construction has been completed, excavate at the location of the seeps, place in the trench and back-fill. Compact the berm to finalize,
  - After construction has been completed, using a steel pipe with a conical end, insert pipes through the berm.

### MAINTENANCE

- Inspect the dam from the seep and supporting berm after every 1/2" or greater rainfall.
- Make any repairs promptly.
- Remove sediment when it has accumulated to one-third the height of the intermediate dike.

**SpB**

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Sr

## TEMPORARY STREAM CROSSING

### DEFINITION

A temporary structure installed across a flowing stream or watercourse for use by construction equipment.



### PURPOSE

- Provide a means for construction vehicles to cross streams or watercourses without moving sediment into streams, damaging the streambed or channel, or causing flooding.

### INSTALLATION

- Install according to the approved plan.
- The drainage area is not to exceed one square mile, unless specifically designed to accommodate the additional drainage area by the design professional.
- Structures include bridges, round pipes, or pipe arches.
- Do not allow for use by the general public.
- Install perpendicular to the stream. The crossing may vary 15° from the perpendicular.
- Divert all surface water from the construction site onto undisturbed areas adjoining the stream.

Sr

- Convey full bank flow of stream without appreciably altering the stream flow characteristics.
- Washout protection may include elevation of bridges above adjacent flood plain lands, crowning of fills over pipes, or the use of diversions, dikes or island type structures.
- A Stream Buffer Variance from the GA EPD may be required and all other appropriate agencies, including the U.S. Army Corps of Engineers, must be contacted to ensure compliance with other laws.

### Types of Stream Crossings

#### Temporary Bridge Crossing

Sr-B

- This method causes the least amount of erosion of the stream channel.
- Provides the least obstruction to flow and fish migration.
- Construct at or above the bank elevation to prevent entrapment of floating materials.
- Place abutments parallel to and on stable banks.
- Construct the bridge to span the entire channel. Install a footing, pier, or bridge support if the span exceeds 8 ft.
- Securely anchor the bridge at one end with a steel cable or chain, large trees, large boulders, or driven steel anchors.

#### Temporary Culvert Crossing

Sr-C

- The most common stream crossing design.
- Can be easily constructed and enables heavy equipment loads to be used.
- Creates the greatest obstruction to stream flows and are subject to blockages.

## Sr

- Install the invert elevation of the culvert on the natural streambed grade.
- Extend the culvert(s) a minimum of 1 ft beyond the upstream and downstream toe of the aggregate placed around the culvert.
- Do not exceed 40 ft in length of the culvert.
- Cover the culvert(s) with a minimum of 1 ft of aggregate.
- If using multiple culverts, separate them with compacted aggregate fill by a minimum of 12 in.

Table 1. Pipe Diameters for Stream Crossings  
(in)

Drainage		Average Slope of Watershed			
		1%	4%	8%	16%
Acres					
1-25		24	24	30	30
26-50		24	30	36	36
51-100		30	36	42	48
101-150		30	42	48	48
151-200		36	42	48	54
201-250		36	48	54	54
251-300		36	48	54	60
301-350		42	48	60	60
351-400		42	54	60	60
401-450		42	54	60	72
451-500		42	54	60	72
501-550		48	60	60	72
551-600		48	60	60	72
601-640		48	60	72	72

## Sr

### MAINTENANCE

- Inspect structure after every rainfall and at least once a week.
- Repair all damages immediately.
- Remove the structure immediately after construction is finished.
- Stabilize the streambed and banks.

### REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)
- Bf** Buffer Zone

St

## STORM DRAIN OUTLET PROTECTION

### DEFINITION

Paved and/or riprapped channel sections placed below storm drain outlets.



### PURPOSE

- Reduce the velocity of flow before entering receiving channels below storm drain outlets.

### INSTALLATION

- Install according to the approved plan.
- The apron may be lined with riprap, grouted riprap, or concrete.
- Compact any fill required in the subgrade to the density of the surrounding undisturbed material.
- Ensure that the riprap and gravel filter conform to the specified grading limits on the plan.
- Install geotextile between the riprap and the soil base.
- Protect the geotextile from punching or tears during installation. Overlap connecting joints a minimum of 1 ft.
- The minimum thickness of the riprap should be 1.5x the maximum stone diameter.
- Place riprap by hand or equipment. Be careful to avoid damaging the filter fabric.

St

PIPE OUTLET TO WELL DEFINED CHANNEL

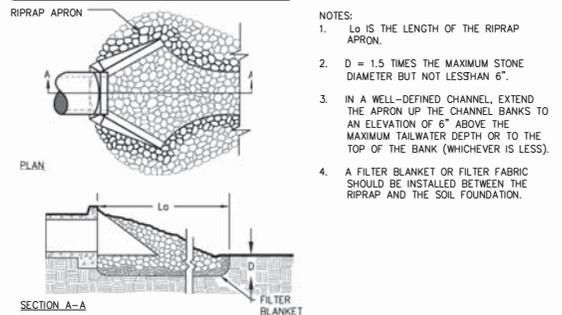


Figure 1. Outlet Protection for a Well-Defined Channel

- Construct the apron on zero grade with no overfall at the end. Ensure the top of the riprap at the downstream end is level with the receiving area or slightly below it.
- Place any necessary curves in the upper section of the apron.
- Ensure the apron is properly aligned and preferably straight throughout its length.
- Stabilize all disturbed areas after construction.

#### Apron Width for a Well-Defined Channel

- Side slopes of the channel shall be no steeper than 2:1.
- Extend the apron across the channel bottom.
- Extend the apron up the channel banks to an elevation one foot above the maximum tailwater depth or to the top of the bank (whichever is less).

#### Apron Width for a Flat Area

- The upstream end of the apron shall have a width 3x the diameter of the outlet pipe.
- For a Minimum Tailwater Condition, the downstream end of the apron shall have a width equal to the pipe diameter plus the length of the apron.

- For a Maximum Tailwater Condition, the downstream end shall have a width equal to the pipe diameter plus 0.4x the length of the apron.

PIPE OUTLET TO FLAT AREA – NO WELL DEFINED CHANNEL

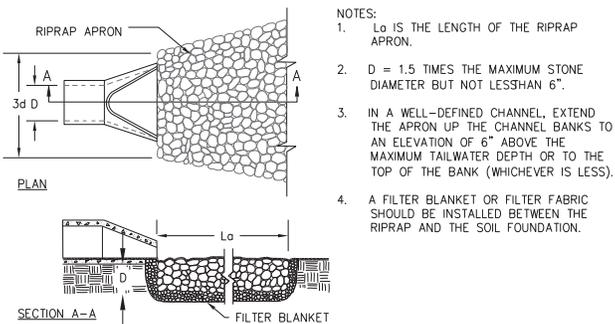


Figure 2. Outlet Protection for a Flat Area

## MAINTENANCE

- Inspect riprap outlet structures after heavy rain events to see if any erosion has taken place around or below the riprap.
- Make all needed repairs immediately to prevent further damage.

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Su

## SURFACE ROUGHENING

### DEFINITION

Providing a rough soil surface with horizontal depressions created by operating a tillage or other suitable implement on the contour.



### PURPOSE

- Aid in the establishment of vegetative cover with seed.
- Reduce runoff velocity and increase infiltration.
- Reduce erosion and provide for sediment trapping.

### INSTALLATION

- Conduct according to the approved plan.
- Required on all slopes steeper than 3:1 if they are to be stabilized with vegetation.
- If slope is to be stabilized with matting and blankets, the surface should not be roughened.
- Not required on slopes with a stable rock face.
- Lightly roughen and loosen soil to a depth of 2"-4" on slopes 3:1 or flatter.
- Areas that will be mowed should have slopes less than 3:1.
- Groove or maintain roughness of fill slopes steeper than 3:1.

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Su

- Stair-step grade or groove cut slopes steeper than 3:1.

### Roughening Methods

#### Stair-Step Grading

- May be carried out on any material soft enough to be ripped with a bulldozer.
- Particularly good for slopes with soft rock and some subsoil.
- The ratio of the vertical cut distance to the horizontal distance shall be less than 1:1.
- Horizontal portion of the "step" shall slope toward the vertical wall.

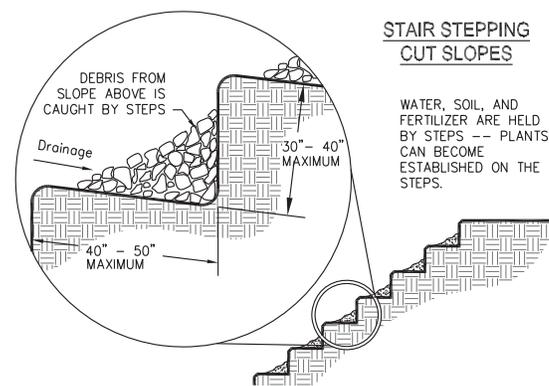


Figure 1. Stair-Stepping Cut Slopes

- Individual vertical cuts are not to exceed 30" on soft materials and not more than 40" in rocky materials.

#### Grooving

- Use discs, tillers, spring harrows, or the teeth on a front-end loader.
- On un-mowed slopes, minimum groove depth of 3" and maximum groove spacing of 15".
- On mowed slopes, minimum depth of 1" and maximum groove spacing of 12".

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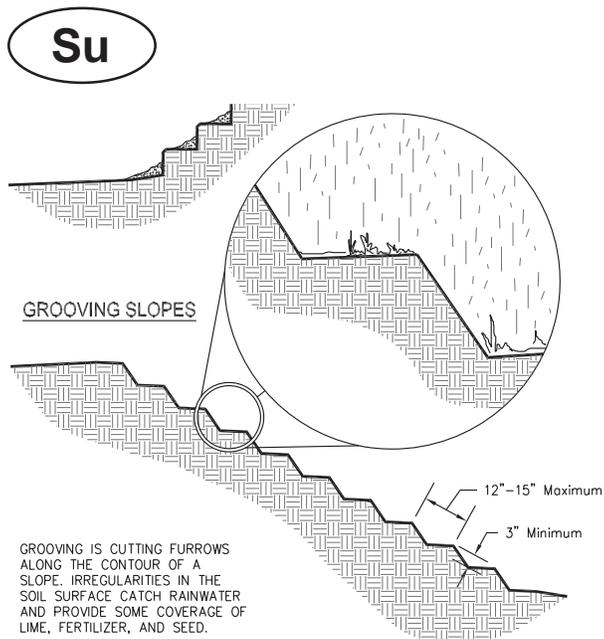


Figure 2. Grooving Slopes

### Tracking

- Not recommended on clayed soils unless no alternatives are available.
- Sandy soils may be tracked because they do not compact severely.
- Minimize machine passes to minimize compaction.
- Roughened areas shall be seeded and mulched as soon as possible to obtain optimum seed germination and growth.

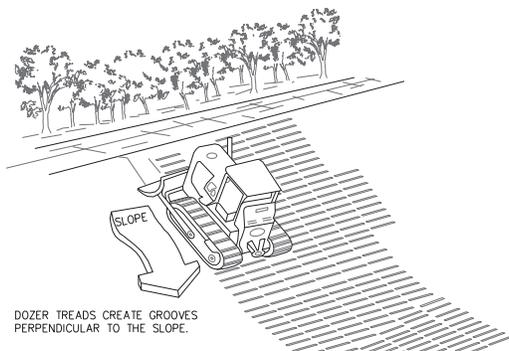


Figure 3. Tracking

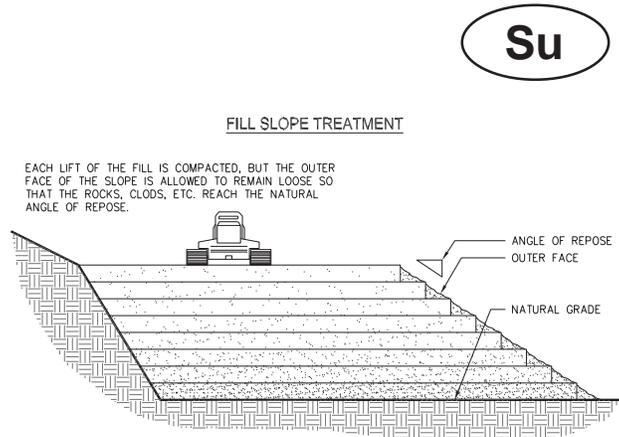


Figure 4. Fill Slope Treatment

## REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)

Tc

# TURBIDITY CURTAIN

Tc

## DEFINITION

A floating or staked barrier installed within the water.



## PURPOSE

- Minimize turbidity and silt migration from work occurring within the water or as a supplement to perimeter control BMPs at the water's edge.
- Allow suspended particles to drop out of the water column over time.

## INSTALLATION

- Install according to the approved plan.
- This practice is only allowed as a primary device when required permitting has been obtained for the site that approves the filling of State or U.S. waters.
- A Stream Buffer Variance from the GA EPD may be required and all other appropriate agencies, including the U.S. Army Corps of Engineers, must be contacted to ensure compliance with other laws.
- Not to be used as sediment storage.

- The installation of a turbidity curtain as a supplemental BMP is allowed provided the stream or other water “body” is not altered in any manner by the installation.
- Place barrier approximately 25 ft outside of the affected construction area for large water bodies.
- Place barrier parallel to flow whenever there is significant velocity or current in the body of water.
- Never allow the silt dispersion to exceed the allowances the filling permit has authorized.
- Installation dimensions and methods shall be fitted to the conditions, permitted activity, and construction methods.

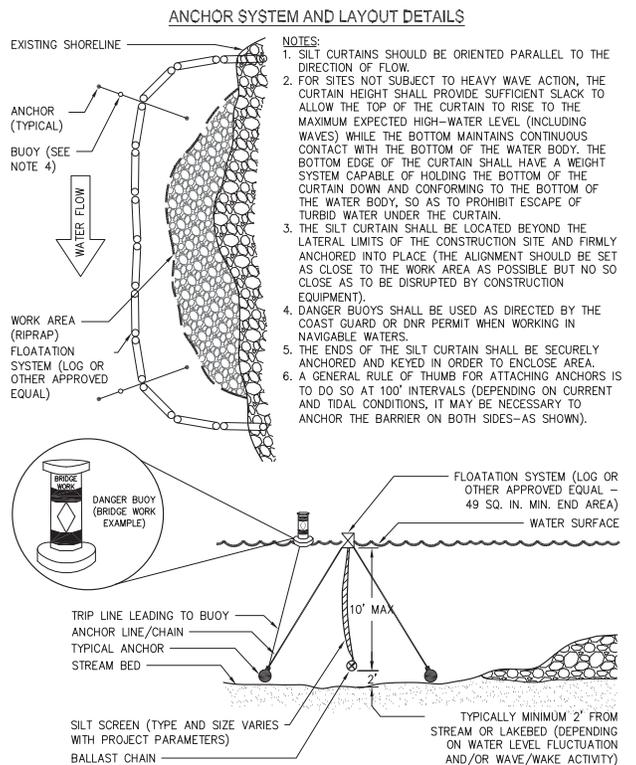


Figure 1. Turbidity Curtain System

**Tc**

**Tc**

### Installation Types

#### Floating Turbidity Curtain

**Tc-F**

- Typical installation include large bodies of water such as rivers and lakes.
- Extend curtain to a depth of 5 ft from the bottom of the water body.

#### Staked Turbidity Curtain

**Tc-S**

- Typical installations include shallow inundations where construction is required.
- Extend the barrier to the bottom of the streambed.
- Limit the height to 5 ft whenever possible and extend 2 ft above the normal water elevation.

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## **MAINTENANCE**

- Remove the curtain when it is no longer required.
- Carefully remove any sediment that exceeds the allowance of the filling permit.
- If using Tc as a supplemental BMP, it should be removed once the contributing drainage area reaches final stabilization and perimeter control removal has occurred.

**Top**

## TOPSOILING

### DEFINITION

The stripping off of the fertile topsoil, storing it, then spreading it over the disturbed area after the completion of construction activities.



### PURPOSE

- Provide a suitable soil medium for vegetative growth on areas where other measures will not produce or maintain a desirable stand.

### SPECIFICATIONS

- Recommended for sites with slopes 2:1 or flatter where:
  - (1) the texture of the exposed subsoil or parent material is not suitable to produce adequate vegetative growth.
  - (2) the soil material is so shallow that the rooting zone is not deep enough to support plants with continuing supplies of moisture and food.
  - (3) the soil to be vegetated contains material toxic to plant growth.
- Topsoil should be friable and loamy, free of debris, objectionable weed and stones, and contain no toxic substance that may be harmful to plant growth.

**Top**

- A stripping depth of 4"-6" is common and should be confined to the immediate construction area.
- Stockpiles should not obstruct natural drainage or cause off-site environmental damage.
- Stockpiles shall be contained by sediment barriers and stabilized with temporary vegetative measures.
- Where the pH of the subsoil is 5.0 or less or composed of heavy clays, agricultural lime shall be spread at a rate of 100lbs/1000 sq.ft.
- Subsoil shall be loosened by discing or scarifying to a minimum depth of 3" to permit bonding of the topsoil to the subsoil. Tracking by a bulldozer is also adequate.
- Topsoil should be applied at a uniform depth of 5" (unsettled), but may be adjusted at the discretion of the design professional.
- Topsoil should be handled only when dry in order to prevent damaging the soil structure.

Table 1. Cubic Yards of Topsoil Required for Application to Various Depths

Depth (in.)	Per 1,000 Sq. Ft.	Per Acre
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806

Tr

## TREE PROTECTION

### DEFINITION

The protection of desirable trees from injury during construction activity.



### PURPOSE

- Ensure the survival of desirable trees where they will be effective for erosion and sediment control, watershed protection, landscape beautification, dust and pollution control, noise reduction, shade and other environmental benefits while the land is being converted.

### SPECIFICATIONS

- Contact the local government to obtain information regarding tree ordinances BEFORE ES&PC plans are designed.

#### Tree Protection Zones

- (1) Measure the diameter of the tree trunk in inches 4.5 ft from the ground. This is the Diameter Breast Height (DBH).
- (2) Multiply this value by 1.5. This result is the radius of the root protection zone in ft Also considered the critical rooting distance.

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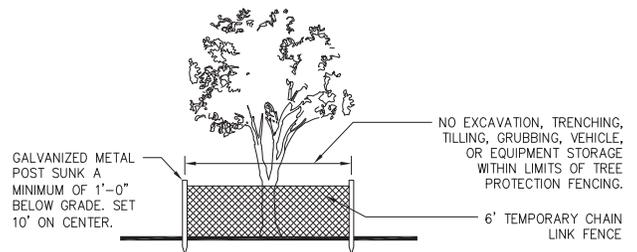


Figure 1. Chain Link Fence Installation

#### Tree Protection Zone Fencing

Tree protection zone fencing may be one of the following:

- For areas of large remnant forest to be protected, use 4 ft high orange plastic fabric fencing stapled in 3 locations to 2x4 treated wood stakes. Set stakes 6 ft on center. Do not use rebar as stakes.
- For single family homes use a treated wood fencing. It may have orange fabric attached to it.
- For all other developments use 6 ft high chain link fencing attached to galvanized metal post.

\*Please refer to the American National Standard(ANSI) or the International Society of Arboriculture for more information regarding standards for adequate tree protection.

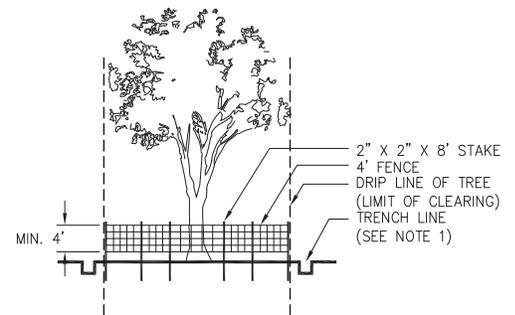


Figure 2. "Snow" Fence Installation

**Wt**

## VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL

### DEFINITION

A natural or constructed channel that is shaped or graded to required dimensions and established in suitable vegetation for the stable conveyance of runoff.



### PURPOSE

- Dispose of runoff without causing damage either by erosion or flooding.

### INSTALLATION

- Install according to the approved plan.
- Remove all trees, brush, stumps, obstructions and other objectionable material so as not to interfere with the proper functioning of the waterway.
- Ensure the channel is free of bank projections or other irregularities that will impede normal flow.
- Compact fills as needed to prevent unequal settlement.
- Dispose of all excess earth fill so that it will not interfere with waterway functioning.
- Stabilize the channel in accordance with applicable vegetative standards.

**Wt**

- Channel shape may be parabolic, trapezoidal, or triangular.
- The bottom width shall not exceed 50 ft unless multiple or divided waterways or other means are provided to control meandering of low flows within this limit.
- Please refer to Table 1 for design velocities of the grassed waterways.

Table 1. Permissible Velocities for Vegetated and Rock-Lined Waterways

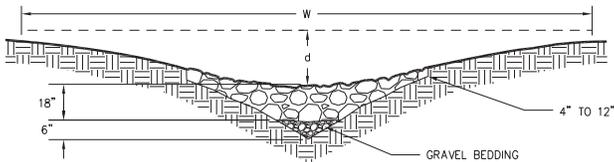
Vegetative Cover	Maximum Permissible Velocity (fps)
Bermuda	5
Bahia	4
Tall Fescue	4
Sericea Lespedeza Weeping Lovegrass	3
Stone Center	Design Required

- Tile or other subsurface drainage measure shall be provided for sites having high water tables or seepage problems. Where there is base flow, a stone center or lined channel will be required.
- Mulching is required for all seeded or sprigged channels.
- Geotextiles should be used as an erosion control measure beneath the riprap center.
- If conditions permit, water should be temporarily diverted from the channel, or otherwise disposed of, during the establishment of vegetation.

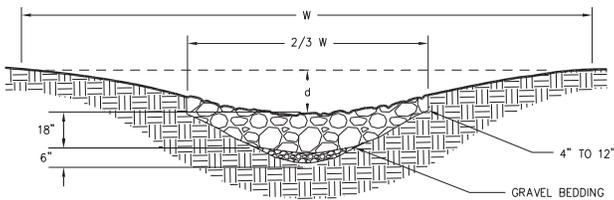
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WATERWAY WITH STONE CENTER DRAIN AND  
V-SECTION SHAPED BY MOTOR GRADER



WATERWAY WITH STONE CENTER DRAIN AND  
ROUNDED SECTION SHAPED BY BULLDOZER



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Figure 1. Stone Center Waterway

## REFERENCES

- Ds1** Disturbed Area Stabilization  
(With Mulching Only)
- Ds2** Disturbed Area Stabilization  
(With Temporary Seeding)
- Ds3** Disturbed Area Stabilization  
(With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization  
(With Sodding)
- Ss** Slope Stabilization

Insert Tab 3  
Stream Impacts

Back of Tab

1

# STREAM IMPACTS



## BUFFERS, PERMITS, VARIANCES

 Level 1B Recertification July 2016

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2

## State Waters

State Level

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### Definition

3

- Per O.C.G.A. 12-7-3(16)
  - "State waters" includes any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state, which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

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### Agency Roles

4

- GA Environmental Protection Division 
  - Reviews buffer variance applications
  - Issues buffer variances for state-mandated buffers
  - State waters determinations (where there is no certified LIA)
- Local Issuing Authority
  - Can incorporate additional stream buffers (more stringent than state buffers)
  - Can issue variances for their own buffers
  - State water determinations

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### Who Determines State Waters?

5

- For projects regulated by the Local Issuing Authority (LIA), the LIA is responsible for determining State Waters.
- The Buffer Variance application must include a letter from the LIA, stating that the LIA has visited the site and determined the presence of State Waters that require a buffer.

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### Who Determines State Waters?

6

- For projects that are exempt from local Erosion & Sediment Control Ordinances and not regulated by a LIA, the GA EPD is responsible for determining State Waters.
- The GA EPD is responsible for reviewing the ES&PC plan, conducting any complaint investigations, and initiating any enforcement actions.

