

Level 1B: Advanced Fundamentals

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: Advanced Fundamentals

Day 1

7:30 a.m. Registration & Program
Introduction

8:00 a.m. Basics of Erosion &
Sedimentation

8:30 a.m. The Georgia Erosion &
Sedimentation Act

9:30 a.m. Break

9:45 a.m. State Waters

10:45 a.m. NPDES Permit Requirements

12:00 p.m. Lunch

1:00 p.m. Local Program: Processes &
Principles

2:15 p.m. Break

2:30 p.m. Stormwater Management

3:30 p.m. Q&A

4:30 p.m. Adjourn

Day 2

8:00 a.m. Role of the Inspector

9:00 a.m. Agency Roles

9:30 a.m. Break

9:45 a.m. Structural Measures

12:00 p.m. Lunch

1:00 p.m. Vegetative Measures

2:30 p.m. Q&A

3:00 p.m. Break

3:15 p.m. Exam Procedures

3:30 p.m. Exam

4:30 p.m. Adjourn

Checking My Exam Score

- If you receive a score of 70% or greater, you will receive your certification card in the mail within 60 days
- You may check your score on the Georgia Soil & Water Conservation Commission website: www.gaswcc.georgia.gov. Please allow time for exams to be scored
- Scores will be posted according to the ID Number you created, your DOB and Last 4 digits of your Social Security # (MMDDYY####)
- If you do not receive communication regarding your certification in 60 days, please contact the:

Education & Certification Program

4310 Lexington Road

Athens, GA 30605


(706) 552-4474

Email: certification@gaswcc.ga.gov

Insert Tab 1


Basics of Erosion & Sedimentation

Back of Tab



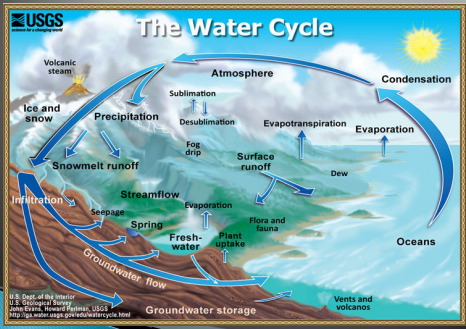
BASICS OF EROSION & SEDIMENTATION

Level 1B: Advanced Fundamentals
Effective August 2018



1

Hydrologic Cycle

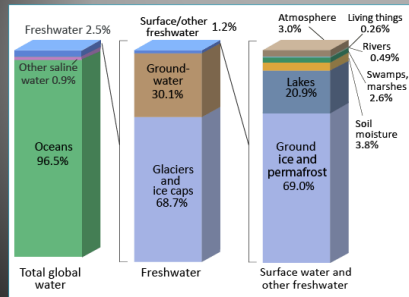


The diagram illustrates the hydrologic cycle with various processes:

- Atmosphere:** Sublimation, Desublimation, Evapotranspiration, Evaporation, Condensation, Dew.
- Surface:** Precipitation (Ice and snow, Snowmelt runoff), Surface runoff, Streamflow, Fog drip.
- Groundwater:** Infiltration, Seepage, Groundwater flow, Groundwater storage, Spring, Fresh-water.
- Other:** Volcanic steam, Plants and fauna, Plant uptake, Flora and fauna, Oceans, Vents and volcanoes.

2

Where is Earth's Water?



Category	Sub-category	Percentage
Total global water	Oceans	96.5%
	Other saline water	0.5%
Freshwater	Glaciers and ice caps	68.7%
	Ground-water	30.1%
Surface water and other freshwater	Ground ice and permafrost	69.0%
	Lakes	20.9%
	Atmosphere	3.0%
	Soil moisture	3.8%
	Swamps, marshes	2.6%
	Rivers	0.49%
Living things	0.26%	

Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*.
NOTE: Numbers are rounded, so percent summations may not add to 100.

3

Water Quality

- ▶ Sediment is the #1 non-point source pollutant



4

EROSION

- » Definition
- Types
- Factors

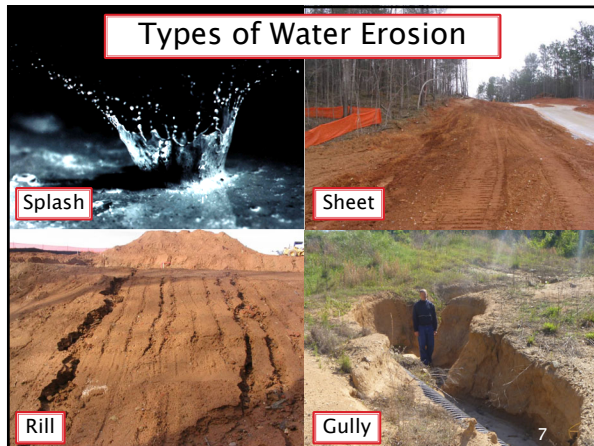
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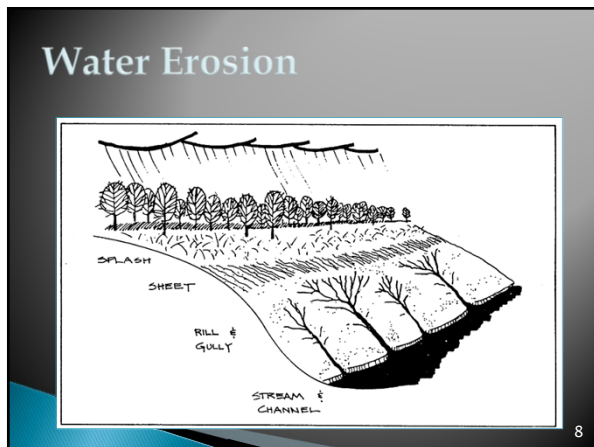
Definition

- ▶ The process by which the land surface is worn away by the action of water, wind, ice and gravity



6





Natural (Geologic) Erosion

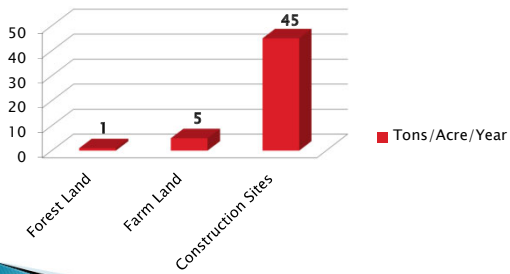
- ▶ Definition
 - Erosion without the interference of human activity that has been occurring since the earth was formed
- ▶ Except in some cases of shore and stream channel erosion, the rate is very slow and uniform

Accelerated Erosion

- ▶ Definition
 - Alteration of the land surface intensified by human activities (i.e. Farming & Construction)



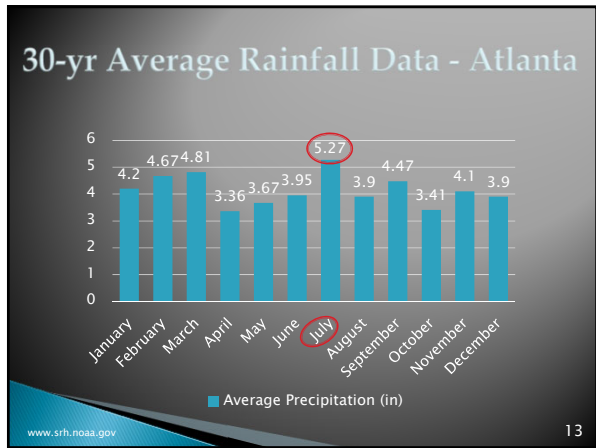
Expected Erosion Rates



Factors Influencing Erosion

- ▶ Climate
 - The frequency, intensity and duration of rainfall and temperature extremes are principle factors influencing the volume of runoff
- ▶ Topography
 - The size, shape, and slope characteristics of a watershed influence the amount and duration of runoff

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Gradient

- Definition
 - The number of horizontal units per vertical units (i.e. 4:1 or 25%)

The greater the slope length and gradient = the greater the potential for runoff and erosion

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Factors Influencing Erosion

- Soils
 - The soil type will determine its vulnerability to erosion

Most Erodible

Tifton

Sand

→

Least Erodible

Cecil

Clay

15

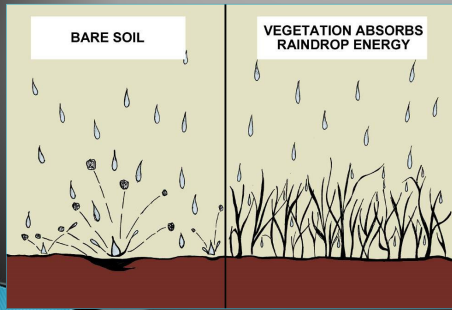
Factors Influencing Erosion

- ▶ Vegetative Cover
 - Extremely important factor in reducing erosion
 - It will:
 - Absorb energy of rain drops
 - Bind soil particles
 - Slow velocity of runoff
 - Increase ability to absorb water
 - Remove subsurface water between rainfalls



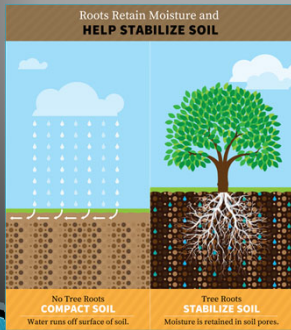
16

Absorb Energy of Rain Drops



17

Bind Soil Particles



18

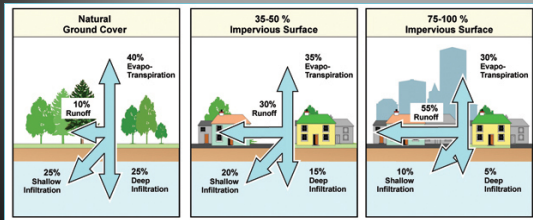
Slow Velocity of Runoff

Slows the flow of water, reducing erosion, & trapping sediment



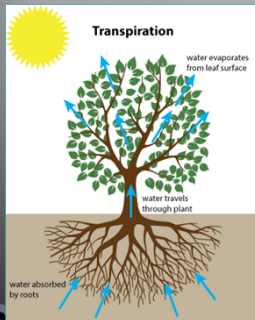
19

Increase Absorption



20

Remove Subsurface Water



21


SEDIMENTATION

- » Definition
- » Process
- » Everyday Impacts

22

Definition


» The process by which the eroded material is transported and deposited by water, wind, ice and gravity



23

3 Step Process

Detachment Transport Deposition



24

Sediment Transport

VIDEO
hover cursor over slide to activate control bar at bottom



25

Everyday Impacts of Sedimentation

- ▶ Increased likelihood of flooding
- ▶ Loss of soil productivity
- ▶ Decreased recreational value
- ▶ Deterioration of water quality
- ▶ Increase costs and maintenance
- ▶ Impacts to wildlife and habitat

26

Increased Likelihood of Flooding



27

Loss of Soil Productivity



28

Decreased Recreational Value

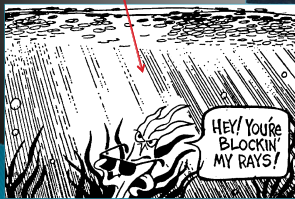


Potential impacts to revenue in the State

29

Decreased Recreational Value

Suspended sediment can block sunlight and result in a decline in plant growth



30

Deterioration of Water Quality



31

Deterioration of Water Quality



32

Increased Costs & Maintenance



As structures begin to fill with sediment, the flood control storage volume decreases



33

Impacts to Wildlife & Habitat

Decreased oxygen levels

Aquatic plant changes

Loss of habitat

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Summary

- ▶ Erosion & Sedimentation are natural processes that can be accelerated by human activities
- ▶ Erosion = Detachment
- ▶ Sedimentation = Deposition
- ▶ If accelerated erosion and sedimentation is not controlled properly on land disturbance sites, everyday resources will be impacted and costs will increase

35

Questions?

» GSWCC
 Urban Program
 4310 Lexington Road
 Athens, GA 30605
 (706) 552-4474

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Insert Tab 2

GESA

Back of Tab



THE GEORGIA EROSION & SEDIMENTATION ACT OF 1975

O.C.G.A. Title 12 Chapter 7

Level 1B: Advanced Fundamentals
Effective August 2018



1

Overview

- » Key Definitions – Slide 7
- » LIA Requirements – Slide 13
- » Permitting Process – Slide 19
- » Enforcement – Slide 25
- » Exemptions – Slide 33
- » Education & Training – Slide 46

2

Key Points

- ▶ Erosion in Georgia is the result of several activities including construction, agriculture, forestry, etc.... that convert land from one use to another
- ▶ Land disturbing activities are governed on the federal, state, and local level
- ▶ GESA is the State Law that may be incorporated into a local ordinance and enforced by a county or municipality
- ▶ Sometimes referred to as the "E&S Act"

3

History of GESA

- ▶ On April 24th, 1975, the Honorable George Busbee, Governor of the State of Georgia, signed into law as Act 599, the **Erosion & Sedimentation Act of 1975** (O.C.G.A. 12-7-1 et. seq.)
- ▶ With the passage of the E&S Act, Georgia joined very few states that had adopted legislation specifically designed to protect soil and water resources



4

Intent of GESA

- ▶ To strengthen and extend the present erosion and sediment control activities and programs of this state
- ▶ To provide for the establishment and implementation of a state-wide comprehensive soil erosion and sediment control program
- ▶ To conserve and protect the land, water, air, and other resources of the state

O.C.G.A 12-7-2

5

Participating Agencies

- ▶ Local Issuing Authorities (LIA)
- ▶ Soil & Water Conservation Districts (SWCD)
- ▶ Georgia Soil & Water Conservation Commission (GSWCC)
- ▶ Georgia Environment Protection Division (GA EPD)
- ▶ Natural Resources Conservation Service (NRCS)

Contact information for each agency can be found in the "Resource Information" section

6

Key Definitions

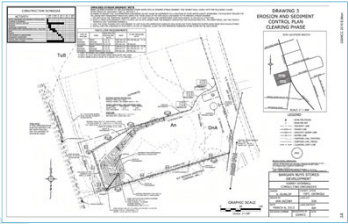
» O.C.G.A. 12-7-3

*A complete listing of all Definitions can be found in the "Resource Information" section

7

"Plan"

▶ An "Erosion & Sediment Control Plan" is a plan for the control of soil erosion and sediment resulting from a land-disturbing activity




O.C.G.A. 12-7-3(8)

8

"Land-Disturbing Activity"

▶ Any activity which may result in soil erosion from water or wind and the movement of sediments into state water or onto lands within the state, including, but not limited to:

- Clearing
- Dredging
- Grading
- Excavating
- Transporting
- Filling of land



O.C.G.A. 12-7-3(9)

9

“Local Issuing Authority”

- ▶ The governing authority of any county or municipality which is certified pursuant to subsection (a) of Code Section 12-7-8 (Certified by GA EPD)

Please refer to the “Resource Information” in the back of this section for a complete listing of all Local Issuing Authorities in the State of Georgia

O.C.G.A. 12-7-3(10)

10

“Manual”

- ▶ The “Manual for Erosion & Sediment Control in Georgia” is the published guidance of the GSWCC 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 upon sound engineering principles and repeatable bench and field testing of structural and vegetative best management practices

O.C.G.A. 12-7-3(10.2)

11

Overview Council

- ▶ Purpose
 - Approve the Manual for Erosion & Sediment Control in Georgia prior to publication by GSWCC
 - Provide guidance on the installation and maintenance of best management practices for the preparation of plans
- ▶ Composed of 9 members
 - House of Representatives
 - Senate
 - GA DOT
 - GA EPD
 - State & Road Tollway Authority
 - Environmental Engineer
 - Highway Contracting Industry
 - Electric Utility Industry
 - Chairperson

O.C.G.A. 12-7-7.1(f)(1-2)

12

LIA Requirements & Responsibilities

- » O.C.G.A. 12-7-4
- » O.C.G.A. 12-7-7
- » O.C.G.A. 12-7-8

13

Local Ordinance

- ▶ The EPD may certify a county or municipality as a Local Issuing Authority if the county or municipality enacts an ordinance which meets or exceeds the standards, requirements, and provisions of GESA and the State General Permit
- ▶ Any land-disturbing activities by a Local Issuing Authority shall be subject to the same requirements of the ordinances such Local Issuing Authority adopted pursuant to this chapter as are applied to private persons, and the division shall enforce such requirements upon the Local Issuing Authority

O.C.G.A. 12-7-8(a)(3) 14

Local Ordinance

<ul style="list-style-type: none"> ▶ Cannot be more stringent for: <ul style="list-style-type: none"> ◦ Monitoring ◦ Reporting ◦ Inspections ◦ Design standards ◦ Turbidity standards ◦ Education & Training requirements 	<ul style="list-style-type: none"> ▶ May be more stringent for: <ul style="list-style-type: none"> ◦ Additional Buffers ◦ Project size* ◦ Other related ordinances such as: <ul style="list-style-type: none"> ▪ Tree protection ▪ Flood plain protection ▪ Stormwater management
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*Project size thresholds with regard to education and training requirements cannot exceed the state general permit

O.C.G.A. 12-7-4(a) 15
O.C.G.A. 12-7-8(a)(1)

Responsibilities of Certified LIA

- ▶ Process applications
- ▶ Forward ES&PC plans to SWCD for review
- ▶ Issue permits
- ▶ Maintain list of active permits
- ▶ Conduct inspections
- ▶ Enforce ordinance
- ▶ Collect fees
- ▶ Handle complaints

O.C.G.A. 12-7-7

16

Memorandum of Agreement (MOA)

- ▶ When a certified LIA demonstrates the capability to review and approve ES&PC plans AND requests an agreement with the SWCD to conduct such review and approval,
- ▶ The LIA enters into an agreement with the SWCD & GSWCC to conduct plan review "in-house"
 - Can result in a quicker turn around time

Please refer to the "Resource Information" for a complete listing of all LIA's with a Memorandum of Agreement

O.C.G.A. 12-7-7(2)(e)

17

LIA Oversight

- ▶ The SWCD and/or GSWCC shall review semi-annually the actions of certified LIA's
 - LIA w/MOA are required to submit additional quarterly reports
- ▶ The SWCD and/or GSWCC may provide technical assistance to any county or municipality to improve the effectiveness of their erosion and sedimentation control program
- ▶ The GA EPD may periodically review the actions of certified LIA's

O.C.G.A. 12-7-8(b)

18

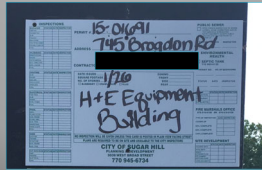
Permitting Process

» O.C.G.A. 12-7-9

19

LDA Permit

- ▶ All land disturbing activities, not exempt from GESA, must first secure a Land Disturbing Activity (LDA) Permit from the LIA (if applicable)
- ▶ It is the responsibility of the property owner/operator to obtain the LDA Permit



*Local requirements can be more stringent

20

Plan Submittal

- ▶ An application for a LDA permit shall be accompanied by an Erosion & Sedimentation Control Plan
- ▶ The Plan shall contain a certification stating that the plan preparer or the designee thereof visited the site prior to the creation of the plan
- ▶ In any event, permits shall be issued no later than 45 days after the application has been filed with the LIA

O.C.G.A. 12-7-9(a-c)

21

Plan Submittal

LIA w/o MOA

- ▶ Owner/Operator
 - Submits application with Plan
- ↓
- ▶ LIA
 - Receives application with Plan
 - Forwards Plan for review within 10 days
- ↓
- ▶ SWCD
 - Technical review conducted by GSWCC or NRCS
 - Ratifies the Plan
 - 35 days upon receipt per submittal to approve or deny

LIA w/ MOA

- ▶ Owner/Operator
 - Submits application with Plan
- ↓
- ▶ LIA
 - Receives application with Plan
 - Approves or denies the Plan
 - 45 days upon receipt to issue or deny permit application

Failure to act within timeframe constitutes an automatic approval

O.C.G.A. 12-7-10

22

Plan Submittal

No LIA

- ▶ Owner/Operator
 - Submits single copy of the Plan to the GA EPD Watershed Protection Branch
 - Submits second copy to the corresponding GA EPD District office
- ⇒
- ▶ GA EPD
 - GA EPD Watershed Protection Branch reviews the Plan for deficiencies and may provide comments
 - Enforcement conducted by GA EPD District office

EPD does not issue a LDA Permit

23

Plan Submittal

Project not regulated by a Local Issuing Authority
(GA DOT, GA Power, Poultry House, Public Drinking Reservoir)

- ▶ Owner/Operator
 - Submits single copy of the Plan to the GA EPD Watershed Protection Branch
 - Submits second copy to the corresponding GA EPD District office
- ⇒
- ▶ GA EPD
 - GA EPD Watershed Protection Branch reviews the Plan for deficiencies and may provide comments
 - Enforcement conducted by GA EPD District office

EPD does not issue a LDA Permit

24

Enforcement Options

- » O.C.G.A. 12-7-7
- » O.C.G.A. 12-7-11
- » O.C.G.A. 12-7-12
- » O.C.G.A. 12-7-15

25

Possible Actions

- ▶ Notice of Violation
- ▶ Issuance of Stop Work Order
- ▶ Suspension of LDA Permit
- ▶ Denial of future LDA Permit applications
- ▶ Imposition of civil penalties
- ▶ Forfeiture of bonding

26

Notice of Violation

<ul style="list-style-type: none"> ▶ First & Second Violation <ul style="list-style-type: none"> ◦ A written warning is issued to the permittee ◦ The permittee shall have five (5) days to correct the violation ◦ If the violation is not corrected within five (5) days, an immediate stop work shall be issued 	<ul style="list-style-type: none"> ▶ Third Violation <ul style="list-style-type: none"> ◦ An immediate stop work order shall be issued
---	---

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O.C.G.A. 12-7-12(c)

Stop Work Order

- ▶ Immediate Issuance
 - 3rd violation
 - Imminent threat to public health
 - Land disturbance without a permit
 - Failure to maintain stream buffer
 - Significant amounts of sediment discharged into state waters
 - Where BMPs have not been properly designed, installed, and maintained
- ▶ All Stop Work Orders
 - Effective immediately upon issuance
 - In effect until corrective action or mitigation has occurred
 - Apply to all land-disturbing activity on the site with the exception of the installation and maintenance of all erosion and sediment controls
 - Can be issued with a NOV

O.C.G.A. 12-7-12(d)

28

Suspension of LDA Permit

- ▶ The LDA Permit may be suspended, revoked, or modified by the LIA if the permit holder is not in compliance with the approved Erosion & Sediment Control Plan or if there is any violation

O.C.G.A. 12-7-11(b)

29

Denial of Future LDA Permits

- ▶ If a permit applicant has had two (2) or more violations of previous permits within three (3) years prior to the date of filing of the application under consideration, the Local Issuing Authority may deny the permit application.

O.C.G.A. 12-7-7(f)(1)

30

Civil Penalties

- ▶ A maximum penalty of \$2500 for each violation shall be imposed by the municipal or magistrate courts
- ▶ Each day during which the violation or failure or refusal to comply continues shall be a separate violation

O.C.G.A. 12-7-15

31

Forfeiture of Bonding

- ▶ The LIA may require the permit applicant to post a bond in the form of:
 - Government security
 - Cash
 - Irrevocable letter of credit
 - Combination thereof
- ▶ Up to \$3000/acre of the proposed land-disturbing activity
- ▶ If the applicant doesn't comply with permit, the bond may be forfeited and the proceeds may be used to hire a contractor to stabilize the site and bring it into compliance

O.C.G.A. 12-7-7(f)(2)

32

Exemptions

» O.C.G.A. 12-7-17

33

Surface Mining

▶ "Surface mining" means any activity constituting all or part of a process for the removal of minerals, ores, and other solid matter for sale or for processing or for consumption in the regular operation of a business. Tunnels, shafts, borrow pits of less than 1.1 disturbed acres, and dimension stone quarries shall not be considered to be surface mining.



O.C.G.A. 12-7-17(1)
O.C.G.A. 12-4-72(15)

34

Granite Quarrying



▶ Granite quarrying and the land clearing for such quarrying

O.C.G.A. 12-7-17(2)

35

Minor Land Disturbing Activities

- ▶ Home gardens
- ▶ Home landscaping
- ▶ Repairs
- ▶ Maintenance
- ▶ Fences
- ▶ Other related activities which result in minor soil erosion



N/A for activities that are located within the State-mandated Buffer on sites covered by the State General Permits

O.C.G.A. 12-7-17(3)

36

Single-Family Residences

- ▶ When
 - Construction disturbs < one (1) acre
 - Not part of a larger common plan of development
- ▶ ES&PC Plan & Buffer requirements still apply



Exempt from LDA
Permit only

O.C.G.A. 12-7-17(4)

37

Agricultural Operations

- ▶ Practices involving the establishment, cultivation, or harvesting of products of the field or orchard
- ▶ Preparation and planting of pasture land
- ▶ Farm ponds
- ▶ Dairy operations
- ▶ Livestock & Poultry management practices
- ▶ Construction of farm buildings *(not exempt from NPDES)*



O.C.G.A. 1-3-3

O.C.G.A. 12-7-17(5)

38

Forestry Practices



- ▶ Forestry land management practices, including harvesting
- ▶ When such activities result in a buffer encroachment, a 3 year moratorium is placed on the entire property

Forestry Land Management Practices / Silvicultural Practices Exemption Guidelines - March 2010 (epd.georgia.gov)

O.C.G.A. 12-7-17(6)

39

NRCS Projects

- ▶ Projects carried out under the technical supervision of the USDA-NRCS



O.C.G.A. 12-7-17(7)

40

Projects < 1.0 Acre

- ▶ Any project involving less than one (1) acre of disturbed area unless the land-disturbing activity is:
 - Within a larger common plan of development with a planned disturbance equal to or greater than 1.0 acre
 - Or within 200 ft. of the bank of any perennial stream
- ▶ If a project, located in a area with no Certified LIA, is less than one (1) acre AND within 200 ft. of a perennial stream, no plan submittal is required but the buffer requirements would still be applicable

Check local requirements

O.C.G.A. 12-7-17(8)

41

Road Projects

Not exempt from NPDES

- ▶ Any projects undertaken or financed by:
 - Department of Transportation
 - GA Highway Authority
 - State Road & Tollway Authority
- ▶ Any road construction or maintenance project, or both, undertaken by any county or municipality
- ▶ Not exempt if located within a larger common plan of development
 - Becomes secondary permittee; Enforced by LIA

O.C.G.A. 12-7-17(9)

42

Utility Projects

Not exempt from NPDES

- ▶ Any land-disturbing activities conducted by:
 - Electric Membership Corporation
 - Municipal Electrical System
 - Public Utility under PSC jurisdiction (i.e. Solar Farms & Railroads)
 - Any utility under FERC jurisdiction
 - Cable television systems
- ▶ Not exempt if located within a larger common plan of development
 - Becomes secondary permittee; Enforced by LIA

O.C.G.A. 12-7-17(9)

43

Utility Projects

Not exempt from NPDES



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Public Water System Reservoirs

Not exempt from NPDES



O.C.G.A. 12-7-17(11)

45

Education &
Training
Requirements

» O.C.G.A. 12-7-19

46

Who Must Be Certified?