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### Perennial Stream Characteristics

7

- Base flow that maintains stream flow throughout the year under normal circumstances
- Well-developed stream banks
- A channel that is almost always sinuous (winding)
- Evidence of fluctuating high water marks
- Evidence of soil and debris movement (scour) in the channel
- Presence of hydric soils
- Presence of wetland vegetation

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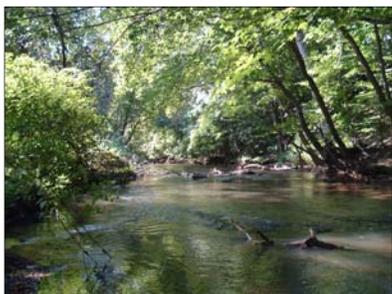
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### Perennial Stream Characteristics

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### Intermittent Stream Characteristics

9

- Base flow that is **seasonally present**
- Presence of **crayfish burrows and aquatic insects**
- Well-developed stream banks
- Evidence of fluctuating high water marks
- Evidence of soil and debris movement (scour) in the channel
- Presence of hydric soils
- Presence of wetland vegetation

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### Intermittent Stream Characteristics

10



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### Ephemeral Stream Characteristics

11

- Flows only in direct response to precipitation
- If there is no flowing water within 48 hours of a rain event, the drainage feature is most probably ephemeral
- No well-defined channel
- Absence of riffles/pools
- A flow area that is almost always straight
- Lack of groundwater-induced base flows
- Lack of hydric soils that dominate the banks
- Lack of wetland vegetation

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### Ephemeral Stream Characteristics

12



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### Common Misconceptions

13

- These factors are not to be considered in State Water Determinations:
  - Whether a stream appears on a topo map as a solid or dashed blue line
  - Whether the stream originates on the property
  - Whether a stream that originates on the property flows into another stream before it leaves the property
  - The duration of flow in the stream
  - The absence of observable aquatic life

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### “Buffer”

14

- Per O.C.G.A. 12-7-3(2)
  - *The area of land immediately adjacent to the banks of State Waters in its natural state of vegetation, which facilitates, when properly vegetated, the protection of water quality and aquatic habitat*
- The State-mandated **stream buffers** are measured **horizontally** from the point where vegetation has been wrested by “normal stream flow” or “wave action”

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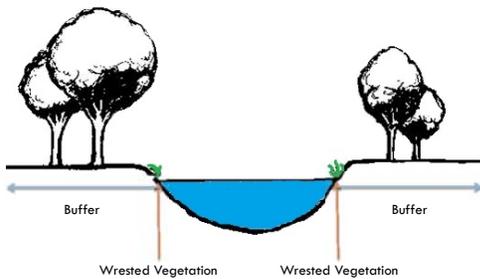
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### Wrested Vegetation

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### Wrested Vegetation

16




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### Normal Stream Flow

17

- Per Rule 391-3-7-.01(w):
  - For non-trout waters only, any stream flow that consists solely of base flow or consists of both base flow and direct runoff during any period of the year.
  - Base Flow – the discharge that enters the stream channel through the soil. This includes spring flow into streams.
  - Direct runoff – the water entering stream channels promptly after rainfalls or snow melts.

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### Stream Buffer Requirements

18

Non-trout	Trout
□ Warm water perennial and intermittent streams: □ <u>25-ft buffer</u>	□ Cold water perennial, intermittent and ephemeral streams: □ <u>50-ft buffer</u>

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### Trout Streams

19

- Primary Trout Waters
  - Streams supporting a self-sustaining population of Rainbow, Brown, or Brook Trout
- Secondary Trout Waters
  - Streams with no evidence of natural trout reproduction but capable of supporting trout throughout the year (i.e. water temperatures will support introduced trout, whether or nor the fish reproduce)
- The list of Primary & Secondary trout waters is maintained by the GA EPD. Designations are listed by individual stream segments or watershed.

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### Stream Buffer Exemptions

20

- Stream crossings for water & sewer lines provided
  - It is within 25° of perpendicular to the stream
  - And the disturbance is not more than 50 ft. within the buffer
- Construction of public water system reservoirs
- Drainage Structures – warm water streams only
- Roadway Drainage Structures
- Construction of bulkheads or seawalls on:
  - Lake Sinclair & Lake Oconee

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### Drainage Structure

21

- A device composed of a virtually non-erodible material such as concrete, steel, plastic or other such material that conveys water from one place to another by intercepting the flow and carrying it to a release point for storm water management, drainage control, or flood control purposes.




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### Roadway Drainage Structure

22

- A device such as a bridge, culvert, or ditch, composed of a virtually non-erodible material such as concrete, steel, plastic, or other such material that conveys water under a roadway by intercepting the flow on one side of a traveled roadway consisting of one or more defined lanes, with or without shoulder areas, and carrying water to a release point on the other side.




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### Buffer Variance

23

- The minimum 25-ft or 50-ft undisturbed State-mandated stream buffers shall be maintained, except where the GA EPD Director determines to allow a variance that is at least as protective of natural resources and the environment.
- An buffer variance application must be submitted and will only be considered for the applicable criteria (a-k) delineated in the E&SC Rules & Regulations.
- The GA EPD receives ~220 buffer variance applications/year.

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### Stream Buffer Variance Criteria

24

- (a) The project involves the construction or repair of an existing infrastructure project or a structure that, by its nature, must be located within the buffer. Such structures include, include but are not limited to, dams, public water supply intake structures, detention/retention ponds, waste water discharges, docks including access ways, boat launches including access ways, and stabilization of areas of public access to water

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### Stream Buffer Variance Criteria

25

- (b) The project will result in the restoration or enhancement to improve water quality and/or aquatic habitat quality
- (c) Buffer intrusion is necessary to provide reasonable access to a property or properties
- (d) The intrusion is for water and sewer lines that cannot reasonably be placed outside the buffer, and stream crossings and vegetative disturbance are minimized

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### Stream Buffer Variance Criteria

26

- (e) Crossing for utility lines, including but not limited to gas, liquid, power, telephone, and other pipelines, provided that the number of crossings and the amount of vegetative disturbance are minimized
- (f) Recreational foot trails and viewing areas, providing that impacts to the buffer are minimal

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### Stream Buffer Variance Criteria

27

- (g) The project involves construction of one (1) single family home for residential use by the owner of the subject property and, at the time of adoption of this rule, there is no opportunity to develop the home under any reasonable design configuration unless a buffer variance is granted. Variances will be considered for such single family homes only if construction is initiated or local government approval is obtained prior to January 10, 2005

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### Stream Buffer Variance Criteria

28

- (h) For non-trout waters, the proposed land disturbing activity within the buffer will require a permit from the United States Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act Amendment of 1972, [33 U.S.C. Section 1344](#), and the Corps of Engineers has approved a mitigation plan to be implemented as a condition of such a permit
- (i) For non-trout waters, a plan is provided for buffer intrusion that shows that, even with the proposed land disturbing activity within the buffer, the completed project will result in maintained or improved water quality downstream of the project

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### Stream Buffer Variance Criteria

29

- (j) For non-trout waters, the project with a proposed land disturbing activity within the buffer is located in, or upstream and within ten linear miles of, a stream segment listed as impaired under Section 303(d) of the federal Water Pollution Control Act Amendment of 1972, [33 U.S.C. Section 1313\(d\)](#) and a plan is provided that shows that the completed project will result in maintained or improved water quality in such listed stream segment and that the project has no adverse impact relative to the pollutants of concern in such stream segment

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### Stream Buffer Variance Criteria

30

- (k) The proposed land disturbing activity within the buffer is not eligible for a permit from the United States Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act Amendment of 1972, [33 U.S.C. Section 1344](#), but includes required mitigation in accordance with current EPD "Stream Buffer Variance Mitigation Guidance" document, and involves:
  1. piping, filling, or re-routing of non-trout waters that are not jurisdictional Waters of the U.S.
  2. stream buffer impacts due to new infrastructure projects adjacent to state waters (jurisdictional and non-jurisdictional Waters of the U.S.). This criterion shall not apply to maintenance and/or modification to existing infrastructure, which are covered under 391-3-7.05(2)(a).

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### General Variance

31

- A general variance is provided for the piping of trout streams with an average annual flow of 25 GPM or less provided
  - ▣ The total length of stream that is piped on any one property shall not exceed 200 ft
  - ▣ The downstream end of the pipe shall terminate at least 25 ft. before the property
  - ▣ Piping of more than 200 ft. will require an individual variance for the entire project

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### Public Notice

32

- Within 60 days of receipt of a complete buffer variance application, the GAEPD will either provide written comments to the applicant or propose to issue a variance.
- The public shall have 30 days from the date of publication of the public notice to comment on the proposed buffer variance.
- The public notice shall describe:
  1. The proposed buffer encroachment
  2. The location of the project
  3. Where the public can view the site plans
  4. Where comments should be sent

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### Coastal Marshlands

33

- Marshlands – any marshland intertidal area, mud flat, tidal water bottom, or salt marsh in the State within the estuarine area of the state, whether or not the tidewaters reach the littoral areas through natural or artificial watercourses
- The established 25-foot buffer along coastal marshlands is measured horizontally from the coastal-marshlands-upland interface as determined in accordance with the Coastal Marshlands Protection Act of 1970

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### Coastal Marshlands Exemptions

34

- For the maintenance of any currently serviceable structure, landscaping, or hardscaping
- Construction or maintenance of any drainage or roadway drainage structure
- On the landward side of any currently serviceable shoreline stabilization structure
- The maintenance of any man-made stormwater detention basin, golf course pond, or impoundment located on the property of a single individual, partnership, or corporation

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### Coastal Marshlands Exemptions

35

- Utility line crossings that cause a width of disturbance less than 50 ft within the buffer
- Any land-disturbing activity conducted with a valid LDA permit issued between April 22, 2014 and December 31, 2015
- Any lot where the preliminary plat has been approved prior to December 31, 2015 provided
  - Roadways, bridges, or water and sewer lines have been extended to such lot prior to the effective date of this Act
  - If the requirement to maintain a 25 ft buffer would consume at least 18% of the high ground of the platted lot

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### Coastal Marshlands

36



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37 Waters of the U.S.

Federal Level

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Agency Roles

38

<p><b>U.S. Army Corps of Engineers</b> </p> <ul style="list-style-type: none"><li>Administers day-to-day program</li><li>Individual and general permit decisions/issuance</li><li>Jurisdictional determinations</li><li>Enforcement</li></ul>	<p><b>U.S. Environmental Protection Agency</b> </p> <ul style="list-style-type: none"><li>Develops and interprets policy, guidance, and environmental criteria used in permit applications</li><li>Determines scope of geographic jurisdiction and applicability of exemptions</li><li>Has authority to prohibit, deny, or restrict the use of any defined area</li></ul>
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Waters of the U.S.

39

<p><b>Navigable waters</b></p> <ul style="list-style-type: none"><li>Oceans, bays, inlets</li></ul> <p><b>Tributaries</b></p> <ul style="list-style-type: none"><li>Rivers, creeks, ephemeral &amp; intermittent streams, lakes, ponds</li></ul> <p><b>Interstate bodies of water or wetlands</b></p>	<p><b>Wetlands adjacent to the waters listed here</b></p> <p><b>Special aquatics sites</b></p> <ul style="list-style-type: none"><li>Sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, riffle and pool complexes</li></ul>
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## Definitions

40

- Navigable waters
  - Waters subject to the ebb and flow of the tide
  - Has a connection to transportation of interstate commerce
- Interstate commerce
  - Defined as had been used, being used presently, or potential to be used for interstate commerce



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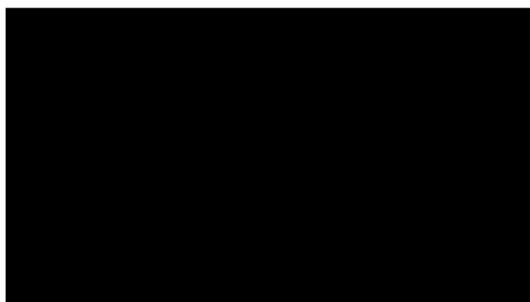
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## Jurisdictional Determinations

41



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## Jurisdictional Determinations

42

- Identifies the location and type of waters of the US on your property or project site



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### Jurisdictional Determinations

43

Three types of Jurisdictional Determinations

The diagram consists of three overlapping circles. The leftmost circle is orange and labeled 'Preliminary'. The middle circle is green and labeled 'Expanded Preliminary'. The rightmost circle is blue and labeled 'Approved JD'. The circles overlap in pairs and in the center.

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### Jurisdictional Determinations

44

- Preliminary JD
  - Used for initial planning purposes and pre-application meeting
- Expanded Preliminary JD
  - Used for initial planning purposes and pre-application meetings.
- Approved JD
  - An approved JD must include:
    - All of the same information as the expanded preliminary JD
    - A significant nexus evaluation

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### Jurisdictional Determinations

45

<ul style="list-style-type: none"><li>Preliminary<ul style="list-style-type: none"><li>Valid for a specific project</li><li>Only applicable to Waters of the U.S.</li><li>Not appealable</li><li>Coordination with other agencies is not required</li></ul></li></ul>	<ul style="list-style-type: none"><li>Approved<ul style="list-style-type: none"><li>Valid for 5 years</li><li>Applicable to Waters of the U.S. &amp; non-waters of the U.S.</li><li>Appealable</li><li>In some circumstances, coordination with the EPA and USACE is required</li></ul></li></ul>
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### JD Line

46




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### Section 10 Rivers & Harbors Act

47

- Purpose
  - ▣ To protect and preserve the navigability of navigable waters
- Requires that you obtain a permit from the USACE Regulatory Branch for:
  - ▣ Any structure or work in, over or under a navigable water of the U.S.
- The list of Section 10 waters in Georgia is maintained by the USACE

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### Section 10 Regulated Activities

48

- |               |                             |
|---------------|-----------------------------|
| □ Buoys       | □ Piers                     |
| □ Floats      | □ Piling                    |
| □ Marinas     | □ Boatlifts                 |
| □ Bulkheads   | □ Boat ramps                |
| □ Breakwaters | □ Marine railways           |
| □ Dredging    | □ Disposal dredged material |
| □ Fill        |                             |

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## Section 404 Clean Water Act

49

- Objective
  - To restore and maintain the chemical, physical, and biological integrity of the waters of the U.S.
- Establishes a program to regulates the discharge of dredged or fill material into waters of the U.S., including wetlands
- A permit must be obtained before any dredged or fill material may be discharged into waters of the U.S.

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## Discharge of Fill Material

50

- Material that has the effect of:
  - Replacing any portion of a water of the U.S. with dry land
  - Changing the bottom elevation of any portion of a water of the U.S.
- Fill Material includes:
  - Rock
  - Sand
  - Soil
  - Clay
  - Plastics
  - Construction debris
  - Wood chips
  - Overburden from excavation



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## Discharge of Dredged Material

51

- Mechanized land clearing
- Grading
- Excavation with associated discharge



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## 404 Regulated Activities

52

- Placement of fill material
- Ditching activities when the excavated material is cast aside
- Levee and dike construction
- Mechanized land clearing
- Land leveling
- Most road construction
- Dam construction
- Slab-on-grade foundations
- Grading and Landscaping
- Certain pile-supported structures

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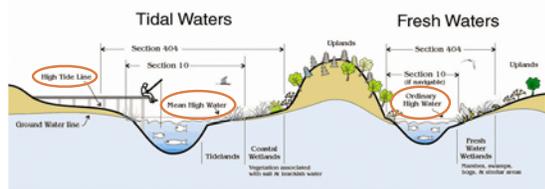
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## USACE Jurisdiction

53

### CORPS OF ENGINEERS REGULATORY JURISDICTION



- |  |  |   |
|--|--|---|
| <p><b>Section 103</b><br/>Ocean Disposal of Dredged Material</p> <p>Typical examples of regulated activities</p> <p>Ocean discharges of dredged material</p> | <p><b>Section 404</b><br/>Discharge of Dredged or Fill Material (all waters of the U.S.)</p> <p>All filling activities, utility lines, canal structures, road crossings, beach replenishment, ditches, jetties, some excavation activities, etc.</p> | <p><b>Section 10</b><br/>All Structures and Work (navigable waters)</p> <p>Dredging, mooring, dams, wharves, levees, locks / culvert pipes, piers, bulkheads, weirs, fills, overhead transmission lines, etc.</p> |
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## Definitions

54

- High Tide Line (Section 404)
  - Shoreward limit of jurisdiction for all tidal waters
  - Intersection of land and water at the maximum height reached by a rising tide
- Mean High Water (Section 10)
  - Shoreward limit of jurisdiction for all tidal waters
  - Line on the shore reached by the plane of the average high water
- Ordinary High Water Mark
  - Shoreward limit of jurisdiction for all non-tidal waters
  - Line on the shore established by the normal fluctuations in the water level

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## Wetland

55

### □ Definition

- Those areas inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support a prevalence of vegetation adapted for life in saturated soil conditions
- Wetlands generally include marshes, swamps, bogs, and similar areas; also includes special aquatic sites such as riffle and pool complexes and submerged vegetation

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## Important Wetland Functions

56

- Food chain production
- Habitat, spawning sites, rearing and resting sites for both land and aquatic species
- Protection from wave action and erosion
- Storage area for storm and flood waters
- Natural recharge areas
- Provide natural water filtration and purification

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## Wetland

57



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### How are wetlands determined?

58

- Vegetation Indicators – Hydrophytic Vegetation
  - ▣ Cattails, bulrushes, cordgrass, sphagnum moss, arrowheads, willows, mangroves, sedges, rushes, and water plantains
  - ▣ Also includes tree that have a shallow root systems, swollen trunks (i.e. bald cypress & tupelo gum) or roots found growing from the plant stem or trunk above the soil surface

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### Hydrophytic Vegetation

59



Arrowheads



Sphagnum Moss



Cattails



Bald Cypress

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### How are wetlands determined?

60

- Soil Indicators – Hydric soils
  - ▣ Soils that were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season
  - ▣ Characteristics include:
    - Consists predominantly of decomposed plant material
    - Thick layer of decomposing plant material on surface
    - Bluish-gray or gray color below the surface
    - Rotten egg odor
    - Sandy soil with dark stains or dark streaks in the upper layer below the surface

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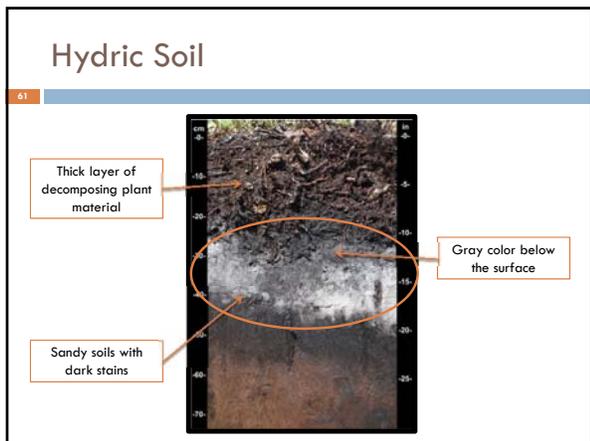
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- ### How are wetlands determined?
- 62
- Hydrology Indicators
    - ▣ The presence of water at or above the soil surface for a sufficient period of the year to significantly influence the plant types and soils in the area
    - ▣ Evidence of soil saturation
      - Standing or flowing water is observed during the growing season
      - Soil is waterlogged during the growing season
      - Water marks present on trees
      - Small piles of debris oriented in the direction of flow
      - Thin layer of sediment that has been deposited on leaves

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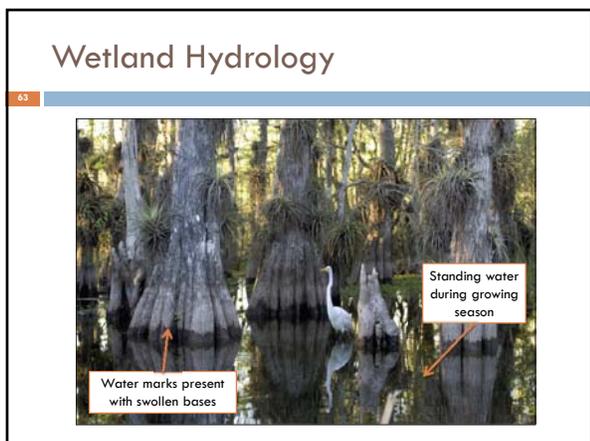
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## Summary

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- Make no assumption when it comes to working near “State waters” or “Waters of the U.S.”
- Plan Ahead
  - ▣ Most buffer variances and permits take 3-4 months to be issued
- Buffer variances are issued by the GA EPD
- Permits for working within the flow of the water are issued by the USACE
- Contact information for each Regulatory agency can be found in the “Resource Information” section

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## Questions?

GSWCC  
Urban Program  
P.O. Box 8024  
Athens, GA 30603  
(706) 552-4474



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Insert Yellow Sheet

Back of Yellow Sheet

**RULES  
OF  
GEORGIA DEPARTMENT OF NATURAL RESOURCES  
ENVIRONMENTAL PROTECTION DIVISION**

**CHAPTER 391-3-7  
EROSION AND SEDIMENTATION CONTROL**

**TABLE OF CONTENTS**

391-3-7-.01 Definitions  
391-3-7-.02 Repealed  
391-3-7-.03 Repealed  
391-3-7-.04 Repealed  
391-3-7-.05 Buffer Variance Procedures and Criteria  
391-3-7-.06 Turbidity Limits for Stormwater Runoff Discharges  
391-3-7-.07 Inspection and Compliance  
391-3-7-.08 Enforcement  
391-3-7-.09 Local Issuing Authorities  
391-3-7-.10 Site Visit Required  
391-3-7-.11 Coastal Marshlands Buffer Variance Procedures and  
Criteria.

**391-3-7-.01 Definitions**

The following definitions shall apply in the interpretation and enforcement of these rules and regulations unless otherwise specifically stated.

(a) “Best Management Practices” means a collection of structural measures and vegetative practices which, when properly designed, installed and maintained, will provide effective erosion and sedimentation control and are designed in accordance with the design specifications contained in the “Manual for Erosion and Sediment Control in Georgia.” Best Management Practices also include, but are not limited to, design specifications from the most recent publications of the Georgia Stormwater Management Manual and Coastal Stormwater Supplement to the Georgia Stormwater Management Manual.

(b) “Certification” means an action by the Division that states in writing that a local issuing authority has met the criteria established in these rules and regulations.

(c) “Certified Personnel” means any person who meets or exceeds the education and training requirements of Code Section 12-7-19.

(d) “Coastal Marshlands” shall have the same meaning as in Code Section 12-5-282.

(e) “Complaint Investigation Process” means a process followed by a local issuing authority or the Division when dealing with inquiries, complaints or concerns about land disturbing activities.

(f) “Decertification” means an action by the Division that states in writing that a local issuing authority has failed to meet the criteria established in these rules and regulations.

(g) “Department” means the Department of Natural Resources of the State of Georgia.

(h) “Director” means the Director of the Environmental Protection Division.

(i) “District” means the appropriate local Soil and Water Conservation District.

(j) “Division” means the Environmental Protection Division of the Department of Natural Resources.

(k) “Erosion” means the process by which land surface is worn away by the action of wind, water, ice, or gravity.

(l) “Erosion, Sedimentation and Pollution Control Plan” or “Plan” means a plan for the control of soil erosion and sediment resulting from a land disturbing activity.

(m) “Infrastructure Project” means construction activities that are not part of a common development that include the construction, installation and maintenance of roadway and railway projects and conduits, pipes, pipelines, substations, cables, wires, trenches, vaults, manholes, and similar or related structures or devices for the conveyance of natural gas (or other types of gas), liquid petroleum products, electricity, telecommunications (telephone, data television, etc.), water or sewage.

(n) “Land Disturbing Activity” means any activity which may result in soil erosion and the movement of sediments into State waters or onto lands within the State, including but not limited to clearing, dredging, grading, excavating, transporting, and filling of land, but not including those practices to the extent described in O.C.G.A. 12-7-17.

(o) “Local Issuing Authority” means the governing authority of any county or municipality that is certified pursuant to these rules and regulations and O.C.G.A. 12- 7-8(a).

(p) “Maintenance” means actions necessary or appropriate for retaining or restoring a currently serviceable improvement to the specified operable condition to achieve its maximum useful life. Maintenance includes emergency reconstruction of recently damaged parts of a currently serviceable structure so long as it occurs within a reasonable period of time after damage occurs. Maintenance does not include any modification that changes the character, scope or size of the original design.