- ▶ Persons involved in land development design, review, permitting, construction, monitoring, or inspection or any land-disturbing activity shall meet the education and training certification requirements, dependent on his or her level of involvement with the process as developed by the Commission in consultation with the GA EPD and the Stakeholder Advisory Board

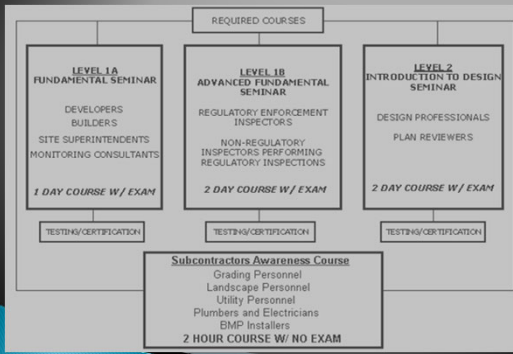
O.C.G.A. 12-7-19(a)(1) 47

Who Must Be Certified On Site?

- ▶ Whenever land-disturbing activities are being conducted on site, each entity or person acting as either a primary, secondary, or tertiary permittee shall have as a minimum one (1) person who is responsible charge of erosion and sedimentation control activities
- ▶ Persons or entities involved in projects not requiring a state general permit but otherwise requiring certified personnel on site may contract with certified persons

O.C.G.A. 12-7-19(a)(2-3) 48

Courses



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Certification Card Substitution



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Subcontractor Awareness Seminar

- ▶ Required for individuals involved in land disturbing activities that are working in a subcontractor capacity for a primary, secondary or tertiary permittee
- ▶ Individuals working in a subcontractor capacity cannot be required to meet any educational requirements that exceed those of a Certified Subcontractor
- ▶ Certified Subcontractor status **DOES NOT** certify an individual to perform the duties of a "certified" person/personnel
- ▶ If an individual is performing "certified" duties, a Level 1A certification is required

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Subcontractor Awareness Seminar

- ▶ If an individual is working in a subcontractor capacity and possesses a Level 1A certification they are not required to take the Subcontractor Awareness Seminar
- ▶ If an individual is working in a subcontractor capacity and has attended a Level 1A course, they are not required to take the Subcontractor Awareness Seminar. They can:
 - Complete a Subcontractor Awareness Application
 - Submit a Proof of Attendance form from the Level 1A course

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Certification Cards

- ▶ Cards are color coded by level of certification for quick reference in the field
 - Level 1A - **Blue**
 - Level 1B - **Red**
 - Level II Plan Reviewer - **Gray**
 - Level II Design Professional - **Tan**
 - Subcontractor Awareness - **White**
- ▶ Regulatory inspectors should ask to see certification cards on-site

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Certification Cards



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Re-Certification Requirements

- ▶ A certification provided by achieving the requirements established by GSWCC shall expire no later than three (3) years after its issuance
- ▶ A certified individual shall be required to attend and participate in at least four (4) hours of approved continuing education courses, as established by GSWCC, every three (3) years
- ▶ Individuals may begin taking re-certification courses one (1) year before their initial certification expires
 - **Courses taken before the 1 year mark will not count as credit**

O.C.G.A. 12-7-19(e)(1-2)

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Re-Certification Requirements

- ▶ An individual who wishes to renew their certification shall attend four (4) hours of continuing education (CE) for each certification they wish to renew
- ▶ Example
 - *John Doe is a Certified Inspector & Certified Plan Reviewer*
 - *He must attend 4 hours of CE for Level 1B & 4 hours of CE for Level II*
- ▶ There is no exam for any re-certification course
- ▶ Re-certification cards are mailed out two (2) weeks before expiration

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Course Listings

- ▶ For additional information and a complete list of upcoming courses
 - <http://www.gaswcc.org/esc-courses.php>

Erosion and Sedimentation Certification Program Recent and Upcoming Courses

Initial Certification	Recertification:
<u>Awareness for Subcontractors</u>	Level 1A
Level 1A	Level 1B
Level 1B	Level 1I
Level 1I	Trainer 1
Trainer 1	Trainer 2
Trainer 2	

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Summary

- ▶ GESA is the State Law that governs land-disturbing activities
- ▶ All eligible activities must first secure a LDA permit
- ▶ Counties and municipalities can become a LIA when certified by the GA EPD
- ▶ One person from each entity shall meet the education and certification requirements dependent on their level of involvement

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Questions?

- ▶▶ GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



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Insert Yellow Sheet

Back of Yellow Sheet

O.C.G.A. § 12-7-1

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***** Current through the 2018 Regular Session of the General Assembly. *****

**TITLE 12. CONSERVATION AND NATURAL RESOURCES
CHAPTER 7. CONTROL OF SOIL EROSION AND SEDIMENTATION**

O.C.G.A. § 12-7-1 (2018)

§ 12-7-1. Short title

This chapter shall be known and may be cited as the "Erosion and Sedimentation Act of 1975."

§ 12-7-2. Legislative findings; policy of state and intent of chapter

It is found that soil erosion and sediment deposition onto lands and into waters within the watersheds of this state are occurring as a result of widespread failure to apply proper soil erosion and sedimentation control practices in land clearing, soil movement, and construction activities and that such erosion and sediment deposition result in pollution of state waters and damage to domestic, agricultural, recreational, fish and wildlife, and other resource uses. It is therefore declared to be the policy of this state and the intent of this chapter to strengthen and extend the present erosion and sediment control activities and programs of this state and to provide for the establishment and implementation of a state-wide comprehensive soil erosion and sediment control program to conserve and protect the land, water, air, and other resources of this state.

§ 12-7-3. Definitions

As used in this chapter, the term:

- (1) "Board" means the Board of Natural Resources.
- (2) "Buffer" means the area of land immediately adjacent to the banks of state waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.
 - (2.1) "Coastal marshlands" shall have the same meaning as in Code Section 12-5-282.
- (3) "Commission" means the State Soil and Water Conservation Commission.

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- (4) "Director" means the director of the Environmental Protection Division of the Department of Natural Resources.
- (5) "District" means any one of the soil and water conservation districts of this state.
- (6) "Division" means the Environmental Protection Division of the Department of Natural Resources.
- (7) "Drainage structure" means a device composed of a virtually nonerodible 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.
- (8) "Erosion and sediment control plan" or "plan" means a plan for the control of soil erosion and sediment resulting from a land-disturbing activity.
- (9) "Land-disturbing activity" means any activity which may result in soil erosion from water or wind and the movement of sediments into state water or onto lands within the state, including, but not limited to, clearing, dredging, grading, excavating, transporting, and filling of land but not including agricultural practices as described in paragraph (5) of Code Section 12-7-17.
- (9.1) "Larger common plan of development or sale" means a contiguous area where multiple separate and distinct construction activities are occurring under one plan of development or sale. For purposes of this paragraph, "plan" means an announcement; piece of documentation such as a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, or computer design; or physical demarcation such as boundary signs, lot stakes, or surveyor markings, indicating that construction activities may occur on a specific plot.
- (10) "Local issuing authority" means the governing authority of any county or municipality which is certified pursuant to subsection (a) of Code Section 12-7-8.
- (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.
- (10.2) "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.

- (10.3) "Operator" means the party or parties that have:
- (A) Operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; or
 - (B) Day-to-day operational control of those activities that are necessary to ensure compliance with a storm-water pollution prevention plan for the site or other permit conditions, such as a person authorized to direct workers at a site to carry out activities required by the storm-water pollution prevention plan or to comply with other permit conditions.
- (11) "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 of this state, any interstate body, or any other legal entity.
- (12) "Qualified personnel" means any person who meets or exceeds the education and training requirements of Code Section 12-7-19.
- (13) "Roadway drainage structure" means a device, such as a bridge, culvert, or ditch, composed of a virtually nonerodible 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 way consisting of one or more defined lanes, with or without shoulder areas, and carrying water to a release point on the other side.
- (13.1) "Serviceable" means usable in its current state or with minor maintenance but not so degraded as to essentially require reconstruction.
- (14) "Soil and water conservation district approved plan" means an erosion and sediment control plan approved in writing by a soil and water conservation district.
- (15) "State general permit" means the National Pollution Discharge Elimination System general permit or permits for storm-water runoff from construction activities as is now in effect or as may be amended or reissued in the future pursuant to the state's authority to implement the same through federal delegation under the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251, et seq., and subsection (f) of Code Section 12-5-30.
- (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.

§ 12-7-4. Adoption of comprehensive ordinances relating to land-disturbing activities; delegation of responsibility to planning and zoning commission; other local ordinances relating to land development; effect of chapter on design professionals

(a) The governing authority of each county and each municipality shall adopt a comprehensive ordinance establishing the procedures governing land-disturbing activities which are conducted within their respective boundaries. Such ordinances shall be consistent with the standards provided by this chapter. Local governing authorities shall have the authority, by such ordinance, to delegate in whole or in part the responsibilities of the governing authorities, as set forth in this chapter, to any constitutional or statutory local planning and zoning commission. Where the local governing authority deems it appropriate, it may integrate such provisions with other local ordinances relating to land development including but not limited to tree protection, flood plain protection, stream buffers, or storm-water management; and the properties to which any of the types of ordinances identified in this Code section shall apply, whether or not such ordinances are integrated, shall include without limitation property owned by the local governing authority or by a local school district, except as otherwise provided by Code Section 12-7-17.

(b) Nothing in this chapter shall be construed as to limit or exclude any design professional, including but not limited to any professional engineer or registered land surveyor, or Natural Resource Conservation Service employee, within any county, municipality, or consolidated government in this state from performing such professional services as may be incidental to the practice of his or her profession, including any and all soil erosion and sedimentation control plans, storm-water management reports including hydrological studies, and site plans, when such professional has demonstrated competence through such qualifications, education, experience, and licensing as required for practice in this state by applicable provisions of Title 43 related to such profession; provided, however, that any such person shall be subject to the requirements of Code Section 12-7-19.

§ 12-7-5. Adoption of rules and regulations for localities without ordinances

The board, by appropriate rules and regulations, shall adopt the procedures governing land-disturbing activities which are conducted in those counties and municipalities which do not have in effect an ordinance conforming to this chapter. Such rules and regulations shall be developed by the division in consultation with the commission and shall contain provisions which meet those minimum requirements set forth in Code Section 12-7-6.

§ 12-7-6. Best management practices; minimum requirements for rules, regulations, ordinances, or resolutions

(a) (1) Best management practices as set forth in subsection (b) of this Code section shall be required for all land-disturbing activities. Proper design, installation, and maintenance of

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best management practices shall constitute a complete defense to any action by the director or to any other allegation of noncompliance with paragraph (2) of this subsection or any substantially similar terms contained in a permit for the discharge of storm water issued pursuant to subsection (f) of Code Section 12-5-30. As used in this subsection, the terms "proper design" and "properly designed" mean designed in accordance with the hydraulic design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" specified in subsection (b) of this Code section.

(2) A discharge of storm-water runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation of any land-disturbing permit issued by a local issuing authority or of any state general permit issued by the division pursuant to subsection (f) of Code Section 12-5-30 for each day on which such discharge results in the turbidity of receiving waters being increased by more than 25 nephelometric turbidity units for waters supporting warm water fisheries or by more than ten nephelometric turbidity units for waters classified as trout waters. The turbidity of the receiving waters shall be measured in accordance with guidelines to be issued by the director. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a larger common plan of development or sale unless the planned disturbance for such construction is equal to or greater than five acres.

(3) Failure properly to design, install, or maintain best management practices shall constitute a violation of any land-disturbing permit issued by a local issuing authority or of any state general permit issued by the division pursuant to subsection (f) of Code Section 12-5-30 for each day on which such failure occurs.

(4) The director may require, in accordance with regulations adopted by the board, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land-disturbing activities occur.

(b) The rules and regulations, ordinances, or resolutions adopted pursuant to this chapter for the purpose of governing land-disturbing activities shall require, as a minimum, protections at least as stringent as the state general permit; and 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" published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:

(1) Stripping of vegetation, regrading, and other development activities shall be conducted in such a manner so as to minimize erosion;

(2) Cut and fill operations must be kept to a minimum;

(3) Development plans must conform to topography and soil type, so as to create the lowest practicable erosion potential;

(4) Whenever feasible, natural vegetation shall be retained, protected, and supplemented;

(5) The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum;

(6) Disturbed soil shall be stabilized as quickly as practicable;

(7) Temporary vegetation or mulching shall be employed to protect exposed critical areas during development;

(8) Permanent vegetation and structural erosion control measures must be installed as soon as practicable;

(9) To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of this chapter;

(10) Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surfaces of fills;

(11) Cuts and fills may not endanger adjoining property;

(12) Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners;

(13) Grading equipment must cross flowing streams by the means of bridges or culverts, except when such methods are not feasible, provided, in any case, that such crossings must be kept to a minimum;

(14) Land-disturbing activity plans for erosion and sedimentation control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on site or preclude sedimentation of adjacent waters beyond the levels specified in subsection (a) of this Code section;

(15) (A) There is established a 25 foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except:

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

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

(iii) Where otherwise allowed by the director pursuant to Code Section 12-2-8;

(iv) Where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented;

(v) Along any ephemeral stream. As used in this division, the term "ephemeral stream" means a stream:

(I) That under normal circumstances has water flowing only during and for a short duration after precipitation events;

(II) That has the channel located above the ground-water table year round;

(III) For which ground water is not a source of water; and

(IV) For which runoff from precipitation is the primary source of water flow; or

(vi) Where shoreline stabilization is installed; provided, however, that this exception shall be limited to the construction of bulkheads and sea walls only to the extent required to prevent the erosion of the shoreline. This exception shall be limited to Lake Oconee and Lake Sinclair and shall be limited to the duration of such construction.

Unless exempted under division (v) of this subparagraph, buffers of at least 25 feet established pursuant to Part 6 of Article 5 of Chapter 5 of this title shall remain in force unless a variance is granted by the director as provided in this paragraph.

(B) No land-disturbing activities shall be conducted within any such buffer; and a buffer shall remain in its natural, 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 as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; 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 as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed.

(C) On or before December 31, 2004, the board shall adopt rules which contain specific criteria for the grant or denial by the director of requests for variances. After such date, no variance shall be granted by the director which is not consistent with the criteria contained in such rules. Such rules shall provide, at a minimum, that the director shall consider granting a variance in the following circumstances:

(i) Where a proposed land-disturbing activity within the buffer would require the landowner to acquire 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;

(ii) Where the landowner provides a plan satisfactory to the director 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

(iii) Where a 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 the landowner provides a plan satisfactory to the director 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.

All projects covered under divisions (i), (ii), and (iii) of this subparagraph shall meet all criteria set forth in rules for specific variance criteria adopted by the board by December 31, 2004.

(D) The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented:

(i) Stream crossings for water lines; or

(ii) Stream crossings for sewer lines;

(16) There is established a 50 foot buffer, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any state waters classified as "trout streams" pursuant to Article 2 of Chapter 5 of this title except where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as trout streams which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the landowner, pursuant to the terms of a rule providing for a general variance promulgated by the board providing for notice to the division or local issuing authority of the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream landowner's property, and the landowner must comply with the buffer requirement for any adjacent trout streams. The director may grant a variance from such buffer to allow land-disturbing activity, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. The following requirements shall apply to any such buffer:

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(A) No land-disturbing 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. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; 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 as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed;

(B) On or before December 31, 2000, the board shall adopt rules which contain specific criteria for the grant or denial by the director of requests for variances. After such date, no variance shall be granted by the director which is not consistent with the criteria contained in such rules; provided, however, that, should the board fail to adopt rules which contain specific criteria for the grant or denial of requests for variances by the director on or before December 31, 2000, the authority of the director to issue such variances shall be suspended until the board adopts such rules; and

(C) The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; they cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented:

- (i) Stream crossings for water lines; or
- (ii) Stream crossings for sewer lines; and

(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 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

(ii) 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 December 31, 2015, 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.

(c) Nothing contained in this chapter shall prevent any local issuing authority from adopting rules and regulations, ordinances, or resolutions which contain stream buffer requirements that exceed the minimum requirements in subsection (b) of this Code section.

(d) The fact that land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this Code section or the terms of the permit.

§ 12-7-7. Permit or notice of intent required for land-disturbing activities; approval of application and issuance of permit; denial of permit; bond requirement

(a) No land-disturbing activities shall be conducted in this state, except those land-disturbing activities provided for in Code Section 12-7-17, without the operator first securing a permit from a local issuing authority or providing notice of intent to the division as required by this Code section.

(b) In those counties and municipalities which are certified as local issuing authorities pursuant to subsection (a) of Code Section 12-7-8:

(1) The application for such permit shall be made to and the permit shall be issued by the governing authority of the county wherein such land-disturbing activities are to occur, in the

event that such activities will occur outside the corporate limits of a municipality;

(2) In those instances where such activities will occur within the corporate limits of any municipality, the application for such permit shall be made to and the permit shall be issued by the governing authority of the municipality in which such land-disturbing activities are to occur; and

(3) The local issuing authority shall conduct inspections and enforce the permits it issues.

(c) In those counties and municipalities which are not certified pursuant to subsection (a) of Code Section 12-7-8, the terms of the state general permit shall apply, those terms shall be enforced by the division, and no individual land-disturbing activity permit under this Code section will be required; provided, however, that notice of intent shall be submitted to the division prior to commencement of any land-disturbing activities under the state general permit in any of such uncertified counties or municipalities.

(d) (1) Fees assessed pursuant to paragraph (5) of subsection (a) of Code Section 12-5-23 shall be calculated and paid by the primary permittee as defined in the state general permit for each acre of land-disturbing activity included in the planned development or each phase of development.

(2) In a jurisdiction that is certified pursuant to subsection (a) of Code Section 12-7-8, half of any such fees levied shall be submitted by the applicant to the local issuing authority and half of such fees shall be submitted to the division; except that any and all fees due from an entity which is required to give notice pursuant to paragraph (9) or (10) of Code Section 12-7-17 shall be submitted in full to the division, regardless of the existence of a local issuing authority in the jurisdiction. In a jurisdiction where there is no local issuing authority, the full fee shall be submitted to the division.

(e) Except as provided in this subsection, no permit shall be issued pursuant to subsection (b) of this Code section unless the erosion and sediment control plan has been approved by the appropriate district as is required by Code Section 12-7-10. When the governing authority of a county or municipality lying within the boundaries of the district demonstrates capabilities to review and approve an erosion and sediment control plan and requests an agreement with the district to conduct such review and approval, the district, with the concurrence of the commission, shall enter into an agreement which allows the governing authority to conduct review and approval without referring the application and plan to the district, if such governing authority meets the conditions specified by the district as set forth in the agreement. A district may not enter into an agreement authorized in this Code section with the governing authority of any county or municipality which is not certified pursuant to subsection (a) of Code Section 12-7-8.

(f) (1) If a permit applicant has had two or more violations of previous permits or this Code section within three years prior to the date of filing of the application under consideration, the local issuing authority may deny the permit application.

(2) The local issuing authority may require the permit applicant to post a bond in the form of government security, cash, irrevocable letter of credit, or any combination thereof up to, but not exceeding, \$3,000.00 per acre of the proposed land-disturbing activity, prior to issuing the permit. If the applicant does not comply with this Code section or with the conditions of the permit after issuance, the local issuing authority may call the bond or any part thereof to be forfeited and may use the proceeds to hire a contractor to stabilize the site of the land-disturbing activity and bring it into compliance. This subsection shall not apply unless there is in effect an ordinance or statute specifically providing for hearing and judicial review of any determination or order of the local issuing authority with respect to alleged permit violations.

§ 12-7-7.1. Erosion and sediment control plan prepared; completion; implementation

(a) As used in this Code section, the term "contractor" means the individual, firm, corporation, or combination thereof or governmental organization contracting with the Department of Transportation or State Road and Tollway Authority for the performance of prescribed work.

(b) (1) In addition to the requirements of Code Section 12-7-6, the Department of Transportation or the State Road and Tollway Authority after July 1, 2003, shall not contract for land-disturbing activity on any construction or maintenance project that will disturb one or more contiguous acres of land until an erosion and sediment control plan for such project has been prepared and accepted pursuant to this Code section.

(2) Through its own forces or by means of the acquisition of professional service pursuant to the provisions of Chapter 22 of Title 50, the Department of Transportation or the State Road and Tollway Authority shall be responsible for the preparation of an erosion and sediment control plan for any construction or maintenance project as required by paragraph (1) of this subsection. Any consultant providing such professional service shall be prequalified by the Department of Transportation as a responsible bidder for the design of erosion and sediment control plans. The division shall assist the Department of Transportation in developing the prequalification approval process for purposes of this subsection.

(c) Upon completion of a proposed plan, the same shall be submitted to the division for review and comment as required by the state general permit.

(d) (1) All bidders for any construction or maintenance project subject to this Code section shall review and submit with their bid proposal a cost estimate as a separate bid for the implementation of the plan, it being understood that the contractor may utilize either its own personnel and resources, qualified subcontractors, or both for implementation of the plan. All contractors and subcontractors for such project shall be prequalified by the Department of Transportation as a responsible bidder for the installation of erosion and

sediment control devices in accordance with a plan. The division shall assist the Department of Transportation in developing the prequalification approval process for purposes of this subsection.

(2) The contractor for a construction or maintenance project subject to this Code section shall be responsible for implementing the plan on the awarded project. Payment to any contractor under any contract for implementing any part or all of any plan shall not be on a lump sum basis; rather, such payment shall be based upon unit prices for specific quantities of work performed pursuant to the approved erosion and sediment control plan plus any additional quantities of completed work necessitated by project conditions affecting erosion and sediment control, including without limitation soil types and weather conditions. Charges for all maintenance and cleaning of erosion and sediment control devices shall likewise be paid on a unit price basis.

(e) (1) Through the services of independent consultants, contractors, or subcontractors, or by its own forces, the Department of Transportation shall monitor the water quality and inspect the installation and maintenance of the best management practices in accordance with the plan. All such consultants, contractors, or subcontractors shall be prequalified by the Department of Transportation as a responsible bidder for the inspection of such best management practices and shall have the necessary expertise to determine that such practices are being installed and maintained in accordance with the plan. The division shall assist the Department of Transportation in developing the prequalification approval process for purposes of this subsection.

(2) Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the director or to any other allegation of noncompliance with paragraph (2) of subsection (a) of Code Section 12-7-6.

(3) If deficiencies in the plan or installation or maintenance of best management practices are discovered during the inspection, the Department of Transportation or the State Road and Tollway Authority shall determine the appropriate corrective action. Further, the Department of Transportation or State Road and Tollway Authority may require the consultant to amend the plan or the contractor to change its procedures by change order or supplemental agreement in order to institute such changes as may be necessary to correct any errors or deficiencies in the plan, the implementation of the plan, or the maintenance of the best management practices.

(4) The division, the Department of Transportation, or the State Road and Tollway Authority shall control or coordinate the work of its employees inspecting any project so as to prevent any delay of, interference with, or hindrance to any contractor performing land-disturbing activity on any project subject to the provisions of this Code section.

(f) (1) There shall be an Erosion and Sediment Control Overview Council which shall approve the Manual for Erosion and Sediment Control in Georgia prior to publication by the commission. In addition, the council shall provide guidance on the best management practices for implementing any erosion and sediment control plan for purposes of this Code

section. The council shall be composed of nine members, including one member of the House of Representatives who shall be appointed by the Speaker of the House of Representatives and serve at the pleasure thereof; one member of the Senate who shall be appointed by the Lieutenant Governor and serve at the pleasure thereof; and seven members who shall be appointed by the Governor and serve at the pleasure thereof, including one employee each from the Department of Transportation, the Environmental Protection Division of the Department of Natural Resources, and the State Road and Tollway Authority, a professional engineer licensed to practice in this state from a private engineering consulting firm practicing environmental engineering, one representative of the highway contracting industry certified by the Department of Transportation, one representative of the electric utility industry, and a chairperson. The council shall meet prior to December 1, 2015, to approve the most current version of the manual and at all other times as necessary to approve any subsequent changes or updates to the manual prior to its implementation. Such meetings shall be held at the call of the chairperson. Each councilmember shall receive a daily allowance in the amount specified in subsection (b) of Code Section 45-7-21; provided, however, that any full-time state employee serving on the council shall draw no compensation but shall receive necessary expenses. The commissioner is authorized to pay such compensation and expenses from department funds.

(2) The council may develop recommendations governing the preparation of plans and the installation and maintenance of best management practices. If a dispute concerning the requirements of this Code section should arise, the Erosion and Sediment Control Overview Council shall mediate the dispute.

(g) Nothing in this Code section shall be construed to affect the division's authority under Article 2 of Chapter 5 of this title, the "Georgia Water Quality Control Act."

§ 12-7-8. Certification of locality as local issuing authority; periodic review; procedure for revoking certification; enforcement actions

(a) (1) If a county or municipality has enacted ordinances which meet or exceed the standards, requirements, and provisions of this chapter and the state general permit, except that the standards, requirements, and provisions of the ordinances for monitoring, reporting, inspections, design standards, turbidity standards, education and training, and project size thresholds with regard to education and training requirements shall not exceed the state general permit requirements, and which are enforceable by such county or municipality, and if a county or municipality documents that it employs qualified personnel to implement enacted ordinances, the director may certify such county or municipality as a local issuing authority for the purposes of this chapter.

(2) A local issuing authority shall regulate both primary and secondary permittees as such terms are defined in the state general permit. Primary permittees shall be responsible for installation and maintenance of best management practices where the primary permittee is conducting land-disturbing activities. Secondary permittees shall be responsible for

installation and maintenance of best management practices where the secondary permittee is conducting land-disturbing activities. A local issuing authority must review, revise, or amend its ordinances within 12 months of any amendment to this chapter.

(3) Any land-disturbing activities by a local issuing authority shall be subject to the same requirements of the ordinances such local issuing authority adopted pursuant to this chapter as are applied to private persons, and the division shall enforce such requirements upon the local issuing authority.

(b) The districts or the commission or both shall review semi-annually the actions of counties and municipalities which have been certified as local issuing authorities pursuant to subsection (a) of this Code section. The districts or the commission or both may provide technical assistance to any county or municipality for the purpose of improving the effectiveness of the county's or municipality's erosion and sedimentation control program. The districts or the commission shall notify the division and request investigation by the division if any deficient or ineffective local program is found.

(c) The board, on or before December 31, 2003, shall promulgate rules and regulations setting forth the requirements and standards for certification and the procedures for decertification of a local issuing authority. The division may periodically review the actions of counties and municipalities which have been certified as local issuing authorities pursuant to subsection (a) of this Code section. Such review may include, but shall not be limited to, review of the administration and enforcement of and compliance with a governing authority's ordinances and review of conformance with an agreement, if any, between the district and the governing authority. If such review indicates that the governing authority of any county or municipality certified pursuant to subsection (a) of this Code section has not administered, enforced, or complied with its ordinances or has not conducted the program in accordance with any agreement entered into pursuant to subsection (e) of Code Section 12-7-7, the division shall notify the governing authority of the county or municipality in writing. The governing authority of any county or municipality so notified shall have 90 days within which to take the necessary corrective action to retain certification as a local issuing authority. If the county or municipality does not take necessary corrective action within 90 days after notification by the division, the division shall revoke the certification of the county or municipality as a local issuing authority.

(d) The director may determine that the public interest requires initiation of an enforcement action by the division. Where such a determination is made and the local issuing authority has failed to secure compliance, the director may implement the board's rules and seek compliance under provisions of Code Sections 12-7-12 through 12-7-15. For purposes of this subsection, enforcement actions taken by the division pursuant to Code Sections 12-7-12 through 12-7-15 shall not require prior revocation of certification of the county or municipality as a local issuing authority.

§ 12-7-9. Applications for permits; erosion and sediment control plans and data; time for issuance or denial

(a) Applications for permits shall be submitted in accordance with this chapter and the rules and regulations, ordinances, and resolutions adopted pursuant to this chapter. Such applications shall be accompanied by the applicant's erosion and sediment control plans and by such supportive data as will affirmatively demonstrate that the land-disturbing activity proposed will be carried out in such a manner that the minimum requirements set forth in Code Section 12-7-6 shall be met. All applications shall contain a certification stating that the plan preparer or the designee thereof visited the site prior to creation of the plan or that such a visit was not required in accordance with rules and regulations established by the board.

(b) No permit shall be issued to any applicant unless the local issuing authority affirmatively determines that the plan embracing such activities meets the requirements of Code Section 12-7-6. All applicable fees shall be paid prior to issuance of the land disturbance permit by the local issuing authority.

(c) Permits shall be issued or denied as soon as practicable after the application therefor has been filed with the local issuing authority, but in any event not later than 45 days thereafter.

§ 12-7-10. Referral of application and plan to district; time for action

Except as otherwise provided by Code Section 12-7-7, immediately upon receipt of an application for a permit the application and plan for sediment and erosion control shall be referred to the appropriate district wherein such land-disturbing activities are proposed to take place, for its review and approval or disapproval concerning the adequacy of the erosion and sediment control plan proposed by the applicant. A district shall approve or disapprove a plan within 35 days of receipt. Failure of a district to act within 35 days shall be considered an approval of the pending plan.

§ 12-7-11. Statement of reasons for denial of permit required; conditions for approval; suspension, revocation, or modification of permit

(a) Within the time specified by Code Section 12-7-9, the local issuing authority shall issue or deny the permit. The local issuing authority, upon denial of a permit, shall state its reasons for the denial, setting forth specifically wherein such application is found to be deficient. Any land-disturbing activity permitted under this chapter shall be carried out in accordance with this chapter and the ordinance, resolution, or rules and regulations adopted and promulgated pursuant to this chapter. The local issuing authority shall specify on the permit the conditions under which the activity may be undertaken.

(b) The permit may be suspended, revoked, or modified by the local issuing authority, as to

all or any portion of the land affected by the plan, upon a finding that the holder or his or her successor in title is not in compliance with the approved erosion and sediment control plan or that the holder or his or her successor in title is in violation of this chapter or any ordinance, resolution, rule, or regulation adopted or promulgated pursuant to this chapter. A holder of a permit shall notify any successor in title to him or her as to all or any portion of the land affected by the approved plan of the conditions contained in the permit.

§ 12-7-12. Orders directed to violators; stop work order procedures

(a) Except as provided in subsection (d) of this Code section, whenever the director has reason to believe that a violation of any provision of this chapter, any rule or regulation of the board, or any order of the director has occurred in a county or municipality which is not certified pursuant to subsection (a) of Code Section 12-7-8, the director may issue an order directed to such violator or violators. The order shall specify the provisions of this chapter or the rules or regulations or order alleged to have been violated and may require that land-disturbing activity be stopped until necessary corrective action and mitigation have been taken or may require that necessary corrective action and mitigation be taken within a reasonable time to be prescribed in the order. Any order issued by the director under this Code section shall be signed by the director. Any such order shall become final unless the person or persons named therein request, in writing, a hearing pursuant to Code Section 12-7-16.

(b) Except as provided in subsection (d) of this Code section, whenever a local issuing authority has reason to believe that a violation of any provision of a local ordinance or resolution has occurred within the jurisdiction of the local issuing authority, the local issuing authority may require that land-disturbing activity be stopped until necessary corrective action and mitigation have been taken or may require that necessary corrective action and mitigation be taken within a reasonable time.

(c) The following procedures shall apply to the issuances of stop work orders:

(1) For the first and second violations of the provisions of this chapter, the director or the local issuing authority shall issue a written warning to the violator. The violator shall have five days to correct the violation. If the violation is not corrected within five days, the director or local issuing authority shall issue a stop work order requiring that land-disturbing activities be stopped until necessary corrective action or mitigation has occurred; provided, however, that, if the violation presents an imminent threat to public health or waters of the state, the director or local issuing authority shall issue an immediate stop work order in lieu of a warning;

(2) For a third and each subsequent violation, the director or local issuing authority shall issue an immediate stop work order; and

(3) All stop work orders shall be effective immediately upon issuance and shall be in effect

until the necessary corrective action or mitigation has occurred.

(d) When a violation of this chapter in the form of taking action without a permit, failure to maintain a stream buffer, or significant amounts of sediment, as determined by the local issuing authority or by the director or his or her designee, have been or are being discharged into state waters and where best management practices have not been properly designed, installed, and maintained, a stop work order shall be issued by the local issuing authority or by the director or his or her designee. All such stop work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred. Such stop work orders shall apply to all land-disturbing activity on the site with the exception of the installation and maintenance of temporary or permanent erosion and sediment controls.

§ 12-7-13. Injunctions

Whenever, in the judgment of the director, any person has engaged in or is about to engage in any act or practice which constitutes or would constitute a violation of this chapter, the rules and regulations adopted pursuant to this chapter, or any order or permit conditions in a county or municipality which is not certified pursuant to subsection (a) of Code Section 12-7-8, he or she may make application to the superior court of the county where such person resides or, if such person is a nonresident of the state, to the superior court of the county in which the violative act or practice has been or is about to be engaged in for an order enjoining such act or practice or for an order requiring compliance with this chapter, the rules and regulations adopted pursuant to this chapter, or the order or permit condition. Upon a showing by the director that such person has engaged in or is about to engage in any such violative act or practice, a permanent or temporary injunction, restraining order, or other order shall be granted without the necessity of showing the lack of an adequate remedy at law.

§ 12-7-14. Actions to restrain imminent danger; emergency orders; duration of effectiveness of orders

(a) Notwithstanding any other provision of this chapter to the contrary, upon receipt of evidence that certain land-disturbing activities occurring in a municipality or county which is not certified pursuant to subsection (a) of Code Section 12-7-8 are presenting an imminent and substantial danger to the environment or to the health of humans, the director may bring an action as provided in Code Section 12-7-13 to restrain immediately any person causing or contributing to the danger caused by such land-disturbing activities or to take such other action as may be necessary.

(b) If it is not practicable to assure prompt protection of the environment or the health of humans solely by commencement of such a civil action, the director may issue such emergency orders as may be necessary to protect the environment or the health of humans

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who are or may be affected by such land-disturbing activities. Notwithstanding any other provision of this chapter, such order shall be immediately effective for a period of not more than 48 hours, unless the director brings an action under subsection (a) of this Code section before the expiration of such period. Whenever the director brings such an action within such period, such order shall be effective for such period of time as may be authorized by the court pending litigation or thereafter.

§ 12-7-15. Civil penalty

Any person who violates any provision of this chapter, the rules and regulations adopted pursuant to this chapter, or any permit condition or limitation established pursuant to this chapter or who negligently or intentionally fails or refuses to comply with any final or emergency order of the director issued as provided in this chapter shall be liable for a civil penalty not to exceed \$2,500.00 per day. For the purpose of enforcing the provisions of this chapter, notwithstanding any provision in any city charter to the contrary, municipal courts shall be authorized to impose a penalty not to exceed \$2,500.00 for each violation. Notwithstanding any limitation of law as to penalties which can be assessed for violations of county ordinances, any magistrate court or any other court of competent jurisdiction trying cases brought as violations of this chapter under county ordinances approved under this chapter shall be authorized to impose penalties for such violations not to exceed \$2,500.00 for each violation. Each day during which the violation or failure or refusal to comply continues shall be a separate violation.

§ 12-7-16. Hearings and review

All hearings on and review of contested matters, orders, or permits issued by or filed against the director and all hearings on and review of any other enforcement actions or orders initiated by the director under this chapter shall be provided and conducted in accordance with subsection (c) of Code Section 12-2-2. The hearing and review procedure provided in this Code section is to the exclusion of all other means of hearings or review.

§ 12-7-17. Exemptions

This chapter shall not apply to the following activities:

- (1) Surface mining, as the same is defined in Code Section 12-4-72;
- (2) Granite quarrying and land clearing for such quarrying;
- (3) Such minor land-disturbing activities as home gardens and individual home landscaping, repairs, maintenance work, fences, and other related activities which result in

minor soil erosion;

(4) The construction of single-family residences, when such construction disturbs less than one acre and is not a part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and not otherwise exempted under this paragraph; provided, however, that construction of any such residence shall conform to the minimum requirements as set forth in subsection (b) of Code Section 12-7-6 and this paragraph. For single-family residence construction covered by the provisions of this paragraph, there shall be a buffer zone between the residence and any state waters classified as trout streams pursuant to Article 2 of Chapter 5 of this title. In any such buffer zone, no land-disturbing activity shall be constructed between the residence and the point where vegetation has been wrested by normal stream flow or wave action from the banks of the trout waters. For primary trout waters, the buffer zone shall be at least 50 horizontal feet, and no variance to a smaller buffer shall be granted. For secondary trout waters, the buffer zone shall be at least 50 horizontal feet, but the director may grant variances to no less than 25 feet. Regardless of whether a trout stream is primary or secondary, for first order trout waters, which are streams into which no other streams flow except for springs, the buffer shall be at least 25 horizontal feet, and no variance to a smaller buffer shall be granted. The minimum requirements of subsection (b) of Code Section 12-7-6 and the buffer zones provided by this paragraph shall be enforced by the issuing authority;

(5) Agricultural operations as defined in Code Section 1-3-3 to include those practices involving the establishment, cultivation, or harvesting of products of the field or orchard; the preparation and planting of pasture land; farm ponds; dairy operations; livestock and poultry management practices; and the construction of farm buildings;

(6) Forestry land management practices, including harvesting; provided, however, that when such exempt forestry practices cause or result in land-disturbing or other activities otherwise prohibited in a buffer, as established in paragraphs (15) and (16) of subsection (b) of Code Section 12-7-6, no other land-disturbing activities, except for normal forest management practices, shall be allowed on the entire property upon which the forestry practices were conducted for a period of three years after the completion of such forestry practices;

(7) Any project carried out under the technical supervision of the Natural Resources Conservation Service of the United States Department of Agriculture;

(8) Any project involving less than one acre of disturbed area; provided, however, that this exemption shall not apply to any land-disturbing activity within a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre or within 200 feet of the bank of any state waters, and for purposes of this paragraph, "state waters" excludes channels and drainageways which have water in them only during and immediately after rainfall events and intermittent streams which do not have water in them year round; provided, however, that any person responsible for a project which involves less than one acre, which involves land-disturbing activity, and which is within 200 feet of any such excluded channel or drainageway must prevent sediment from moving beyond the

boundaries of the property on which such project is located and provided, further, that nothing contained in this chapter shall prevent a city or county which is a local issuing authority from regulating any such project which is not specifically exempted by paragraph (1), (2), (3), (4), (5), (6), (7), (9), or (10) of this Code section;

(9) Construction or maintenance projects, or both, undertaken or financed in whole or in part, or both, by the Department of Transportation, the Georgia Highway Authority, or the State Road and Tollway Authority; or any road construction or maintenance project, or both, undertaken by any county or municipality; provided, however, that construction or maintenance projects of the Department of Transportation or the State Road and Tollway Authority which disturb one or more contiguous acres of land shall be subject to the provisions of Code Section 12-7-7.1; except where the Department of Transportation, the Georgia Highway Authority, or the State Road and Tollway Authority is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case a copy of a notice of intent under the state general permit shall be submitted to the local issuing authority, the local issuing authority shall enforce compliance with the minimum requirements set forth in Code Section 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders;

(10) Any land-disturbing activities conducted 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; except where an 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 is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case the local issuing authority shall enforce compliance with the minimum requirements set forth in Code Section 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders; and

(11) Public water system reservoirs.

§ 12-7-18. Effect of chapter on requirements of the "Georgia Water Quality Control Act."

No provision of this chapter shall authorize any person to violate Article 2 of Chapter 5 of this title, the "Georgia Water Quality Control Act," or the rules and regulations promulgated

and approved under said article or to pollute any waters of this state as defined in said article.

§ 12-7-19. Education and training requirements; required programs; instructor qualifications; expiration of certification

(a) (1) Persons involved in land development design, review, permitting, construction, monitoring, or inspection or any land-disturbing activity shall meet the education and training certification requirements, dependent on his or her level of involvement with the process, as developed by the commission in accordance with this Code section and in consultation with the division and the Stakeholder Advisory Board created pursuant to Code Section 12-7-20.

(2) On or after May 14, 2007, for each site on which land-disturbing activity occurs, each entity or person acting as either a primary, secondary, or tertiary permittee, as defined in the state general permit, shall have as a minimum one person who is in responsible charge of erosion and sedimentation control activities on behalf of said entity or person and meets the applicable education or training certification requirements developed by the commission present on site whenever land-disturbing activities are conducted on that site. A project site shall herein be defined as any land disturbance site or multiple sites within a larger common plan of development or sale permitted by an owner or operator for compliance with the state general permit.

(3) Persons or entities involved in projects not requiring a state general permit but otherwise requiring certified personnel on site may contract with certified persons to meet the requirements of this chapter.

(4) If a state general permittee who has operational control of land-disturbing activities for a site has met the certification requirements of paragraph (1) of subsection (b) of this Code section, then any person or entity involved in land-disturbing activity at that site and operating in a subcontractor capacity for such permittee shall have until December 31, 2007, to meet those educational requirements specified in paragraph (4) of subsection (b) of Code Section 12-7-19 and shall not be required to meet any educational requirements that exceed those specified in said paragraph.

(b) No less than the following training programs shall be established:

(1) A fundamentals seminar (Level 1) will be established which provides sufficient training to all participants as to the applicable laws, requirements, processes, and latest means and methods recognized by this state to effectively control erosion and sedimentation;

(2) An advanced fundamentals seminar (Level 1) will be established which provides additional details of installation and maintenance of best management practices for both regulatory and nonregulatory inspectors and others;

(3) An introduction to design seminar (Level 2) will be established which provides required training to design and review a successful erosion, sedimentation, and pollution control plan;

(4) An awareness seminar (Level 1) will be established which does not exceed two hours in duration and which provides information regarding the erosion and sediment control practices and processes in the state and which will include an overview of the systems, laws, and roles of the participants; and

(5) A trainer and instructor seminar will be established for both Level 1 and Level 2 trainers and instructors which will provide the minimum training as to applicable laws and best management practices and design of erosion, sedimentation, and pollution control plans in this state.

(c) Trainer and instructor qualifications will be established with the following minimum requirements:

(1) Level 1 trainers and instructors shall meet at least the following minimum requirements and any other requirements as set by the commission:

(A) Education: four-year college degree or five years' experience in the field of erosion and sediment control;

(B) Experience: five-years' experience in the field of erosion and sediment control. Where years of experience is used in lieu of the education requirement of subparagraph (A) of this paragraph, a total of ten years' field experience is required;

(C) Approval by the commission and the Stakeholder Advisory Board; and

(D) Successful completion of the Level 1 trainer and instructor seminar found in paragraph (5) of subsection (b) of this Code section; and

(2) Level 2 trainers and instructors shall meet at least the minimum requirements of a Level 1 trainer or instructor, any other requirements as set by the commission, and successful completion of the Level 2 trainer and instructor seminar created under paragraph (5) of subsection (b) of this Code section.

(d) In addition to the requirements of subsection (c) of this Code section, the commission shall establish and any person desirous of holding certification must obtain a passing grade as established by the Stakeholder Advisory Board on a final exam covering the material taught in each mandatory seminar; provided, however, that there shall be no final exam requirement for purposes of paragraph (4) of subsection (b) of this Code section. Final exams may, at the discretion of the commission, serve in lieu of attendance at the seminar. Any person shall be authorized to administer a final examination for any seminar for which he or she was the instructor.

(e) (1) A certification provided by achieving the requirements established by the commission shall expire no later than three years after its issuance.

(2) A certified individual shall be required to attend and participate in at least four hours of approved continuing education courses, as established by the commission, every three years.

(3) A certification may be extended or renewed by meeting requirements established by the commission.

(4) Revocation procedures may be established by the commission in consultation with the division and the Stakeholder Advisory Board.

§ 12-7-20. Creation of Stakeholder Advisory Board; responsibilities; procedures

(a) There shall be a Stakeholder Advisory Board to consist of not more than 13 members.

(b) Members shall be appointed by the Governor, shall serve at the pleasure thereof, and shall represent the following interests:

- (1) The division;
- (2) The commission;
- (3) Soil and water conservation districts;
- (4) The Department of Transportation;
- (5) Municipal governments;
- (6) County governments;
- (7) Public utilities;
- (8) The engineering and design community;
- (9) The construction community;
- (10) The development community;
- (11) The environmental community;
- (12) The Erosion and Sediment Control Overview Council; and

(13) Educators.

(c) The Stakeholder Advisory Board shall elect one of its members as chairperson. The chairperson shall call all meetings of the Stakeholder Advisory Board.

(d) The Stakeholder Advisory Board shall be responsible for working together with the division and the commission to establish, evaluate, and maintain the education and training program established pursuant to Code Section 12-7-19, including but not limited to reviewing course curricula, educational materials, and exam and testing procedures; evaluating trainer and instructor qualifications; and reviewing audit results performed by the commission.

(e) The Stakeholder Advisory Board may conduct such meetings at such places and at such times as it may deem necessary or convenient to enable it to exercise fully and effectively its powers, perform its duties, and accomplish the objectives and purposes of this Code section. Meetings shall be held on the written notice of the chairperson. The notice of a meeting shall set forth the date, time, and place of the meeting. Minutes shall be kept of all meetings.

(f) A majority of the members shall constitute a quorum of the Stakeholder Advisory Board. The powers and duties of the Stakeholder Advisory Board shall be transacted, exercised, and performed only pursuant to an affirmative vote of a majority of those members present at a meeting at which a quorum is present.

(g) Members of the Stakeholder Advisory Board shall not be entitled to any compensation for the rendering of their services to the Stakeholder Advisory Board.

§ 12-7-21. Appointment of panel to study controls implemented pursuant to chapter; procedure and operation of panel

Reserved.

§ 12-7-22. Electronic filing and reporting system

In order to achieve efficiencies and economies for both the division and the regulated community by the use of electronic filing for certain application and reporting requirements of this chapter and National Pollution Discharge Elimination System permits, the division and the Pollution Prevention Assistance Division of the department shall jointly work toward implementing such an electronic filing and reporting system as soon as practicable and allowable under federal regulations.

Insert Tab 3

State Waters

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STATE WATERS



Buffers, Permits, Variances

Level 1B: Advanced Fundamentals
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 - Buffer Variances & Exemptions – Slide 36
- Coastal Marshlands – Slide 50
 - Definition – Slide 41
 - Steps to Determine Coastal Marshlands – Slide 51
- Waters of the U.S. – Slide 58
 - Definition – Slide 60
 - Wetlands – Slide 78

2

State Waters

- » State Level

3

Definition

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.*

4

Agency Roles

GA Environmental Protection Division



Local Issuing Authority

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

5

Who Determines State Waters?

- ▶ For projects regulated by a certified Local Issuing Authority (LIA), the LIA is responsible for determining State Waters
- ▶ 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 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

6

Important Terms - Buffer

- ▶ The State-mandated **buffer** requirements apply to State Waters that have **wrested** vegetation by normal stream flow
- ▶ **Buffer** (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"

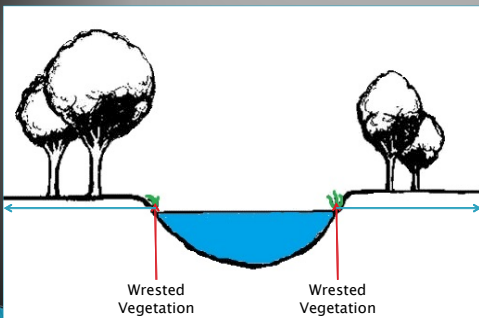
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Important Terms - Wrested Vegetation

- ▶ The State mandated buffer requirements apply to State Waters that have **wrested vegetation** by normal stream flow
- ▶ **Wrested vegetation** = movement of water that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth

8

Wrested Vegetation



9

Wrested Vegetation



10

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...



11

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...



12

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...



13

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...



14

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...



15

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...

Not Wrested



The absence of wrested vegetation can be due to completely vegetated banks and/or bottoms (excluding aquatic vegetation), rip rap or a solid bulkhead, seawall, or retaining wall.

16

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...

Wrested

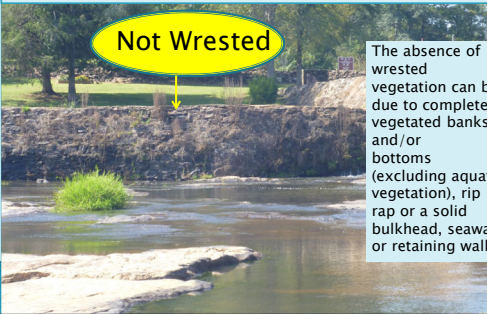


17

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...

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18

Wrested or Not Wrested Vegetation?

...movement of water by normal stream flow or wave action that removes soil, debris, and vegetation, creating a clear demarcation between water flow and vegetative growth...



The absence of wrested vegetation can be due to completely vegetated banks and/or bottoms (excluding aquatic vegetation), rip rap or a solid bulkhead, seawall, or retaining wall.

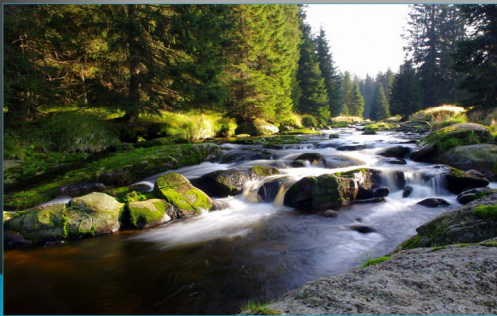
19

Important Terms - Normal Stream Flow

- ▶ The State mandated buffer requirements apply to State Waters that have wrested vegetation by *normal stream flow*
- ▶ **Normal Stream Flow** (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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What Type of Stream is Present?