(q) “Major Buffer Impact” means any impact that does not meet the definition of “Minor Buffer Impact.”

(r) “Minor Buffer Impact” means an impact that upon completion yields no additional above ground, man-made materials or structures within the buffer, maintains the original grade, and results in less than 5,000 square feet of buffer impacts per stream crossing and/or less than 5,000 square feet of buffer impacts per individual area of encroachment for each project.

(s) “Permit” means the authorization necessary to conduct a land disturbing activity under the provisions of these rules and regulations.

(t) “Person” means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, State agency, municipality or other political subdivision or the State, any interstate body or any other legal entity.

(u) “Project” means the entire area of the proposed development site, regardless of the size of the area to be disturbed.

(v) "Sediment" means solid material, both organic and inorganic, that is in suspension, is being transported, or has been moved from its site of origin by wind, water, ice, or gravity as a product of erosion.

(w) "Sedimentation" means the action or process of forming or depositing sediment.

(x) "Serviceable" means usable in its current state or with minor maintenance but not so degraded as to essentially require reconstruction.

(y) "Soil and Water Conservation District Approved Plan" means an erosion, sedimentation and pollution control plan approved in writing by the Soil and Water Conservation District in which the proposed land disturbing activity will take place.

(z) "Stabilization" means the process of establishing an enduring soil cover of vegetation and/or mulch or other ground cover and/or installing temporary or permanent structures for the purpose of reducing to a minimum the erosion process and the resultant transport of sediment by wind, water, ice or gravity.

(aa) "State Waters" means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface or subsurface water, natural and artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation, except as may be defined in O.C.G.A. 12-7-17(7).

(bb) "Stream Bank" means the confining cut of a stream channel and is usually identified as the point where the normal stream flow has wrested the vegetation. For nontrout waters, the normal stream flow is any stream flow that consists solely of base flow or consists

of both base flow and direct runoff during any period of the year. Base flow results from groundwater that enters the stream channel through the soil. This includes spring flows into streams. Direct runoff is the water entering stream channels promptly after rainfalls or snow melts.

(cc) “Trout Streams” means all streams or portions of streams within the watershed as designated by the Division under the provisions of the Georgia Water Quality Control Act, O.C.G.A. 12-5-20 et seq. Streams designated as primary trout waters are defined as water supporting a self-sustaining population of rainbow, brown or brook trout. Streams designated as secondary trout waters are those in which there is no evidence of natural trout reproduction, but are capable of supporting trout throughout the year. First order trout waters are streams into which no other streams flow except springs.

(dd) “Watercourse” means any natural or artificial waterway, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, gully, ravine, or wash in which water flows either continuously or intermittently, having a definite channel, bed and bank, and includes any area adjacent thereto which is subject to inundation by reason of overflow or floodwater.

(ee) “Water Quality” means the chemical, physical, and biological characteristics of the State’s water resources.

Authority: O.C.G.A. Secs. 12-7-1 et seq.

#### **391-3-7-.05 Buffer Variance Procedures and Criteria**

(1) Buffers on state waters are valuable in protecting and conserving land and water resources; therefore, buffers should be protected. The buffer variance process will apply to all projects legally eligible for variances and to all state waters having vegetation wrested from the channel by normal stream flow,

provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. Rule 391-3-7-.05 does not apply to coastal marshlands. The following activities do not require application to or approval from the Division:

(a) stream crossings for water lines or stream crossing for sewer lines that occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer; or

(b) where drainage structures must be constructed within the twenty-five (25) foot buffer area of any state water not classified as a trout stream; or

(c) where roadway drainage structures must be constructed within the twenty-five (25) foot buffer area of any state waters or the fifty (50) foot buffer of any trout stream; or

(d) construction of bulkheads or sea walls on Lake Oconee and Lake Sinclair where required to prevent erosion at the shoreline; or

(e) construction of public water system reservoirs.

(2) Variance applications will be reviewed by the Director only where the applicant provides reasonable evidence that impacts to the buffer have been avoided or minimized to the fullest extent practicable and only in the following cases:

(a) The project involves the construction or repair of an existing infrastructure project or a structure that, by its nature, must be located within the buffer. Such structures include, but are not limited to, dams, public water supply intake structures, detention/retention ponds, waste water discharges, docks including access ways, boat launches including access ways, and stabilization of areas of public access to water; or

- (b) The project will result in the restoration or enhancement to improve water quality and/or aquatic habitat quality; or
- (c) Buffer intrusion is necessary to provide reasonable access to a property or properties; or
- (d) The intrusion is for water and sewer lines that cannot reasonably be placed outside the buffer, and stream crossings and vegetative disturbance are minimized; or
- (e) Crossing for utility lines, including but not limited to gas, liquid, power, telephone, and other pipelines, provided that the number of crossings and the amount of vegetative disturbance are minimized; or
- (f) Recreational foot trails and viewing areas, providing that impacts to the buffer are minimal; or
- (g) The project involves construction of one (1) single family home for residential use by the owner of the subject property and, at the time of adoption of this rule, there is no opportunity to develop the home under any reasonable design configuration unless a buffer variance is granted. Variances will be considered for such single family homes only if construction is initiated or local government approval is obtained prior to January 10, 2005; or
- (h) For non-trout waters, the proposed land disturbing activity within the buffer will require a permit from the United States Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. Section 1344, and the Corps of Engineers has approved a mitigation plan to be implemented as a condition of such a permit; or
- (i) For non-trout waters, a plan is provided for buffer intrusion that shows that, even with the proposed land disturbing activity within

the buffer, the completed project will result in maintained or improved water quality downstream of the project; or

(j) For non-trout waters, the project with a proposed land disturbing activity within the buffer is located in, or upstream and within ten linear miles of, a stream segment listed as impaired under Section 303(d) of the federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. Section 1313(d) and a plan is provided that shows that the completed project will result in maintained or improved water quality in such listed stream segment and that the project has no adverse impact relative to the pollutants of concern in such stream segment; or

(k) The proposed land disturbing activity within the buffer is not eligible for a permit from the United States Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. Section 1344, but includes required mitigation in accordance with current EPD “Stream Buffer Variance Mitigation Guidance” document, and involves:

1. piping, filling, or re-routing of non-trout waters that are not jurisdictional Waters of the U.S.; or
  2. stream buffer impacts due to new infrastructure projects adjacent to state waters (jurisdictional and non-jurisdictional Waters of the U.S.). This criterion shall not apply to maintenance and/or modification to existing infrastructure, which are covered under 391-3-7.05(2)(a).
- (3) If the buffer impact will be minor, the buffer variance request shall include the following information at a minimum:
- (a) Site map that includes locations of all state waters, wetlands, floodplain boundaries and other natural features, as determined by field survey.

- (b) Description of the shape, size, topography, slope, soils, vegetation and other physical characteristics of the property.
- (c) Dated and numbered detailed site plan that shows the locations of all structures, impervious surfaces, and the boundaries of the area of soil disturbance, both inside and outside of the buffer. The exact area of the buffer to be impacted shall be accurately and clearly indicated.
- (d) Description of the project, with details of the buffer disturbance, including estimated length of time for the disturbance and justification for why the disturbance is necessary.
- (e) Calculation of the total area and length of the buffer disturbance.
- (f) Letter from the issuing authority (if other than the Division and as applicable) stating that the issuing authority has visited the site and determined the presence of state waters that require a buffer and that a stream buffer variance is required as per the local erosion and sedimentation control ordinance.
- (g) Erosion, sedimentation and pollution control plan.
- (h) Re-vegetation plan as described in the most recent publication of the Division's guidance book, "Streambank and Shoreline Stabilization" and/or a plan for permanent vegetation as per the "Manual for Erosion and Sedimentation Control in Georgia."
- (i) For projects within the buffer of or upstream and within one linear mile of impaired stream segments on Georgia's "305(b)/303(d) List Documents (Final)," documentation that the project will have no adverse impacts relative to the pollutants of concern and if applicable, documentation that the project will be in compliance with the TMDL Implementation Plan(s).

(j) Any other reasonable information related to the project that the Division deems necessary to effectively evaluate the variance request.

(k) Applications must be on the most current forms provided by the Division.

(4) If the buffer impact will be major, the buffer variance request shall include all of the information in Sections (3)(a) thru (k) above, with the exception of (3)(h). A buffer variance request for major buffer impacts shall also include the following additional information:

(a) For variance requests made under Section (2)(h):

1. Joint Public Notice (JPN), if it is an individual permit;
2. Pre-Construction Notification (PCN), if it is a Nationwide Permit;
3. Mitigation calculations; and
4. Permit approval from the United States Army Corps of Engineers.

(b) Buffer mitigation plan addressing impacts to critical buffer functions, including water quality and floodplain, watershed and ecological functions based on an evaluation of existing buffer conditions and predicted post construction buffer conditions pursuant to Section (7)(c) herein.

(c) Plan for stormwater control once site stabilization is achieved, when required by a local stormwater ordinance.

(d) For variance requests made under Sections (2)(i) and (2)(j), the application shall include the following water quality information:

1. Documentation that post-development stormwater management systems to conform to the minimum standards for water quality, channel protection, overbank flood protection and extreme flood protection as established in the Georgia Stormwater Management Manual or the equivalent and if applicable, the Coastal Stormwater Supplement to the Georgia Stormwater Management Manual.

2. Documentation that existing water quality will be maintained or improved based on predicted pollutant loading under pre- and post-development conditions as estimated by models accepted by the Division.

(e) For variance requests made under Section (2)(j), if the proposed project is in, or upstream and within ten linear miles of impaired stream segments on Georgia's "305(b)/303(d) List Documents (Final)," documentation that the project will have no adverse impacts relative to the pollutants of concern and if applicable, documentation that the project will be in compliance with the TMDL Implementation Plan(s).

(f) For variance requests made under Section (2)(k)1., the application shall include documentation from the United States Army Corps of Engineers verifying the water bodies identified in the application are non-jurisdictional waters of the United States under Section 404 of the Clean Water Act.

(5) Upon receipt of a completed application in accordance with Sections 391-3-7-.05(3) or 391-3-7-.05(4), the Division shall consider the completed application and the following factors in determining whether to issue a variance:

(a) Locations of state waters, wetlands, floodplain boundaries and other natural features as determined by field surveys.

(b) Shape, size, topography, slope, soils, vegetation and other physical characteristics of the property.

(c) Location and extent of buffer intrusion.

(d) Whether reasonable alternative project designs, such as the use of retaining walls, are possible which do not require buffer intrusion or which require less buffer intrusion.

(e) Whether issuance of the variance, with the required mitigation plan, re-vegetation plan and/or plan for permanent vegetation, is at least as protective of natural resources and the environment (including wildlife habitat).

(f) The current condition of the existing buffer, to be determined by:

1. The extent to which existing buffer vegetation is disturbed;
2. The hydrologic function of the buffer; and
3. Stream characteristics such as bank vegetative cover, bank stability, prior channel alteration or sediment deposition.

(g) The extent to which the encroachment into the buffer may reasonably impair buffer functions.

(h) The value of mitigation activities conducted pursuant to this rule, particularly Subsections 391-3-7-.05(7)(c) and 391-3-7-.05(7)(d) herein, and shall take regional differences into consideration on-site or downstream, to be determined by development techniques or other measures that will contribute to the maintenance or improvement of water quality, including the use of low impact designs and integrated best management practices, and reduction in effective impervious surface area.

(i) The long-term water quality impacts of the proposed variance, as well as the construction impacts. And for applications made

under Subsections 391-3- 7.05(2)(i) and 391-3-7-.05(2)(j), the following criteria, which reflect regional differences in the state, shall be used by the Director to assist in determining whether the project seeking a variance will, when completed and with approved mitigation, result in maintained or improved water quality downstream of the project and minimal net impact to the buffer:

1. Division will assume that the existing water quality conditions are commensurate with an undeveloped forested watershed unless the applicant provides documentation to the contrary. If the applicant chooses to provide baseline documentation, site and/or stream reach specific water quality, habitat, and/or biological data would be needed to document existing conditions. If additional data are needed to document existing conditions, the applicant may need to submit a monitoring plan and have it approved by the Division prior to collecting any monitoring data. Existing local data may be used, if available and of acceptable quality to the Division.

2. The results of the predicted pollutant loading under pre- and post-development conditions as estimated by models accepted by the Division indicate that existing water quality conditions will be maintained or improved.

(j) For applications made under Section 391-3-7-.05(2)(j), for which a land disturbing activity is proposed within the buffer of a 303(d) listed stream, or upstream and within 10 linear miles of a 303(d) listed stream, the results of the model demonstrate that the project has no adverse impact relative to the pollutants of concern in such stream segment.

(6) Within 60 days of receipt of a complete buffer variance application, the Division will either provide written comments to the applicant or propose to issue a variance. When the Division proposes to issue a variance, it will issue a public notice. The public notice shall describe the proposed buffer encroachment, the

location of the project, where the public can review site plans, and where comments should be sent. The public shall have 30 days from the date of publication of the public notice to comment on the proposed buffer variance.

(7) In all cases in which a buffer variance is issued, the following conditions shall apply:

(a) The variance shall be the minimum reduction in buffer width necessary to provide relief. Streams shall not be piped if a buffer width reduction is sufficient to provide relief.

(b) Disturbance of existing buffer vegetation shall be minimized.

(c) Mitigation is required for all major buffer impacts and shall offset the buffer encroachment and any loss of buffer functions. Where lost functions cannot be replaced, mitigation shall provide other buffer functions that are beneficial. Buffer functions include, but are not limited to:

1. temperature control (shading);
2. streambank stabilization;
3. trapping of sediments, if any;
4. removal of nutrients, heavy metals, pesticides and other pollutants;
5. aquatic habitat and food chain;
6. terrestrial habitat, food chain and migration corridor; and
7. buffering of flood flows.

(d) Mitigation should be on-site when possible. Depending on site conditions, acceptable forms of mitigation may include but are not limited to:

1. Restoration of the buffer to a naturally vegetated state to the extent practicable, or to current existing conditions;
2. Bioengineering of channels to reduce bank erosion and improve habitat;
3. Creation or restoration of wetlands;
4. Stormwater management systems to better maintain the pre-development flow regime (with consideration given to downstream effects) that exceeds the requirements of applicable ordinances at the time of application;
5. Reduction in pollution sources, such as on-site water quality treatment or improving the level of treatment of septic systems;
6. Other forms of mitigation that protect or improve water quality and/or aquatic wildlife habitat;
7. An increase in buffer width elsewhere on the property;
8. Mitigation as required under a Clean Water Act Section 404 or Nationwide permit issued by the U.S. Army Corps of Engineers;
9. Stormwater management systems described in the most recent publication of the Georgia Stormwater Management Manual and the Coastal Stormwater Supplement to the Georgia Stormwater Management Manual;
10. Mitigation as described in the most recent publication of the Division's guidance document, Stream Buffer Mitigation Guidance.

(e) Forms of mitigation that are *not* acceptable include:

1. Activities that are already required by the Georgia Erosion and Sedimentation Act, such as the minimal use of best management practices;

2. Activities that are already required by other federal, state and local laws, except as described in 391-3-7.05(7)(d) above. U.S. Army Corps of Engineers mitigation is acceptable.

(f) The Division will not place a condition on a variance that requires a landowner to deed property or the development rights of property to the state or to any other entity. The landowner may voluntarily preserve property or the development rights of property as a mitigation option with the agreement of the Division.

(8) If the approved buffer impacts are not completed within five years of the date issued, buffer variances issued on or after the effective date of this rule will become null and void.

The applicant may request a buffer variance time extension only if the approved buffer impacts will not be completed prior to the buffer variance expiration date. The buffer variance time extension, if granted, can be for a period of up to five years. If the applicant can demonstrate that a time extension for a period of greater than five years is reasonable, the Director may grant a buffer variance time extension for a reasonable period of greater than five years. A buffer variance time extension may be issued only once.

The buffer variance time extension must be requested in writing at least 90 calendar days prior to the buffer variance expiration date with justifiable cause demonstrated. Once an approved buffer variance expires, it is no longer eligible for a time extension.

Time extension requests will be reviewed by the Division. The Division will either provide written comments to the applicant or propose to issue a buffer variance time extension within 60 days of receipt of a time extension request. If there are any other changes to the original buffer variance application, the Division shall issue a public notice in accordance with Section 391-3-7-.05(6).

If a variance issued by the Director is acceptable to the issuing authority, the variance shall be included as a condition of permitting and therefore becomes a part of the permit for the proposed land disturbing activity project. If a stream buffer variance is not acceptable to the issuing authority, the issuing authority may issue a land disturbing permit without allowing encroachment into the buffer.

(9) A general variance is provided for piping of trout streams with an average annual flow of 25 gpm or less.

(10) To obtain this general variance in Section 391-3-7.05(9) for encroaching on the buffer of a trout stream, the applicant must submit information to the issuing authority or EPD if there is no issuing authority demonstrating that the average annual flow in the stream is 25 gpm or less. There are two acceptable methods for making this determination.

(a) The USGS unit area runoff map may be used to determine the threshold acreage that will produce an average annual flow of 25 gpm or less.

(b) The applicant may submit a hydrologic analysis certified by a Registered Professional Engineer or Geologist that presents information sufficient to estimate that the average annual flow of each stream to be piped is 25 gpm or less with a high level of certainty.

(11) Any stream piping performed in accordance with this general variance in Section 391-3- 7.05(9) shall be subject to the following terms:

(a) The total length of stream that is piped in any one property shall not exceed 200 feet.

(b) Any project that involves more than 200 ft of piping will require an individual variance for the entire project. The general variance may not be applied to a portion of a project; e.g., it is not permissible to pipe 200 ft of a stream under the general variance and seek an individual variance for an additional length of pipe.

(c) The downstream end of the pipe shall terminate at least 25 ft before the property boundary.

(d) The applicant for a Land Disturbing Activity Permit shall notify the appropriate issuing authority of the precise location and extent of all streams piping as part of the land disturbing activity permit application. The issuing authority (if other than the Division) shall compile this information and convey it to the Division annually.

(e) Where piping of a stream increases the velocity of stream flow at the downstream end of the pipe, appropriate controls shall be employed to reduce flow velocity to the predevelopment level. Plans for such controls must be submitted as part of the land disturbing activity permit.

Authority: O.C.G.A. Sec. 12-7-6.

**391-3-7-.11 Coastal Marshlands Buffer Variance Procedures and Criteria.**

(1) Buffers on state waters are valuable in protecting and conserving land and water resources. Therefore, there is

established a 25 foot buffer along coastal marshlands, as measured horizontally from the coastal marshland-upland interface, except:

- (a) Where the Director determines to allow a variance that is at least as protective of natural resources and the environment under the variance criteria in 391-3-7-.11(2) through (7) or under the variance by rule criteria in 391-3-7-.11(9); or
- (b) Where otherwise allowed by the Director pursuant to O.C.G.A. §12-2-8; or
- (c) Where an alteration within the buffer area has been authorized pursuant to O.C.G.A. §12-5-286; or
- (d) For maintenance of any currently serviceable structure, landscaping, or hardscaping, including bridges, roads, parking lots, golf courses, golf cart paths, retaining walls, bulkheads, and patios; provided, however, that if such maintenance requires any land-disturbing activity, adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented; or
- (e) Where a drainage structure or roadway drainage structure is constructed or maintained; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented; or
- (f) On the landward side of any currently serviceable shoreline stabilization structure; or
- (g) For the maintenance of any manmade storm-water detention basin, golf course pond, or impoundment that is located entirely within the property of a single individual, partnership, or corporation; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented; or

(h) Crossings for utility lines that cause a width of disturbance of not more than 50 feet within the buffer; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented; or

(i) Any land-disturbing activity conducted pursuant to and in compliance with a valid and effective land-disturbing permit issued subsequent to April 22, 2014, and prior to December 31, 2015; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented; or

(j) Any lot for which the preliminary plat has been approved prior to December 31, 2015 if roadways, bridges, or water and sewer lines have been extended to such lot prior to the effective date of this Act and if the requirement to maintain a 25 foot buffer would consume at least 18 percent of the high ground of the platted lot otherwise available for development; provided, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented.

(2) The buffer variance process will apply to all projects legally eligible for variances, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. Variance applications will be reviewed by the Director only in the following cases:

(a) The project involves the construction or repair of an existing infrastructure project or a structure that, by its nature, must be located within the buffer. Such structures include, but are not limited to, dams, public water supply intake structures, detention/retention ponds, waste water discharges, docks including access ways, boat launches including access ways and stabilization of areas of public access to water; or

- (b) The project will result in the restoration or enhancement to improve water quality and/or aquatic habitat quality; or
- (c) Buffer intrusion is necessary to provide reasonable access to a property or properties; or
- (d) The intrusion is for utility lines within or adjacent to existing utility or transportation right of ways or that cannot reasonably be placed outside the buffer, and crossings and vegetative disturbance are minimized; or
- (e) Crossing for utility lines, including but not limited to gas, liquid, power, telephone, and other pipelines, provided that the number of crossings and the amount of vegetative disturbance are minimized; or
- (f) Recreational foot trails and viewing areas, providing that impacts to the buffer are minimal; or
- (g) The project involves construction of one (1) single family home for residential use by the owner of the subject property and, at the time of adoption of this rule, there is no opportunity to develop the home under any reasonable design configuration unless a buffer variance is granted. Variances will be considered for such single family homes only if construction is initiated or local government approval is obtained prior to January 10, 2005; or
- (h) The proposed land disturbing activity within the buffer will require a permit from the United States Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. Section 1344, and the Corps of Engineers has approved a mitigation plan to be implemented as a condition of such a permit; or

(i) A plan is provided for buffer intrusion that shows that, even with the proposed land disturbing activity within the buffer, the completed project will result in maintained or improved water quality; or

(j) The proposed land disturbing activity includes an alteration within the buffer that has been authorized pursuant to a permit issued by the United States Army Corps of Engineers under Section 404 of the Federal Water Pollution Control Act of 1972, as amended, or Section 10 of the Rivers and Harbors Act of 1899; or

(k) The proposed land disturbing activity within the buffer is not eligible for a permit from the United States Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act Amendment of 1972, 33 U.S.C. Section 1344, and involves:

1. Piping, filling, or re-routing of waters that are not jurisdictional Waters of the U.S.; or

2. Buffer impacts due to new infrastructure projects adjacent to state waters (jurisdictional and non-jurisdictional Waters of the U.S.). This criterion shall not apply to maintenance and/or modification to existing infrastructure.

(3) Except as provided in 391-3-7-.11(9), if the buffer impact will be minor, the buffer variance request shall include the following information at a minimum:

(a) Site map that includes locations of all state waters, wetlands, floodplain boundaries and other natural features, as determined by field survey.

(b) Description of the shape, size, topography, slope, soils, vegetation and other physical characteristics of the property.

(c) Dated and numbered detailed site plan that shows the locations of all structures, impervious surfaces, and the boundaries of the area of soil disturbance, both inside and outside of the buffer. The exact area of the buffer to be impacted shall be accurately and clearly indicated.

(d) Description of the project, with details of the buffer disturbance, including estimated length of time for the disturbance and justification for why the disturbance is necessary.

(e) Calculation of the total area and length of the buffer disturbance.

(f) Letter from the issuing authority (if other than the Division and as applicable) stating that the issuing authority has visited the site and determined the presence of coastal marshlands that require a buffer and that a buffer variance is required.

(g) Erosion, sedimentation and pollution control plan.

(h) Re-vegetation plan as described in the most recent publication of the Division's guidance book, "Streambank and Shoreline Stabilization", or the "Hydromodification Best Management Practice Manual for Coastal Georgia," and/or a plan for permanent vegetation as per the "Manual for Erosion and Sedimentation Control in Georgia."

(i) For projects within the buffer of or upstream and within one linear mile of an impaired water body on Georgia's "305(b)/303(d) List Documents (Final)," documentation that the project will have no adverse impacts relative to the pollutants of concern and if applicable, documentation that the project will be in compliance with the TMDL Implementation Plan(s).

(j) Applications must be on the most current forms provided by the Division.