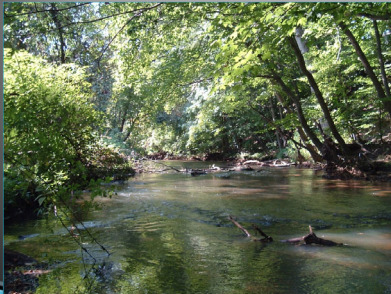
21

Perennial Stream Characteristics

- ▶ 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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Perennial Stream Characteristics



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Intermittent Stream Characteristics

- ▶ 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



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Ephemeral Stream Characteristics

- ▶ 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



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Common Misconceptions

- ▶ 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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Steps for Determining the Presence of State Waters and Buffer Requirements on a Site

Field Guide for Determining the Presence of State Waters That Require a Buffer

THE GEORGIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATERSHED PROTECTION BRANCH
NONPOINT SOURCE PROGRAM



The Guidance does not change or modify any requirements in the Erosion and Sedimentation Act of 1975 O.C.G.A. 12-7 or DNR Rules on Buffer Variance Procedures and Criteria 291-3-7-.05, as amended.
This field guide supersedes any previous manuals, memos, or guidance issued by the Georgia Environmental Protection Division on the identification of State Waters that require a buffer. It does not supersede the requirements of any Rule or Law. APRIL 2017

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Steps for Determining the Presence of State Waters

Step 1: Review the topography on the ES&PC Plan for natural or artificial features that may indicate the presence of State Waters.

Step 2: Physically visit the site & walk the entire length or perimeter of waterbody to verify the feature is not completely contained on the property. The waterbody must have an inlet/outlet outside of the property in order to be identified as a State Water.



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Steps for Determining the Presence of State Waters

Step 3: Once a State Water has been determined, the next step is to decide if it should have a buffer.

- ▶ The State-mandated buffer requirements apply to State Waters that have **wrested vegetation** and **normal stream flow**.

Step 4: Is wrested vegetation present?

- ▶ If no point of wrested vegetation, then the waterbody is **not** required to have a buffer.
- ▶ Lack of wrested vegetation can be when there are completely vegetated banks (excluding aquatic vegetation), rip rap, or a solid bulkhead, seawall, or retaining wall.

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Steps for Determining the Presence of State Waters

Step 5: Is base flow present?

- ▶ To accurately identify base flow, a site visit should be made within **48 hours** of a rain event.
- ▶ If evidence of base flow is present during the site inspection, the stream is either perennial or intermittent and will **require a buffer**.
- ▶ If the site is visited and base flows are not evident, the feature may be ephemeral or intermittent.
- ▶ Ephemeral trout streams **require a buffer** if they have wrested vegetation even without evidence of a base flow.
- ▶ Ephemeral non-trout streams do **not require a buffer**.

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Steps for Determining the Presence of State Waters

Step 6 & Step 7:

- ▶ Further investigation is needed to determine if the stream is **ephemeral**
- ▶ Use professionally trained personnel
- ▶ Use the most current version of the "North Carolina Division of Water Quality Stream Identification Method"

Step 8: If wrested vegetation and base flows exist, then a buffer is required. The buffer is measured from the point of wrested vegetation.

Step 9: Document the determination (photos recommended)

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Stream Buffer Requirements

Non-trout

- ▶ Warm water perennial and intermittent streams:
 - [25-ft buffer](#)

Measured horizontally from point where vegetation has been *wrested* by normal stream flow or wave action

- ▶ Local Issuing Authorities may require additional buffers in the local ordinance!

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Trout Streams

- ▶ 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 not 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

- ▶ 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 only on:
 - Lake Sinclair & Lake Oconee

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Drainage Structure

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

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

- ▶ 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.
- ▶ A buffer variance [application](#) must be submitted and will only be considered for the applicable criteria (a-k) as delineated in the E&SC Rules & Regulations.
- ▶ The GA EPD receives ~220 buffer variance applications/year.

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Stream Buffer Variance Criteria (a-k)

- (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 (a-k)

- (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 (a-k)

- (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 (a-k)

- (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

Stream Buffer Variance Criteria (a-k)

- (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

Stream Buffer Variance Criteria (a-k)

- (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.

Stream Buffer Variance Criteria (a-k)

- (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:
- piping, filling, or re-routing of non-trout waters that are not jurisdictional Waters of the U.S.
 - 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

- ▶ 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

- ▶ 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:
- The proposed buffer encroachment
 - The location of the project
 - Where the public can view the site plans
 - Where comments should be sent

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Coastal Marshlands

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Coastal Marshlands

- ▶ **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 (O.C.G.A 12-5-282(3)).
- ▶ The established 25-foot buffer applies along all coastal marshlands and 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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Steps for Determining the Presence of Marshlands and Buffer Requirements on a Site

Field Guide for Identifying and Permitting Coastal Marshlands That Require a Buffer

GEORGIA WATERSHED PROTECTION BRANCH
NONPOINT SOURCE PROGRAM

This guidance addresses the identification and permitting of coastal marshlands (including impoundments) that require a buffer. The State mandated buffer requirements apply to all coastal marshlands as defined in Code Section 12-5-282 (Coastal Marshland Protection Act). This field guide supersedes any previous manuals, memos, or guidance issued by the Georgia Environmental Protection Division on the identification of coastal marshlands that require a buffer. It does not supersede the requirements of any Rule or Law. APRIL 2017

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Steps for Determining the Presence of Marshlands & Buffer Requirements on a Site

Step 1: Review topography of the ES&PC Plan for features that indicate the presence of coastal marshland

Step 2: A *Jurisdictional Determination (JD)* is needed for any land disturbing activity below the 2-meter elevation. The JD line must be documented

Step 3: The LIA or EPD (if no LIA) will determine if the land disturbing activity is exempt. If not exempt, the project will require a buffer variance

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Steps for Determining the Presence of Marshlands & Buffer Requirements on a Site

Step 4: All determinations should be documented. Photos are strongly encouraged

Step 5: If needed, buffer variance applications or variance by rule applications are to be submitted to GA EPD

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Coastal Marshlands Exemptions

No Buffer Variance Required

- ▶ 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

No Buffer Variance Required

- ▶ 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 Marshland Variance by Rule

- ▶ Used for land disturbing activities where the area within the buffer is not more than 500 square feet
- ▶ Used for land disturbing activities that have a "minor buffer impact" provided that the total area of buffer impacts is less than 5,000 square feet
- ▶ Bank and shoreline stabilization structures are not eligible for coverage under the variance by rule

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Variance by Rule Requirements

- ▶ Minimize disturbance to existing buffer vegetation
- ▶ Final stabilization must include a re-vegetation plan recommended using native riparian vegetation
- ▶ Stabilize soil disturbance on site at the end of each day. Implement temporary vegetative measures after 14 days of soil disturbance
- ▶ Proper implementation of erosion and sediment control measures
- ▶ Consideration of post construction stormwater management
- ▶ Compliance with all other federal, state, and local laws and ordinances


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Waters of the U.S.


» Federal Level

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Agency Roles

U.S. Army Corps of Engineers 

- Administers day-to-day program
- Individual and general permit decisions/issuance
- Jurisdictional determinations
- Enforcement

U.S. Environmental Protection Agency 

- Develops and interprets policy, guidance, and environmental criteria used in permit applications
- Determines scope of geographic jurisdiction and applicability of exemptions
- Has authority to prohibit, deny, or restrict the use of any defined area

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Waters of the U.S.

- ▶ Navigable waters
 - Oceans, bays, inlets
- ▶ Tributaries
 - Rivers, creeks, ephemeral & intermittent streams, lakes, ponds
- ▶ Interstate bodies of water or wetlands

- ▶ Wetlands adjacent to the waters listed here
- ▶ Special aquatics sites
 - Sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, riffle and pool complexes

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Definitions

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



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Jurisdictional Determinations

VIDEO



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Jurisdictional Determinations

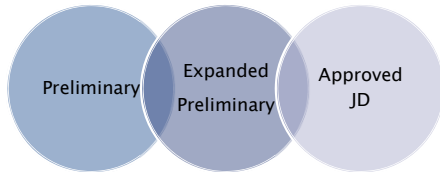
- ▶ Identifies the location and type of waters of the US on your property or project site



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Jurisdictional Determinations

▶ Three types of Jurisdictional Determinations



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Jurisdictional Determinations

- ▶ 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

Preliminary

- Valid for a specific project
- Only applicable to Waters of the U.S.
- Not appealable
- Coordination with other agencies is not required

Approved

- Valid for 5 years
- Applicable to Waters of the U.S. & non-waters of the U.S.
- Appealable
- In some circumstances, coordination with the EPA and USACE is required

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JD Line



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Section 10 Rivers & Harbors Act

- ▶ 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

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

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Section 404 Clean Water Act

- ▶ 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

- ▶ 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

- ▶ Mechanized land clearing
- ▶ Grading
- ▶ Excavation with associated discharge



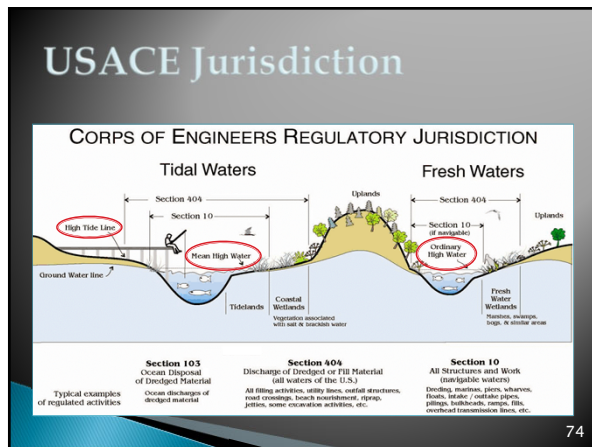
72

404 Regulated Activities

- ▶ 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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USACE Jurisdiction



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Definitions

- ▶ 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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Wetlands

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

- ▶ 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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Wetlands



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How are Wetlands Determined?

▶ 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



80

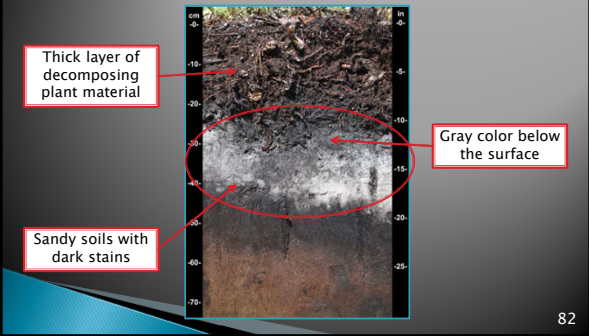
How are Wetlands Determined?

▶ 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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Hydric Soil

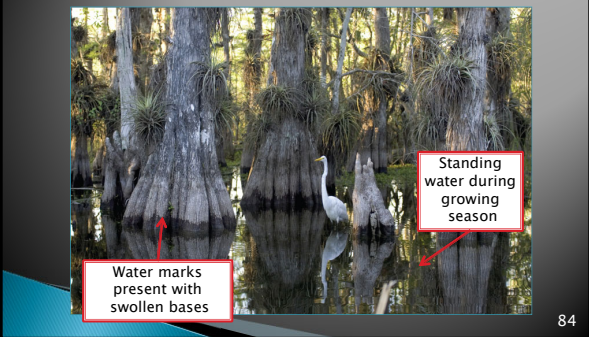


How are Wetlands Determined?

- ▶ 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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Wetland Hydrology



Summary

- ▶ 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
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



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Insert Yellow Sheet

Back of Yellow Sheet

Rules and Regulations of the State of Georgia
Department 391: Rules of Georgia Department of Natural Resources
Subject 391-3-7: Erosion and Sedimentation Control

current through June 2018

Rule 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.

Rule 391-3-7-.02 Repealed

Rule 391-3-7-.03 Repealed

Rule 391-3-7-.04 Repealed

Rule 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.

Rule 391-3-7-.06 Turbidity Limits for Stormwater Runoff Discharges

Turbidity of stormwater runoff discharges shall be controlled to the extent that the limits established in O.C.G.A. 12-7-6 shall not be exceeded.

Rule 391-3-7-.07 Inspection and Compliance

- (1) The Division may periodically inspect the site of any land disturbing activity for which a permit has been issued to determine if such activity is being conducted in accordance with the permit and to evaluate the effectiveness of the erosion and sediment control measures employed.
- (2) The Division shall have the authority to conduct such investigations as it may reasonable deem necessary to carry out its duties as prescribed by O.C.G.A. 12-7-1 *et seq.*, and these rules and regulations and for this purpose to enter at reasonable times upon any property, public or private, for the purpose of investigating and inspecting the sites of land disturbing activities. The Division shall make its best efforts to contact a local issuing authority prior to any site inspection of a project within that local issuing authority's jurisdiction, provided however, that the Division shall, if contact was not prior made, contact the local issuing authority not more than five (5) business days after the site visit.
- (3) No person shall refuse entry or access to any authorized representative of the Division who requests entry for purposed of inspection and who presents appropriate credentials, nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out assigned official duties.

Rule 391-3-7-.08 Enforcement

- (1) The administration and enforcement of these rules and regulations shall be in accordance with the Erosion and Sedimentation act of 1975, O.C.G.A. 12-7-1 *et seq.*; the Executive Reorganization Act of 1972, O.C.G.A. 12-2-1 *et seq.*, and the Georgia Administrative Procedure Act, O.C.G.A. 50-13-1 *et seq.*, all as amended, but also includes the authority to require corrective action and/or remediation of conditions creating adverse water quality impacts, or otherwise in violation of these rules, regulations and authorizing statutes.
- (2) When the Division seeks to enforce the requirements of these rules or the requirements of O.C.G.A. 12-7-1 *et. seq.*, as amended, in a jurisdiction covered by a certified local issuing authority, the Division should coordinate enforcement with the local issuing authority. However, coordination with a local issuing authority is not a prerequisite for enforcement by

the Division.

Rule 391-3-7-.09 Local Issuing Authorities

(1) Criteria for Certification.

- (A) City or county has adopted an ordinance which demonstrates compliance with the provisions in Title 12, Chapter 7 of the Official Code of Georgia.
- (B) City or county has inspection personnel, who are or will be qualified personnel (within 6 months of date of hire) in erosion and sediment control.
- (C) Required Documentation. A city or county shall provided the following documentation to the Division:
 - 1. A letter from the city or county requesting certification as a Local Issuing Authority; and
 - 2. A listing of the number of inspectors employed by the City or County that will be responsible for land disturbance activity inspections and documentation of the training for each inspector; and
 - 3. Documentation of the geographic size of the jurisdiction; and
 - 4. Documentation of the estimated workload and inspection frequency schedule for the inspectors; and
 - 5. A copy of the ordinance which demonstrates compliance with the provisions in Title 12, Chapter 7 of the Official Code of Georgia.
- (D) The Division shall provide written notification to the city or county of the Director's decision no later than 60 days after receipt of request for certification. In the case of a denial of local issuing authority certification, the Division shall explain the deficiencies causing the denial. The denial of certification by the Division shall not preclude a city or county from making any subsequent application for certification.

(2) Responsibilities of Certified Local Issuing Authorities.

- (A) City or county demonstrates adequate program administration, record keeping and enforcement as evidenced by:
 - 1. Processing land disturbing activity applications, issuing permits and compliance with stream buffer variance requirements; and
 - 2. Maintaining a list of open land disturbance permits; and
 - 3. Conducting inspections and maintaining reports of inspections including violations; and
 - 4. Enforcing the ordinance and keeping record of written notification of violations, stop-work orders, court actions, etc.
- (B) City or county must follow a Complaint Investigation Process which:

1. Includes an investigation of the complaint by the local issuing authority within 5 business days; and
 2. Includes a mechanism for referral of unresolved complaints to the Division; and
 3. Includes a monthly log of complaints and inquiries, including actions taken.
- (C) City or county with a Memorandum of Agreement (MOA) with the appropriate local Soil and Water Conservation District to review and approve an Erosion and Sedimentation Control Plan shall approve or disapprove a revised Plan submittal within 35 days of receipt. Failure of the city or county to act within 35 days shall be considered an approval of the revised Plan submittal.

(3) De-certification of a Local Issuing Authority.

- (A) Recommendation for De-certification Investigation. The Division shall begin an investigation for de-certification upon request with adequate documentation by the local Soil and Water Conservation District or Georgia Soil and Water Conservation Commission or on its own initiative if any of the following occurs:
1. City or county no longer has an ordinance which demonstrates compliance with the provisions in Title 12, Chapter 7 of the Official Code of Georgia; or
 2. City or county no longer has inspection personnel who are or will be qualified personnel (within 6 months of date of hire) in erosion and sediment control; or
 3. City or county does not utilize their Complaint Investigation Process pursuant to 391-3-7-.09 (2)(A); or
 4. City or county no longer has adequate program administration, record keeping and enforcement pursuant to 391-3-7-.09 (2)(B).
- (B) De-certification Investigation. Within 60 days of receipt of the de-certification request, the Division shall initiate an investigation by providing written notice of the recommendation for de-certification to the local issuing authority and detailing the perceived deficiencies enumerated in the recommendation. Prior to any de-certification of a local issuing authority, the Division must perform an on-site evaluation of the program.

The city or county shall have 30 days in which to respond in writing to the Division and:

1. Acknowledge the noted deficiencies and agree to comply; or
2. Offer explanation of why deficiency or omission has occurred and establish a target deadline to comply; or
3. Disagree with some or all of the noted deficiencies and recommendations for improvement and request mediation between the city or county and the

Division.

- (C) Review Local Issuing Authority Response. The Director or his/her designee will review any response received from the local issuing authority. The Director may then uphold, modify, suspend or dismiss the de-certification recommendation. The determination of the Director shall be made within 30 days from receipt of the response from the local issuing authority.
- (D) Final Decision and Appeal. A determination made by the Director to uphold, modify, suspend or dismiss the de-certification is a final action of the Director and may be appealed in accordance with subsection (c) of Code Section 12-2-2.

(4) **Continuing Certification.**

A local issuing authority shall submit documentation showing continued compliance with the criteria for certification established at 391-3-7-.09 (1)(A) and (B) to the Division whenever an event requiring the Division to evaluate a local issuing authority for continuing compliance with the certification requirements occurs.

Rule 391-3-7-.10 Site Visit Required

- (1) All applications shall contain a certification stating that the plan preparer or his or her designee has visited the site prior to creation of the plan.
- (2) Plans submitted shall contain the following certification:

"I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my direct supervision."

Rule 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.

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WRESTED VEGETATION

Examples of situations that usually do not require a buffer due to lack of wrested vegetation are:

1. Freshwater Wetlands
2. Concrete Channels
3. Bulkheads, Seawalls or Retaining Walls
4. Rip Rap
5. Vegetated Waterways (excluding aquatic vegetation)
6. Impoundments with completely vegetated banks

Note: Structures that are in disrepair may require a buffer if vegetation has been reestablished.

Freshwater Wetlands



Concrete Channel



Bulkhead



Rip Rap Bank



Vegetated Waterway



Grassed Impoundment



DEFINITIONS

- a. "Base Flow" means the discharge that enters a stream channel mainly from groundwater, but also from lakes during periods when no precipitation occurs.
- b. "Buffer" means 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 (O.C.G.A. 12-7-3(2)).
- c. "Ephemeral Stream" means a stream that typically has no well-defined channel, and which flows only in direct response to precipitation with runoff. (O.C.G.A. 12-7-6(b)(15))
- d. "Intermittent Stream" means a stream that flows in a well-defined channel during wet seasons of the year but not for the entire year.
- e. "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 grubbing, dredging, grading, excavation, transporting, and filling of land, but not including those practices to the extent described in O.C.G.A. 12-7-17 (O.C.G.A. 12-7-3(9)).
- f. "Normal Stream Flow" for non-trout waters only, means 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 (Rule 391-3-7-.01(bb)).
- g. "Perennial Stream" means a stream that flows in a well-defined channel throughout most of the year under normal climatic conditions
- h. "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(8) (O.C.G.A. 12-7-3(16)).
- i. "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 (Rule 391-3-7-.01(bb)).
- j. "Wrested Vegetation" means movement of water that removes soil, debris and vegetation, creating a clear demarcation between water flow and vegetative growth.

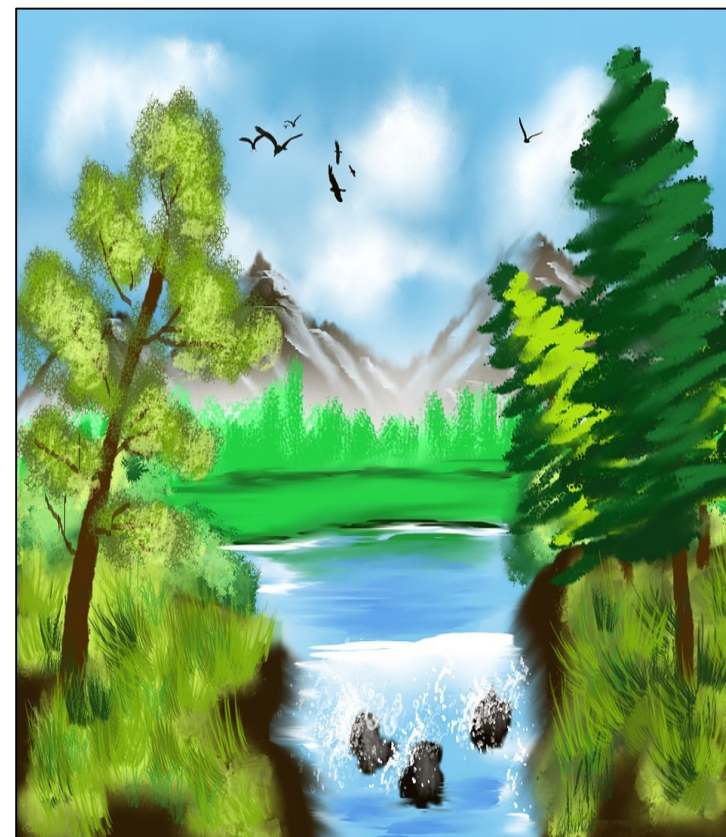
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April 2017

Field Guide for Determining the Presence of State Waters That Require a Buffer



The Guidance does not change or modify any requirements in the Erosion and Sedimentation Act of 1975 O.C.G.A. 12-7 or DNR Rules on Buffer Variance Procedures and Criteria 391-3-7-.05, as amended.

This field guide supersedes any previous manuals, memos, or guidance issued by the Georgia Environmental Protection Division on the identification of State Waters that require a buffer. It does not supersede the requirements of any Rule or Law.



WATERSHED PROTECTION BRANCH
NONPOINT SOURCE PROGRAM

This guidance is based on the Rules for Erosion and Sedimentation Control (Rules), 391-3-7, promulgated under the Georgia Erosion and Sedimentation Act (Act), O.C.G.A. 12-7.

This guidance only addresses the identification of rivers, streams, creeks, branches, canals, and impoundments that require a buffer. The State mandated buffer requirements apply to these State Waters that have wrested vegetation by normal stream flow. Coastal marshlands are addressed in a separate document and have state mandated buffers that are measured from the Jurisdictional Determination (JD) Line established by the Coastal Marshland Protection Act and implemented by the Coastal Resources Division (CRD).

For the purposes of this guidance, Normal Stream Flow is defined as "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. Direct runoff is the water entering stream channels promptly after rainfalls or snow melts." This definition is found in the definition of Stream Bank in the Rules, and only applies to non-trout streams. Streams that have Normal Stream Flow as defined in the Rules have characteristics that are not normally associated with ephemeral streams.

Please note the following:

1. The definition of Normal Stream Flow that appears in the guidance applies only to non-trout streams. Ephemeral trout streams are not exempt from buffer requirements, but may be eligible for the General Stream Buffer Variance in 391-3-7-.05(9) of the Rules for Erosion and Sedimentation Control. Refer to the Georgia Water Quality Control Rules (391-3-6-.03) for a listing of trout streams. **DNR Wildlife Resources Division trout maps should not be used.**
2. Ponds, lakes and other impoundments located within a trout stream watershed may be subject to trout stream buffer requirements (50 foot buffers).
3. Detention, retention and other water quality/water quantity ponds may be subject to buffer requirements.
4. Draining a pond may not eliminate the buffer. In addition, if the pond is altered after draining the new buffer will be based on the new conditions of the feature, i.e., (instead of a buffered pond there may be a buffered stream).
5. The buffer on an impoundment is measured from the point of "wrested vegetation." Normal pool elevation should not be used unless it coincides with the point of "wrested vegetation."
6. The buffer is 25 or 50 feet as measured horizontally from the point where "vegetation has been wrested by normal stream flow or wave action."
7. Buffer requirements are included in the General NPDES Permit for Storm Water Discharges Associated With Construction Activities.
8. Agricultural **activities**, such as the cultivation and harvesting products of the field or orchard, planting of pasture land, construction of a pond for agricultural purposes, dairy operations, and livestock and poultry operations, are exempt from the buffer requirements (O.C.G.A. 12-7-17(5)). However, the construction of **agricultural buildings, such as poultry houses** may be subject to the buffer requirements included in the NPDES General Permits for Stormwater Discharges Associated With Construction Activities.
9. Contact DNR, Coastal Resources Division for guidance involving any land disturbing activity within the coastal marshland itself.
10. State Waters may also be classified as Waters of the U.S. and may require a U.S. Army Corps of Engineers Section 404 permit.

STEPS FOR DETERMINING THE PRESENCE OF STATE WATERS AND BUFFER REQUIREMENTS ON A SITE

Please note that this guidance is primarily written to assist local issuing authorities with their determinations of State waters and buffer requirements. However, it is also a tool for plan preparers and environmental consultants to use in the preparation of accurate Erosion, Sedimentation and Pollution Control Plans.

Step 1 Review the topography of the Erosion, Sedimentation and Pollution Control Plan for natural or artificial features that may indicate the presence of State Waters.

Step 2 Walk the entire length of the river, stream, creek, branch or canal until it exits the property to verify that the feature is not completely contained upon the property of a single individual, partnership or corporation. If the feature is an impoundment then the perimeter should be inspected for an inlet and/or outlet and property lines identified to verify that the feature is not completely contained upon the property. If a feature is completely contained upon the property of a single individual, partnership or corporation and there is no inflow/outflow, the feature is not a State Water and is not buffered.

Step 3 If it is determined that the feature is a State water the next step is to determine if the feature is a buffered State water. This involves determining if the feature has wretched vegetation and base flow. The buffer determination should be made at least 48 hours after the last rain event to accurately identify base flows.

Step 4 The feature should first be inspected for wretched vegetation. If there is no point of wretched vegetation, the feature is not buffered. The absence of wretched vegetated banks and/or bottoms (excluding aquatic vegetation), rip rap or a solid bulkhead, seawall or retaining wall.

Step 5 If there is flowing water in the wretched vegetated channel 48 hours after a rain event the feature is either perennial or intermittent and will require a buffer. If there is no water in the channel the feature is either ephemeral or intermittent. **NOTE:** Ephemeral non-trout streams do not require buffers so great care should be exercised when conducting field investigations for ephemeral and intermittent stream determinations. Ephemeral trout streams are buffered if they have wretched vegetation, regardless of the presence of base flows.

Step 6 Further investigation is required if the feature has wretched vegetation and is dry at the time of the site inspection. In such conditions inspections should be accomplished by professionals trained or otherwise familiar with methods used to determine whether the stream is in a season where base flows may not be observable, or if the stream is ephemeral and simply flows in direct response to precipitation.

Step 7 The most current version of the “North Carolina Division of Water Quality Stream Identification Method” should be used to verify whether the stream is ephemeral. For impoundments a test hole should be dug upland of the high water mark and a few inches below the elevation of the existing water level. The water level in the test hole should stabilize at the same elevation of the subject feature if there is a ground water component.

Step 8 If it is determined that there is both wretched vegetation and base flow present on the site then a State-mandated buffer exists and the buffer is measured from the point of wretched vegetation. Please note that ephemeral trout streams are buffered regardless of the presence of base flow.

Step 9 The determination should be documented in writing. Photo documentation is strongly recommended.

PERENNIAL STREAM CHARACTERISTICS



North Georgia Perennial



Piedmont Perennial



Coastal Perennial

All perennial streams flow throughout the year in a normal climatic year. Site inspections should result in visually discernible stream flows as evidence of base flow contribution between rain events, even in low flow conditions. After confirming perennial flow regimes, the presence of one or more of the following characteristics indicates that the drainage feature is a **perennial stream**:

1. Base flow that maintains stream flow throughout the year under normal circumstances.
2. Well-developed stream banks and channels include riffles/pools.
3. A channel that is almost always sinuous (winding, snake-like, etc.) The degree of sinuosity is specific to physiographic regions. For example, in geographic regions that have mountainous terrain, or in the coastal plain where many streams have been channelized, the channels are less sinuous.
4. Presence of iron oxidizing bacteria in the streambed.
5. Evidence of soil and debris movement (scouring) in the stream channel. Leaf litter is usually transient or temporary in the flow channel.
6. Algae and wetland or hydrophytic vegetation are usually associated with the stream channel. However, perennial streams with deeply incised or “down-cut” channels will usually have wetland vegetation present along the banks or flood-prone zone. Examples include sedges, rushes, mosses, ferns, and the riparian grasses, shrubs and other woody species.
7. Stream bank soils with hydric conditions, including dominant black/gray (gleying) and/or redoximorphic features evident in the exposed stream bank profiles at or above the low flow conditions.
8. Exposure of rock or gravel or sand in a continuous or nearly continuous low lying channel. In the coastal plain, the soils may be sandy with veins of black.
9. The presence of aquatic mollusks, crayfish, amphibians, aquatic insects (in any life phase) or fish (For help identifying insects as aquatic, use the [GA Adopt-A-Stream Aquatic Macroinvertebrate Field Guide, http://www.georgiaadoptastream.com/db/index.html](http://www.georgiaadoptastream.com/db/index.html)).

INTERMITTENT STREAM CHARACTERISTICS



North Georgia Intermittent



Piedmont Intermittent



Coastal Intermittent

After confirming whether base flows are seasonally present, one or more of the following characteristics indicates that the drainage feature is an **intermittent stream**:

1. Well-developed stream bank and defined channel. Riffles/pools channel morphology is evident.
2. Presence of iron oxidizing bacteria in the streambed.
3. Evidence of soil and debris movement (scouring) in the stream channel. Leaf litter is usually transient or temporary in the flow channel.
4. Algae and wetland or hydrophytic vegetation are usually associated with the stream channel or flow area. Intermittent streams with deeply incised or “down-cut” channel will usually have wetland vegetation present along the banks or flood prone zone. Examples include sedges, rushes, mosses, ferns, and the riparian grasses, shrubs and other woody species.
5. Exposure of rock or gravel or sand in a continuous or nearly continuous low lying channel.
6. Stream bank soils with hydric conditions, including dominant black/gray (gleying) and/or redoximorphic features evident in the exposed stream bank profiles at or above the low flow conditions. In the coastal plain, the soils may be sandy with veins of black.
7. Exposure of rock or gravel or sand in a continuous or nearly continuous low lying channel.
8. The presence of aquatic mollusks, crayfish, amphibians, aquatic insects (in any life phase) or fish (For help identifying insects as aquatic, use the [GA Adopt-A-Stream Aquatic Macroinvertebrate Field Guide, http://www.georgiaadoptastream.com/db/index.html](http://www.georgiaadoptastream.com/db/index.html)).

EPHEMERAL STREAM CHARACTERISTICS



North Georgia Ephemeral



Piedmont Ephemeral



Coastal Ephemeral

The most reliable method for differentiating between intermittent and ephemeral stream types during drier conditions requires investigation of the stream bank (i.e., from the stream bed to the top of the bank).

Intermittent stream banks typically are dominated by soils with hydric indicators, such as: visually confirmed oxidized rhizospheres in the stream bank, matrix of gray or black soils, reducing conditions present and confirmed by a redox meter, or the stream banks otherwise include indicators of hydric soils as determined by the most current list of *Regional Indicators of Soil Saturation* as produced by the National Technical Committee for Hydric Soils.

Ephemeral streams usually have poor channel development and lack groundwater-induced base flows that normally result in hydric soils dominating the banks of intermittent and perennial streams.

The prerequisite for a drainage feature to be classified as ephemeral is there must be no evidence of base flows in the stream bank (see methods discussed in intermittent stream characteristics). After meeting the prerequisite above, the presence of one or more of the following characteristics indicates that the drainage feature is an **ephemeral stream**:

1. Poorly developed stream banks.
2. Absence of riffles/pools.
3. A flow area that is almost always straight and either “flattens” out at the bottom of the slope or grades into intermittent or perennial streams.
4. Absence of iron oxidizing bacteria in the streambed.
5. An abundant amount of leaf litter in the flow areas. Usually sparse or no algae and/or wetland (hydrophytic) vegetation present.
6. Fibrous roots and/or rooted upland plants in the streambed. Side slope soils with characteristics typical of the surrounding landscape. Soil texture usually more loamy than the surrounding upslope landscape and usually has a clay subsurface.

Insert Yellow Sheet

Back of Yellow Sheet



Two Meter Elevation Map for Coastal Counties with Marshlands

PLEASE NOTE THE FOLLOWING:

- Buffer requirements are included in the General NPDES Permit for Storm Water Discharges Associated with Construction Activities.
- Agricultural activities, such as the cultivation and harvesting products of the field or orchard, planting of pasture land, construction of a pond for agricultural purposes, dairy operations, and livestock and poultry operations, are exempt from the buffer requirements (O.C.G.A. 12-7-17(5)). However, the construction of agricultural buildings may be subject to the buffer requirements included in the NPDES General Permits for Stormwater Discharges Associated with Construction Activities.
- Contact the DNR, Coastal Resources Division, for guidance involving any land disturbing activity within the marshland itself.
- State waters may also be classified as Waters of the U.S. and may require a U.S. Army Corps of Engineers Section 404 permit.

CONTACT INFORMATION

Coastal Resources Division
 Georgia Department of Natural Resources
 One Conservation Way
 Brunswick, GA 31520
 Phone: 912-264-7218
<http://coastalgadnr.org/msp/jd>

US Army Corps of Engineers
 Savannah District
 Regulatory Division
 100 W. Oglethorpe Avenue
 Savannah, GA 31401-3640
 Phone: 912-652-5347 or
 1-800-448-2402
<http://www.sas.usace.army.mil/Regulatory>

Georgia Environmental Protection Division
 Watershed Protection Branch
 2 Martin Luther King Jr. Drive
 Suite 1462 East, Atlanta, Georgia 30334
 Phone: 404-463-1511.
www.epd.georgia.gov

ADDITIONAL RESOURCES:

Coastal Marshlands Protection Act
<http://coastalgadnr.org/sites/uploads/crd/pdf/permitapps2011/CMPAlaw.pdf>

Rules for Erosion and Sedimentation Control
<http://rules.sos.ga.gov/gac/391-3-7>

Georgia Erosion and Sedimentation Act
<http://www.lexisnexis.com/hottopics/gacode/Default.asp>

The following documents can be found at
<http://epd.georgia.gov/erosion-and-sedimentation>:

“Streambank and Shoreline Stabilization Guidance”

Local Issuing Authorities List

“Minor Land Disturbing Guidance”

<http://epd.georgia.gov/erosion-and-sedimentation-forms>

Coastal Marshland Buffer Variance Application

Coastal Marshland Variance by Rule Notification Form

April 2017

**Field Guide for Identifying and Permitting Coastal Marshlands That Require a Buffer
 April 2017**



This guidance addresses the identification and permitting of coastal marshlands (including impoundments) that require a buffer. The State mandated buffer requirements apply to all coastal marshlands as defined in Code Section 12-5-282 (Coastal Marshland Protection Act).

This field guide supersedes any previous manuals, memos, or guidance issued by the Georgia Environmental Protection Division on the identification of coastal marshlands that require a buffer. It does not supersede the requirements of any Rule or Law.



The publication of this document was supported by the Georgia Department of Natural Resources, Environmental Protection Division and was financed in part through a grant from the U.S. Environmental Protection Agency under the provisions of Section 319(h) of the Federal Clean Water Act of 1987, as amended.

This guidance is based on the Rules for Erosion and Sedimentation Control (Rules), 391-3-7, promulgated under the Georgia Erosion and Sedimentation Act (GESA), O.C.G.A. 12-7.

The Act defines State waters as “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.” Coastal marshlands meet this definition and therefore are State waters.

STEPS FOR DETERMINING THE PRESENCE OF MARSHLANDS AND BUFFER REQUIREMENTS ON A SITE

Please note that this guidance is primarily written to assist Local Issuing Authorities (LIAs) with their determinations of coastal marshlands and buffer requirements. However, it is also a tool for plan preparers and environmental consultants to use in the preparation of accurate Erosion, Sedimentation and Pollution Control Plans. **Coastal marshlands are buffered if they meet the definition in O.C.G.A. 12-5-282 and are not otherwise exempted.**

STEP 1 Review the topography of the Erosion, Sedimentation and Pollution Control Plan for features that may indicate the presence of coastal marshlands.

STEP 2 For any proposed land disturbance activity below the 2 meter elevation (see map for more information) the owner should contact the Georgia Department of Natural Resources (DNR), Coastal Resources Division (CRD) for a jurisdictional determination. If CRD takes jurisdiction, the owner will need to provide EPD and/or the LIA documentation of a CRD verified Jurisdictional Determination (JD) Line. CRD should be contacted by the owner or the owner’s agent to establish the location of the JD Line. Alternately, the owner or owner’s agent may do their own topographical survey or plant survey and present that information to CRD for verification of the JD line. If CRD does not take jurisdiction the owner will need to provide EPD and/or the LIA with written verification.

STEP 3 The LIA or EPD (if the activity is not regulated by an LIA) should then determine if the proposed activity meets one of the exemptions in the Georgia Erosion and Sedimentation Act (O.C.G.A. 12-7-17). If the activity is not exempt the project will require a buffer variance based on the JD line established by CRD. Coastal marshlands have a 25 foot buffer as measured horizontally from the coastal marshland-upland interface (JD Line), as determined in accordance with Part 4 of Article 4 of Chapter 5 of the Coastal Marshlands Protection Act (CMPA).

STEP 4 The determination should be documented in writing. Photo documentation and/or a survey plat are strongly recommended. It is the responsibility of the project owner to retain this documentation for permitting purposes.

STEP 5 If it is determined that a buffer variance is required a buffer variance application or variance by rule notification (with supporting documentation) should be submitted to the Georgia Environmental Protection Division, Watershed Protection Branch, 2 Martin Luther King Jr. Drive, Suite 1462 East, Atlanta, GA 30334, 404-463-1511.

THE FOLLOWING ACTIVITIES DO NOT REQUIRE A BUFFER VARIANCE. THESE EXEMPTIONS ARE ONLY APPLICABLE TO THE COASTAL MARSHLANDS (O.C.G.A. 12-7-6(b)(17)):

- Where an alteration within the buffer area has been authorized pursuant to Code Section 12-5-286 (Coastal Marshland Protection Act).
- Maintenance of any currently serviceable structure, landscaping, or hardscaping, including bridges, roads, parking lots, golf courses, golf cart paths, retaining walls, bulkheads, and patios.
- Where a drainage structure or a roadway drainage structure is constructed or maintained.
- On the landward side of any currently serviceable shoreline stabilization structure.
- 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.

- Crossings for utility lines that cause a width of disturbance of not more than 50 feet within the buffer.
- 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.
- 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 December 31, 2015 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.

COASTAL MARSHLANDS VARIANCE BY RULE (391-3-7-11(9)) MAY BE USED FOR:

1. Activities where the area within the buffer is not more than 500 square feet, or
2. Activities that have a “Minor Buffer Impact” as defined in 391-3-7-.01(r) (no additional above ground, man-made materials or structures within the buffer, and maintains the original grade), provided that the total area of buffer impacts is less than 5,000 square feet.

PLEASE NOTE THAT BANK AND SHORELINE STABILIZATION STRUCTURES ARE NOT ELIGIBLE FOR COVERAGE UNDER THE VARIANCE BY RULE

THE VARIANCE BY RULE IS SUBJECT TO THE FOLLOWING REQUIREMENTS:

- Disturbance of existing buffer vegetation shall be minimized.
- Final stabilization must include a re-vegetation plan as described in the most recent publication of the Division’s “Streambank and Shoreline Stabilization” guidance. Native riparian vegetation is recommended.
- 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.
- Proper and full implementation of the erosion control measures in 391-3-7-.11(9)(g)1.ii of the Rules.
- 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.
- 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.

THE FOLLOWING INFORMATION MUST BE MAINTAINED ON-SITE UNTIL FINAL STABILIZATION OF THE SITE IS COMPLETE:

- 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.
- Documentation that adequate erosion control measures are incorporated into the project plans and specifications.

ANY ACTIVITY THAT DOES NOT MEET THE REQUIREMENTS OF 391-3-7-.11(9)(g) WILL BE CONSIDERED IN VIOLATION OF THE VARIANCE BY RULE

VARIANCE BY RULE NOTIFICATION REQUIREMENTS

Notification of Variance by Rule form must be submitted to the Department of Natural Resources, Environmental Protection Division for review at least 14 days prior to the commencement of land-disturbing activities. Unless notified by the EPD to the contrary, the applicant is authorized to encroach into the buffer 14 days after the notification form is received by the EPD. Notification must be submitted by return receipt mail (or similar service) to both EPD and the Local Issuing Authority (if applicable).

DEFINITIONS

- a. “Buffer” means 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 (O.C.G.A. 12-7-3(2)).
- b. “Coastal Marshlands” shall have the same meaning as in Code Section 12-5-282.

- c. “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 grubbing, dredging, grading, excavation, transporting, and filling of land, but not including those practices to the extent described in O.C.G.A. 12-7-17 (O.C.G.A. 12-7-3(9)).
- d. “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.
- e. “Serviceable” means usable in its current state or with minor maintenance but not so degraded as to essentially require reconstruction.
- f. “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(8) or (O.C.G.A. 12-7-3(16)).




Insert Tab 4

NPDES


Back of Tab

NPDES
GENERAL
PERMITS



Storm Water Discharges from
Construction Activity

Level 1B: Advanced Fundamentals
Effective August 2018



1


Overview

- » Coverage – Slide 5
- » Notice of Intent – Slide 23
- » Special Conditions – Slide 38
- » ES&PC Plan – Slide 50
- » Notice of Termination – Slide 95


2

What is NPDES?

National Pollutant Discharge Elimination System



Created by the Federal Clean Water Act to control water pollution by regulating the discharge of pollutants to surface waters



The GA EPD has been "authorized" by the EPA to issue NPDES General Permits within the State

3

3 NPDES General Permits

GAR100001 – Stand Alone
GAR100002 – Infrastructure
GAR100003 – Common Development

- ▶ The Permits became effective on August 1, 2018
 - Valid for 5 years (Expires July 31, 2023)
- ▶ Permits are available at:
 - www.epd.georgia.gov
 - www.gaswcc.georgia.gov

4

Part I. Coverage Under The Permit

- ▶▶ Permit Area
 - Eligibility
 - Definitions

5

Coverage Under the Permit

- ▶ Permit Area
 - These permits regulate **point source discharges of storm water** to the waters of the State of Georgia from construction activities
- ▶ Eligibility
 - Construction activities that will result in land disturbance equal to or greater than one (1) acre
 - Construction activities involving less than one (1) acre which are a part of a larger common development (i.e. greater than one (1) acre)

Part I.A. & I.C.

6

“Construction Activity”

- ▶ The disturbance of soils associated with clearing, grading, excavating, filling of land, or other similar activities
- ▶ Does not include agricultural and silvicultural practices, but does include agricultural buildings

Part I.B.
7

“Stand Alone Construction”

(GAR100001)

- ▶ Construction activities that are not part of a common development where the primary permittee chooses not to use secondary permittees



Part I.B.
8

“Infrastructure Construction”

(GAR100002)

- ▶ 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, liquid petroleum products, electricity, telecommunications, water, storm water, or sewage

Part I.B.
9

“Infrastructure Construction”



10

Infrastructure Eligibility

- ▶ Infrastructure construction projects that will result in contiguous land disturbance equal to or greater than one (1) acre
- ▶ Contiguous areas of land disturbances includes those areas of land disturbances solely separated by:
 - Drilling & Boring activities
 - Waters of the State and adjacent State buffers
 - Roadways and/or Railways and/or Intersections

Part I.C.1.a. & b.

11

Infrastructure Exemptions

- ▶ 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:
 - No mass grading
 - Stabilized by the end of each day
 - Duration of < 120 calendar days
 - Final Stabilization at the end of the project

Part I.C.1.c.

12

Infrastructure Exemptions

- ▶ Coverage under this permit is **not** required for 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
- ▶ Must comply with the following conditions:
 - No mass grading
 - Stabilized by the end of each day
 - Duration of < 120 calendar days
 - Final Stabilization at the end of the project

Part I.C.1.d.
13

Infrastructure Exemptions

- ▶ Coverage under this permit is **not** required for railroad construction projects and emergency re-construction 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 Federal Railway Safety Act
 - The Interstate Commerce Commission Termination Act

Part I.C.1.e.
14

Infrastructure Exemptions

- ▶ Coverage under this permit is **not** required for infrastructure road construction projects that consist solely of the installation of cable barriers and guard rail for an existing facility within the existing rights-of-way
- ▶ Must comply with the following conditions:
 - No mass grading
 - Stabilized by the end of each day
 - Final stabilization at the end of the project

Part I.C.1.f.
15

Infrastructure Exemptions

- ▶ Coverage under this permit is **not** required for infrastructure construction projects that consist of the installation of buried utility lines and comply with the following conditions:
 - (1) solely installed via vibratory plow,
 - (2) the conduit does not exceed 4 inches in diameter, and
 - (3) occurs within an existing stabilized right-of-way
- ▶ Must comply with the following conditions:
 - No mass grading
 - No tree clearing
 - No change in grade
 - Stabilized by the end of each day
 - Final stabilization at the end of the project

Part I.C.1.g.
16

"Common Development"

(GAR100003)

- ▶ 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



Part I.B.
17

Permittees

- ▶ "Permittee"
 - Any entity that has submitted a Notice of Intent (NOI) and obtained permit coverage
- ▶ "Primary Permittee"
 - The Owner or Operator or both of a tract of land for a construction site subject to the permit
- ▶ "Secondary Permittee"
 - An owner, individual builder, utility company, or utility contractor that conducts a construction activity within a common development with an existing primary permittee
- ▶ "Tertiary Permittee"
 - The Owner or Operator of remaining lot(s) within a common development conducting a construction activity where the primary permittee and all secondary permittees have submitted a Notice of Termination or where a primary permittee does not exist

Part I.B.
18

"Best Management Practices" (BMPs)

- ▶ Schedules of activities
 - ▶ Prohibitions of practices
 - ▶ Maintenance procedures
 - ▶ Treatment requirements
 - ▶ Operating procedures
 - ▶ Practices to control spillage or leaks, sludge or waste disposal, or drainage from raw material storage
 - ▶ **Sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation**
- ▶ These practices are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion & Sediment Control in Georgia" (Manual) published by the State Soil & Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia

Part I.B.
19

"Design Professional"

- ▶ A professional licensed in the State of Georgia in the field of:
 - Engineering
 - Architecture
 - Landscape Architecture
 - Forestry
 - Geology
 - Land Surveying
- ▶ A person that is a Certified Professional in Erosion & Sediment Control (**CPESC**) with a current certification by EnviroCert International, Inc.



Part I.B.
20

"Certified Personnel"

- ▶ A person who has successfully completed the appropriate certification course approved by GSWCC
 - **Level 1A** - Contractors, Builders, Superintendents, Consultants
 - **Level 1B** - Regulatory Inspectors
 - **Level II** - Design Professionals or Plan Reviewers

A "Certified Person" shall be on-site at all times when land-disturbing activities are being conducted

Part I.B.
21

“Normal Business Hours”

- ▶ Monday thru Friday, 8:00 a.m. to 5:00 p.m.
- ▶ Excluding:
 - Non-working Saturday
 - Non-working Sunday
 - Non-working Federal Holiday

Part I.B.
22

Part II. Notice of Intent Requirements

- » Deadlines
- » Submittal Fees

23

Deadlines – Initial NOI

- ▶ For new construction sites, the permittee shall submit a Notice of Intent (NOI) electronically at least 14 days prior to the commencement of construction activities
- ▶ Applicable to primary, secondary, and tertiary permittees

To create a new NOI, select "Start New Application". Then follow the instructions on Page 3.

To edit a pending submittal, select "Edit Pending Submittals". Then follow the instructions on Page 31.

Part II.A.1.
24

Deadlines – Re-issuance NOI

- ▶ Permittees are required to submit a re-issuance NOI electronically within 90 days after the effective date of the permit for continued permit coverage
- ▶ No additional fees are required if they had already been paid

For Re-issuance Notification

NOTICE OF INTENT:

- Initial Notification
- Re-issuance Notification
- Change of Information
- Change of Owner/Operator: Formerly Known As:

Part II.A.2.
25

Deadlines – Modification NOI

- ▶ Where the permittee changes or a secured creditor (i.e. Foreclosure) acquires legal title to the construction site after an NOI has been filed, a modification NOI shall be filed within
 - 7 days before work begins at the site **OR**
 - 30 days from acquiring legal title to the site

For Change of Information or Change of Owner/Operator

NOTICE OF INTENT:

- Change of Information
- Change of Owner/Operator: Formerly Known As:

Part II.A.4.
26

Georgia EPD Online System for Permitting, Compliance, & Facility Information

GEOS

- ▶ Coverage under the reissued permits will be achieved by mandatory electronic submittal of an initial or reissuance Notice of Intent (NOI) through the Georgia EPD Online System (GEOS) for electronic permit applications.
- ▶ Convenience of obtaining environmental permits and submitting compliance reports online
- ▶ Establish a user account and manage submittals online
- ▶ Submit environmental reports
- ▶ Monitor processing status of online submittals
- ▶ Receive e-mail notifications on permitting results/status
- ▶ Receive e-mail alerts for upcoming reporting obligations;
- ▶ Submit requests to revise permits or submit revised reports
- ▶ Track submittals

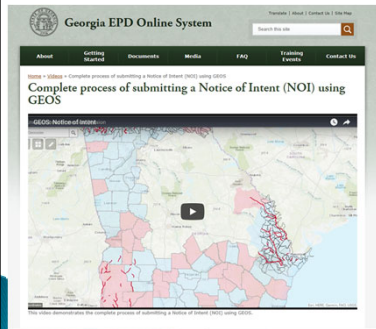
27

Georgia EPD Online System - GEOS

VIDEO



hover cursor over slide to activate control bar at bottom



Created by the GA EPD and Carl Vinson Institute

This video can be found at:
<https://epd.georgia.gov/geos/videos/com-plete-process-submitting-notice-intent-noi-using-geos>

28

Responsible Official and Preparer

Responsible Official (RO)

- ▶ A duly authorized representative for the facility
- ▶ Only the RO account can certify and submit applications in GEOS.
- ▶ Generally, for an RO to submit an application, they must first be approved by the EPD as the RO for that facility.
- ▶ An RO can request additional Account Types through the GEOS system

Preparer

- ▶ A preparer is someone who is assigned by a RO to create and prepare applications for their facility.
- ▶ The preparer has no right to actually submit an application but can prepare applications for a single or multiple ROs that they have been associated with. The types of application and the facilities that the preparer can prepare applications for are all defined by the RO.
- ▶ An RO can be associated as a preparer for another RO.