(4) If the buffer impact will be major, the buffer variance request shall include all of the information in 391-3-7-.11(3)(a) through (j) above, with the exception of 391-3-7-.11(3)(h). A buffer variance request for major buffer impacts shall also include the following additional information:

(a) For variance requests made under 391-3-7-.11(2)(h) or (j):

1. Joint Public Notice (JPN), if it is an individual permit;
2. Pre-Construction Notification (PCN), if it is a Nationwide Permit;
3. Mitigation calculations; and
4. Permit approval from the United States Army Corps of Engineers.

(b) Buffer mitigation plan addressing impacts to critical buffer functions, including water quality and floodplain, watershed and ecological functions based on an evaluation of existing buffer conditions and predicted post construction buffer conditions pursuant to 391-3-7-.11(7)(c) herein.

(c) Plan for stormwater control once site stabilization is achieved, when required by a local stormwater ordinance.

(d) For variance requests made under 391-3-7-.11(2)(i), the application shall include the following water quality information:

1. Documentation that post-development stormwater management systems to conform to the minimum standards for water quality, channel protection, overbank flood protection and extreme flood protection as established in the Georgia Stormwater Management Manual or the equivalent and if applicable, the Coastal Stormwater Supplement to the Georgia Stormwater Management Manual.

2. Documentation that existing water quality will be maintained or improved based on predicted pollutant loading under pre- and post-development conditions as estimated by models accepted by the Division.

(e) For variance requests made under 391-3-7-.11(2)(k)1., the application shall include documentation from the United States Army Corps of Engineers verifying the water bodies identified in the application are non-jurisdictional waters of the United States under Section 404 of the Clean Water Act.

(5) Upon receipt of a complete application, the Division shall consider the complete application and the following factors in determining whether to issue a variance:

(a) Locations of state waters, wetlands, coastal marshlands, floodplain boundaries and other natural features as determined by field surveys.

(b) Shape, size, topography, slope, soils, vegetation and other physical characteristics of the property.

(c) Location and extent of buffer intrusion.

(d) Whether reasonable alternative project designs, such as the use of retaining walls are possible which do not require buffer intrusion or which require less buffer intrusion.

(e) Whether issuance of the variance, with the required mitigation plan, re-vegetation plan and/or plan for permanent vegetation, is at least as protective of natural resources and the environment.

(f) The current condition of the existing buffer, to be determined by:

1. The extent to which existing buffer vegetation is disturbed;

2. The hydrologic function of the buffer; and

3. Hydrologic functional characteristics such as bank vegetative cover, bank stability, or prior channel alteration.

(g) The extent to which the encroachment into the buffer may reasonably impair buffer functions.

(h) The value of mitigation activities conducted pursuant to this rule, particularly 391-3-7-.11(7)(c) and (d) herein, development techniques or other measures that will contribute to the maintenance or improvement of water quality, including the use of low impact designs and integrated best management practices, and reduction in effective impervious surface area.

(i) The long-term water quality impacts of the proposed variance, as well as the construction impacts. And for applications made under 391-3-7-.11(2)(i), the following criteria shall be used by the Director to assist in determining whether the project seeking a variance will, when completed and with approved mitigation, result in maintained or improved water quality downstream of the project and minimal net impact to the buffer:

1. The Division will assume that the existing water quality conditions are commensurate with an undeveloped maritime forested watershed unless the applicant provides documentation to the contrary. If the applicant chooses to provide baseline documentation, site specific water quality, habitat, and /or biological data would be needed to document existing conditions. If additional data are needed to document existing conditions, the applicant may need to submit a monitoring plan and have it approved by the Division prior to collecting any monitoring data. Existing local data may be used, if available and of acceptable quality to the Division.

2. The results of the predicted pollutant loading under pre- and post-development conditions as estimated by models accepted by the Division indicate that existing water quality conditions will be maintained or improved.

(j) For applications made under 391-3-7-.11(2)(i), for which a land disturbing activity is proposed within the buffer of a 303(d) listed water body, or upstream and within one linear mile of a 303(d) listed water body, the results of the model demonstrate that the project has no adverse impact relative to the pollutants of concern.

(6) Within 60 days of receipt of a complete buffer variance application, the Division will either provide written comments to the applicant or propose to issue a variance. When the Division proposes to issue a variance, it will issue a public notice. The public notice shall describe the proposed buffer encroachment, the location of the project, where the public can review site plans, and where comments should be sent. The public shall have 30 days from the date of publication of the public notice to comment on the proposed buffer variance.

(7) In all cases in which a buffer variance is issued, the following conditions shall apply:

(a) The variance shall be the minimum reduction in buffer width necessary to provide relief.

(b) Disturbance of existing buffer vegetation shall be minimized.

(c) Mitigation is required for all major buffer impacts and shall offset the buffer encroachment and any loss of buffer functions. Where lost functions cannot be replaced, mitigation shall provide other buffer functions that are beneficial. Buffer functions include, but are not limited to:

1. temperature control (shading);

2. bank stabilization;
3. trapping of sediments, if any;
4. removal of nutrients, heavy metals, pesticides and other pollutants;
5. aquatic habitat and food chain;
6. terrestrial habitat, food chain and migration corridor;
7. buffering of flood flows; and
8. maintenance of salinity through buffering of freshwater flows.

(d) Mitigation should be on-site when possible. Depending on site conditions, acceptable forms of mitigation may include, but are not limited to:

1. Restoration of the buffer to a naturally vegetated state to the extent practicable, or to current existing conditions. Information on natural vegetation in Coastal Georgia is available from the University of Georgia Marine Extension Service at <http://marex.uga.edu/ecoscapes/> or <http://www.caes.uga.edu/extension/bryan/anr/documents/nativeplantlist.pdf>;
2. Bioengineering of channels to reduce bank erosion and improve habitat;
3. Creation or restoration of wetlands;
4. Stormwater management systems to better maintain the pre-development flow regime (with consideration given to downstream

effects) that exceeds the requirements of applicable ordinances at the time of application;

5. Reduction in pollution sources, such as on-site water quality treatment or improving the level of treatment of septic systems;
6. Other forms of mitigation that protect or improve water quality and/or aquatic wildlife habitat;
7. An increase in buffer width elsewhere on the property;
8. Mitigation as required under a Clean Water Act Section 404 or Nationwide permit issued by the U.S. Army Corps of Engineers; or
9. Stormwater management systems described in the most recent publication of the Georgia Stormwater Management Manual and the Coastal Stormwater Supplement to the Georgia Stormwater Management Manual.

(e) Forms of mitigation that are *not* acceptable include:

1. Activities that are already required by the Georgia Erosion and Sedimentation Act, such as the minimal use of best management practices;
2. Activities that are already required by other federal, state and local laws, except as described in 391-3-7-.11(7)(d) above. U.S. Army Corps of Engineers mitigation is acceptable.

(f) The Division will not place a condition on a variance that requires a landowner to deed property or the development rights of property to the state or to any other entity. The landowner may voluntarily preserve property or the development rights of property as a mitigation option with the agreement of the Division.

(g) If a variance issued by the Director is acceptable to the issuing authority, the variance shall be included as a condition of permitting and therefore becomes a part of the permit for the proposed land disturbing activity project. If a buffer variance is not acceptable to the issuing authority, the issuing authority may issue a land disturbing permit without allowing encroachment into the buffer.

(8) A buffer variance will expire five years after the effective date, unless a request for an extension is submitted prior to the expiration date, with justifiable cause demonstrated.

The applicant may request a buffer variance time extension only if the approved buffer impacts will not be completed prior to the buffer variance expiration date. The buffer variance time extension, if granted, can be for a period of up to five years. If the applicant can demonstrate that a time extension for a period of greater than five years is reasonable, the Director may grant a buffer variance time extension for a reasonable period of greater than five years.

Time extension requests will be reviewed by the Division. The Division will either provide written comments to the applicant or propose to issue a buffer variance time extension within 60 days of receipt of a time extension request. If there are any significant changes to the original buffer variance application, the Division shall issue a public notice in accordance with 391-3-7-.11(6).

**(9) Variance By Rule**

(a) Notwithstanding any other provision of these Rules, the following activities have minimal impact on the water quality or aquatic habitat of the adjacent coastal marshland and therefore are deemed to have an approved buffer variance.

1. Activities where the area within the buffer is not more than 500 square feet.

2. Activities that have a “Minor Buffer Impact” as defined in 391-3-7-.01(r), provided that the total area of buffer impacts is less than 5,000 square feet. A proposed development site may not be subdivided into smaller projects or phases to circumvent the 5,000 square feet limitation.

(b) Bank and shoreline stabilization structures are not eligible for coverage under the variance by rule.

(c) Notification shall be made at least 14 days prior to the commencement of land-disturbing activities to provide the Division an opportunity to review the activity to ensure it meets the applicable criteria. Unless notified by the Division to the contrary, an applicant who submits a notification in accordance with 391-3-7-.11(9) is authorized to encroach into the buffer 14 days after the notification form is received by the Division. A buffer variance by rule expires if the buffer impacts are not completed within two years after the notification form is received by the Division. The Director may deny coverage under this variance by rule and require submittal of an application for an individual variance based on the review of the documentation submitted or other information. Persons failing to notify the Director of such activities shall be deemed to be operating without a variance.

(d) Notification for a variance by rule is to be submitted by return receipt certified mail (or similar service that provides confirmation of receipt) to both the Division and to the Local Issuing Authority in jurisdictions authorized to issue Land Disturbance Permits.

(e) An individual variance will be required for any activity that does not qualify for a variance by rule.

(f) Any notification for a variance by rule shall include the following:

1. Description of the activity, with details of the buffer disturbance, including area and length of the buffer to be impacted and estimated length of time for the disturbance.
2. Photographs of the area that will be affected by the proposed activity.
3. Notice of a land-disturbing activity to be covered by a variance by rule must be on the most current forms provided by the Division.

(g) Any variance by rule shall be subject to the following requirements:

1. The following information shall be maintained onsite until final stabilization of the site is complete:
  - i. Site plan that shows the locations of all structures, impervious surfaces, and the boundaries of the area of soil disturbance, both inside and outside of the buffer. The exact area and length of the buffer to be impacted shall be accurately and clearly indicated.
  - ii. Documentation that adequate erosion control measures are incorporated into the project plans and specifications.
2. Disturbance of existing buffer vegetation shall be minimized.
3. Final stabilization of the site must include a re-vegetation plan as described in the most recent publication of the Division's guidance book, "Streambank and Shoreline Stabilization." It is recommended that vegetation be native riparian vegetation.

4. Temporary vegetative measures must be implemented within 14 calendar days following the completion of any soil disturbance and the site shall be stabilized at the end of every day until project completion.

5. Proper and full implementation of the erosion control measures in 391-3-7-.11(9)(g)1.ii.

6. Post construction stormwater management practices should be considered. Best management practices can be found in the latest edition of the Georgia Stormwater Management Manual or the Coastal Supplement to the Georgia Stormwater Management Manual.

7. All other applicable federal, state, and local laws, rules and ordinances, including erosion and sedimentation control must be fully complied with prior to commencement of project construction.

8. For a variance by rule under 391-3-7-.11(9)(a)1., cumulative impacts shall not exceed 500 square feet within a 5 year period.

9. Any activity that does not meet the requirements of 391-3-7-.11(9)(g) is in violation of the variance by rule.

Authority: O.C.G.A. Sec. 12-7-6.

Insert Tab 4

Role of the Inspector

Back of Tab

ENFORCEMENT



ROLE OF THE INSPECTOR

 Level 1B Recertification July 2016

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Purpose of the Inspector

- The inspector is the key person in determining if the approved plan has been implemented properly
- The inspector is the person who ensures the responsible party keeps the site in compliance
- The inspector should be effective at communicating the issues present on site
- The inspector should ensure that all sites are being evaluated fairly and consistently

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Role of the Inspector

Duties that can be expected of an Inspector

1. Official Representative
2. Fact Finder
3. Provider of enforcement presence
4. Enforcement case developer
5. Technical educator
6. Technical authority

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### Characteristics of a Good Inspector

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- Inquisitive
- Determined
- Professional appearance
- Integrity and impartiality
- Avoids conflicts of interest
- Maintains standards of conduct
- Consistently applies ordinance to all individuals

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### Certified Local Issuing Authorities

5

- Per O.C.G.A. 12-7-7, one of the responsibilities of a certified LIA is to conduct inspections of all Land Disturbing Projects within its jurisdiction
- Inspectors should be visiting sites at least once a week and after every rainfall to ensure the sites remain in compliance
- All inspectors should be familiar with their Local Ordinance & the State Law

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### 6 The Site Inspection

- Do's & Don'ts
- Sequence
- What should be on site?
- Documentation

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## Before an Inspection

7

1. Review the approved ES&PC Plan
  - Check contours, critical areas, delineated state waters
2. Have a copy of the Plan with you or on site at all times
3. Bring any inspection files or forms that will be needed
4. Secure any additional equipment you may need, such as cameras, hardhats, safety vests, etc...
5. Review all phases of the approved plan to understand the scope of the construction activity

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## Equipment

8

- Field Inspection Equipment may include
  - Cameras
  - Logbook & Pen
  - Tablet
  - Tape measure
    - Crucial for checking proper installation and maintenance of BMPs
  - GPS
  - Sampling Equipment
  - Turbidity Meter



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## 1<sup>st</sup> Visit

9

1. Present your credentials and provide contact info
2. Walk the perimeter of the site
3. Start from the lowest point of the site and work your way up
4. Document any observations along the way
  - Note date, time, and weather conditions
5. Ensure that the initial sediment storage and perimeter control BMPs have been installed properly

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## The ES&PC Plan

10

- During every site inspection
  - ▣ You should ask to see the approved ES&PC Plan
  - ▣ Observe how the site has changed since the last inspection
  - ▣ Confirm the site conditions match the plan
  - ▣ Determine that all practices have been installed and are being maintained
  - ▣ If any deficiencies are found, appropriate action must be taken to obtain compliance

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## Inspection Sequence

11

1. Construction exits
2. Inspect discharge points & downstream areas for impact
3. Walk the perimeter of the site
4. Inspect active areas
5. Inspect disturbed areas that are not currently being worked
6. Inspect areas that have undergone final stabilization
7. Take into account the entire site and ensure that the project is reflective of the Plan

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## What should be on site?

12

- Approved ES&PC Plan
  - ▣ These should be updated on site if there is ever a revision to the plan
- At a minimum, one certified person shall be on site at all times when land disturbing activities are being conducted
- The following slide lists all of the documents that must be kept on site or readily available at a designated alternative location until a NOT is submitted

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### What should be on site?

13

- LDA Permit
- All NOIs submitted to the GA EPD
- Design Professional 7-day letter
- Daily, weekly, and monthly inspection reports
- Daily rainfall data
- Any buffer variances or permits
- Violation summaries and reports
- All sampling and monitoring information, results, and reports

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### Documentation

14

- A complete and factual record should be documented for the entire inspection
  - Current activities at the site
  - Any observations related to BMPs
  - Any observations related to sediment leaving the site
  - Any outcomes
- These records support potential enforcement action
- A way to communicate your findings to other
  - Provides a "site history" for another inspector

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15

### Structural BMPs

What to look for?

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### Co – Construction Exit

16

- What to look for?
  - ▣ Is the exit the appropriate length and width?
  - ▣ Has the correct size rock been used?
  - ▣ Has the geotextile been placed under the rock?



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### Rt - Retrofit

17

- What to look for?
  - ▣ Has the half-round been affixed to the structure?
  - ▣ Has the correct size rock been used?
  - ▣ Is the structure being cleaned out at 1/3<sup>rd</sup> full?



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### Sd1 – Sediment Barrier

18

- What to look for?
  - ▣ Has the appropriate type been selected?
  - ▣ Is the Silt Fence been trenched in?
  - ▣ Is the barrier being cleaned out at 1/2 full?
  - ▣ Has the barrier been installed in an area of concentrated flow?



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### Sd2 – Inlet Sediment Trap

19

- What to look for?
  - ▣ Is the trap self draining?
  - ▣ Does the installed practice match the need?
  - ▣ Is the trap being cleaned out at 1/2 the height?



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### Sd3 – Temporary Sediment Basin

20

- What to look for?
  - ▣ Has emergency spillway been installed?
  - ▣ Has the basin been properly stabilized?
  - ▣ Is there a clean out marker?
  - ▣ Does the riser have the correct size holes and stone placed around?



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### Sk – Floating Surface Skimmer

21

- What to look for?
  - ▣ Is the skimmer stuck in the mud?
  - ▣ Has the device been damaged or clogged?
  - ▣ Is the pond draining appropriately?
  - ▣ Is a portion of the skimmer visible at all times?



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22 **Vegetative Practices**

What to look for?

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**Ds1 - Mulching**

23

What to look for?

- Has mulch been applied to all disturbed are within 14 days?
- Has it been applied to an appropriate depth?
- Has it been anchored?
- Is it older than 6 months?



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**Ds2 – Temporary Seeding**

24

What to look for?

- Has the right species been selected for the time of year?
- Has an adequate stand emerged?
- Will this species be in place for less than 6 months?



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### Ds3 – Permanent Seeding

25

- What to look for?
  - ▣ Has the right species been selected for the time of year?
  - ▣ Is 100% of soil surface uniformly covered with a 70% density or greater?
  - ▣ Is a 6" top growth being maintained?



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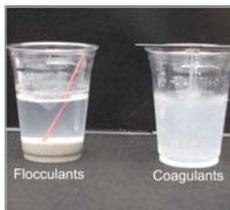
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### FI-Co – Flocculants & Coagulants

26

- What to look for?
  - ▣ Have only anionic forms been used?
  - ▣ Has it been applied to surface waters of the state?
  - ▣ Has it been applied in the appropriate storm water ditches or storage basins?



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### Ss – Slope Stabilization

27

- What to look for?
  - ▣ Have the blankets been anchored properly?
  - ▣ Are there any failures, washouts, or dislocations?
  - ▣ Are the fibrous components natural or biodegradable?



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28 Enforcement

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29 Notice of Violation

- First & Second Violation
  - 1) A written warning is issued to the permittee
  - 2) The permittee shall have five (5) days to correct the violation
  - 3) If the violation is not corrected within five (5) days, a immediate stop work shall be issued
- Third Violation
  - 1) An immediate stop work order shall be issued




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30 Handling Violations

- The inspection records written by an inspector are the basis for enforcement and civil penalties
- Remember
  - ▣ Write a report for each inspection conducted at the site
  - ▣ Take a substantial amount of pictures
  - ▣ Always write the report at the site so that you don't forget anything
- For consultants, this is your client's best defense against a violation

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## Interactions @ the Site

31

- As an inspector you will be dealing with a wide range of people.
- To be effective, you must follow the law and be fair and consistent when enforcing it.
- You must conduct yourself in a professional manner



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## Dealing with Difficult People

32

- An inspector will often have to handle heated situations
- Often times you will not have time to prepare a response and you must resolve the situation immediately.
- The following are a list of steps that can be used to resolve a heated situation

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## Key Steps

33

1. Maintain a friendly and professional attitude
  - Don't argue with the person
  - Show that you have interest in their problem
  - State that you would like to help them solve it
  - Don't let their anger get to you
  - Don't take what they say personally

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### Key Steps

34

- 2. Acknowledge that a difficult situation exists
  - Show that you take the complaint seriously
  - Choose your words carefully
  - Use a tone that demonstrates understanding
  - Respond to what the person is saying
  - If you owe an apology, apologize only for the specific incident

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### Key Steps

35

- 3. Calm the individual by questioning and verifying
  - Demonstrate that you are willing to work with them
  - Don't assume anything, ask specific questions
  - Respond to show that you understand the problem
  - Be sure that you and the person are on the same page

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### Key Steps

36

- 4. Involve the person in solving the problem
  - Ask the person to help you solve the problem
  - Request suggestions and offer your assistance to correct the situation
  - Explain the law and regulations and the reasoning behind them
  - Continue to ask questions to keep their focus on the problem

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### Key Steps

37

- 5. Handle the problem
  - Be positive
  - Focus on the most feasible solution
  - Decide on a follow-up action to ensure the problem has been resolved

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### References

38

- Florida Erosion and Sediment Control Inspector's Manual
  - ▣ Florida Department of Environmental Protection
- Conducting Environmental Compliance Inspections: Inspector's Field Manual, International Edition
  - ▣ Office of Enforcement and Compliance Assurance - Environmental Protection Agency
- Manual for Erosion and Sediment Control in Georgia
  - ▣ 2016 Edition - GSWCC
- NPDES Permits GAR100001,100002,100003

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### Summary

39

- Inspectors must be professional, fair and consistent
- Inspectors must be technical authorities
- Proper inspection procedures must be observed
- Properly applied enforcement action promotes broader compliance
- Knowing how to deal with people can go a long way

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40 Questions?

GSWCC  
Urban Program  
P.O. Box 8024  
Athens, GA 30603  
(706) 552-4474



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Insert Tab 5

Resource Information

Back of Tab

# Important Links for E&S in Georgia

These documents can be found @ <http://gaswcc.georgia.gov/>

Under “Documents List”

## **O.C.G.A. 12-7-1 (GESA)**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related\\_files/document/OCGA\\_June\\_2016.pdf](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related_files/document/OCGA_June_2016.pdf)

## **NPDES Permit for Stand Alone Construction Projects (GAR100001)**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES\\_Permit\\_for\\_Standalone\\_Construction\\_Projects-09-23-13.pdf](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_Permit_for_Standalone_Construction_Projects-09-23-13.pdf)

## **NPDES Permit for Infrastructure Construction Projects (GAR100002)**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES\\_Permit\\_for\\_Infrastructure\\_Construction\\_Projects-09-23-13.pdf](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_Permit_for_Infrastructure_Construction_Projects-09-23-13.pdf)

## **NPDES Permit for Common Development Construction Projects (GAR100003)**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES\\_Permit\\_for\\_Common\\_Development\\_Construction\\_Projects-09-23-13.pdf](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_Permit_for_Common_Development_Construction_Projects-09-23-13.pdf)

## **Notice of Intent Primary Permittee**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related\\_files/document/2015-NPDES-NOI-Primary-Permittee-Revised-Jun-2015.pdf](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related_files/document/2015-NPDES-NOI-Primary-Permittee-Revised-Jun-2015.pdf)

## **Notice of Intent Secondary Permittee**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES\\_NOI\\_Secondary\\_Permittee\\_Revised-09-23-13.doc](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_NOI_Secondary_Permittee_Revised-09-23-13.doc)

## **Notice of Intent Tertiary Permittee**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES NOI Tertiary Permittee Revised-09-23-13.doc](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_NOI_Tertiary_Permittee_Revision-09-23-13.doc)

## **Notice of Intent Blanket Secondary Permittee**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES NOT Blanket Secondary-09-23-13.doc](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_NOT_Blanket_Secondary-09-23-13.doc)

## **Notice of Termination Permittee**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES NOT Permittees-09-23-13.doc](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_NOT_Permittees-09-23-13.doc)

## **Notice of Termination Blanket Secondary Permittee**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES NOT Blanket Secondary-09-23-13.doc](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/NPDES_NOT_Blanket_Secondary-09-23-13.doc)

## **2016 Manual for Erosion & Sediment Control in Georgia**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related\\_files/site\\_page/GSWCC-2016-Manual-As-Approved-by-Overview-Council.pdf](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related_files/site_page/GSWCC-2016-Manual-As-Approved-by-Overview-Council.pdf)

## **2016 Field Manual for Erosion & Sediment Control in Georgia**

<https://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/2016%20Field%20Manual%20for%20Erosion%20%26%20Sediment%20Control.pdf>

## **Model Ordinance 2016**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related\\_files/document/Model Ordinance June 2016.doc](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/related_files/document/Model_Ordinance_June_2016.doc)

## **2016 ES&PC Plan Review Checklists**

<http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/2016%20ESPC%20Plan%20Review%20Checklists.pdf>

## **Sample Inspection & Record Keeping Forms**

[http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/Sample\\_FormsF.zip](http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/Sample_FormsF.zip)

## **Equivalent Best Management Practice List**

<https://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/2016-Equivalent-BMP-List.pdf>

## **Impaired Streams Map Viewer**

<http://www.gaswcc.org/maps/>



# Commonly Used Acronyms

BMP: Best Management Practices

CPESC: Certified Professional in Erosion & Sediment Control

CWA: Clean Water Act

DNR: Department of Natural Resources

EMC: Electric Membership Corporation

EPA: Environmental Protection Agency

EPD: Environmental Protection Division

ES&PC: Erosion, Sedimentation & Pollution Control

FEMA: Federal Emergency Management Agency

FERC: Federal Energy Regulatory Commission

GACD: Georgia Association of Conservation Districts

GDOT: Georgia Department of Transportation

GESA: Georgia Erosion & Sediment Control Act

GFC: Georgia Forestry Commission

GSWCC: Georgia Soil & Water Conservation Commission

LDA: Land Disturbing Activity

LIA: Local Issuing Authority

MLRA: Major Land Resource Area

MOA: Memorandum of Agreement

NOI: Notice of Intent

NOT: Notice of Termination

NOV: Notice of Violation

NPDES: National Pollutant Discharge Elimination System

NRCS: Natural Resource Conservation Service

NTU: Nephelometric Turbidity Unit

O.C.G.A.: Official Code of Georgia Annotated

PSC: Public Service Commission

SWCD: Soil & Water Conservation District

TMDL: Total Maximum Daily Load

USACE: United States Army Corps of Engineers

USDA: United States Department of Agriculture





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### Commission Members

**Garland Thompson**  
Chair  
Douglas, GA  
Region 3

**Harold Fallin**  
Vice Chair  
Thomaston, GA  
Region 4

**Jason Winters**  
Lyerly, GA  
Region 1

**Drew Echols**  
Alto, GA  
Region 2

**Bob Martin**  
Ocilla, GA  
Region 5

### Headquarters Staff

**Brent Dykes** – Executive Director – [bdykes@gaswcc.org](mailto:bdykes@gaswcc.org)  
**La Shawn Jennings** – Administrative Assistant – [ljennings@gaswcc.org](mailto:ljennings@gaswcc.org)

### Financial Personnel

**Cynthia Wilbur** – Administrative Operations Manager – [cwilbur@gaswcc.org](mailto:cwilbur@gaswcc.org)  
**Karen Parson** – Procurement Officer – [kparson@gaswcc.org](mailto:kparson@gaswcc.org)  
**Andy Pope** – Personnel Representative – [apope@gaswcc.org](mailto:apope@gaswcc.org)

### Information Technology Program

**Erik McCutcheon** – IT Director – [emccutcheon@gaswcc.org](mailto:emccutcheon@gaswcc.org)  
**Ernell Babb** – IT Project Specialist – [ebabb@gaswcc.org](mailto:ebabb@gaswcc.org)  
**Bryan Johnson** – GIS Analyst – [bjohnson@gaswcc.org](mailto:bjohnson@gaswcc.org)

### Urban Program

**Ben Ruzowicz** – Program Manager – [bruzowicz@gaswcc.org](mailto:bruzowicz@gaswcc.org)  
**Brady Hart** – Technical Specialist – [bhart@gaswcc.org](mailto:bhart@gaswcc.org)  
**Jennifer Standridge** – Data Entry Specialist – [jstandridge@gaswcc.org](mailto:jstandridge@gaswcc.org)  
**Melanie Hill** – Administrative Assistant – [mhill@gaswcc.org](mailto:mhill@gaswcc.org)

### Rural Program

**Bob Fulmer** – Program Manager – [bfulmer@gaswcc.org](mailto:bfulmer@gaswcc.org)  
**Jessica Bee** – Agricultural Water Quality Project Specialist – [jbee@gaswcc.org](mailto:jbee@gaswcc.org)



# GEORGIA SOIL & WATER CONSERVATION COMMISSION

gaswcc.georgia.gov



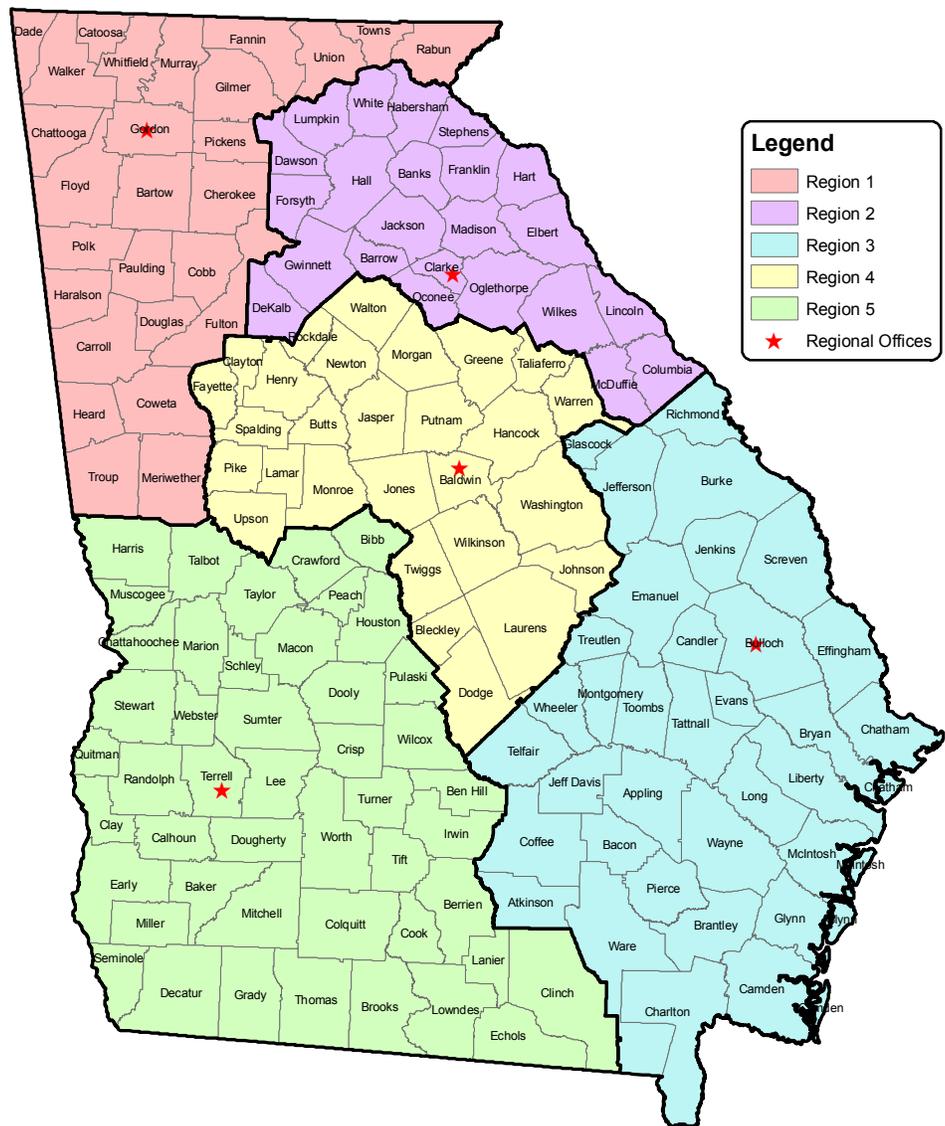
Region 1  
1282 SR 53 Spur SW  
Suite 300  
Calhoun, GA 30701  
(706) 624-1434

Region 2  
4310 Lexington Road  
Athens, GA 30603  
(706) 552-4479

Region 3  
151 Langston Chapel Rd  
Suite 700  
Statesboro, GA 30459  
(912) 681-5241

Region 4  
3014 Heritage Road  
Suite 1  
Milledgeville, GA 301061  
(478) 445-5766

Region 5  
4344 Albany Highway  
Dawson, GA 39842  
(229) 995-6001

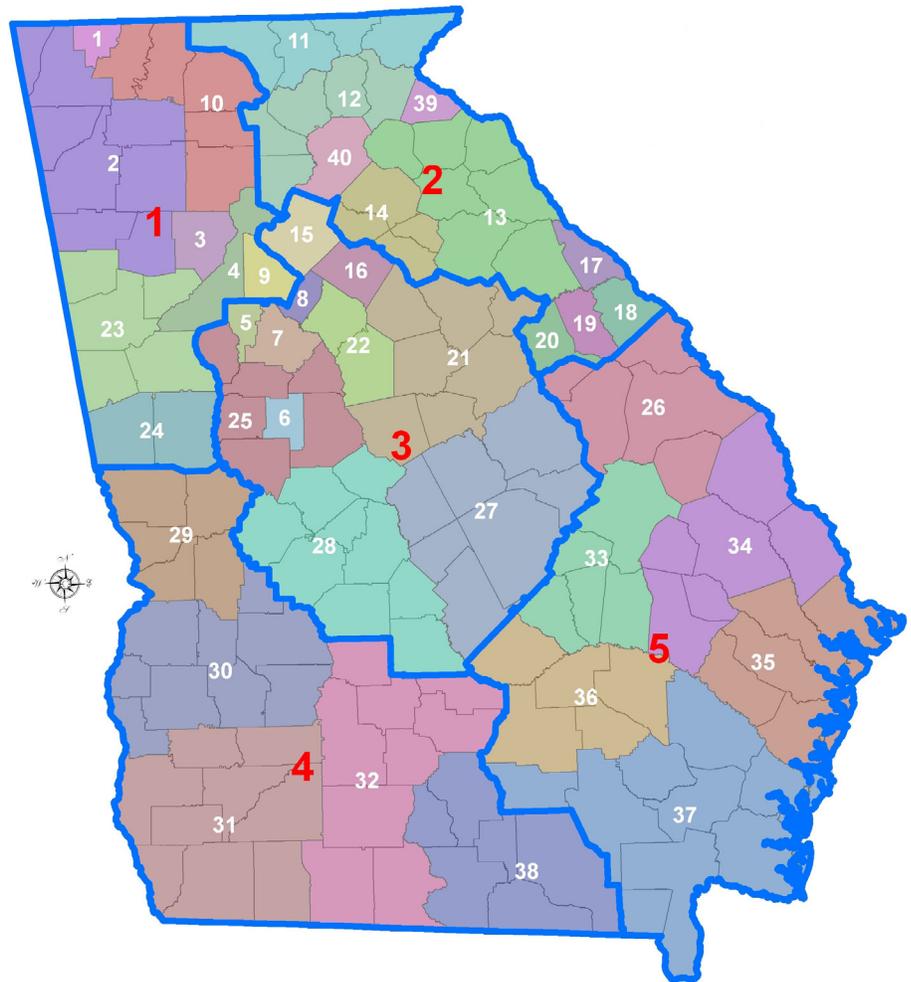




# Georgia Soil & Water Conservation Districts

[www.gacd.us](http://www.gacd.us)

1. Catoosa County
2. Coosa River
3. Cobb County
4. Fulton County
5. Clayton County
6. Lamar County
7. Henry County
8. Rockdale County
9. DeKalb County
10. Limestone Valley
11. Blue Ridge Mountain
12. Upper Chattahoochee River
13. Broad River
14. Oconee River
15. Gwinnett County
16. Walton County
17. Lincoln County
18. Columbia County
19. McDuffie County
20. Warren County
21. Piedmont
22. Upper Ocmulgee River
23. West Georgia
24. Roosevelt
25. Towaliga
26. Brier Creek
27. Central Georgia
28. Ocmulgee River
29. Pine Mountain
30. Lower Chattahoochee River
31. Flint River
32. Middle South Georgia
33. Ohoopie River
34. Ogeechee River
35. Coastal Georgia
36. Altamaha
37. Satilla River
38. Alapaha
39. Stephens County
40. Hall County





# GA DNR Environmental Protection Division

epd.georgia.gov



West Central District  
2640 Shurling Drive  
Macon, GA 31211  
(478) 751-6612

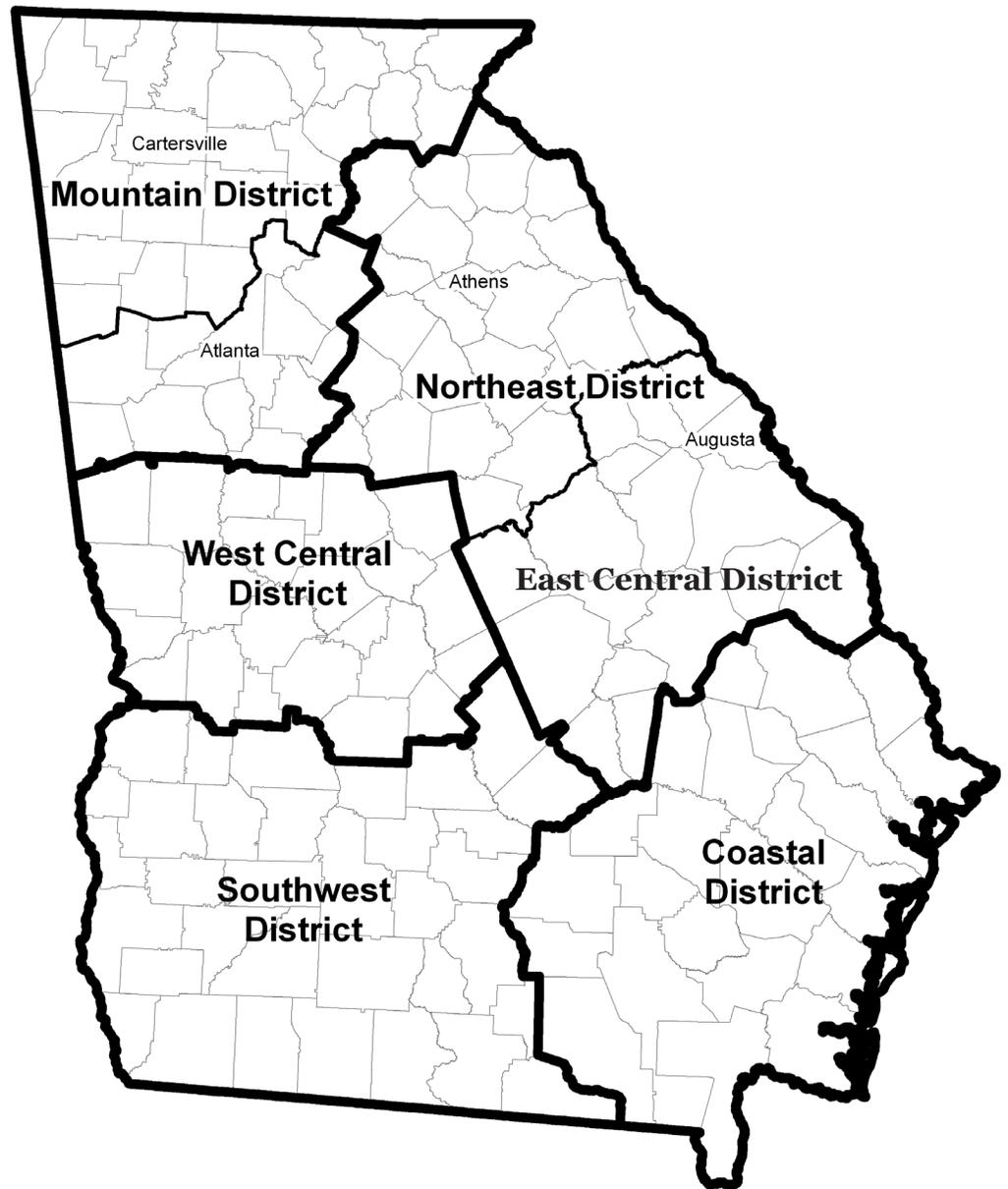
Mountain District  
(Atlanta)  
4244 International  
Parkway  
Atlanta, GA 30354  
(404) 362-2671

Northeast District  
745 Gaines School Road  
Athens, GA 30605  
(706) 369-6376

Mountain District  
(Cartersville)  
P.O. Box 3250  
16 Center Road  
Cartersville, GA 30120  
(770) 387-4900

Southwest District  
2024 Newton Road  
Albany, GA 31701  
(229) 430-4144

Coastal District  
400 Commerce Center Dr.  
Brunswick, GA 31523  
(912) 264-7284



East Central District  
3525 Walton Way Ext.  
Augusta, GA 30909  
(706) 667-4343



# Georgia Department of Transportation

[www.dot.ga.gov](http://www.dot.ga.gov)



## District 1

2505 Athens Hwy SE  
Gainesville, GA 30507  
(770) 531-5721

## District 2

643 Hwy 15 S  
Tennille, GA 31089  
(478) 553-3301

## District 3

115 Transportation Blvd  
Thomaston, GA 30286  
(706) 646-6900

## District 4

710 West 2nd St.  
Tifton, GA 31794  
(229) 386-3280

## District 5

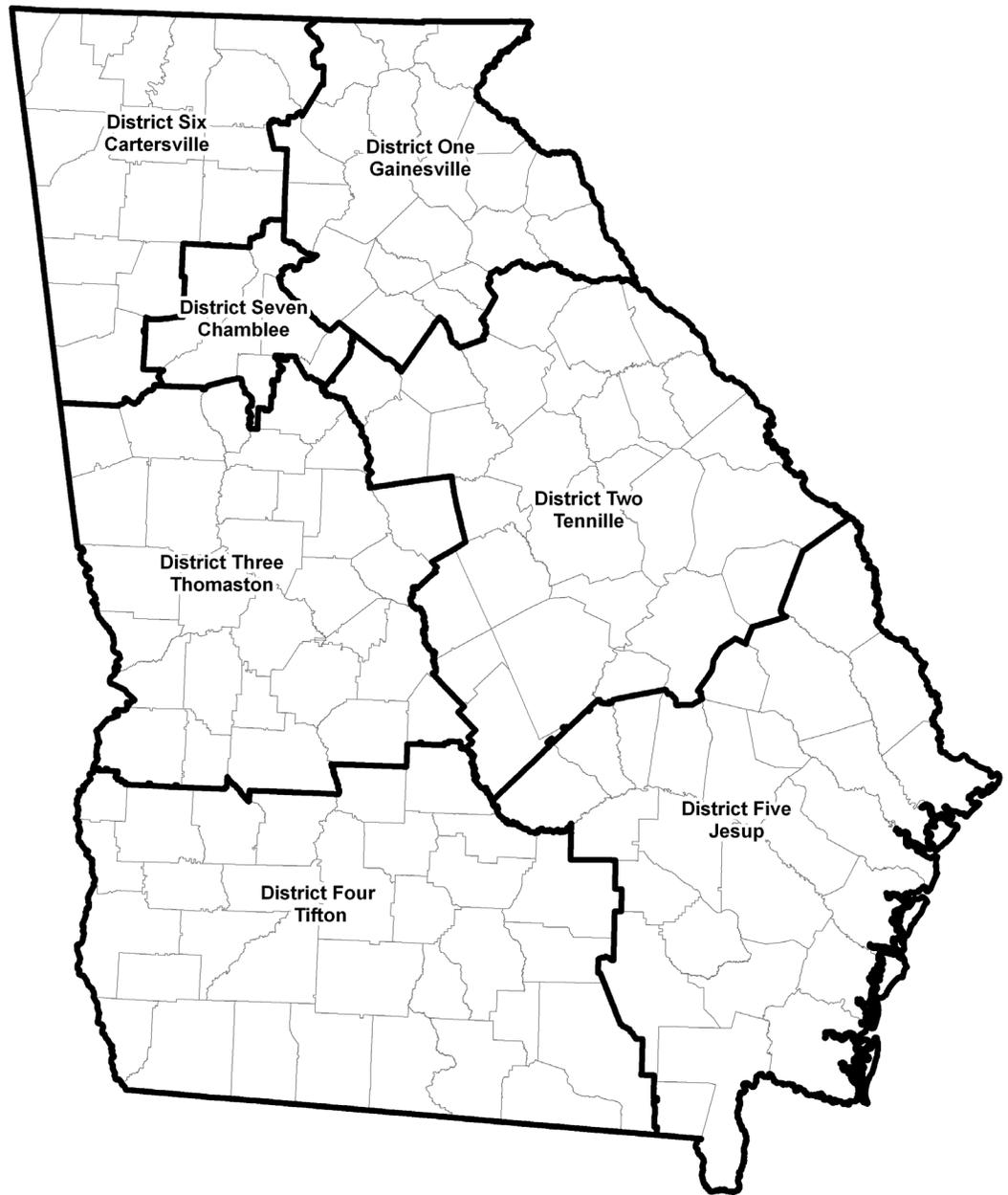
204 North Highway 301  
Jesup, GA 31546  
(912) 427-5711

## District 6

500 Joe Frank Harris  
Pkw  
Cartersville, GA 30120  
(770) 387-3602

## District 7

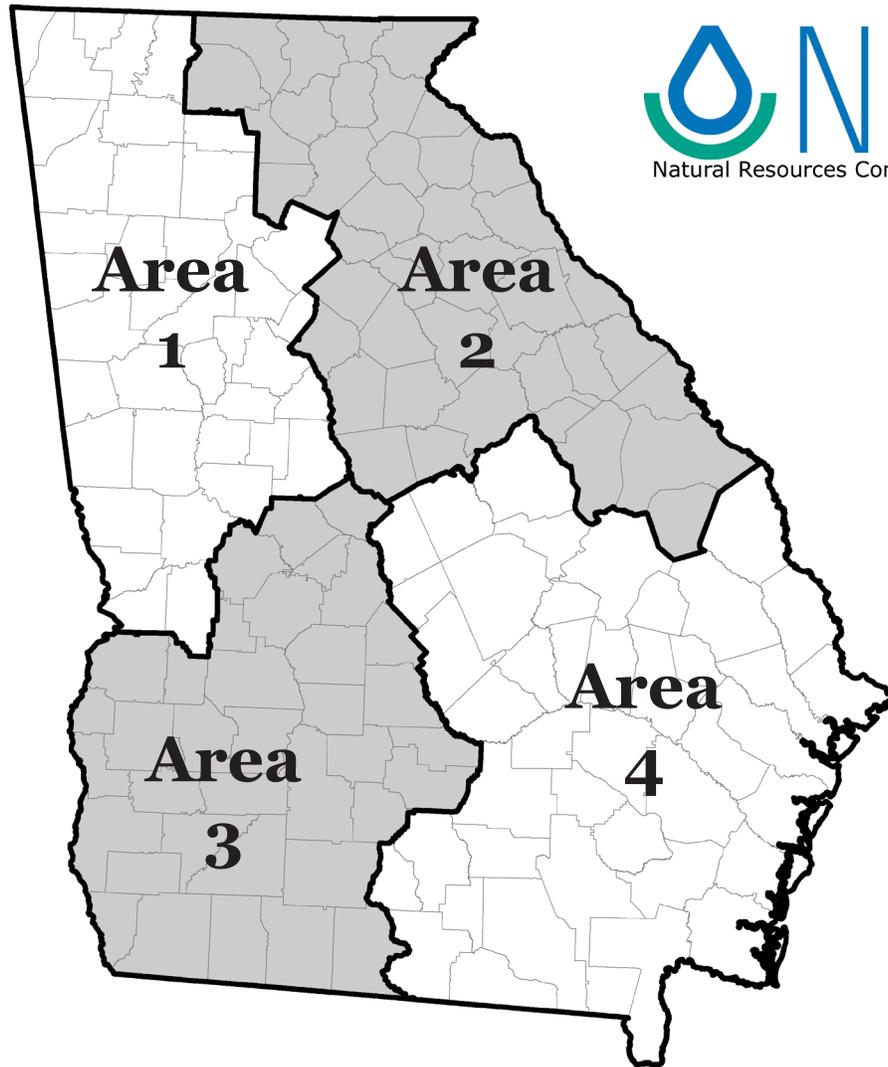
5025 New Peachtree Rd  
Chamblee, GA 30341  
(770) 986-1011





# Natural Resources Conservation Service

[www.nrcs.usda.gov](http://www.nrcs.usda.gov)



### **Area 1**

Federal Building Room G-27  
201 West Solomon St.  
Griffin, GA 30224  
(770) 227-1026