29

Submittal

- ▶ All NOI types for primary, secondary, and tertiary permittees must be submitted to the EPD using the Georgia EPD Online System (GEOS)
 - A NOI for secondary permittee coverage can be submitted either concurrently with or after the submittal of the NOI by the primary permittee.
- ▶ The permittee shall retain a copy of the proof of submittal at the construction site or be readily available at a designated alternative location
- ▶ A copy of the NOI is to be submitted to the LIA where Land Disturbance Activity permits are issued

Part II.C.
30

Tertiary Permittee Submittal Options

- ▶ Option (1)
 - The permittee may submit a NOI for each individual lot and a new ES&PC Plan for each individual lot. For each NOI submitted, the Tertiary Permittee must submit a Notice of Termination
- ▶ Option (2)
 - 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). A Notice of Termination is required for each individual lot

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Tertiary Permittee Submittal Options

- ▶ Option (3)
 - The permittee may submit a single NOI - Initial Notification for the entire construction site and a new ES&PC plan for the entire construction site
 - The permittee may submit the NOI - Initial Notification as either a Primary or Tertiary
 - A single Notice of Termination is required at the end
- ▶ The Primary Permittee must notify the legal title holders of each remaining lot(s) that these lot Owners will become Tertiary Permittee(s) - applicable to all lots, including lots that are less than one acre

32

Utility Companies Submittal Options

- ▶ A Utility Company may submit an annual [Blanket Notice of Intent](#) covering all construction activities within common developments statewide on or before January 15th of the year in which coverage is desired
- ▶ A copy of the [Blanket NOI](#) shall be provided to the primary permittee no less than seven (7) days prior to the commencement of construction activities by the Utility Company at each site

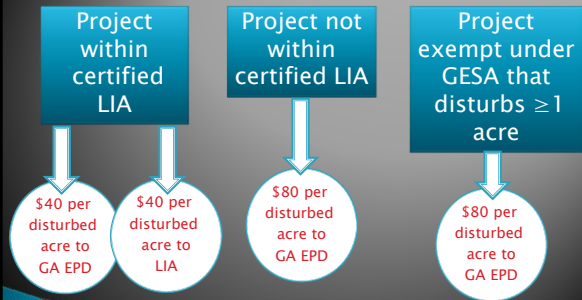
Part II.B.2(i)

33

NPDES General Permit Fees

▶ The Primary Permittee is solely responsible for the payment of fees for all planned land disturbing activities, including all land disturbing activities within a Common Development that will be conducted by the Secondary Permittees and/or Tertiary Permittees.

NPDES General Permit Fees



GEOS Construction Site Activity Information & Fee Calculations

II. Construction Site Activity Information and Fee Calculations - Stand Alone, Infrastructure, and Common Development-Primary

Fill out the fields that apply.

The screenshot shows a web-based form for calculating NPDES fees. Key sections include:

- Section 5: CONSTRUCTION SITE ACTIVITY INFORMATION AND FEE CALCULATIONS**
- 5.1:** Start Date, Completion Date, and a checkbox for "Regulated by a certified Local Sewering Authority (LSA)".
- 5.2:** "Acres Disturbed by the nearest bank (to 1/10th acre)". A callout box instructs: "Enter the Acres Disturbed to the nearest 1/10th of an acre, and click on 'Calculate'. See example: 2.3 x \$80/acre = \$184.00".
- 5.3:** "Have the Erosion, Sedimentation and Pollution Control Plan (EPCP) permits for disturbing more than 10 acres of any one site for each activity...".
- 5.4:** "State of EPA/MSWIR authorization" with radio buttons for YES, NO, or N/A.
- 5.5:** "Construction Activity Type" with a list of categories: Commercial, Industrial, Municipal/Professional, Marine Use, Water Quality/Equity Habitat Restoration, Cemetery, Utility, Recreational, Agricultural Buildings, and Other.

Callout boxes provide additional guidance:

- "See next page for examples of what appears when you select yes or no." (pointing to the LSA checkbox)
- "If you are unsure if the site is regulated by a LIA, click the 'View LIA Map'." (pointing to the LSA checkbox)
- "Select the appropriate construction activity." (pointing to the activity type list)

When you select "NO" LIA

Regulated by a certified Local Sewing Authority (LSA) Yes No **View LSA Map**

Acres Disturbed (to the nearest tenth (1/10th) acre) **23.5** x **\$38/acre = \$893.00**

Regulated by a certified Local Sewing Authority **TOTAL FEE SUBMITTED = \$1,000.00** **Calculate**

If the site is regulated by an LIA, select "Yes". Additional question will appear. Answer each question, then enter the Acres Disturbed and select "Calculate".

Regulated by a certified Local Sewing Authority Yes No **View LSA Map**

Is this a Local Sewing Authority? Yes No

Is this an Agricultural District? (see criteria listed) Yes No

Is this a public water system? Yes No

Is this project regulated by the Public Service Commission (PSC)? (see Electric, natural gas, nuclear, oil/gas) Yes No

Is the project under the direct supervision of the National Resource Conservation Service (NRCS)? Yes No

Is this a construction activity? (see project guidelines and/or Resource to which it is subject to the Department of Transportation, the Georgia Highway Authority, or the State Road and Safety Authority) Yes No

Is this a road construction and/or road maintenance project (including sidewalks, bike routes, multi-use paths or trails)? Yes No

Acres Disturbed (to the nearest tenth (1/10th) acre) **21.1** x **\$39/acre = \$822.90**

Regulated by a certified Local Sewing Authority **TOTAL FEE SUBMITTED = \$940.00** **Calculate**

Acres Disturbed (to the nearest tenth (1/10th) acre) **23.5** x **\$38/acre = \$893.00**

Regulated by a certified Local Sewing Authority **TOTAL FEE SUBMITTED = \$940.00** **Calculate**


37

Part III. Special Conditions

» Biota Impaired Stream Segment
TMDL Implementation Plan

38

Criteria



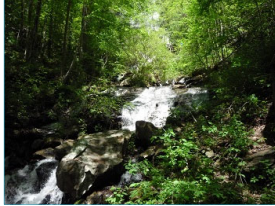
Discharges into, or within one mile upstream of and within the same watershed as, any portion of a Biota Impaired Stream Segment

- ▶ 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)

Part III.C.
39

Impaired Streams

- ▶ The ES&PC Plan must include at least **four (4) BMPs** for those areas of the site which discharge to the Impaired Stream Segment
- ▶ Part III.C.2. (a) – (v)



40

Additional Plan Requirements (a-v)

- a. During all construction activities as defined in this permit, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width pursuant to this section.
- b. Increase all temporary sediment basins and retrofitted stormwater management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
- c. Use baffles in all temporary sediment basins and retrofitted stormwater management basins to at least double the conventional flow path length to the outlet structure.
- d. A large sign (minimum 4 feet x 8 feet) must be posted on site by the actual start date of construction. The sign must be visible from a public roadway. The sign must identify the following: (1) the construction site, (2) the permittee(s), (3) the contact person(s) along with their telephone number(s), and (4) the permittee-hosted website where the Plan can be viewed. The permittee-hosted website where the Plan can be viewed must be provided on the submitted NOI. The sign must remain on site and the Plan must be available on the provided website until a NOT has been submitted.

Part III.C.2. 41

Additional Plan Requirements (a-v)

- e. Use flocculants or coagulants and/or mulch to stabilize all areas left disturbed for more than seven (7) calendar days in accordance with Part III.D.1. of this permit.
- f. Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part IV.D.6.d. of this permit.
- g. Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6(a)(1).
- h. Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
- i. Limit the amount of area disturbed at any one time to no greater than 25 acres or 50% of the total planned site, whichever is less. All calculations must be included on the Plan.
- j. Use "Dirt II" techniques available on the EPD website, to model and manage all construction stormwater runoff (including sheet flow). All calculations must be included on the Plan.

Part III.C.2. 42

Additional Plan Requirements (a-v)

- k. Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post- construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
- l. Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction stormwater (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
- m. Use appropriate erosion control slope stabilization instead of concrete in all construction stormwater ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
- n. Use flocculants or coagulants under a passive dosing method (e.g., flocculant blocks) within all construction stormwater ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
- o. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever construction stormwater (including sheet flow) may be discharged.
- p. Conduct soil tests to identify and to implement site-specific fertilizer needs.

Part III.C.2. 43

Additional Plan Requirements (a-v)

- q. Certified personnel shall conduct inspections at least twice every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(3).(a)-(c) of this permit.
- r. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
- s. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).
- t. Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included in the Plan.
- u. Conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase of the project by the design professional who prepared the Plan in accordance with Part IV.A.5. of the permit.
- v. Install Post Construction BMPs (e.g., runoff reduction BMPs) which remove 80% TSS as outlined in the Georgia Stormwater Management Manual known as the Blue Book or an equivalent or more stringent design manual.

Part III.C.2. 44

Exclusions

- ▶ These impaired stream requirements are not applicable to the following:
 - 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 lot is less than one (1) acre
 - Utility companies and utility contractors if they are secondary permittees provided that they implement the BMPs detailed in the primary permittee's Plan
 - Those discharges located within one (1) linear mile, but are not located within the watershed of any portion of that impaired stream segment

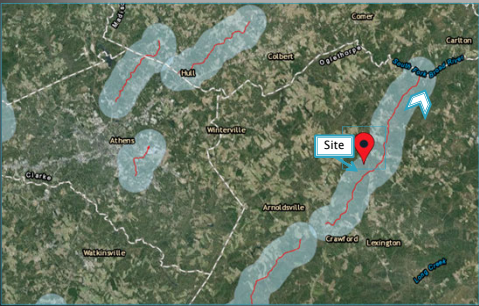
Part III.C. 45

Resource Information

- ▶ Georgia's 305(b)/303(d) List Documents (Approved) can be viewed at:
<http://epd.georgia.gov/georgia-305b303d-list-documents>
- ▶ Georgia's 305(b)/303(d) Impaired Streams can be viewed at:
<http://www.gaswcc.org/maps2/>
- ▶ GIS Data Sets are available on the GA EPD website in ESRI ArcGIS 10.0 Shapefile and KMZ file format at:
<http://epd.georgia.gov/geographic-information-systems-gis-databases-and-documentation>

46

305(b)/303(d) Impaired Waters Map



Georgia's 305(b)/303(d) Impaired Streams: <http://www.gaswcc.org/maps2/>

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TMDL Implementation Plan

TMDL = 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 at www.epd.georgia.gov

Part III.C.1.

48

TMDL Implementation Plan

TMDL = Total Maximum Daily Load

If no site-specific conditions or requirements have been included in the TMDL Implementation Plan for the applicable stream segments:

“NPDES construction activities are considered a significant source of pollution and compliance with the Permits should lead to sediment loading for construction sites at or below applicable targets”

Part III.C.1.
49

Part IV. ES&PC Plan

- » Stream Buffer Exemptions
- Compliance
- Contents of the ES&PC Plan
- Inspections
- Sampling

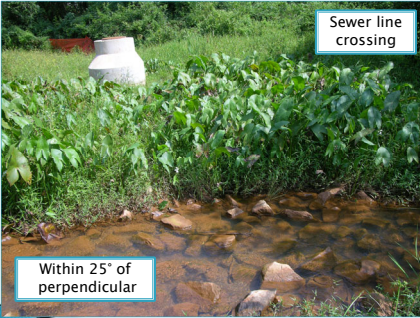
50

Stream Buffer Exemptions

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

Part IV.(i-ii)
51

Stream Buffer Exemptions



Part IV.(i-ii)
52

Stream Buffer Exemptions



Part IV.(i-ii)
53

Stream Buffer Exemptions

▶ Public Drinking Water System Reservoirs



Part IV.(i-ii)
54

Stream Buffer Exemptions

- ▶ Stream crossings for Utility Lines for any EMC, municipal electrical system (MES) or public utility under the regulatory jurisdiction of the PSC and/or FERC or any Cable Television System
- ▶ 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.

Part IV.(i-ii)
55

Stream Buffer Exemptions

- ▶ Maintenance, repair and/or upgrade of SWCD Watershed Dams when under the technical supervision of USDA-NRCS



Part IV.(i-ii)
56

Coastal Marshlands Buffer Exemptions

- ▶ 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

Part IV.(i-iii)
57

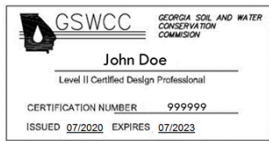
Coastal Marshlands Buffer Exemptions

- ▶ 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.

Part IV.(i-iii)
58

ES&PC Plan

- ▶ A site-specific [Erosion, Sedimentation and Pollution Control](#) Plan shall be designed, installed, and maintained for the entire construction activity
- ▶ The ES&PC Plan must be prepared by a certified "[design professional](#)" as defined by the permit



59

Signature

- ▶ The ES&PC Plan shall be signed in accordance with Part IV. and be retained on site (or a readily accessible location)
- ▶ The primary permittee of a common development shall ensure
 - That each secondary permittee is provided with a copy of the Plan
 - That each secondary permittee signs the Plan
 - That each secondary permittee understand their role in implementing the Plan

Part IV.B.1.
60

Keeping Plans Current

- ▶ The primary, secondary, or tertiary permittee(s) shall amend their Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on BMPs with a [hydraulic component](#)
- ▶ Amendments must be certified by the "design professional"
- ▶ [Hydraulic Component](#)
 - BMPs where the design is based upon rainfall intensity, duration and return frequency of storms

Part IV.C.
61

BMP Deficiencies or Failures

- ▶ Applies to failed or deficient BMPs (beyond routine maintenance)
- ▶ Resulted in sediment deposition into State waters
- ▶ Permittee shall immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces
- ▶ Summary of violations to be sent to EPD

Part III.D.6
62

BMP Deficiencies or Failures

- ▶ Correct BMPs as follows:
 - When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be repaired within [two \(2\) business days](#) from the time of discovery
 - When repair requires a new or replacement BMP or significant repair, the installation of the new or modified BMP must be completed and BMP must be operational by no later than [seven \(7\) days](#) from the time of discovery.
 - If it is infeasible to complete installation or repair within seven (7) days, permittee must document why plus a schedule for installing or repairing the BMP to make the BMP operational

63

Erosion & Sediment Control: Covering of Building & Waste Materials

- ▶ Cover materials to minimize exposure to precipitation and minimize the discharge of pollutants
- ▶ Materials to cover:
 - building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site
- ▶ Measures to provide cover:
 - plastic sheeting or temporary roofs
- ▶ Not required when exposure will not result in or pose little risk of a discharge of pollutants

Part IV.D.3.c.(2)

64

50+ Acre Sites

- ▶ Stand Alone
 - The Plan shall limit the amount of disturbed area to **no greater than 50 acres** at any one time
- ▶ Infrastructure
 - There is **no limitation** on the amount of disturbed area
- ▶ Common Development
 - The Plan shall limit the amount of disturbed area to **no greater than 50 acres** for each individual permittee at any one time, and **no more than 50 contiguous acres total at any one time**

Part IV.D.3.

65

50+ Acre Sites

- ▶ The GA EPD will approve or disapprove such requests within 35 days of receipt
- ▶ If the GA EPD approves a request to disturb 50 acres or more at any one time, at least **four (4) BMPs** from Part III.C.2. (a) – (v) shall be included on the Plan

Part IV.D.3.

66

Permittee Inspection Results

- ▶ If BMP deficiencies are identified during an inspection, the BMP deficiencies should be documented and corrected as soon as practical
 - If corrective action requires a revision to the Plan, the Plan must be revised within 7 calendar days of the inspection.
 - Any Plan revisions must be implemented within 7 calendar days of the inspection.

Part IV.D.4.a-c.(5)
73

Permittee Inspection Results

- ▶ If BMP deficiencies are identified during a Secondary Permittee inspection, the Secondary Permittee must notify the Primary Permittee of any suspected BMP design deficiencies within 24 hours
 - Primary Permittee must evaluate any suspected BMP design deficiencies within 48 hours of notice.
 - If corrective action requires a revision to the Plan, the Plan must be revised within 7 calendar days of notification.
 - Any Plan revisions affecting their site(s) must be implemented by the Secondary Permittee within 48 hours of notice by the Primary Permittee.

Part IV.D.4.a-c.(5)
74

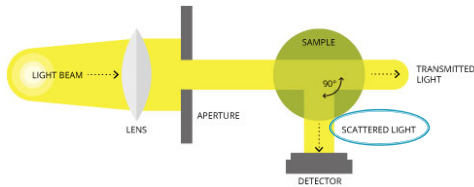
Permittee Inspection Reports

- Name(s) of certified personnel
- Signature of certified personnel
- Date(s) of each inspection
- Phase of construction
- Observations relating to the implementation of the Plan
- Corrective actions
- Incidents of non-compliance
- Where reports do not identify any incidents of non-compliance, the report must contain a certification statement that the site is in compliance with the ES&PC Plan and the Permit.
- ▶ All inspection reports must be retained at the site (or readily available at a designated alternative location)
- ▶ All permit violations (Part V.A.(2)) must be documented in the site records within 7 days of discovery and a report of these violations must be submitted to the appropriate GA EPD District Office within 14 days of discovery.

Part IV.D.4.a-c.(6)
75

Nephelometric Turbidity Units

Measurement of the amount of light passing through a sample of water



79

Sampling Methodology

- ▶ The analytical method included on the ES&PC Plan must include quality control/quality assurance procedures
- ▶ The narrative on the ES&PC Plan must include a precise sampling methodology for each sampling location
- ▶ All sampling shall be collected by "grab samples" and analyzed in accordance with the methodology and test procedures established by 40 CFR Part 136 & "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-011"

Part IV.D.6.
80

Sampling

- ▶ Containers should be labeled prior to collection
- ▶ Large, well cleaned glass or plastic jars should be used for collecting samples
- ▶ The samples should be taken from the center of the receiving water
- ▶ The container should be held so that it faces upstream
- ▶ The samples should be kept free of floating debris
- ▶ Samples should be analyzed within 48 hours after collection



Part IV.D.6.
81

Sample Methodology

Outfall Sampling Methodology

▶ A rationale must be included on the Plan for the NTU limit(s) selected from Appendix B rationale

Receiving Waters Methodology

▶ The increase in turbidity from the Upstream sample to the Downstream sample shall not be more than:

- 10 NTUs (Cold Water)
- 25 NTUs (Warm Water)

Part III.D.4. & 5.
82

Appendix B Rationale

Waters Supporting Warm Water Fisheries

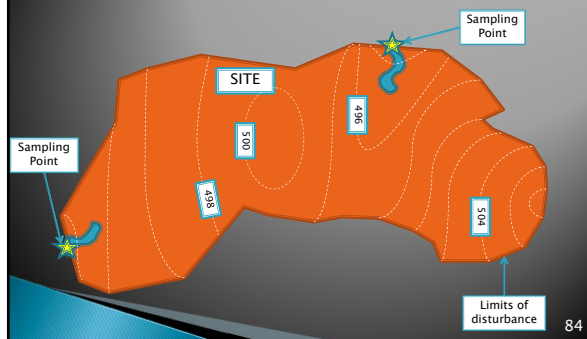
Site Size* acres	Surface Water Drainage Area square miles							
	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1.00-10	75	150	200	400	750	750	750	750
10.01-25	50	100	100	200	300	500	750	750
25.01-50	50	50	100	100	200	300	750	750
50.01-100	50	50	50	100	100	150	300	600
100.01 +	50	50	50	50	50	100	200	100

* Site size refers to the entire project site, not just the disturbed area

Example: For a site size of 32 acres and "waters supporting warm water fisheries" drainage area of 4.8 square miles, the NTU value is 50 NTU

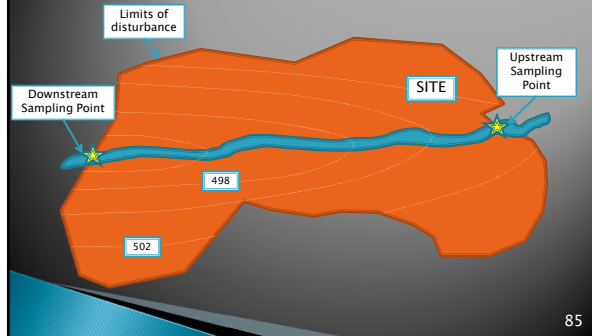
83

Sampling Points - Outfall

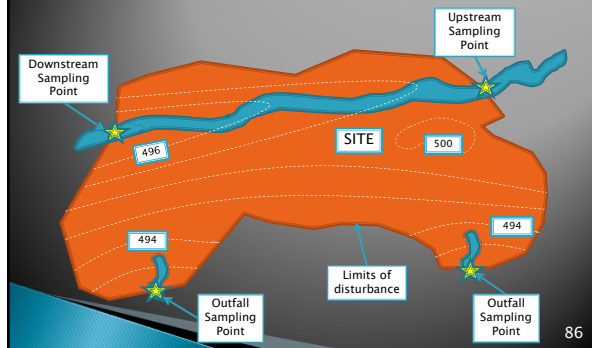


84

Sampling Points - Receiving Waters



Sampling Points - Combination



Sampling Frequency

- ▶ Samples from the following qualifying events shall be taken no more than twelve (12) hours after the beginning of the storm water discharge:
 - The first rain event that reaches or exceeds 0.5 inch after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations
 - The first rain event that reaches or exceeds 0.5 inch either ninety (90) days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT

Part IV.D.6.d.3(a-b)
87

Additional Sampling

- ▶ If any BMPs on site are not properly designed, installed, and maintained, turbidity samples shall be taken for each subsequent rain event that reaches or exceeds 0.5 inch until the selected turbidity standard is attained OR inspections determine that BMPs have been installed and maintained properly

Part IV.D.6.d.3(c)
88

Sampling Frequency

- ▶ Where sampling is required but not possible (or not required because there was no discharge), the primary permittee, or the tertiary permittee, 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

Part IV.D.6.d.3(d)
89

Reporting of Results

- ▶ Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD
- ▶ Reports should include the following:
 - a. The rainfall amount, date, location and time of sampling
 - b. The name of the certified personnel who performed the sampling
 - c. The date the analyses were performed
 - d. The time the analyses were performed
 - e. The name of the certified personnel who performed the analyses
 - f. References and written procedures for analytical techniques
 - g. Results of the analyses, including instrument readouts
 - h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU"
 - i. Certification statement that sampling was conducted per the Plan

Part IV.E.2.(a-i)
90

Reporting of Results

- ▶ The permittee is required to submit sampling results to EPD using the [electronic submittal service](#) provided by EPD by the 15th day of the month following the sampling event
- ▶ Sampling reports must be submitted to EPD until a NOT is submitted



Part IV.E.1.

91

Stormwater Monitoring Records

Month: _____ Year: _____ Sheet of

Submit to EPD by 15th of Following Month

Project Name: _____ Project Location: _____

Date Sampled	Rainfall Amount, Inches	Exact Location of Samples	Time Sampled	Sampling Technique Manual or Automatic	Sampled By	Date of Analysis	Time of Analysis	Analyzed By	Analytical Method	Results (NTI)

Found on GASWCC website

I, (Name), certify that sampling procedures were conducted per the ES&PC Plan

(Signature)

92

Retention of Records

- ▶ The following records shall be retained at the site or be made readily available at an alternative location:
 - Notice of Intent
 - ES&PC Plan
 - Design Professional 7-Day Inspection Letter (N/A for Secondary)
 - Sampling Results & Reports (N/A for Secondary)
 - Inspection Reports
 - Violation Reports
 - Daily Rainfall Information (N/A for Secondary)

Part IV.F.1.(a-g) & Part IV.F.2.(a-d)

93

Retention of Records

- ▶ All of the previous records plus the Notice of Termination must be retained by the permittee who either produced or used it for a period of at least [three \(3\) years](#) from the date the NOT is submitted
- ▶ This period may be extended by request of the GA EPD at any time

Part IV.F.4.
94

Part VI. Termination of Coverage

- » Eligibility
- » Contents
- » Submittal

95

Notice of Termination

- ▶ Eligibility for all permits
 - All planned construction activities have been completed
 - Where the entire site has undergone final stabilization
 - All storm water discharges have ceased
 - The site is in compliance with the permit
 - All temporary BMPs have been removed

Part VI.A.1.
96

Termination Eligibility

Common Development

- ▶ May submit a Notice of Termination, even if all planned construction activities have not been completed, if and only if in addition to the above:
 - 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

Part VI.A.1.
97

Termination Eligibility

Infrastructure Construction

- ▶ 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 or greater than 25% of the total disturbed acreage – except for the final phase
- ▶ For the final phase, the disturbed acreage must be equal to or greater than 10% of the total estimated disturbed acreage

Part VI.A.1.
98

“Final Stabilization”

- ▶ 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 perennials appropriate for the region)

Part I.B.
99

Notice of Termination

NOTICE OF TERMINATION NPDES Construction

PERMIT TYPE:

- GARI00001 - Stand Alone
- GARI00002 - Infrastructure
- GARI00003 - Common Development

NOTICE OF TERMINATION ELIGIBILITY:

Please select:

- Construction Activities Ceased and Final Stabilization Completed
Final stabilization means that 100% of the soil surface is covered in permanent vegetation with a density of 70% or greater or landscaped according to the plan and all temporary BMPs removed.
- No Longer Owner and/or Operator of Facility/Construction Site
- Partial Termination (applicable only to NPDES General Permit No. GARI00002)

CERTIFICATIONS:

I, applicable only to NPDES General Permit No. GARI00002, certify under penalty of law that either: (a) all storm water discharges associated with construction activity authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed or (b) I am no longer an Owner or Operator of the construction site and a new Owner or Operator has assumed operational control of the permitted construction site which is currently not receiving or operational control of (c) coverage under the permit for an existing infrastructure construction project is not required under Part 1.C. of NPDES General Permit No. GARI00002 and that discharging pollutants to storm water associated with construction activity is subject to coverage in related water quality control act and the Clean Water Act where the discharge is not authorized by a NPDES permit.

I, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that certified personnel prepare all information submitted. Based upon my inquiry of the persons or persons who manage the records, or those persons directly responsible for gathering the information, the information submitted on, to the best of my knowledge and belief, is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of being held criminally liable.

Buttons: **Back** **Save** **Previous** **Next**

For Notice of Termination, Select the appropriate reason for termination.

Carefully read the Certifications, and click both empty boxes to select and confirm agreement.

Once the application is certified, select "Next".

100

Contents

- ▶ The NPDES permit number – ex.) GARI00001
- ▶ The project site name and location – must correspond to NOI
- ▶ The owner/operator's legal name, address, telephone, and email
- ▶ Indication whether permittee is primary, secondary, or tertiary
- ▶ The name of the receiving water(s)
- ▶ Copies of all sampling reports not previously submitted to EPD
- ▶ Signed Certification Statement

Part VI.B.
101

Submittal

- ▶ All Notices of Termination shall be submitted to EPD using the electronic submittal service provided by EPD **AND** a copy to the Local Issuing Authority (LIA) in jurisdictions authorized to issue Land Disturbing Activity (LDA) permits

Part VI.C.
102

Summary

- ▶ NPDES Permits govern land disturbance of one (1) acre or more and individual lots within a common development
- ▶ Notice of Intent has to be submitted fourteen (14) days prior to the commencement of construction activities
- ▶ All ES&PC Plan contents can be found in Part IV. of the permits
- ▶ Notice of Termination can only be filed once the site has reached final stabilization

103

Questions?

- » GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



104

Insert Yellow Sheet

Back of Yellow Sheet



ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch

2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
404-463-1511

FACT SHEET

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

May 4, 2018

Regulatory 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 stormwater, Congress amended the CWA in 1987 to require the U.S. Environmental Protection Agency (EPA) to establish phased NPDES requirements for stormwater discharges. EPA published an initial permit application and other requirements for certain categories of stormwater discharges associated with industrial activity, including construction activities, on November 16, 1990 (50 FR 47990) and on April 2, 1992 (57 FR 11394).

The CWA provisions are reflected in O.C.G.A. § 12-5-29 and O.C.G.A. § 12-5-30 and also in the Georgia Rules and Regulations for Water Quality Control (Rules) Chapter 391-3-6-.16 which specifies requirements for stormwater permits. In addition, the Rules Chapter 391-3-6-.03 defines waters of the state.

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. Georgia is a fully authorized State and administers its own NPDES program.

NPDES Permits

A NPDES permit authorizes the discharge of a pollutant or pollutants into a receiving water under certain conditions. The NPDES program relies on two types of permits: individual permits and general permits. An individual permit is a permit specifically tailored for an individual

discharger for a specific time period (not to exceed five (5) years). A general permit covers multiple facilities, sites, and activities within a specific category for a specific time period (not to exceed five (5) years). Both types of permits are subject to public comment prior to permit issuance. The Federal Regulations, 40 CFR Part 122.26, specify who must apply for NPDES coverage and the requirements that must be included in a NPDES permit.

General NPDES Permits No. GAR100001, No. GAR100002 and GAR100003

NPDES General Permit No. GAR100000 (permit) for stormwater discharges associated with construction activity was issued in 2000 and regulated construction activities that disturbed five (5) or more acres. In 2003, in response to the December 1999 Phase II final rule, the permit was reissued as three general permits that regulate construction activities that disturb one (1) or more acres. NPDES Permit No. GAR100001 regulates stand-alone construction sites, NPDES Permit No. GAR100002 regulates infrastructure construction sites, and NPDES Permit No. GAR100003 regulates common development construction sites. These permits were reissued in 2008 and 2013. The current permits are scheduled to expire July 31, 2018.

Regulated Construction Activities

NPDES General Permits No. GAR100001, No. GAR100002 and No. GAR100003 will authorize the discharge of stormwater from sites where construction activities will result in contiguous land disturbances equal to or greater than one (1) acre or tracts of less than one (1) acre that are part of a larger common plan of development with a combined disturbance one (1) acre or greater. 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 stormwater discharges, the proposed general NPDES permits authorize certain non-stormwater discharges such as fire fighting water and uncontaminated groundwater.

The proposed permit complies with the anti-degradation requirements in the EPD Rules and Regulations for Water Quality Control, subparagraph 391-3-6-.03. Existing water quality will not be degraded by the issuance of this permit. The issuance of this permit will protect and improve existing water quality and is consistent with EPD's antidegradation policy. 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). The NOI will include basic information about the construction site and the receiving waters where the discharges occur.

Upon issuance of the permit, all NOIs for coverage under the General Construction Permits must be submitted through EPD's electronic submittal portal as required by EPA's Electronic Reporting Rule. Existing construction sites must submit a new NOI within ninety (90) days after the effective date of the permits in order to obtain coverage. New sites that begin construction

activities after the effective date of the permits must submit the NOI form at least fourteen (14) days prior to beginning construction activities.

The permittee must specify on the NOI whether or not the facility discharges stormwater 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 (Approved).” 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 to check for new stream segment listings.

Term of the Permit

The proposed permit will be valid for a term of five (5) years in accordance with Federal regulations, which limit NPDES permits to a maximum term of five (5) years. 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

Permit Changes

Summary of General Permit Changes throughout Permits No. GAR100001, No. GAR100002, and No. GAR100003

The General Construction Permits contain the following revisions throughout multiple parts of the permits:

- To improve accuracy and reduce the need for minor permit revisions, hyperlinks have been removed from the permits and can now be found on EPD’s website in the document titled “NPDES General Construction Permit References”.
- Miscellaneous redundant language has been removed from the permits.
- The term “projects” has been changed to “sites” for consistency with the permit definitions.
- The permits contain changes as a result of EPD’s implementation of the NPDES Electronic Reporting Rule. Specific changes are listed below:
 - Beginning on the effective date of the permit, All Notices of Intent (NOIs), Modification NOIs and Notices of Termination (NOTs) must be submitted through EPD’s electronic submittal portal.
 - The term “change of information” has been replaced by “modification”.

- The permittee will be required to submit sampling reports electronically.
- ES&PC Plans required to be submitted to the EPD District Offices must now be submitted electronically through EPD’s electronic submittal portal or as a PDF on CD-ROM or other storage device.

Summary of Changes to Part I. Coverage Under This Permit

- In Part I.B., the following definitions have been revised for clarity and/or consistency with established Regulations: “Permittee”, “Phase or Phased”, and “Primary Permittee”.
- In Part I.B., the definition of “Infeasible” was added as follows: “Infeasible” means not technologically possible, or not economically practicable and achievable in light of best industry practices. The definition was taken directly from EPA’s May 2014 Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category final rule.
- In Part I.E., the continuing obligations of permittees has been revised for clarification.

Summary of Changes to Part II. Notice of Intent Requirements

- Part II.B.1.e. (as well as Part II.B.2.g. & Part II.B.3.f. in GAR100003) has been revised to better align with the language in the 305(b)/303(d) List Documents.

Summary of Changes to Part III. Special Conditions, Management Practices, Permit Violations and Other Limitations

- Part III.C. has been revised to better align with the language in the 305(b)/303(d) List Documents.
- In Part III.C.2., all references to anionic polyacrylamide (PAM) have been replaced by “floculants or coagulants” and “matting or blankets” has been replaced with “slope stabilization” to be consistent with the most recent Manual for Erosion and Sediment Control.
- In Part III.C.2., BMP options which were no longer “over and beyond” have been removed from the options to address impaired waters.
- Part III.C.2.d. has been revised to require the permittee to host a website where the ES&PC Plan can be viewed in addition to posting a sign. The sign must remain on site and the ES&PC Plan must be available on the provided website until a NOT has been submitted.
- Part III.C.2.u., EPD added the following BMP option to address impaired waters: *“Conduct inspections during the intermediate grading and drainage BMP phase and*

during the final BMP phase of the project by the design professional who prepared the Plan in accordance with Part IV.A.5. of the permit.”

- In Part III.C.2.v., EPD added the following BMP option to address impaired waters: *“Install Post Construction BMPs (e.g., runoff reduction BMPs) which remove 80% TSS as outlined in the Georgia Stormwater Management Manual known as the Blue Book or an equivalent or more stringent design manual.”*
- Part III.D.1. has been revised to include correct references to the Permit.
- Part III.D.3. has been revised for clarity and the following language has been added:

“6. Whenever a permittee finds that a BMP has failed or is deficient (beyond routine maintenance) and has resulted in sediment deposition into waters of the State, the permittee shall immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events. The permittee shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit and shall correct such BMP as follows:

- a. When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be repaired within two (2) business days from the time of discovery;*
- b. When the repair requires a new or replacement BMP or significant repair, the installation of the new or modified BMP must be completed and the BMP must be operational by no later than seven (7) days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) days, the permittee must document why it is infeasible to complete the installation or repair within the seven (7) day timeframe and document the schedule for installing or repairing the BMPs and making the BMPs operational as soon as feasible after the seven (7) day timeframe.”*

Summary of Changes to Part IV. Erosion, Sedimentation and Pollution Control Plan

- Part IV.D.3.a.(1).(b). has been removed from the permits to be consistent with the minimum Federal requirements for stabilization as outlined in EPA’s May 2014 Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category final rule.
- In accordance with 40 CFR Section 450.21(d)(2), Part IV.D.3.c.(2). of the permits has been revised to require permittees to provide cover for on-site construction wastes and building materials such that exposure to precipitation and stormwater is minimized.

- For clarification, Part IV.D.4.a.(2) has been revised as follows: *“Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity.”*

Appendix A has been updated to reflect current addresses.

Summary of Permit Changes Specific to Permit No. GAR100002

- In Part I.C., coverage under the permit for infrastructure construction projects is not required for discharges of stormwater associated with infrastructure construction projects that consist solely of the installation of cable barriers and guardrail within existing rights-of-way, and for the installation of buried utility lines via vibratory plow. To be eligible for the exemption, projects must avoid mass grading, provide temporary or permanent stabilization at the end of each day and achieve final stabilization at the end of the project.
- Part II.B.1.k. has been revised for clarity.

Summary of Permit Changes Specific to Permit No. GAR100003

- In Part II.B.2.l., EPD corrected the language regarding the requirement for a secondary permittee to submit a blanket NOI to the primary permittee no less than seven (7) days prior to the commencement of construction activities.

Procedures for the Formulation of Final Determination

Comment Period

The draft permits and supporting documents were available for review at the EPD office located at 2 Martin Luther King Jr. Drive, Atlanta, Georgia, 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday (except official State holidays). The draft permits and public notice were also posted on EPD’s website on December 15, 2017.

Public Hearing

A public meeting regarding the permits was held on January 31, 2018 at 9:00 a.m., followed by a public hearing at 10:00 a.m., in EPD’s Training Room located at 4244 International Parkway, Suite 114, Atlanta, Georgia, 30354. Both oral and written comments were accepted at the public hearing; however, for the accuracy of the record, written comments were encouraged. No oral statements were made during the public hearing. Several persons, industry trade groups, and environmental groups provided comments on the proposed NPDES permits both in writing and by email to EPDComments@dnr.ga.gov. The public comment period ended on February 1, 2018. Comments were considered in developing the final permits, and a response to each question was provided.

Contested Hearings

Any person who is aggrieved or adversely affected by the issuance of 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 notice of such permit issuance. Such hearing shall be held in accordance with EPD Rules, 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 of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which are relevant to the action in question

Issuance of the Permit When No Public Hearing is Held

If no public hearing is held, and, after review of the written comments received, the Director determines that a permit should be issued and that his determinations as set forth in the proposed permit are substantially unchanged, the permit will be issued and will become final in the absence of a request for a contested hearing. Notice of issuance or denial will be circulated to those persons who submitted written comments to the Director on the proposed permit within thirty (30) days from the date of the public notice of such proposed permit, and to all persons or groups included on the EPD mailing list.

If no public hearing is held, but the Director determines, after a review of the written comments received, that a permit should be issued but that substantial changes in the proposed permit are warranted, public notice of the revised determinations will be given and written comments accepted in the same manner as the initial notice of application was given and written comments accepted pursuant to EPD Rules, Water Quality Control, subparagraph 391-3-6-.06(7)(b). The Director shall provide an opportunity for public hearing on the revised determinations. Such opportunity for public hearing and the issuance or denial of a permit thereafter shall be in accordance with the procedures set forth above.

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GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Authorization To Discharge Under The National Pollutant Discharge Elimination System Storm Water Discharges Associated With Construction Activity For Stand Alone Construction Projects

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p.416, as amended), hereinafter called the "State Act," the Federal Clean Water Act, as amended (33 U.S.C. 1251 et seq.), hereinafter called the "Clean Water Act," and the Rules and Regulations promulgated pursuant to each of these Acts, new and existing stormwater point sources within the State of Georgia that are required to have a permit, upon submittal of a Notice of Intent, are authorized to discharge stormwater associated with construction activity to the waters of the State of Georgia in accordance with the limitations, monitoring requirements and other conditions set forth in Parts I through VI hereof.

This permit shall become effective on August 1, 2018.

This permit and the authorization to discharge shall expire at midnight, July 31, 2023.

Signed this 16th day of May 2018.



Richard E. Dunn, Director
Environmental Protection Division

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Part I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit regulates point source discharges of stormwater to the waters of the State of Georgia from construction activities, as defined in this permit.

B. Definitions. All terms used in this permit shall be interpreted in accordance with the definitions as set forth in the Georgia Water Quality Control Act (Act) and the Georgia Rules and Regulations for Water Quality Control Chapter 391-3-6 (Rules), unless otherwise defined in this permit:

1. “Best Management Practices” (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
2. “Buffer” means the area of land immediately adjacent to the banks of State waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.
3. “Certified Personnel” means a person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission.
4. “Commencement of Construction” means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
5. “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.
6. “Construction Activity” means the disturbance of soils associated with clearing, grading, excavating, filling of land, or other similar activities which may result in soil erosion. Construction activity does not include agricultural and silvicultural practices, but does include agricultural buildings.
7. “CPESC” means Certified Professional in Erosion and Sediment Control with current certification by EnviroCert International, Inc.
8. “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. Design Professionals shall practice in a manner that complies with applicable Georgia law governing professional licensure.

9. “CWA” means Federal Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972).

10. “Director” means the Director of the Environmental Protection Division or an authorized representative.

11. “Division” means the Environmental Protection Division of the Department of Natural Resources.

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

13. “Erosion, Sedimentation and Pollution Control Plan” or “Plan” means a plan for the control of soil erosion, sediment and pollution resulting from a construction activity.

14. “Filling” means the placement of any soil or solid material either organic or inorganic on a natural ground surface or an excavation.

15. “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 a seeding of target crop perennials appropriate for the region).

16. “General Contractor” means the operator of the stand alone construction or site.

17. “Impossible” means the monitoring location(s) are either physically or legally inaccessible, or access would cause danger to life or limb.

18. “Infeasible” means not technologically possible, or not economically practicable and achievable in light of best industry practices.

19. “Landfill” means an area of land or an excavation in which waste materials are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well or waste pile as defined by Georgia NPDES General Permit GAR050000, and which area of land or excavation must be certified by EPD before it can begin waste disposal operations.

20. “Landfill Cell(s)” means a defined area within a landfill where waste materials are permanently disposed and that must be certified by EPD for use before such cell(s) can begin

receiving waste materials after which those activities associated with waste receipt and disposal in the landfill cell(s) shall not be considered construction activity as defined by this permit.

21. "Local Issuing Authority" means the governing authority of any county or municipality which is certified pursuant to Official Code of Georgia Section 12-7-8(a).

22. "Mass Grading" means the movement of earth by mechanical means to alter the gross topographic features (elevations, slopes, etc.) to prepare a site for final grading and the construction of facilities (buildings, roads, parking, etc.).

23. "Nephelometric Turbidity Unit (NTU)" means a numerical unit of measure based upon photometric analytical techniques for measuring the light scattered by fine particles of a substance in suspension.

24. "NOI" means Notice of Intent to be covered by this permit (see Part II).

25. "Normal Business Hours" means Monday thru Friday, 8:00 AM to 5:00 PM, excluding any non-working Saturday, non-working Sunday and non-working Federal holiday.

26. "NOT" means Notice of Termination (see Part VI).

27. "Operator" means the entity that has the primary day-to-day operational control of those activities at the construction site necessary to ensure compliance with Erosion, Sedimentation and Pollution Control Plan requirements and permit conditions.

28. "Other Water Bodies" means ponds, lakes, marshes and swamps which are waters of the State.

29. "Outfall" means the location where stormwater, in a discernible, confined and discrete conveyance, leaves a facility or construction site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.

30. "Owner" means the legal title holder to the real property on which is located the facility or site where construction activity takes place.

31. "Permittee" means any entity that has submitted a Notice of Intent and obtained permit coverage.

32. "Phase" or "Phased" means sub-parts or segments of construction sites where the sub-part or segment is constructed and stabilized prior to completing the entire construction site.

33. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure or container from which pollutants are or may be discharged. This term also means sheet flow which is later

conveyed via a point source to waters of the State. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

34. "Primary Permittee" means the Owner or the Operator or both of a tract of land for a construction site subject to this permit.

35. "Proper design" and "properly designed" means designed in accordance with the design requirements and specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the Manual as approved by the GSWCC up until the date of NOI submittal.

36. "Receiving Water(s)" means all perennial and intermittent waters of the State into which the runoff of stormwater from a construction activity will actually discharge, either directly or indirectly.

37. "Roadway Project(s)" means traveled ways including but not limited to roads, sidewalks, multi-use paths and trails, and airport runways and taxiways. This term also includes the accessory components to a roadway project that are necessary for the structural integrity of the roadway and the applicable safety requirements. These accessory components include but are not limited to slopes, shoulders, stormwater drainage ditches and structures, guardrails, lighting, signage, cameras and fences and exclude subsequent landscaping and beautification projects.

38. "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.

39. "Sedimentation" means the action or process of forming or depositing sediment.

40. "Sheet flow" means runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel.

41. "Site" or "Construction Site" means a facility of any type on which construction activities are occurring or are to occur which may result in the discharge of pollutants from a point source into the waters of the State.

42. "Stand Alone Construction" or "Stand Alone Construction Project" means construction activities that are not part of a common development where the primary permittee chooses not to use secondary permittees.

43. "Stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage.

44. "Structural Erosion and Sediment Control Practices" means measures for the stabilization of erosive or sediment producing areas by utilizing the mechanical properties of matter for the

purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss.

45. “Sub-contractor” means an entity employed or retained by the permittee to conduct any type of construction activity (as defined in this permit) at a stand alone 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. Sub-contractors are not permittees unless they meet the definition of either a primary, secondary or tertiary permittee.

46. “Surface Water Drainage Area” means the hydrologic area starting from the lowest downstream point where the stormwater from the construction activity enters the receiving water(s) and following the receiving water(s) upstream to the highest elevation of land that divides the direction of water flow. This boundary will connect back with the stormwater entrance point. Boundary lines follow the middle of the highest ground elevation or halfway between contour lines of equal elevation.

47. “Trout Streams” means waters of the State classified as either primary trout waters or secondary trout waters, as designated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.

48. “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, stormwater or sewage.

49. “USGS Topographic Map” means a current quadrangle, 7½ minute series map prepared by the United States Department of the Interior, Geological Survey.

50. “Vegetative Erosion and Sediment Control Practices” means measures for the stabilization of erosive or sediment producing areas by covering the soil with: (1) permanent seeding, sprigging or planting, producing long-term vegetative cover; (2) temporary seeding, producing short-term vegetative cover; or (3) sodding, covering areas with a turf of perennial sod forming grass.

51. “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.

52. “Waters of Georgia” or “Waters of the State” means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and all 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.

C. Eligibility.

1. Construction Activities. This permit authorizes, subject to the conditions of this permit:

- a. all discharges of stormwater associated with stand alone construction projects that will result in land disturbance equal to or greater than one (1) acre occurring on or before, and continuing after, the effective date of this permit, (henceforth referred to as existing stormwater discharges from construction activities) except for discharges identified under Part I.C.3.;
- b. all discharges of stormwater associated with stand alone construction projects that will result in land disturbance equal to or greater than one (1) acre occurring after the effective date of this permit, (henceforth referred to as stormwater discharges from construction activities); and
- c. coverage under this permit is not required for discharges of stormwater associated with minor land disturbing activities (such as home gardens and individual home landscaping, repairs, maintenance work, fences and other related activities which result in minor soil erosion) conducted outside of the 25 foot buffer along the banks of all State waters requiring a buffer and outside of the 50 foot buffer along the banks of all State waters classified as 'trout streams' requiring a buffer on individual residential lots sold to homeowners where all planned construction activities on that lot have been completed and have undergone final stabilization.

2. Mixed Stormwater Discharges. This permit may only authorize a stormwater discharge from a construction site or construction activities mixed with a stormwater 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 stormwater 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. stormwater 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 permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

3. Limitations on Coverage. The following stormwater discharges from construction sites are not authorized by this permit:

- a. stormwater discharges associated with an industrial activity that originate from the site after construction activities have been completed and the site has undergone final stabilization;
- b. discharges that are mixed with sources of non-stormwater other than discharges which are identified in Part III.A.2. of this permit and which are in compliance with Part IV.D.7. (non-stormwater discharges) of this permit;
- c. stormwater discharges associated with industrial activity that are subject to an existing NPDES individual or general permit. Such discharges may be authorized under this permit after an existing permit expires provided the existing permit did not establish numeric limitations for such discharges; and
- d. stormwater discharges from construction sites that the Director (EPD) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard.

4. Compliance with Water Quality Standards. No discharges authorized by this permit shall cause violations of Georgia's in-stream water quality standards as provided by the Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03.

D. Authorization.

1. Any person desiring coverage under this permit must submit a Notice of Intent (NOI) to the EPD and the NOI must be received by the EPD in accordance with the requirements of Part II, using the electronic submittal service provided by the EPD, in order for stormwater discharges from construction sites to be authorized.
2. Unless notified by the Director to the contrary, a permittee who submits an NOI in accordance with the requirements of this permit is authorized to discharge stormwater from construction sites under the terms and conditions of this permit fourteen (14) days after the date that the NOI is submitted and confirmation of submittal is received. The Director may deny coverage under this permit and require submittal of an application for an individual NPDES permit or alternative general NPDES permit based on a review of the NOI or other information. Should the Director deny coverage under this permit, coverage under this permit is authorized until the date specified in the notice of denial by the Director.
3. Where a new permittee is to begin work on-site after an NOI for the facility/construction site has been submitted, that new permittee must submit a new NOI in accordance with Part II.

E. Continuing Obligations of Permittees. Unless and until responsibility for a site covered under this permit is properly terminated or ownership changes, according to the terms of the permit, the current permittee remains responsible for compliance with all applicable terms of the permit and for any violations of said terms.

Part II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for Notification.

1. Except as provided in Part II.A.2., II.A.3. and II.A.5., Owners or Operators or both who intend to obtain coverage under this general permit for stormwater discharges from a construction site (where construction activities begin after issuance of this permit), shall submit a Notice of Intent (NOI) in accordance with the requirements of this Part at least fourteen (14) days prior to the commencement of construction activities.
2. For sites where construction activities, subject to this permit, are occurring on the effective date of this permit, the Owner or Operator or both shall submit a re-issuance NOI for an existing construction site in accordance with the requirements of this part no later than ninety (90) days after the effective date of this permit. Failure to comply with this requirement 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.
3. A discharger is not precluded from submitting an NOI in accordance with the requirements of this part after the dates provided in Parts II.A.1. or II.A.2. of this permit. In such instances, EPD may bring an enforcement action for failure to submit an NOI in a timely manner or for any unauthorized discharges of stormwater associated with construction activity that have occurred on or after the dates specified in Part II.A.1. and II.A.2.
4. Where an Owner or an Operator or both changes after an NOI has been filed, the subsequent Owner or Operator or both must submit a modification NOI in accordance with this Part by the earlier to occur of (a) seven (7) days before beginning work at the facility/construction site or (b) thirty (30) days from acquiring legal title to the facility/construction site. In the event a lender or other secured creditor acquires legal title to the facility/construction site, such party must submit a modification NOI in accordance with this Part by the earlier to occur of (a) seven (7) days before beginning work at the facility/construction site; or (b) thirty (30) days from acquiring legal title to the facility/construction site. Stabilization and BMP installation and/or maintenance measures of a disturbed site, by the subsequent Owner or Operator, may occur in advance of filing a new NOI, without violation of this permit. Failure to comply with this requirement 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.
5. For sites where construction activities will result in land disturbance equal to or greater than one (1) acre that are required as a result of storm- or emergency-related repair work, the Owner or Operator or both shall notify the appropriate EPD District Office within three (3) days of

commencement of said construction activities. The Owner or Operator or both shall submit the NOI to the appropriate EPD district office as soon as possible after the storm- or emergency-related event but no later than fourteen (14) days after the commencement of construction activities and shall submit the Plan in accordance with Part IV.A.6.