### **Area 2**

Federal Building  
355 East Hancock Ave.  
Athens, GA 30601  
(706) 546-2039

### **Area 3**

Plant Materials Center  
295 Morris Drive  
Americus, GA 31709  
(229) 924-0544

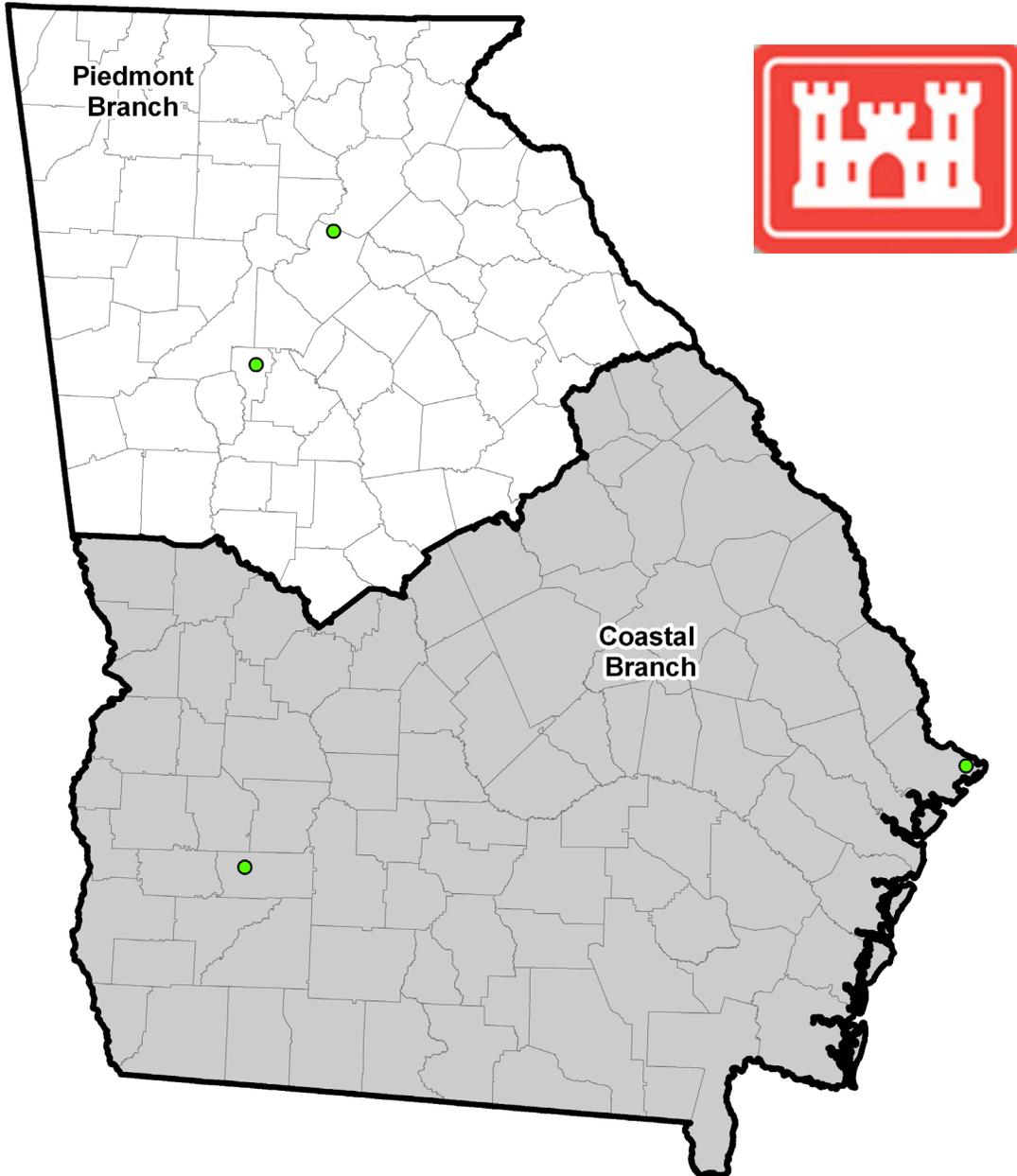
### **Area 4**

Federal Building Room 214  
601 Tabeau St.  
Waycross, GA 31502  
(912) 283-5598



# United States Army Corps of Engineers

[www.sas.usace.army.mil/](http://www.sas.usace.army.mil/)



**Coastal Branch**  
100 W. Oglethorpe Ave  
Savannah, GA 31401  
(912) 652-5279

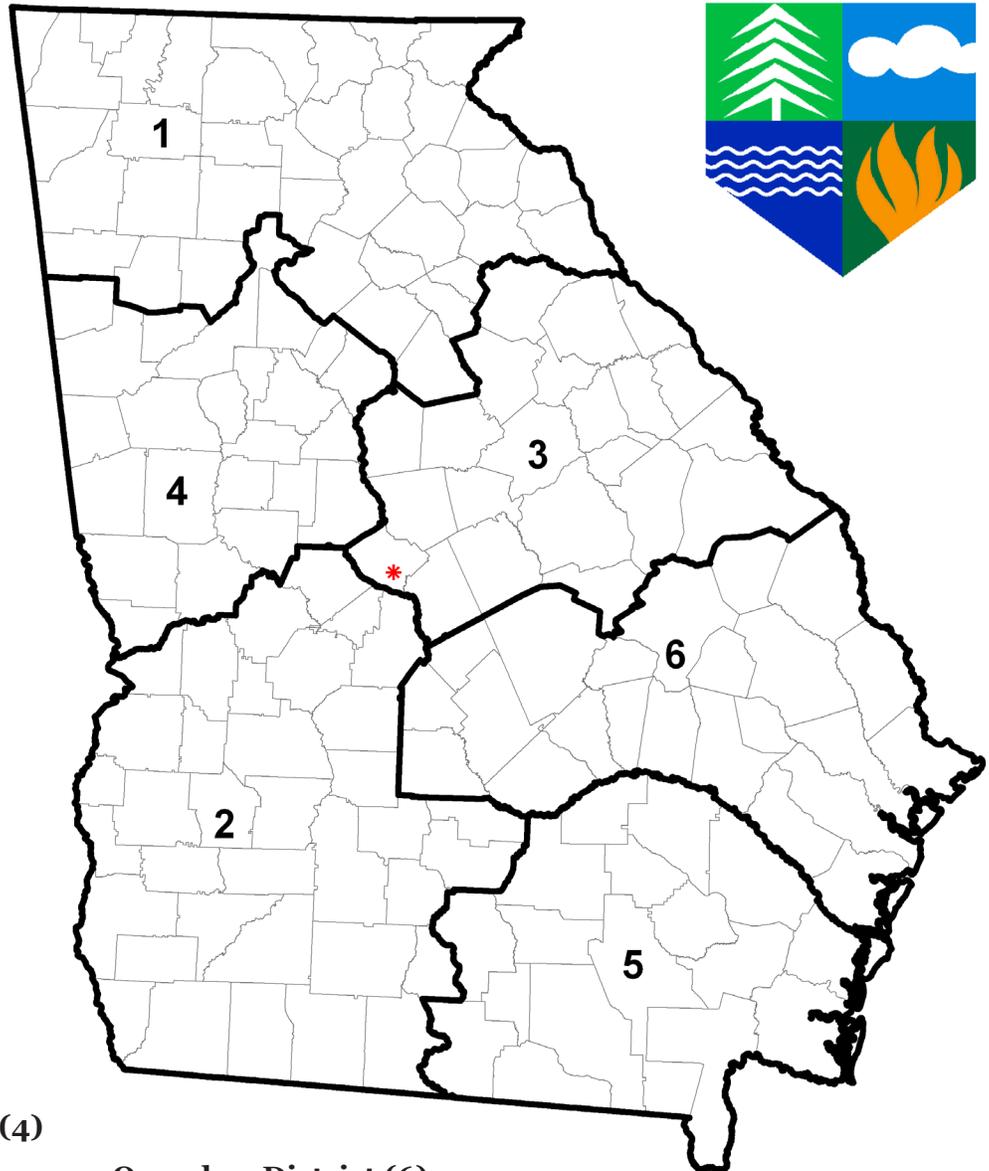
**Piedmont Branch**  
1590 Adamson Parkway  
Suite 200  
Morrow, GA 30260  
(678) 422-2735



# Georgia Forestry Commission

www.gfc.state.ga.us

**GEORGIA FORESTRY  
COMMISSION**



## **Coosa District (1)**

### Gainesville Office

3005 Atlanta Hwy  
Gainesville, GA 30507  
(770) 531-6043/6048

### Rome Office

3086 Martha Berry Hwy NE  
Rome, GA 30165  
(706) 295-6021/6022

## **Flint District (2)**

### Camilla Office

3561 Hwy 112  
Camilla, GA 31730  
(229) 522-3580/3581

### Americus Office

243 US Hwy 19 North  
Americus, GA 31719  
(229) 931-2436/2437

## **Oconee District (3)**

### Milledgeville Office

119 Hwy 49  
Milledgeville, GA 31061  
(478) 445-5164/5548

### Washington Office

1465 Tignall Road  
Washington, GA 30673  
(706) 678-2015

## **Chattahoochee District (4)**

### Newnan Office

187 Corinth Rd  
Newnan, GA 30263  
(770) 254-7218

## **Satilla District (5)**

### Waycross Office

5003 Jacksonville Hwy  
Waycross, GA 31503  
(912) 287-4915

## **Ogeechee District (6)**

### McRae Office

Route 1 Box 67  
Helena, GA 31037  
(229) 868-3385

### Statesboro Office

18899 US Hwy 301 North  
Statesboro, GA 30461  
(912) 681-0490/0496



ID Number	County	Municipality	Local Issuing Authority	LIA Contact	Email	SWCD	GSWCC Region	EPD District Office
LIA-001-00	Appling	Appling	NO	Milton (Shane) Crosby	<a href="mailto:scrosby@aic.cc">scrosby@aic.cc</a>	Alamaha	Region III	Coastal District - Brunswick
LIA-001-01	Appling	Baxley	YES			(912) 367-8300 Alamaha	Region III	Coastal District - Brunswick
LIA-001-02	Appling	Graham	NO			Alamaha	Region III	Coastal District - Brunswick
LIA-001-03	Appling	Surrency	NO			Alamaha	Region III	Coastal District - Brunswick
LIA-002-00	Atkinson	Pearson	NO	Gary Jewell, Acting Police Chief	<a href="mailto:pearson_ga@plamtel.net">pearson_ga@plamtel.net</a>	Satilla River	Region III	Coastal District - Brunswick
LIA-002-01	Atkinson	Willacochee	YES			Satilla River	Region III	Coastal District - Brunswick
LIA-002-02	Atkinson	Willacochee	NO			Satilla River	Region III	Coastal District - Brunswick
LIA-003-00	Bacon	Alma	NO			Alamaha	Region III	Coastal District - Brunswick
LIA-004-00	Baker	Newton	NO			Alamaha	Region V	Coastal District - Brunswick
LIA-004-01	Baker	Newton	NO	Robert West, Code Enforcement	(478) 445-4205 Piedmont	Flint River	Region V	Southwest District - Albany
LIA-005-00	Baldwin	Milledgeville	YES	Mervin G. Graham, Zoning Administrator	<a href="mailto:mervin@milledgevillega.us">mervin@milledgevillega.us</a>	Piedmont	Region IV	Southwest District - Albany
LIA-006-00	Banks	Homer	YES	Keith Covington	(706) 677-4272 Broad River	Broad River	Region IV	Northwest District - Athens
LIA-006-01	Banks	Waynesville	YES			Broad River	Region II	Northwest District - Athens
LIA-006-02	Banks	Waynesville	YES	Clarence J. Suliens	<a href="mailto:schie661@windstream.net">schie661@windstream.net</a>	Broad River	Region II	Northwest District - Athens
LIA-007-00	Barrow	Auburn	YES	Rebecca Whiddon, Senior Planner	<a href="mailto:rwhiddon@bamrowga.gov">rwhiddon@bamrowga.gov</a>	Oconee River	Region II	Northwest District - Athens
LIA-007-01	Barrow	Auburn	YES			Oconee River	Region II	Northwest District - Athens
LIA-007-02	Barrow	Bethlehem	NO			Oconee River	Region II	Northwest District - Athens
LIA-007-03	Barrow	Carl	NO			Oconee River	Region II	Northwest District - Athens
LIA-007-04	Barrow	Slatham	NO			Oconee River	Region II	Northwest District - Athens
LIA-007-05	Barrow	Winder	NO			Oconee River	Region II	Northwest District - Athens
LIA-008-00	Barrow	Winder	YES	Lamont Kiser, County Engineer	<a href="mailto:kiserl@battowga.org">kiserl@battowga.org</a>	Oconee River	Region I	Mountain District - Cartersville
LIA-008-01	Barrow	Adairsville	YES	Ben Skipper, Community Development	(770) 773-2451 Coosa River	Coosa River	Region I	Mountain District - Cartersville
LIA-008-02	Barrow	Cartersville	YES	Randy Mannino, Planning and Development	(770) 607-6161 Coosa River	Coosa River	Region I	Mountain District - Cartersville
LIA-008-03	Barrow	Emerson	YES	Kevin McBurnett, City Manager	(770) 382-9819 Coosa River	Coosa River	Region I	Mountain District - Cartersville
LIA-008-04	Barrow	Euharree	YES	Ronn Goss, Planning and Zoning Director	<a href="mailto:ron@pennanctcm.com">ron@pennanctcm.com</a>	Coosa River	Region I	Mountain District - Cartersville
LIA-008-05	Barrow	Kingston	NO			Coosa River	Region I	Mountain District - Cartersville
LIA-008-06	Barrow	Taylorville	NO			Coosa River	Region I	Mountain District - Cartersville
LIA-008-07	Barrow	White	YES	Jane L. Richards, City Manager	(770) 382-5466 Coosa River	Coosa River	Region I	Mountain District - Cartersville
LIA-009-00	Ben Hill	Fitzgerald	YES	Jason Miller, Building Inspector	(229) 426-5149 Middle South Georgia	Middle South Georgia	Region V	Southwest District - Albany
LIA-009-01	Ben Hill	Fitzgerald	YES	Justin N. Poole	(229) 426-5063 Middle South Georgia	Middle South Georgia	Region V	Southwest District - Albany
LIA-010-00	Berrien	Alapaha	YES	Benjamin Warren, Public Works Director	(229) 686-5421 Alapaha	Alapaha	Region V	Southwest District - Albany
LIA-010-01	Berrien	Enigma	NO			Alapaha	Region V	Southwest District - Albany
LIA-010-02	Berrien	Enigma	NO			Alapaha	Region V	Southwest District - Albany
LIA-010-03	Berrien	Nashville	YES	Henry Yawn, Planning and Zoning Office	<a href="mailto:yawnh@citycode@windstream.net">yawnh@citycode@windstream.net</a>	Alapaha	Region V	Southwest District - Albany
LIA-010-04	Berrien	Ray City	NO			Alapaha	Region V	Southwest District - Albany
LIA-011-00	Bibb	Ray City	YES	Keith Braswell, Engineer	<a href="mailto:kbraswell@co.bibb.ga.us">kbraswell@co.bibb.ga.us</a>	Ocmulgee River	Region V	West Central District - Macon
LIA-011-01	Bibb	Macon	YES	Keith Braswell, Engineer	(478) 621-6660 Ocmulgee River	Ocmulgee River	Region V	West Central District - Macon
LIA-011-02	Bibb	Payne City	YES			Ocmulgee River	Region V	West Central District - Macon
LIA-012-00	Bleckley	Payne City	NO			Ocmulgee River	Region V	West Central District - Macon
LIA-012-01	Bleckley	Cochran	NO			Central Georgia	Region IV	West Central District - Macon
LIA-013-00	Brantley	Cochran	NO			Central Georgia	Region IV	West Central District - Macon
LIA-013-01	Brantley	Hoboken	NO			Satilla River	Region III	Coastal District - Brunswick
LIA-013-02	Brantley	Hoboken	NO			Satilla River	Region III	Coastal District - Brunswick
LIA-013-03	Brantley	Nahunta	NO			Satilla River	Region III	Coastal District - Brunswick
LIA-014-00	Brooks	Morven	NO			Middle South Georgia	Region V	Southwest District - Albany
LIA-014-01	Brooks	Morven	NO			Middle South Georgia	Region V	Southwest District - Albany
LIA-014-02	Brooks	Quitman	NO			Middle South Georgia	Region V	Southwest District - Albany
LIA-015-00	Bryan	Quitman	YES	Kirk D. Crossman, PE, County Engineer	<a href="mailto:kpcrossman@bryan-county.org">kpcrossman@bryan-county.org</a>	Coastal	Region III	Coastal District - Brunswick
LIA-015-01	Bryan	Pembroke	YES			Coastal	Region III	Coastal District - Brunswick
LIA-015-02	Bryan	Richmond Hill	YES	Steve Scholar, Planning and Zoning	<a href="mailto:sscholar@richmondhill.ga.gov">sscholar@richmondhill.ga.gov</a>	Coastal	Region III	Coastal District - Brunswick
LIA-016-00	Bulloch	Brooklet	YES	Robert (Larry) Evans, Building Department	<a href="mailto:inspections@bullochcounty.net">inspections@bullochcounty.net</a>	Ogeechee River	Region III	Coastal District - Brunswick
LIA-016-01	Bulloch	Brooklet	NO			Ogeechee River	Region III	Coastal District - Brunswick
LIA-016-02	Bulloch	Portal	NO			Ogeechee River	Region III	Coastal District - Brunswick
LIA-016-03	Bulloch	Register	NO			Ogeechee River	Region III	Coastal District - Brunswick
LIA-016-04	Bulloch	Statesboro	YES	Brad Deal, Assistant City Engineer	<a href="mailto:bddeal@statesboroga.net">bddeal@statesboroga.net</a>	Ogeechee River	Region III	Coastal District - Brunswick
LIA-017-00	Burke	Statesboro	NO			Ogeechee River	Region III	Coastal District - Brunswick
LIA-017-01	Burke	Girard	NO			Brier Creek	Region III	Northwest District - Augusta
LIA-017-02	Burke	Keyville	NO			Brier Creek	Region III	Northwest District - Augusta
LIA-017-03	Burke	Mcville	NO			Brier Creek	Region III	Northwest District - Augusta
LIA-017-04	Burke	Sardis	NO			Brier Creek	Region III	Northwest District - Augusta
LIA-017-05	Burke	Viadette	NO			Brier Creek	Region III	Northwest District - Augusta
LIA-017-06	Burke	Waynesboro	NO			Brier Creek	Region III	Northwest District - Augusta
LIA-018-00	Butts	Waynesboro	YES	Douglas Manning, Community Development	<a href="mailto:dmmanning@buttscounty.org">dmmanning@buttscounty.org</a>	Towaliga	Region IV	Northwest District - Athens
LIA-018-01	Butts	Flowilla	NO			Towaliga	Region IV	Northwest District - Athens
LIA-018-02	Butts	Jackson	YES	Douglas Manning, Community Development	<a href="mailto:dmmanning@buttscounty.org">dmmanning@buttscounty.org</a>	Towaliga	Region IV	Northwest District - Athens
LIA-018-03	Butts	Jackson	NO			Towaliga	Region IV	Northwest District - Athens
LIA-019-00	Calhoun	Jacksonburg	NO			Towaliga	Region V	Southwest District - Albany
LIA-019-01	Calhoun	Arlington	NO			Flint River	Region V	Southwest District - Albany

LIA-019-02	Edison	NO				Flint River	Region V	Southwest District - Albany
LIA-019-03	Leary	NO				Flint River	Region V	Southwest District - Albany
LIA-019-04	Calhoun	NO				Flint River	Region V	Southwest District - Albany
LIA-020-00	Camden	YES				Satilla River	Region III	Coastal District - Brunswick
LIA-020-01	Kingsland	YES				(912) 729-8279 Satilla River	Region III	Coastal District - Brunswick
LIA-020-02	St. Marys	YES				(912) 882-4415 Satilla River	Region III	Coastal District - Brunswick
LIA-020-03	Camden	NO				Satilla River	Region III	Coastal District - Brunswick
LIA-021-00	Candler	YES				(912) 685-2835 Ogeechee River	Region III	Coastal District - Brunswick
LIA-021-01	Candler	YES				(912) 685-2541 Ogeechee River	Region III	Coastal District - Brunswick
LIA-021-02	Pulaski	NO				Ogeechee River	Region III	Coastal District - Brunswick
LIA-022-00	Carroll	YES				(770) 830-5861 West Georgia	Region I	Mountain District - Atlanta
LIA-022-01	Carroll	NO				West Georgia	Region I	Mountain District - Atlanta
LIA-022-02	Carroll	YES				Jeff Cantrell, Building Inspector	Region I	Mountain District - Atlanta
LIA-022-03	Carroll	YES				(770) 832-1622 West Georgia	Region I	Mountain District - Atlanta
LIA-022-04	Carroll	NO				Teressa Ferguson, City Manager	Region I	Mountain District - Atlanta
LIA-022-05	Carroll	NO				Temple	Region I	Mountain District - Atlanta
LIA-022-06	Carroll	YES				Villa Rica	Region I	Mountain District - Atlanta
LIA-022-07	Carroll	NO				Whitesburg	Region I	Mountain District - Atlanta
LIA-023-00	Catoosa	YES				James Davis, Zoning Administrator	Region I	Mountain District - Atlanta
LIA-023-01	Catoosa	YES				(706) 965-3787 Catoosa County	Region I	Mountain District - Cartersville
LIA-023-02	Catoosa	YES				Jillian Lacy	Region I	Mountain District - Cartersville
LIA-023-03	Charlton	YES				Thomas Callitt, Code Enforcement	Region I	Mountain District - Cartersville
LIA-024-00	Charlton	YES				Al Grace, County Administrator	Region III	Coastal District - Brunswick
LIA-024-01	Folkston	YES				Lenoard Pender H. Lloyd, City Manager	Region III	Coastal District - Brunswick
LIA-024-02	Charlton	YES				Austin Hixcox, Mayor	Region III	Coastal District - Brunswick
LIA-025-00	Chatham	YES				Coastal	Region III	Coastal District - Brunswick
LIA-025-01	Chatham	YES				Coastal	Region III	Coastal District - Brunswick
LIA-025-02	Chatham	YES				Bloomingtondale	Region III	Coastal District - Brunswick
LIA-025-03	Chatham	YES				Garden City	Region III	Coastal District - Brunswick
LIA-025-04	Chatham	YES				Pooler	Region III	Coastal District - Brunswick
LIA-025-05	Chatham	NO				Port Wentworth	Region III	Coastal District - Brunswick
LIA-025-06	Chatham	YES				Savannah	Region III	Coastal District - Brunswick
LIA-025-07	Chatham	NO				Thunderbolt	Region III	Coastal District - Brunswick
LIA-025-08	Chatham	YES				Ybebe Island	Region III	Coastal District - Brunswick
LIA-025-09	Chatham	NO				Vernonburg	Region III	Coastal District - Brunswick
LIA-026-00	Chattahoochee	NO				Pine Mountain	Region V	West Central District - Macon
LIA-026-01	Chattahoochee	NO				Pine Mountain	Region V	West Central District - Macon
LIA-027-00	Chatooga	YES				Coosa River	Region I	Mountain District - Cartersville
LIA-027-01	Chatooga	NO				Coosa River	Region I	Mountain District - Cartersville
LIA-027-02	Chatooga	NO				Lyellville	Region I	Mountain District - Cartersville
LIA-027-03	Chatooga	NO				Menlo	Region I	Mountain District - Cartersville
LIA-027-04	Chatooga	NO				Summerville	Region I	Mountain District - Cartersville
LIA-028-00	Cherokee	YES				Kenny Phelps, Development Inspection Mgr	Region I	Mountain District - Cartersville
LIA-028-01	Cherokee	NO				Ball Ground	Region I	Mountain District - Cartersville
LIA-028-02	Cherokee	YES				Ganton	Region I	Mountain District - Cartersville
LIA-028-03	Cherokee	YES				Holly Springs	Region I	Mountain District - Cartersville
LIA-028-04	Cherokee	NO				Waleska	Region I	Mountain District - Cartersville
LIA-028-05	Cherokee	NO				Woodstock	Region I	Mountain District - Cartersville
LIA-029-00	Clarke	YES				John Spagna, Community Protection Division	Region II	Northeast District - Athens
LIA-029-01	Clarke	YES				John Spagna, Community Protection Division	Region II	Northeast District - Athens
LIA-029-02	Clarke	NO				Winterville	Region II	Northeast District - Athens
LIA-030-00	Clay	NO				Oconee River	Region V	Southwest District - Albany
LIA-030-01	Clay	NO				Bluffton	Region V	Southwest District - Albany
LIA-030-02	Clay	NO				Ft. Gaines	Region V	Southwest District - Albany
LIA-031-00	Clayton	YES				Jeff Matarko, Director, Land Development	Region IV	Mountain District - Atlanta
LIA-031-01	Clayton	YES				Al Wiggins, Planning, Building and Zoning	Region IV	Mountain District - Atlanta
LIA-031-02	Clayton	YES				Janice Truhan, City Clerk	Region IV	Mountain District - Atlanta
LIA-031-03	Clayton	NO				Lake City	Region IV	Mountain District - Atlanta
LIA-031-04	Clayton	YES				Mark Whitley, City Engineer	Region IV	Mountain District - Atlanta
LIA-031-05	Clayton	YES				Anou Sothsavath, Public Works Director	Region IV	Mountain District - Atlanta
LIA-031-06	Clayton	NO				Riverdale	Region IV	Mountain District - Atlanta
LIA-032-00	Clinch	NO				Alapaha	Region V	Coastal District - Brunswick
LIA-032-01	Clinch	NO				Dupont	Region V	Coastal District - Brunswick
LIA-032-02	Clinch	NO				Fargo	Region V	Coastal District - Brunswick
LIA-032-03	Clinch	NO				Homerville	Region V	Coastal District - Brunswick
LIA-033-00	Cobb	YES				Rekasa Deen, City Manager	Region I	Mountain District - Cartersville
LIA-033-01	Cobb	YES				Rob Hassack, Community Development	Region I	Mountain District - Cartersville
LIA-033-02	Cobb	YES				Richard Beard	Region I	Mountain District - Cartersville
LIA-033-03	Cobb	YES				Randy Bowers, Public Works Director	Region I	Mountain District - Cartersville
LIA-033-04	Cobb	YES				Steve Turner	Region I	Mountain District - Cartersville
LIA-033-05	Cobb	YES				Richard King	Region I	Mountain District - Cartersville
LIA-033-06	Cobb	YES				Rodger Swaim, Public Works Director	Region I	Mountain District - Cartersville

LIA-033-06	Cobb	Smyrna	YES	Keith Williams, PE, City Engineer	Williams@ci.smyrna.ga.us	(768) 631-5443	Cobb County	Region I	Mountain District - Cartersville
LIA-034-00	Coffee	Ambrose	YES	Wesley Vickers, Administrator		(912) 384-4799	Alamaha	Region III	Coastal District - Brunswick
LIA-034-01	Coffee	Broxton	NO				Alamaha	Region III	Coastal District - Brunswick
LIA-034-02	Coffee	Broxton	NO				Alamaha	Region III	Coastal District - Brunswick
LIA-034-03	Coffee	Douglas	YES	Ray Parker, Code Enforcement Officer	parker@cityofdouglas.com	(912) 389-3482	Alamaha	Region III	Coastal District - Brunswick
LIA-034-04	Coffee	Nicolaus	NO				Alamaha	Region III	Coastal District - Brunswick
LIA-035-00	Colquitt	Nicolaus	YES	Russell Moody, Compliance Officer		(229) 616-7417	Middle South Georgia	Region V	Southwest District - Albany
LIA-035-01	Colquitt	Berlin	NO				Middle South Georgia	Region V	Southwest District - Albany
LIA-035-02	Colquitt	Doerun	YES				Middle South Georgia	Region V	Southwest District - Albany
LIA-035-03	Colquitt	Ellenton	NO				Middle South Georgia	Region V	Southwest District - Albany
LIA-035-04	Colquitt	Funston	NO				Middle South Georgia	Region V	Southwest District - Albany
LIA-035-05	Colquitt	Moultrie	YES	Daniel Parrish, Director	daniel.parrish@moultriega.com	(229) 880-5405	Middle South Georgia	Region V	Southwest District - Albany
LIA-035-06	Colquitt	Normal Park	YES				Middle South Georgia	Region V	Southwest District - Albany
LIA-035-07	Colquitt	Riverside	YES				Middle South Georgia	Region V	Southwest District - Albany
LIA-036-00	Columbia	Riverside	YES	George Eastman, Environmental Development	geesiman@columbiacountyga.gov	(706) 312-7278	Columbia County	Region II	Southwest District - Albany
LIA-036-01	Columbia	Grovetown	YES	Connie Smith, Zoning Administrator		(706) 860-5084	Columbia County	Region II	Southwest District - Albany
LIA-036-02	Columbia	Hartem	YES	Jason Ritzner, City Manager	ritzner@hartemga.org	(706) 665-0043	Columbia County	Region II	Southwest District - Albany
LIA-037-00	Cook	Adel	YES	Chris Davis, Building/Zoning Administrator		(229) 237-2633	Alapaha	Region V	Southwest District - Albany
LIA-037-01	Cook	Adel	YES	John Flythe, City Manager		(229) 896-4504	Alapaha	Region V	Southwest District - Albany
LIA-037-02	Cook	Cecil	NO				Alapaha	Region V	Southwest District - Albany
LIA-037-03	Cook	Lenox	NO				Alapaha	Region V	Southwest District - Albany
LIA-037-04	Cook	Sparks	YES	Chris Davis, Building/Zoning Administrator		(229) 237-2633	Alapaha	Region V	Southwest District - Albany
LIA-038-00	Coweta	Sparks	YES				West Georgia	Region I	Mountain District - Atlanta
LIA-038-01	Coweta	Grantville	NO				West Georgia	Region I	Mountain District - Atlanta
LIA-038-02	Coweta	Hazleton	NO				West Georgia	Region I	Mountain District - Atlanta
LIA-038-03	Coweta	Moreland	NO				West Georgia	Region I	Mountain District - Atlanta
LIA-038-04	Coweta	Newnan	YES				West Georgia	Region I	Mountain District - Atlanta
LIA-038-05	Coweta	Senoia	NO				West Georgia	Region I	Mountain District - Atlanta
LIA-038-06	Coweta	Sharpsburg	YES				West Georgia	Region I	Mountain District - Atlanta
LIA-038-07	Coweta	Turin	NO				West Georgia	Region I	Mountain District - Atlanta
LIA-039-00	Crawford	Turin	NO				Ocmulgee River	Region V	West Central District - Macon
LIA-039-01	Crawford	Roberta	NO				Ocmulgee River	Region V	West Central District - Macon
LIA-040-00	Crisp	Roberta	YES				Middle South Georgia	Region V	Southwest District - Albany
LIA-040-01	Crisp	Arabi	NO				Middle South Georgia	Region V	Southwest District - Albany
LIA-040-02	Crisp	Cordele	YES	Bruce Castiberry		(706) 657-4625	Coosa River	Region I	Mountain District - Cartersville
LIA-041-00	Dade	Cordele	YES				Coosa River	Region I	Mountain District - Cartersville
LIA-041-01	Dade	Trenton	NO				Coosa River	Region I	Mountain District - Cartersville
LIA-042-00	Dawson	Trenton	YES	David McKee, Director	dmckee@dawsoncountyga.org	(706) 344-3804	Upper Chattahoochee River	Region II	Mountain District - Cartersville
LIA-042-01	Dawson	Dawsonville	YES	Gary Barr		(706) 265-3256	Upper Chattahoochee River	Region II	Mountain District - Cartersville
LIA-043-00	Decatur	Dawsonville	NO				Flint River	Region V	Southwest District - Albany
LIA-043-01	Decatur	Atapulgus	NO				Flint River	Region V	Southwest District - Albany
LIA-043-02	Decatur	Bainbridge	YES				Flint River	Region V	Southwest District - Albany
LIA-043-03	Decatur	Birmin	NO				Flint River	Region V	Southwest District - Albany
LIA-043-04	Decatur	Climax	NO				Flint River	Region V	Southwest District - Albany
LIA-044-00	DeKalb	Climax	YES	Hari Karikaran, Associate Director	hkarikaran@dekalbcountyga.gov	(404) 371-2160	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-01	DeKalb	Avondale Estates	YES	Cary Abanan	cabanan@avondaleestates.org	(404) 294-5400	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-02	DeKalb	Chamblee	YES	Marc Johnson, Chief of Police	chiefmj@chambleega.com	(770) 986-5026	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-03	DeKalb	Clarkston	YES	Keith Barber, City Manager	kbarber@cityofclarkston.com	(404) 296-5489	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-04	DeKalb	Decatur	YES	John Madajewski, PE, Senior Engineer		(404) 377-6198	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-05	DeKalb	Doraville	YES	Steven Strickland, Stormwater Inspector	steven.strickland@doravillega.us	(678) 758-4218	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-06	DeKalb	Lithonia	NO				DeKalb County	Region II	Mountain District - Atlanta
LIA-044-07	DeKalb	Pine Lake	NO				DeKalb County	Region II	Mountain District - Atlanta
LIA-044-08	DeKalb	Stone Mountain	YES	Thurman Johnson, Code Compliance Section		(770) 498-8984	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-09	DeKalb	Dunwoody	YES	Rich Edinger, PE	redinger@clarkcountygov.com	(678) 382-5700	DeKalb County	Region II	Mountain District - Atlanta
LIA-044-10	DeKalb	Brookhaven	YES	Rich Edinger, PE	redinger@clarkcountygov.com	(404) 637-0500	DeKalb County	Region II	Mountain District - Atlanta
LIA-045-00	Dodge	Brookhaven	NO				Central Georgia	Region IV	Southwest District - Albany
LIA-045-01	Dodge	Chauncoy	NO				Central Georgia	Region IV	Southwest District - Albany
LIA-045-02	Dodge	Chester	NO				Central Georgia	Region IV	Southwest District - Albany
LIA-045-03	Dodge	Eastman	YES	Randy Knight, Code Enforcement		(478) 374-7721	Central Georgia	Region IV	Southwest District - Albany
LIA-045-04	Dodge	Rhine	NO				Central Georgia	Region IV	Southwest District - Albany
LIA-046-00	Dooly	Rhine	YES	Gary Houston, Zoning Administrator	inspector@isaa.net	(229) 268-4228	Ocmulgee River	Region V	West Central District - Macon
LIA-046-01	Dooly	Byromville	NO				Ocmulgee River	Region V	West Central District - Macon
LIA-046-02	Dooly	Dooling	NO				Ocmulgee River	Region V	West Central District - Macon
LIA-046-03	Dooly	Lilly	NO				Ocmulgee River	Region V	West Central District - Macon
LIA-046-04	Dooly	Pinehurst	NO				Ocmulgee River	Region V	West Central District - Macon
LIA-046-05	Dooly	Unadilla	YES	Gary Houston, Zoning Inspector	inspector@isaa.net	(229) 268-4228	Ocmulgee River	Region V	West Central District - Macon
LIA-046-06	Dooly	Vienna	NO				Ocmulgee River	Region V	West Central District - Macon
LIA-047-00	Dougherty	Vienna	YES	Larry Cook, Public Works Engr Department		(229) 430-6120	Flint River	Region V	Southwest District - Albany
LIA-047-01	Dougherty	Albany	YES	Brad Little, Engineering Department	blittle@doughertyga.us	(229) 883-6955	Flint River	Region V	Southwest District - Albany
LIA-048-00	Douglas	Albany	YES				West Georgia	Region I	Mountain District - Atlanta

LIA-048-01	Douglas	Douglasville	YES					West Georgia	Region I	Mountain District - Albany
LIA-049-00	Early	Blakely	NO					Flint River	Region V	Southwest District - Albany
LIA-048-01	Early	Damascus	YES					Flint River	Region V	Southwest District - Albany
LIA-048-02	Early	Jakin	NO					Flint River	Region V	Southwest District - Albany
LIA-048-03	Early	Jakin	NO					Flint River	Region V	Southwest District - Albany
LIA-050-00	Echols		NO					Alapaha	Region V	Southwest District - Albany
LIA-051-00	Effingham		YES					(912) 754-8016	Region III	Coastal District - Brunswick
LIA-051-01	Effingham	Guyton	NO					Ogeechee River	Region III	Coastal District - Brunswick
LIA-051-02	Effingham	Rincon	NO					(912) 826-5996	Region III	Coastal District - Brunswick
LIA-051-03	Effingham	Springfield	NO					Ogeechee River	Region III	Coastal District - Brunswick
LIA-052-00	Elbert		YES					(706) 213-1000	Region II	Northwest District - Athens
LIA-052-01	Elbert	Bowman	NO					Broad River	Region II	Northwest District - Athens
LIA-052-02	Elbert	Elberton	YES					(706) 213-3203	Region II	Northwest District - Athens
LIA-053-00	Emanuel		NO					Ocopee River	Region III	Northwest District - Augusta
LIA-053-01	Emanuel	Garfield	NO					Ocopee River	Region III	Northwest District - Augusta
LIA-053-02	Emanuel	Nunez	NO					Ocopee River	Region III	Northwest District - Augusta
LIA-053-03	Emanuel	Oak Park	NO					Ocopee River	Region III	Northwest District - Augusta
LIA-053-04	Emanuel	Stillmore	NO					Ocopee River	Region III	Northwest District - Augusta
LIA-053-05	Emanuel	Summertown	NO					Ocopee River	Region III	Northwest District - Augusta
LIA-053-06	Emanuel	Swainsboro	NO					Ocopee River	Region III	Northwest District - Augusta
LIA-053-07	Emanuel	Twin City	NO					Ocopee River	Region III	Northwest District - Augusta
LIA-054-00	Evans		NO					Ocopee River	Region III	Coastal District - Brunswick
LIA-054-01	Evans	Bellville	NO					Ocopee River	Region III	Coastal District - Brunswick
LIA-054-02	Evans	Claxton	YES					Ocopee River	Region III	Coastal District - Brunswick
LIA-054-03	Evans	Daisy	NO					Ocopee River	Region III	Coastal District - Brunswick
LIA-054-04	Evans	Hagan	NO					Ocopee River	Region III	Coastal District - Brunswick
LIA-055-00	Fannin		YES					(706) 258-5170	Region I	Mountain District - Cartersville
LIA-055-01	Fannin	Blue Ridge	YES					(706) 632-2091	Region I	Mountain District - Cartersville
LIA-055-02	Fannin	McCaysville	NO					Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-055-03	Fannin	Mineral Bluff	NO					Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-055-04	Fannin	Morgantown	NO					Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-056-01	Fayette	Brooks	YES					(770) 305-5142	Region IV	Mountain District - Atlanta
LIA-056-02	Fayette	Fayetteville	YES					Towaliga	Region IV	Mountain District - Atlanta
LIA-056-03	Fayette	Peachtree City	YES					(770) 631-2538	Region IV	Mountain District - Atlanta
LIA-056-04	Fayette	Tyone	YES					(770) 467-4038	Region IV	Mountain District - Atlanta
LIA-056-05	Fayette	Woolsey	YES					(770) 305-5142	Region IV	Mountain District - Atlanta
LIA-057-00	Floyd		YES					(706) 236-4481	Region I	Mountain District - Cartersville
LIA-057-01	Floyd	Cave Spring	NO					Coosa River	Region I	Mountain District - Cartersville
LIA-057-02	Floyd	Rome	YES					Coosa River	Region I	Mountain District - Cartersville
LIA-058-00	Forsyth		YES					(770) 781-2165	Region II	Mountain District - Cartersville
LIA-058-01	Forsyth	Cumming	YES					Upper Chattahoochee River	Region II	Mountain District - Cartersville
LIA-059-00	Franklin		NO					(770) 781-2024	Region II	Mountain District - Cartersville
LIA-059-01	Franklin	Canon	NO					Broad River	Region II	Northwest District - Athens
LIA-059-02	Franklin	Cartersville	NO					Broad River	Region II	Northwest District - Athens
LIA-059-03	Franklin	Franklin Springs	NO					Broad River	Region II	Northwest District - Athens
LIA-059-04	Franklin	Lavonia	NO					Broad River	Region II	Northwest District - Athens
LIA-059-05	Franklin	Royston	NO					Broad River	Region II	Northwest District - Athens
LIA-060-00	Fulton		YES					(404) 612-7474	Region I	Mountain District - Atlanta
LIA-060-01	Fulton	Alpharetta	YES					Fulton County	Region I	Mountain District - Atlanta
LIA-060-02	Fulton	Atlanta	YES					(678) 297-6200	Region I	Mountain District - Atlanta
LIA-060-03	Fulton	College Park	YES					(404) 546-1306	Region I	Mountain District - Atlanta
LIA-060-04	Fulton	East Point	YES					(404) 669-3762	Region I	Mountain District - Atlanta
LIA-060-05	Fulton	Fairburn	YES					(404) 270-7023	Region I	Mountain District - Atlanta
LIA-060-06	Fulton	Hapeville	YES					(770) 683-4081	Region I	Mountain District - Atlanta
LIA-060-07	Fulton	Mountain Park	YES					(404) 669-2120	Region I	Mountain District - Atlanta
LIA-060-08	Fulton	Palmetto	YES					(770) 963-4231	Region I	Mountain District - Atlanta
LIA-060-09	Fulton	Roswell	YES					(770) 594-6196	Region I	Mountain District - Atlanta
LIA-060-10	Fulton	Sandy Springs	YES					(770) 730-5600	Region I	Mountain District - Atlanta
LIA-060-11	Fulton	Union City	YES					(770) 969-9266	Region I	Mountain District - Atlanta
LIA-060-12	Fulton	Johns Creek	YES					(678) 512-3284	Region I	Mountain District - Atlanta
LIA-060-13	Fulton	Milton	YES					(678) 242-2543	Region I	Mountain District - Atlanta
LIA-060-14	Fulton	Chattahoochee Hills	NO					Fulton County	Region I	Mountain District - Atlanta
LIA-061-00	Gilmer		YES					(706) 635-3406	Region I	Mountain District - Cartersville
LIA-061-01	Gilmer	East Ellijay	YES					(706) 276-3111	Region I	Mountain District - Cartersville
LIA-061-02	Gilmer	Ellijay	YES					(706) 635-4771	Region III	Mountain District - Cartersville
LIA-062-00	Glascock		YES					Brier Creek	Region III	Mountain District - Cartersville
LIA-062-01	Glascock	Edgehill	NO					Brier Creek	Region III	Mountain District - Cartersville
LIA-062-02	Glascock	Gibson	NO					Brier Creek	Region III	Mountain District - Cartersville
LIA-062-03	Glascock	Mitchell	NO					Brier Creek	Region III	Mountain District - Cartersville







LIA-109-00	Oglethorpe	NO				Broad River	Region II	Northeast District - Athens
LIA-109-01	Oglethorpe	NO	Arnoldsville			Broad River	Region II	Northeast District - Athens
LIA-109-02	Oglethorpe	NO	Crawford			Broad River	Region II	Northeast District - Athens
LIA-109-03	Oglethorpe	NO	Lexington			Broad River	Region II	Northeast District - Athens
LIA-109-04	Oglethorpe	NO	Mazeys			Broad River	Region II	Northeast District - Athens
LIA-110-00	Pauding	YES				Cosco River	Region I	Mountain District - Cartersville
LIA-110-01	Pauding	NO	Braswell			Cosco River	Region I	Mountain District - Cartersville
LIA-110-02	Pauding	NO	Dallas			Cosco River	Region I	Mountain District - Cartersville
LIA-110-03	Pauding	NO	Hiram			Cosco River	Region I	Mountain District - Cartersville
LIA-111-00	Peach	YES				Ocmulgee River	Region V	West Central District - Macon
LIA-111-01	Peach	YES	Byron			Ocmulgee River	Region V	West Central District - Macon
LIA-111-02	Peach	NO	Fl Valley			Ocmulgee River	Region V	West Central District - Macon
LIA-112-00	Pickens	YES		Rodney Buckingham, Land Development		(706) 253-8850	Region I	Mountain District - Cartersville
LIA-112-01	Pickens	YES	Jasper	Michael Castagna, Planning and Development	<a href="mailto:mcastagna@jasper-ga.us">mcastagna@jasper-ga.us</a>	(706) 692-9100	Region I	Mountain District - Cartersville
LIA-112-02	Pickens	YES	Nelson			Limestone Valley	Region I	Mountain District - Cartersville
LIA-112-03	Pickens	NO	Talking Rock			Limestone Valley	Region I	Mountain District - Cartersville
LIA-113-00	Pierce	YES				Satilla River	Region III	Coastal District - Brunswick
LIA-113-01	Pierce	YES	Blackshear			Satilla River	Region III	Coastal District - Brunswick
LIA-113-02	Pierce	YES	Patterson			Satilla River	Region III	Coastal District - Brunswick
LIA-114-00	Pike	YES		K. Morris, Planning and Development	<a href="mailto:kmorris_pikeco@bellsouth.net">kmorris_pikeco@bellsouth.net</a>	(770) 567-2007	Region IV	West Central District - Macon
LIA-114-01	Pike	NO	Concord			Towaliga	Region IV	West Central District - Macon
LIA-114-02	Pike	NO	Meansville			Towaliga	Region IV	West Central District - Macon
LIA-114-03	Pike	NO	Molena			Towaliga	Region IV	West Central District - Macon
LIA-114-04	Pike	NO	Williamson			Towaliga	Region IV	West Central District - Macon
LIA-114-05	Pike	NO	Zebulon			Towaliga	Region IV	West Central District - Macon
LIA-115-00	Polk	NO				Cosco River	Region I	Mountain District - Cartersville
LIA-115-01	Polk	NO	Aragon			Cosco River	Region I	Mountain District - Cartersville
LIA-115-02	Polk	YES	Cedarrown	Bill Ferrell, Building Inspection	<a href="mailto:bferrell@cedarrowngeorgia.gov">bferrell@cedarrowngeorgia.gov</a>	(770) 748-3220	Region I	Mountain District - Cartersville
LIA-115-03	Polk	YES	Rockmart	Stacey Smith, Community Development	<a href="mailto:stacey.smith@rockmart-ga.gov">stacey.smith@rockmart-ga.gov</a>	(770) 684-5454	Region I	Mountain District - Cartersville
LIA-116-00	Pulaski	YES		Alan (Keith) Carter, Code Enforcement	<a href="mailto:kcarter@pulaskico.com">kcarter@pulaskico.com</a>	(478) 783-1418	Region V	West Central District - Macon
LIA-116-01	Pulaski	YES	Hawkinsville	Alan (Keith) Carter, Code Enforcement	<a href="mailto:kcarter@pulaskico.com">kcarter@pulaskico.com</a>	(478) 783-1418	Region V	West Central District - Macon
LIA-117-00	Punam	YES		David (Glynn) Leverett, Code Enforcement	<a href="mailto:dleverett@punamga.com">dleverett@punamga.com</a>	(706) 485-2776	Region IV	Northeast District - Athens
LIA-117-01	Punam	YES	Eatonton	David (Glynn) Leverett, Code Enforcement	<a href="mailto:dleverett@punamga.com">dleverett@punamga.com</a>	(706) 485-2776	Region IV	Northeast District - Athens
LIA-118-00	Quitman	NO				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-118-01	Quitman	NO	Georgetown			Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-119-00	Rabun	YES		James (Les) Neely, Planning Administrator	<a href="mailto:jneely@rabuncountyga.gov">jneely@rabuncountyga.gov</a>	(706) 782-1579	Region I	Mountain District - Cartersville
LIA-119-01	Rabun	YES	Clayton	Scott Crane, Code Enforcement	<a href="mailto:scottcrane@vahoo.com">scottcrane@vahoo.com</a>	(706) 490-1352	Region I	Mountain District - Cartersville
LIA-119-02	Rabun	NO	Dillard			Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-119-03	Rabun	NO	Mountain City			Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-119-04	Rabun	YES	Sky Valley	Keith Krieger, City Building Inspector	<a href="mailto:skvalleycode@windstream.net">skvalleycode@windstream.net</a>	(706) 746-2204	Region I	Mountain District - Cartersville
LIA-119-05	Rabun	YES	Tiger			Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-120-00	Randolph	NO				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-120-01	Randolph	NO	Coleman			Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-120-02	Randolph	NO	Guthbert			Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-120-03	Randolph	NO	Shelman			Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-121-00	Richmond	YES		Hameed Malik, Augusta Engineering Dept	<a href="mailto:hmalik@augustaga.gov">hmalik@augustaga.gov</a>	(706) 796-5068	Region III	Northeast District - Augusta
LIA-121-01	Richmond	YES	Augusta	Hameed Malik, Augusta Engineering Dept	<a href="mailto:hmalik@augustaga.gov">hmalik@augustaga.gov</a>	(706) 796-5068	Region III	Northeast District - Augusta
LIA-121-02	Richmond	NO	Blythe			Brier Creek	Region III	Northeast District - Augusta
LIA-121-03	Richmond	NO	Hephzibah			Brier Creek	Region III	Northeast District - Augusta
LIA-122-00	Rockdale	YES		Orlando Robinson, Erosion Control Specialist	<a href="mailto:orlando.robinson@rockdalecounty.org">orlando.robinson@rockdalecounty.org</a>	(770) 278-7108	Region IV	Mountain District - Atlanta
LIA-122-01	Rockdale	YES	Conyers	Steven Owens, Chief Building Inspector		(770) 929-4280	Region IV	Mountain District - Atlanta
LIA-123-00	Schley	NO				Lower Chattahoochee River	Region V	West Central District - Macon
LIA-123-01	Schley	NO	Ellaville			Lower Chattahoochee River	Region V	West Central District - Macon
LIA-124-00	Screven	YES				Ogeechee River	Region III	Northeast District - Augusta
LIA-124-01	Screven	NO	Hiltonia			Ogeechee River	Region III	Northeast District - Augusta
LIA-124-02	Screven	NO	Newington			Ogeechee River	Region III	Northeast District - Augusta
LIA-124-03	Screven	NO	Oliver			Ogeechee River	Region III	Northeast District - Augusta
LIA-124-04	Screven	NO	Rocky Ford			Ogeechee River	Region III	Northeast District - Augusta
LIA-124-05	Screven	NO	Sylvania			Ogeechee River	Region III	Northeast District - Augusta
LIA-125-00	Seminole	YES		Stacy Mathis, Interim City Manager	<a href="mailto:djones33845@vahoo.com">djones33845@vahoo.com</a>	(912) 564-2121	Region V	Southwest District - Albany
LIA-125-01	Seminole	NO	Donalsonville	Donna Jones, County Manager		(229) 524-2878	Region V	Southwest District - Albany
LIA-125-02	Seminole	NO	Iron City			Flint River	Region V	Southwest District - Albany
LIA-126-00	Spalding	YES				Towaliga	Region IV	Mountain District - Atlanta
LIA-126-01	Spalding	YES	Griffin			Towaliga	Region IV	Mountain District - Atlanta
LIA-126-02	Spalding	NO	Orchard Hill			Towaliga	Region IV	Mountain District - Atlanta
LIA-126-03	Spalding	NO	Sunny Side			Towaliga	Region IV	Mountain District - Atlanta
LIA-127-00	Stephens	NO				Stephens County	Region II	Northeast District - Athens
LIA-127-01	Stephens	NO	Avalon			Stephens County	Region II	Northeast District - Athens
LIA-127-02	Stephens	NO	Martin			Stephens County	Region II	Northeast District - Athens
LIA-127-03	Stephens	YES	Toccoa			Stephens County	Region II	Northeast District - Athens

LIA-128-00	Stewart	YES					Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-128-01	Stewart	NO	Lumpkin				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-128-02	Stewart	NO	Richland				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-129-00	Sumter	YES		Michael Sudduth, Code Enforcement	<a href="mailto:msudduth@sumtercountyga.us">msudduth@sumtercountyga.us</a>	(229) 928-4547	Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-129-01	Sumter	YES	Americus	Josh Roth, Building Official	<a href="mailto:pubwrks@cityofamericus.net">pubwrks@cityofamericus.net</a>	(229) 924-4411	Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-129-02	Sumter	NO	Andersonville				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-129-03	Sumter	NO	DeSoto				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-129-04	Sumter	NO	Leslie				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-129-05	Sumter	YES	Plains	Michael Sudduth, Code Enforcement	<a href="mailto:msudduth@sumtercountyga.us">msudduth@sumtercountyga.us</a>	(229) 928-4547	Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-130-00	Talbot	NO	Geneva				Pine Mountain	Region V	West Central District - Macon
LIA-130-01	Talbot	NO	Junction City				Pine Mountain	Region V	West Central District - Macon
LIA-130-02	Talbot	NO	Talbot				Pine Mountain	Region V	West Central District - Macon
LIA-131-00	Taliaferro	NO	Talbot				Piedmont	Region IV	Northwest District - Athens
LIA-131-01	Taliaferro	NO	Crawfordville				Piedmont	Region IV	Northwest District - Athens
LIA-131-02	Taliaferro	NO	Sharon				Piedmont	Region IV	Northwest District - Athens
LIA-132-00	Tattall	NO	Cobbtown				Ogeechee River	Region III	Coastal District - Brunswick
LIA-132-01	Tattall	NO	Collins				Ogeechee River	Region III	Coastal District - Brunswick
LIA-132-02	Tattall	NO	Glennville	Willie Bland, Code Enforcement		(912) 654-2461	Ogeechee River	Region III	Coastal District - Brunswick
LIA-132-03	Tattall	YES	Manassas				Ogeechee River	Region III	Coastal District - Brunswick
LIA-132-04	Tattall	NO	Reidsville				Ogeechee River	Region III	Coastal District - Brunswick
LIA-133-00	Taylor	NO	Butler				Ocmulgee River	Region V	West Central District - Macon
LIA-133-01	Taylor	NO	Reynolds	Charles White, Public Works Director		(229) 868-5688	Ocmulgee River	Region V	West Central District - Macon
LIA-133-02	Taylor	YES	Helena				Alamaha	Region III	Southwest District - Albany
LIA-134-00	Telfair	NO	Jacksonville				Alamaha	Region III	Southwest District - Albany
LIA-134-01	Telfair	NO	Lumber City				Alamaha	Region III	Southwest District - Albany
LIA-134-02	Telfair	NO	McRae	Anthony (Andy) Dykes, Public Works Director		(229) 868-6126	Alamaha	Region III	Southwest District - Albany
LIA-134-03	Telfair	YES	Milan				Alamaha	Region III	Southwest District - Albany
LIA-134-04	Telfair	NO	Scotland				Alamaha	Region III	Southwest District - Albany
LIA-134-05	Telfair	NO	Bronwood	Martha Ann Coo		(229) 995-4476	Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-135-01	Terrill	NO	Dawson				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-135-02	Terrill	NO	Parrot				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-135-03	Terrill	NO	Sasser				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-135-04	Terrill	NO	Barwick				Middle South Georgia	Region V	Southwest District - Albany
LIA-136-01	Thomas	NO	Boston				Middle South Georgia	Region V	Southwest District - Albany
LIA-136-02	Thomas	NO	Coolidge				Middle South Georgia	Region V	Southwest District - Albany
LIA-136-03	Thomas	NO	Meigs				Middle South Georgia	Region V	Southwest District - Albany
LIA-136-04	Thomas	NO	Ochlocknee				Middle South Georgia	Region V	Southwest District - Albany
LIA-136-05	Thomas	NO	Pavo				Middle South Georgia	Region V	Southwest District - Albany
LIA-136-06	Thomas	NO	Thomasville	James Petrak, City Engineer		(229) 227-7000	Middle South Georgia	Region V	Southwest District - Albany
LIA-137-00	Tift	YES	Omega	Carl Forston, Tift County Development Services	<a href="mailto:carl.forston@tiftcounty.org">carl.forston@tiftcounty.org</a>	(229) 386-7961	Middle South Georgia	Region V	Southwest District - Albany
LIA-137-01	Tift	YES	Tifton	Carl Forston, Tift County Development Services	<a href="mailto:carl.forston@tiftcounty.org">carl.forston@tiftcounty.org</a>	(229) 386-7961	Middle South Georgia	Region V	Southwest District - Albany
LIA-137-02	Tift	YES	TyTy	Bert Crowe, Environmental Management	<a href="mailto:bcrowe@tifton.net">bcrowe@tifton.net</a>	(229) 391-3950	Middle South Georgia	Region V	Southwest District - Albany
LIA-137-03	Tift	NO	TyTy	Carl Forston, Tift County Development Services	<a href="mailto:carl.forston@tiftcounty.org">carl.forston@tiftcounty.org</a>	(229) 386-7961	Middle South Georgia	Region V	Southwest District - Albany
LIA-138-00	Toombs	YES	Lyons	John Jones, County Manager		(912) 526-3311	Oocopee River	Region III	Coastal District - Brunswick
LIA-138-01	Toombs	NO	Santa Claus				Oocopee River	Region III	Coastal District - Brunswick
LIA-138-02	Toombs	YES	Vidalia	Shaun Oliver, Code Enforcement		(912) 526-7661	Oocopee River	Region III	Coastal District - Brunswick
LIA-139-00	Towns	NO	Hiwassee				Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-139-01	Towns	YES	Young Harris	Gary Willer, Hayes / James	<a href="mailto:info@hayesjames.com">info@hayesjames.com</a>	(706) 632-4981	Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-140-00	Treutlen	NO	Soperton				Oocopee River	Region III	Northwest District - Augusta
LIA-141-00	Troup	YES	Hogansville				Roosevelt	Region I	West Central District - Macon
LIA-141-01	Troup	YES	LaGrange	Scott Harris, Farmer Bailey and Associates	<a href="mailto:sharris@farmerbailey.com">sharris@farmerbailey.com</a>	(706) 645-5885	Roosevelt	Region I	West Central District - Macon
LIA-141-02	Troup	YES	Westpoint	Horner Samuels, Senior Building Inspector	<a href="mailto:hsamuels@lagrange-ga.org">hsamuels@lagrange-ga.org</a>	(706) 883-2059	Roosevelt	Region I	West Central District - Macon
LIA-142-00	Turner	NO	Ashburn	Matthew (Matt) Livingston, Building Inspector	<a href="mailto:MLivingston@CityOfWestPointGA.com">MLivingston@CityOfWestPointGA.com</a>	(706) 645-3537	Roosevelt	Region I	West Central District - Macon
LIA-142-01	Turner	YES	Rebecca	Mary Wynn, County Clerk		(229) 567-4313	Middle South Georgia	Region V	Southwest District - Albany
LIA-142-02	Turner	NO	Sycamore	Ben Taylor, City Manager		(229) 567-9431	Middle South Georgia	Region V	Southwest District - Albany
LIA-143-00	Twiggs	NO	Danville				Middle South Georgia	Region V	Southwest District - Albany
LIA-143-01	Twiggs	NO	Jeffersonville				Central Georgia	Region IV	West Central District - Macon
LIA-143-02	Twiggs	NO					Central Georgia	Region IV	West Central District - Macon
LIA-144-00	Union	YES		Randy Day, Supervisor	<a href="mailto:rday@uniohio.gov">rday@uniohio.gov</a>	(706) 439-6039	Blue Ridge Mountain	Region I	Mountain District - Cartersville

LIA-144-01	Union	Blairsville	YES	Randy Day, Supervisor	<a href="mailto:uppermt@uniongov.com">uppermt@uniongov.com</a>	(706) 439-6039	Blue Ridge Mountain	Region I	Mountain District - Cartersville
LIA-145-00	Upson	Blairsville	YES				Towaliga	Region IV	West Central District - Macon
LIA-145-01	Upson	Thomasston	YES				Towaliga	Region IV	West Central District - Macon
LIA-145-02	Upson	Yatesville	NO				Towaliga	Region IV	West Central District - Macon
LIA-146-00	Walker	Chickamauga	YES	Wayland Butler	<a href="mailto:planning@walkerpa.us">planning@walkerpa.us</a>	(706) 638-4048	Coosa River	Region I	Mountain District - Cartersville
LIA-146-01	Walker	Lafayette	NO	James Powell, Zoning Administrator	<a href="mailto:jpowell-zoning@comcast.net">jpowell-zoning@comcast.net</a>	(706) 375-3177	Coosa River	Region I	Mountain District - Cartersville
LIA-146-02	Walker	Lookout Mountain	NO				Coosa River	Region I	Mountain District - Cartersville
LIA-146-03	Walker	Rossville	NO				Coosa River	Region I	Mountain District - Cartersville
LIA-147-00	Walton	Between	YES	Sherry Foster, City Clerk	<a href="mailto:sfoster@rossvillega.com">sfoster@rossvillega.com</a>	(706) 866-1325	Walton County	Region IV	Northeast District - Athens
LIA-147-02	Walton	Good Hope	YES				Walton County	Region IV	Northeast District - Athens
LIA-147-03	Walton	Jersey	NO				Walton County	Region IV	Northeast District - Athens
LIA-147-04	Walton	Logansville	YES				Walton County	Region IV	Northeast District - Athens
LIA-147-05	Walton	Monroe	YES				Walton County	Region IV	Northeast District - Athens
LIA-147-06	Walton	Social Circle	NO				Walton County	Region IV	Northeast District - Athens
LIA-147-07	Walton	Wainur Grove	YES				Walton County	Region IV	Northeast District - Athens
LIA-148-00	Ware	Waycross	YES	Wayne Kilmark, Planning and Code Director		(912) 287-4379	Satilla River	Region III	Coastal District - Brunswick
LIA-148-01	Ware	Waycross	YES	Gene Thomas, Engineering Department	<a href="mailto:gthomas@waycrossga.com">gthomas@waycrossga.com</a>	(912) 287-2945	Satilla River	Region III	Coastal District - Brunswick
LIA-148-02	Warren	Camak	NO				Warren County	Region IV	Northeast District - Augusta
LIA-148-03	Warren	Norwood	NO				Warren County	Region IV	Northeast District - Augusta
LIA-148-04	Warren	Warrenton	YES				Warren County	Region IV	Northeast District - Augusta
LIA-149-00	Washington	Davisboro	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-150-01	Washington	Deepstep	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-150-02	Washington	Harrison	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-150-03	Washington	Harrison	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-150-04	Washington	Connee	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-150-05	Washington	Ridgely	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-150-06	Washington	Sandersville	YES	Chad Forehand, Building Official	<a href="mailto:cforehand@sandersville.net">cforehand@sandersville.net</a>	(478) 552-2525	Central Georgia	Region IV	Northeast District - Augusta
LIA-150-07	Washington	Tennille	YES				Central Georgia	Region IV	Northeast District - Augusta
LIA-151-00	Wayne	Jesup	NO				Satilla River	Region III	Coastal District - Brunswick
LIA-151-01	Wayne	Odum	NO				Satilla River	Region III	Coastal District - Brunswick
LIA-151-02	Wayne	Odum	NO				Satilla River	Region III	Coastal District - Brunswick
LIA-151-03	Wayne	Screven	NO				Satilla River	Region III	Coastal District - Brunswick
LIA-152-00	Webster	Preston	NO				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-152-01	Webster	Preston	NO				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-152-02	Webster	Webster	NO				Lower Chattahoochee River	Region V	Southwest District - Albany
LIA-153-00	Wheeler	Alamo	NO				Oochopee River	Region III	Northeast District - Augusta
LIA-153-01	Wheeler	Alamo	NO				Oochopee River	Region III	Northeast District - Augusta
LIA-153-02	Wheeler	Glenwood	NO				Oochopee River	Region III	Northeast District - Augusta
LIA-154-00	White	Cleveland	YES	Harry Barton	<a href="mailto:hbarton@whitecountyny.net">hbarton@whitecountyny.net</a>	(706) 865-6768	Upper Chattahoochee River	Region II	Mountain District - Cartersville
LIA-154-01	White	Cleveland	YES	Connie Tracas		(706) 865-2017	Upper Chattahoochee River	Region II	Mountain District - Cartersville
LIA-154-02	White	Helen	NO				Upper Chattahoochee River	Region II	Mountain District - Cartersville
LIA-155-00	Whitfield	Cohutta	YES	Christopher Hester, Inspections	<a href="mailto:chester@whitfieldcounty.ga.com">chester@whitfieldcounty.ga.com</a>	(706) 876-2512	Limestone Valley	Region I	Mountain District - Cartersville
LIA-155-01	Whitfield	Cohutta	NO				Limestone Valley	Region I	Mountain District - Cartersville
LIA-155-02	Whitfield	Dalton	YES	Dena Haverland, Regulatory Compliance	<a href="mailto:dhaverland@dall.com">dhaverland@dall.com</a>	(706) 529-1010	Limestone Valley	Region I	Mountain District - Cartersville
LIA-155-03	Whitfield	Tunnel Hill	YES	Blake Griffin, City Administrator		(706) 673-2365	Limestone Valley	Region I	Mountain District - Cartersville
LIA-155-04	Whitfield	Varnell	YES	Jason Hall, City Administrator	<a href="mailto:jhall@cityofvarnell.com">jhall@cityofvarnell.com</a>	(706) 694-8800	Limestone Valley	Region I	Mountain District - Cartersville
LIA-156-00	Wilcox	Abbeville	NO				Ocmulgee River	Region V	Southwest District - Albany
LIA-156-01	Wilcox	Abbeville	NO				Ocmulgee River	Region V	Southwest District - Albany
LIA-156-02	Wilcox	Pineview	NO				Ocmulgee River	Region V	Southwest District - Albany
LIA-156-03	Wilcox	Pitts	NO				Ocmulgee River	Region V	Southwest District - Albany
LIA-156-04	Wilcox	Rochelle	NO				Ocmulgee River	Region V	Southwest District - Albany
LIA-157-00	Wilkes	Rayle	YES	David Tyler, County Administrator	<a href="mailto:wilkescountyadm@yahoo.com">wilkescountyadm@yahoo.com</a>	(706) 678-2511	Broad River	Region II	Northeast District - Athens
LIA-157-01	Wilkes	Rayle	NO				Broad River	Region II	Northeast District - Athens
LIA-157-02	Wilkes	Tignall	NO				Broad River	Region II	Northeast District - Athens
LIA-157-03	Wilkes	Washington	YES	David VanHart, Building Official	<a href="mailto:buildingoff@washingtonwilkes.org">buildingoff@washingtonwilkes.org</a>	(706) 678-3277	Broad River	Region II	Northeast District - Athens
LIA-158-00	Wilkinson	Allentown	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-158-01	Wilkinson	Gordon	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-158-02	Wilkinson	Inwinton	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-158-03	Wilkinson	Inwinton	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-158-04	Wilkinson	Ivey	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-158-05	Wilkinson	McIntyre	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-158-06	Wilkinson	Toombsboro	NO				Central Georgia	Region IV	Northeast District - Augusta
LIA-159-00	Worth	Poulan	NO				Middle South Georgia	Region V	Southwest District - Albany
LIA-159-01	Worth	Sumner	NO				Middle South Georgia	Region V	Southwest District - Albany
LIA-159-02	Worth	Sylverster	YES	Angel Gray, Code Enforcement	<a href="mailto:ag903@cityofsylvesterga.com">ag903@cityofsylvesterga.com</a>	(229) 776-8505	Middle South Georgia	Region V	Southwest District - Albany
LIA-159-03	Worth	Sylverster	YES				Middle South Georgia	Region V	Southwest District - Albany
LIA-159-04	Worth	Warwick	NO				Middle South Georgia	Region V	Southwest District - Albany

## Local Issuing Authority

Rows

Is Moa? = 'Yes'

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	<u>LIA</u>	<u>Is Moa?</u>	<u>Is Active?</u>	<u>County</u>	<u>Swcd</u>	<u>Region</u>
	Acworth	Yes	Yes	Cobb	Cobb County	Region 1
	Albany	Yes	Yes	Dougherty	Flint River	Region 5
	Alpharetta	Yes	Yes	Fulton	Fulton County	Region 1
	Athens-Clarke County	Yes	Yes	Clarke	Oconee River	Region 2
	Atlanta	Yes	Yes	Fulton	Fulton County	Region 1
	Augusta-Richmond County	Yes	Yes	Richmond	Brier Creek	Region 3
	Bibb County	Yes	Yes	Bibb	Ocmulgee River	Region 5
	Buford	Yes	Yes	Gwinnett	Gwinnett County	Region 2
	Carroll County	Yes	Yes	Carroll	West Georgia	Region 1
	Cartersville	Yes	Yes	Bartow	Coosa River	Region 1
	Charlton County	Yes	Yes	Charlton	Satilla River	Region 3
	Clayton County	Yes	Yes	Clayton	Clayton County	Region 4
	Cobb County	Yes	Yes	Cobb	Cobb County	Region 1
	Columbia County	Yes	Yes	Columbia	Columbia County	Region 2
	Columbus-Muscogee County	Yes	Yes	Muscogee	Pine Mountain	Region 5
	Conyers	Yes	Yes	Rockdale	Rockdale County	Region 4
	Covington	Yes	Yes	Newton	Upper Ocmulgee River	Region 4
	Coweta County	Yes	Yes	Coweta	West Georgia	Region 1
	Dalton	Yes	Yes	Whitfield	Limestone Valley	Region 1

	Dekalb County	Yes	Yes	DeKalb	Dekalb County	Region 2
	Dougherty County	Yes	Yes	Dougherty	Flint River	Region 5
	Douglas County	Yes	Yes	Douglas	West Georgia	Region 1
	Douglasville	Yes	Yes	Douglas	West Georgia	Region 1
	Duluth	Yes	Yes	Gwinnett	Gwinnett County	Region 2
	Fairburn	Yes	Yes	Fulton	Fulton County	Region 1
	Fayette County	Yes	Yes	Fayette	Towaliga	Region 4
	Fayetteville	Yes	Yes	Fayette	Towaliga	Region 4
	Floyd County	Yes	Yes	Floyd	Coosa River	Region 1
	Forest Park	Yes	Yes	Clayton	Clayton County	Region 4
	Griffin	Yes	Yes	Spalding	Towaliga	Region 4
	Gwinnett County	Yes	Yes	Gwinnett	Gwinnett County	Region 2
	Henry County	Yes	Yes	Henry	Henry County	Region 4
	Holly Springs	Yes	Yes	Cherokee	Limestone Valley	Region 1
	Houston County	Yes	Yes	Houston	Ocmulgee River	Region 5
	Johns Creek	Yes	Yes	Fulton	Fulton County	Region 1
	Jonesboro	Yes	Yes	Clayton	Clayton County	Region 4
	Kennesaw	Yes	Yes	Cobb	Cobb County	Region 1
	LaGrange	Yes	Yes	Troup	Roosevelt	Region 1
	Lilburn	Yes	Yes	Gwinnett	Gwinnett County	Region 2
	Lowndes County	Yes	Yes	Lowndes	Alapaha	Region 5
	Macon	Yes	Yes	Bibb	Ocmulgee River	Region 5
	McDonough	Yes	Yes	Henry	Henry County	Region 4
	Milton	Yes	Yes	Fulton	Fulton County	Region 1
	Newnan	Yes	Yes	Coweta	West Georgia	Region 1
	Peachtree City	Yes	Yes	Fayette	Towaliga	Region 4

	Peachtree Corners	Yes	Yes	Gwinnett	Gwinnett County	Region 2
	Pine Lake	Yes	Yes	DeKalb	Dekalb County	Region 2
	Rockdale County	Yes	Yes	Rockdale	Rockdale County	Region 4
	Rome	Yes	Yes	Floyd	Coosa River	Region 1
	Roswell	Yes	Yes	Fulton	Fulton County	Region 1
	Sandy Springs	Yes	Yes	Fulton	Fulton County	Region 1
	Smyrna	Yes	Yes	Cobb	Cobb County	Region 1
	Snellville	Yes	Yes	Gwinnett	Gwinnett County	Region 2
	Stockbridge	Yes	Yes	Henry	Henry County	Region 4
	Troup County	Yes	Yes	Troup	Roosevelt	Region 1
	Tunnel Hill	Yes	Yes	Whitfield	Limestone Valley	Region 1
	Tyrone	Yes	Yes	Fayette	Towaliga	Region 4
	Valdosta	Yes	Yes	Lowndes	Alapaha	Region 5
	Varnell	Yes	Yes	Whitfield	Limestone Valley	Region 1
	Warner Robins	Yes	Yes	Houston	Ocmulgee River	Region 5
	Waycross	Yes	Yes	Ware	Satilla River	Region 3
	Whitfield County	Yes	Yes	Whitfield	Limestone Valley	Region 1
	Woodstock	Yes	Yes	Cherokee	Limestone Valley	Region 1