B. Notice of Intent Contents.

1. Primary Permittee. A single Notice of Intent for the primary permittee (i.e., one NOI signed by the Owner or the Operator or both) shall be signed in accordance with Part V.G.1. of this permit and shall include the following information:

- a. The project construction site name, GPS location (decimal degrees) of construction exit, construction site location (e.g., street address), city (if applicable) and county of the construction site for which the notification is submitted. The construction site location information must be sufficient to accurately locate the construction site;
- b. The Owner's legal name, address, telephone number and email address; and if available, the Operator's legal name, address, telephone number and email address; and if applicable, the Duly Authorized Representative's legal name and/or position name, telephone number and email address;
- c. The name, telephone number and email address of the individual to whom the permittee has assigned the responsibility for the daily operational control (i.e., construction superintendent, etc.) of the construction site;
- d. The name of the initial receiving water(s) or if unnamed the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6;
- e. The name of the receiving water(s) located 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) shown on Georgia's most current "305(b)/303(d) List Documents (Approved)" for the criteria violated/cause, "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);
- f. An estimate of project start date and completion date, a schedule for the timing of the various construction activities, the number of acres of the site on which soil will be disturbed, and the surface water drainage area (if applicable). For projects that began on

or before the effective date of this permit, the start date must be the actual start date of construction;

g. The following certification shall be signed in accordance with Part V.G.1. of this permit:

“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.”

h. The type of construction activity category (from those listed on the NOI) conducted at the site;

i. The location of the receiving water(s) or outfall(s) or a combination of receiving water(s) and outfall(s) to be sampled on a map or drawing of appropriate scale. When it is determined by the primary permittee that some or all of the outfall(s) will be sampled, the applicable nephelometric turbidity unit (NTU) selected from Appendix B (i.e., based upon the size of the construction site and the surface water drainage area) must be shown for each outfall to be sampled.

j. NOIs may be submitted for separate phases of projects with a total planned disturbance greater than 5.0 acres, provided that each phase shall not be less than 1.0 acre. Phased NOIs shall include all documentation required by this permit for each phase, including fees; and

k. Any other information specified on the NOI in effect at the time of submittal.

C. Notice of Intent Submittal. NOIs are to be submitted to EPD using the electronic submittal service provided by EPD and a copy to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated alternative location from commencement of construction until such time as a Notice of Termination (NOT) is submitted in accordance with Part VI.

D. Fees. Any applicable fees shall be submitted by the **Primary Permittee** in accordance with Rules and Regulations for Water Quality Control (Rules) promulgated by the Board of Natural Resources. By submitting an NOI for coverage under this permit the primary permittee agrees to pay any fees required, now or in the future, by such Rules authorized under O.C.G.A. Section 12-5-23(a)(5)(A), which allows the Board of Natural Resources to establish a fee system. Fees may be assessed on land disturbing activity proposed to occur on or after the effective date of this permit and shall be paid in accordance with such Rules.

E. Renotification. Upon issuance of a new or different general permit for some or all of the stormwater discharges covered by this permit, the permittee is required to notify the EPD of their intent to be covered by the new or different general permit. The permittee must submit a renewal Notice of Intent in accordance with the notification requirements of the new or different general permit.

PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, PERMIT VIOLATIONS AND OTHER LIMITATIONS

A. Prohibition on Non-Stormwater Discharges.

1. Except as provided in Part I.C.2. and III.A.2., all discharges covered by this permit shall be composed entirely of stormwater.
2. The following non-stormwater discharges may be authorized by this permit provided the non-stormwater component of the discharge is explicitly listed in the Erosion, Sedimentation and Pollution Control Plan and is in compliance with Part IV.D.7.; discharges from fire fighting activities; fire hydrant flushing; potable water sources including water line flushing; irrigation drainage; air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials or pollutants.
3. This permit does not authorize the discharge of soaps or solvents used in vehicle and equipment washing.
4. This permit does not authorize the discharge of wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.

B. Releases in Excess of Reportable Quantities.

1. The discharge of hazardous substances or oil in the stormwater discharge(s) from a site shall be prevented. This permit does not relieve the permittee of the reporting requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR Part 117 and 40 CFR Part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 or 40 CFR 302 occurs during a 24 hour period, the permittee is required to notify EPD at (404) 656-4863 or (800) 241-4113 and the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 and 40 CFR 302 as soon as he/she has knowledge of the discharge.
2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

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

Any permittee who intends to obtain coverage under this permit for stormwater discharges 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 (Approved)” at the time of NOI submittal, must satisfy the requirements of Part III.C. of this permit if the Impaired Stream Segment has been listed for criteria violated/cause, “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). Those discharges that are located within one (1) linear mile of an Impaired Stream Segment, but are not located within the watershed of any portion of that stream segment, are excluded from this requirement. Georgia’s “305(b)/303(d) List Documents (Approved)” can be viewed on the EPD website.

1. If a Total Maximum Daily Load (TMDL) Implementation Plan for sediment has been 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. If the TMDL Implementation Plan establishes a specific numeric wasteload allocation that applies to a permittee’s discharge(s) to the Impaired Stream Segment, then the permittee must incorporate that allocation into the Erosion, Sedimentation and Pollution Control Plan and implement all necessary measures to meet that allocation. A list of TMDL Implementation Plans can be viewed on the EPD website.

2. 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) of the following best management practices (BMPs) 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:

a. During all construction activities as defined in this permit, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as “trout streams” requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width pursuant to this section.

b. Increase all temporary sediment basins and retrofitted stormwater management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.

c. Use baffles in all temporary sediment basins and retrofitted stormwater management basins to at least double the conventional flow path length to the outlet structure.

- d. A large sign (minimum 4 feet x 8 feet) must be posted on site by the actual start date of construction. The sign must be visible from a public roadway. The sign must identify the following: (1) the construction site, (2) the permittee(s), (3) the contact person(s) along with their telephone number(s), and (4) the permittee-hosted website where the Plan can be viewed. The permittee-hosted website where the Plan can be viewed must be provided on the submitted NOI. The sign must remain on site and the Plan must be available on the provided website until a NOT has been submitted.
- e. Use flocculants or coagulants and/or mulch to stabilize all areas left disturbed for more than seven (7) calendar days in accordance with Part III.D.1. of this permit.
- f. Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part IV.D.6.d. of this permit.
- g. Comply with the applicable end-of-pipe turbidity effluent limit, without the “BMP defense” as provided for in O.C.G.A. 12-7-6(a)(1).
- h. Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
- i. Limit the amount of area disturbed at any one time to no greater than 25 acres or 50% of the total planned site, whichever is less. All calculations must be included on the Plan.
- j. Use “Dirt II” techniques available on the EPD website, to model and manage all construction stormwater runoff (including sheet flow). All calculations must be included on the Plan.
- k. Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
- l. Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction stormwater (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
- m. Use appropriate erosion control slope stabilization instead of concrete in all construction stormwater ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
- n. Use flocculants or coagulants under a passive dosing method (e.g., flocculant blocks) within all construction stormwater ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.

- o. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever construction stormwater (including sheet flow) may be discharged.
- p. Conduct soil tests to identify and to implement site-specific fertilizer needs.
- q. Certified personnel shall conduct inspections at least twice every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(3).(a)–(c) of this permit.
- r. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
- s. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).
- t. Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included in the Plan.
- u. Conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase of the project by the design professional who prepared the Plan in accordance with Part IV.A.5. of the permit.
- v. Install Post Construction BMPs (e.g., runoff reduction BMPs) which remove 80% TSS as outlined in the Georgia Stormwater Management Manual known as the Blue Book or an equivalent or more stringent design manual.

D. Management Practices and Permit Violations.

1. Best management practices, as set forth in this permit, are required for all construction activities, and must be implemented in accordance with the design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with Part III.D.4. and Part III.D.5.
2. Except as required to install the initial sediment storage requirements and perimeter control BMPs as described in Part IV.D.3., 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 this permit 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.

3. Failure to properly design, install, or maintain best management practices shall constitute a violation of this permit for each day on which such failure occurs. BMP maintenance as a result of the permittee's routine inspections shall not be considered a violation for the purposes of this paragraph. If during the course of the permittee's routine inspection BMP failures are observed which have resulted in sediment deposition into Waters of the State, the permittee shall correct the BMP failures and shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit.

4. A discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such discharge results in the turbidity of receiving water(s) being increased by more than ten (10) nephelometric turbidity units for waters classified as trout streams or more than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries, regardless of a permittee's certification under Part II.B.1.i. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a subdivision or planned common development unless five (5) acres or more will be disturbed.

5. When the permittee has elected to sample outfall(s), the discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such condition results in the turbidity of the discharge exceeding the value selected from Appendix B applicable to the construction site. As set forth therein, the nephelometric turbidity unit (NTU) value shall be selected from Appendix B based upon the size of the construction site, the surface water drainage area and whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.

6. Whenever a permittee finds that a BMP has failed or is deficient (beyond routine maintenance) and has resulted in sediment deposition into waters of the State, the permittee shall immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events. The permittee shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit and shall correct such BMP as follows:

- a. When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be repaired within two (2) business days from the time of discovery;
- b. When the repair requires a new or replacement BMP or significant repair, the installation of the new or modified BMP must be completed and the BMP must be operational by no later than seven (7) days from the time of discovery. If it is infeasible

to complete the installation or repair within seven (7) days, the permittee must document why it is infeasible to complete the installation or repair within the seven (7) day timeframe and document the schedule for installing or repairing the BMPs and making the BMPs operational as soon as feasible after the seven (7) day timeframe.

Part IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN

A site-specific Erosion, Sedimentation and Pollution Control Plan (Plan) shall be designed, installed and maintained for the entire construction activity covered by this permit. The Erosion, Sedimentation and Pollution Control Plan must be prepared by a design professional as defined by this permit. All persons involved in Plan preparation shall have completed the appropriate certification course, pursuant to O.C.G.A. 12-7-19(b), approved by the Georgia Soil and Water Conservation Commission. The design professional preparing the Plan must include and sign the following certification in the Plan:

“I certify that the permittee’s Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document “Manual for Erosion and Sediment Control in Georgia” (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100001.”

The Plan shall include any additional certifications regarding the design professional's site visit in accordance with the Rules for Erosion and Sedimentation Control promulgated by the Board of Natural Resources:

“I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision.”

The Plan shall include, as a minimum, 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and O.C.G.A. 12-7-6, as well as the following:

(i). Except as provided in Part IV.(iii). below, no construction activities shall be conducted within a 25 foot buffer along the banks of all State waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director has determined 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 a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion

control measures are incorporated in the project plans and specifications and are implemented, or along any ephemeral stream, or where bulkheads and seawalls must be constructed to prevent the erosion of the shoreline on Lake Oconee and Lake Sinclair. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and are implemented:

- (1) public drinking water system reservoirs;
- (2) 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;
- (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 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; 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.
- (ii). No construction activities shall be conducted within a 50 foot buffer, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any State waters classified as "trout streams" except when approval is granted by the Director for alternate buffer requirements in accordance with the provisions of O.C.G.A. 12-7-6, or where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as "trout streams" which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the permittee, pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources including notification of such to EPD and the Local Issuing Authority of the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream permittee's property, and the permittee must comply with the buffer requirement for any adjacent trout streams. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and are implemented:
- (1) public drinking water system reservoirs;
 - (2) 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;
 - (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 stormwater 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 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) 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 or 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.

(iv). Except as provided above, for buffers required pursuant to Part IV.(i). and (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 stormwater 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 stormwater 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.

a. For all projects identified under Part I.C.1.b., which begin after the effective date of this permit, in a jurisdiction where there is no certified Local Issuing Authority regulating that project, a single copy of the Plan must be submitted to the EPD Watershed Protection Branch and a second copy of the Plan must be submitted to the appropriate EPD District Office prior to or concurrent with the NOI submittal. The second copy of the Plan must be submitted electronically as a Portable Document Format (PDF) file through the electronic submittal method provided by EPD, or by return receipt certified mail or similar service as a PDF on CD-ROM or other storage device to the appropriate EPD District Office. The permittee shall retain a copy of the proof of the submittal at the construction site or the proof of submittal shall be readily available at a designated alternative location from commencement of construction until such a time as a Notice of Termination (NOT) is submitted in accordance with Part VI. The EPD Watershed Protection Branch will review Plans for deficiencies using the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted.

b. For all projects where the construction activity as indicated on the existing NOI has changed, the amended Plans must be submitted in accordance with Part IV.A.4.a. In addition, the permittee must submit a modification NOI in accordance with Part II.

5. For stand alone projects that begin construction activity after the effective date of this permit, the primary permittee must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control 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 which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required.

6. For storm- or emergency-related repair work, the permittee shall implement appropriate BMPs and certified personnel (provided by the primary permittee) shall inspect at least once every

seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater. If the storm- or emergency-related repair work will not be completed within sixty (60) days of commencement of construction activity, a single copy of the Plan shall be submitted to EPD and the permittee shall comply with all requirements of this permit on the sixty-first (61st) day.

B. Signature and Plan Review.

1. The Erosion, Sedimentation and Pollution Control Plan shall be signed in accordance with Part IV., and be retained on the site (or, if not possible, at a readily accessible location) which generates the stormwater discharge in accordance with Part IV.F. of this permit.

2. The primary permittee shall make Plans available upon request to the EPD; to designated officials of the local government reviewing soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system.

3. EPD may notify the primary permittee at any time that the Plan does not meet one or more of the minimum requirements of this Part. Within seven (7) days of such notification (or as otherwise provided by EPD), the primary permittee shall make the required changes to the Plan and shall submit to EPD either the amended Plan or a written certification that the requested changes have been made.

C. Keeping Plans Current. The primary permittee(s) shall amend their Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on BMPs with a hydraulic component (i.e., those BMPs where the design is based upon rainfall intensity, duration and return frequency of storms) or if the Plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part IV.D.3. Amendments to the Plan must be certified by a design professional as provided in this permit.

D. Contents of Plan. The Erosion, Sedimentation and Pollution Control Plan shall include, as a minimum, 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:

1. Checklist. Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the applicable Checklist as approved by the GSWCC up until the date of the NOI submittal. The applicable checklists are available on the GSWCC website.

2. Site description. Each site-specific Plan shall provide a description of pollutant sources and other information as indicated:

- a. A description of the nature of the construction activity;
- b. A detailed description and chart or timeline of the intended sequence of major activities which disturb soils for major portions of the site (i.e., initial sediment storage requirements and perimeter BMPs, clearing and grubbing activities, excavation activities, grading activities, infrastructure activities, immediate and final stabilization activities);
- c. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading, or other activities;
- d. 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;
- e. A site-specific map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the Plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where stormwater is discharged to a surface water; and
- f. Identify the receiving water(s) and areal extent of wetland acreage at the site;

3. Controls. Each Plan shall include a description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage requirements and perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. Plans submitted after the effective date of this permit shall limit the amount of disturbed area to no greater than 50 acres at any one time without prior written authorization from the appropriate EPD District Office according to the schedule in Appendix A of this permit. EPD will approve or disapprove such requests within 35 days of receipt. Failure of EPD to act within 35 days shall be considered an approval of such requests. If the EPD District Office approves a request to disturb 50 acres or more at any one time, the Plan must include at least four (4) of the best management practices listed in Part III.C.2. of this permit.

The Plan will clearly describe for each major activity identified in Part IV.D.2.b. appropriate control measures and the timing during the construction process that the measures will be implemented. The primary permittee is encouraged to utilize the document, *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*, EPA 833-R-060-04, May

2007, when preparing the Plan. The description and implementation of controls shall address the following minimum components:

a. Erosion and sediment controls.

(1). Stabilization measures. A description of interim and permanent stabilization measures, including site-specific scheduling of the implementation of the measures. Site plans should ensure that existing vegetation is preserved and that disturbed portions of the site are stabilized. Stabilization measures may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in the Plan. Except as provided in paragraphs IV.D.3.(a).(1).(a). below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

(a). Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently cease is precluded by snow cover or other adverse weather conditions, stabilization measures shall be initiated as soon as practicable.

(2). Structural practices. A description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA.

(3). Sediment basins. For common drainage locations a temporary (or permanent) sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 1800 cubic feet (67 cubic yards) of storage area per acre drained does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. For drainage locations where a temporary sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent controls is not attainable, sediment traps, silt fences, wood mulch berms or equivalent

sediment controls are required for all side slope and down slope boundaries of the construction area. When the sediment fills to a volume at most of 22 cubic yards per acre for each acre of drainage area, the sediment shall be removed to restore the original design volume. This sediment must be properly disposed. Sediment basins may not be feasible at some construction sites. Careful consideration must be used to determine when a sediment basin cannot be used and/or when 67 cubic yards of storage per acre drained is not attainable and a written justification explaining the decision(s) must be included in the Plan. Perennial and intermittent waters of the State shall not be used for temporary or permanent sediment detention.

When discharging from sediment basins and impoundments, 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. Outlet structures that withdraw water from the surface are temporary BMPs and must be removed prior to submitting a Notice of Termination. For construction activities where the NOI was submitted prior to January 1, 2014, this requirement of the permit is not applicable.

(4). Alternative BMPs. The use of alternative BMPs whose performance has been documented to be equivalent or superior to conventional BMPs as certified by a Design Professional may be allowed (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).

(5). High performance BMPs. The use of infiltration trenches, seep berms, sand filters, dry wells, flocculants or coagulants, etc. for minimizing point source discharges except for large rainfall events is encouraged.

b. Stormwater management. A description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of stormwater management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Operators are only responsible for the installation and maintenance of stormwater management measures prior to final stabilization of the site, and are not responsible for maintenance after stormwater discharges associated with construction activity have been eliminated from the site.

(1). Such practices may include: stormwater detention structures (including wet ponds); stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices). The Plan shall include an explanation

of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

(2). Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water(s)).

(3). Installation and use of green infrastructure approaches and practices that mimic natural processes and direct stormwater where it can be infiltrated, evapotranspired or re-used with significant utilization of soils and vegetation rather than traditional hardscape collection, conveyance and storage structures are encouraged to the maximum extent practicable. Green Infrastructure practices or approaches include permeable or porous paving, vegetated swales instead of curbs and gutters, green roofs, tree boxes, rain gardens, constructed wetlands, infiltration planters, vegetated median strips, protection and enhancement of riparian buffers and floodplains, and the overall reduction in site disturbance and impervious area. Design information on Green Infrastructure practices and other ways to manage stormwater can be found in the Georgia Stormwater Management Manual and Coastal Stormwater Supplement. Additional information on Green Infrastructure can be found at the USEPA website.

c. Other controls.

(1). Waste disposal. Locate waste collection areas away from streets, gutters, watercourses and storm drains. Waste collection areas, such as dumpsters, are often best located near construction site entrances to minimize traffic on disturbed soils. The Plan should include secondary containment around liquid waste collection areas to further minimize the likelihood of contaminated discharges. Solid materials, including building materials, shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

(2). For building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site, provide cover (e.g. plastic sheeting, temporary roofs) to minimize the exposure of these products to precipitation and to stormwater, or a similarly effective means designed to minimize the discharge of pollutants from these areas. Minimization of exposure is not required in cases where exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk to stormwater contamination (such as final products and materials intended for outdoor use).

(3). Off-site vehicle tracking of dirt, soils, and sediments and the generation of dust shall be minimized or eliminated to the maximum extent practical. The Plan shall include the best management practice to be implemented at the site or construction activity.

(4). Nothing in this permit relieves a permittee from any obligation to comply with all applicable State and local regulations of waste disposal, sanitary sewer, septic and petroleum storage systems.

(5). The Plan shall include best management practices for the remediation of all petroleum spills and leaks as appropriate.

(6). The Plan shall include best management practices for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of vehicles. Washout of the drum at the construction site is prohibited. Additional information about best management practices for concrete washout is available at the USEPA website.

(7). All permittees are required to minimize the discharge of pollutants from dewatering trenches and excavations. Discharges are prohibited unless managed by appropriate controls.

4. Inspections.

a. Permittee requirements.

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. 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.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or

any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first); (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). 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, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination has been submitted) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction site that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion,

Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

5. Maintenance. The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements. This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a subdivision or planned common development unless five (5) acres or more will be disturbed. The following procedures constitute EPD's guidelines for sampling turbidity.

a. *Sampling Requirements* shall include the following:

(1). A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the site or the stand alone construction; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the stormwater is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the stormwater(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2). A written narrative of site specific analytical methods used to collect, handle and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3). When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

b. *Sample Type.* All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container.

(3). Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.

(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

c. *Sampling Points.*

(1). For construction activities the primary permittee must sample all receiving water(s), or all outfall(s), or a combination of receiving water(s) and outfall(s). Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the stormwater outfalls using the following minimum guidelines:

(a). The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first stormwater discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other stormwater discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

(b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last stormwater discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other stormwater discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

(c). Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the stormwater outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall stormwater channel.

(e). The sampling container should be held so that the opening faces upstream.

(f). The samples should be kept free from floating debris.

(g). Permittees do not have to sample sheet flow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, 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 a seeding of target crop perennials appropriate for the region).

(h). All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether stormwater runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

d. Sampling Frequency.

(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall location within in forty-five (45) minutes or as soon as possible.

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), 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 under (a), (b) or (c) above; and

(e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

7. Non-stormwater discharges. Except for flows from fire fighting activities, sources of non-stormwater listed in Part III.A.2. of this permit that are combined with stormwater discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge.

E. Reporting.

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

- a. The rainfall amount, date, exact place and time of sampling or measurements;
- b. The name(s) of the certified personnel who performed the sampling and measurements;
- c. The date(s) analyses were performed;
- d. The time(s) analyses were initiated;
- e. The 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. The 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.

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

F. Retention of Records.

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

- a. A copy of all Notices of Intent submitted to EPD;
- b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
- c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
- d. A copy of all sampling information, results, and reports required by this permit;
- e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
- f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
- g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2). of this permit.

2. Copies of all Notices of Intent, Notices of Termination, inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI. of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

Part V. STANDARD PERMIT CONDITIONS

A. Duty to Comply.

1. Each permittee must comply with all applicable conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) and is grounds for enforcement action; for permit termination; or for denial of a permit renewal application. Failure of a primary permittee to comply with any applicable term or condition of this permit shall not relieve any other primary permittee from compliance with their applicable terms and conditions of this permit.

2. Each permittee must document in their records any and all known violations of this permit at his/her site within seven (7) days of his/her knowledge of the violation. A summary of these violations must be submitted to EPD by the permittee at the addresses shown in Part II.C. within fourteen (14) days of his/her discovery of the violation.

3. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Acts, any permit condition or limitation established pursuant to the Acts, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director.

B. Continuation of the Expired General Permit. This permit expires on the date shown on the cover page of this permit. However, an expired general permit continues in force and effect until a new general permit is issued, final and effective.

C. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to Provide Information. The permittee shall furnish to the Director; a State or local agency approving soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system, any information which is requested to determine compliance with this permit. In the case of information submitted to the EPD such information shall be considered public information and available under the Georgia Open Records Act.

F. Other Information. When the permittee becomes aware that he failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report required to be submitted to the EPD, the permittee shall promptly submit such facts or information.

G. Signatory Requirements. All Notices of Intent, Notice of Terminations, inspection reports, sampling reports or other reports requested by the EPD shall be signed as follows:

1. All Notices of Intent and Notices of Termination shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this permit, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president

of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public facility: by either a principal executive officer or ranking elected official; and

d. Changes to authorization. If an authorization under Part II.B. is no longer accurate, a modification NOI satisfying the requirements of Part II.B. must be submitted to the EPD prior to or together with any inspection reports, sampling reports, or other reports requested by the EPD to be signed by a person described above or by a duly authorized representative of that person.

2. All inspection reports, sampling reports, or other reports requested by the EPD shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person(s) described above and submitted to the EPD;

b. The authorization specifies either an individual or a position having responsibility for specified operation(s) of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may be either a named individual or any individual occupying a named position); and

c. *Certification.* Reports delineated in Part V.G.2. shall be signed by the permittee or duly authorized representative and shall make the following certification:

“I certify under penalty of law that this report and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those

persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

H. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-60, et seq. or under Chapter 14 of Title 12 of the Official Code of Georgia Annotated; nor is the Operator relieved from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or Section 106 of Comprehensive Environmental Response Compensation And Liability Act.

I. Property Rights. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

J. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Other Applicable Environmental Regulations and Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act. Nothing in this permit, unless explicitly stated, exempts the permittee from compliance with other applicable local, state and federal ordinances, rules, regulations, and laws. Furthermore, it is not a defense to compliance with this permit that a local government authority has approved the permittee’s Erosion, Sedimentation and Pollution Control Plan or failed to take enforcement action against the permittee for violations of the Erosion, Sedimentation and Pollution Control Plan, or other provisions of this permit.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

L. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the required plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

M. Inspection and Entry. The permittee shall allow the Director or an authorized representative of EPA, EPD or to designated officials of the local government reviewing soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or, in the case of a construction site which discharges through a municipal separate storm sewer system, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit; and
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

N. Permit Actions. This permit may be revoked and reissued, or terminated for cause including but not limited to changes in the law or regulations. The filing of a request by the permittee for termination of the permit, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

Part VI. TERMINATION OF COVERAGE

A. Notice of Termination Eligibility. Notice of Termination signed in accordance with Part V.G.1. of this permit must be submitted:

1. For construction activities, by the permittee where the entire stand alone development has undergone final stabilization, all stormwater discharges associated with construction activity that are authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed. For construction activities where the primary permittee has elected to submit NOIs for separate phases of the stand alone development, the phase or phases of the stand alone development on the NOT shall correspond to the phase or phases on the NOI.
2. By the Owner or Operator when the Owner or Operator of the site changes. Where stormwater discharges will continue after the identity of the Owner or Operator changes, the permittee must, prior to filing the Notice of Termination, notify any subsequent Owner or Operator of the permitted site as to the requirements of this permit.

B. Notice of Termination Contents:

1. The NPDES permit number for the stormwater discharge associated with construction activity identified by the Notice of Termination (i.e., GAR100001 – Stand Alone);
2. The project construction site name, GPS location (decimal degrees) of construction exit, construction site location, city (if applicable) and county of the construction site for which the notification is submitted. This information must correspond to the similar information as provided on the NOI. Where an address for the construction site is not available, the construction site location information must be sufficient to accurately locate the construction site;
3. The Owner's legal name, address, telephone number and email address and the Operator's legal name, address, telephone and email address;
4. The name of the initial receiving water(s), and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4;
5. Copies of all sampling reports not previously submitted and/or a written justification why sampling was not conducted. Copies of all sampling reports may be submitted as a Portable Document Format (PDF) file on CD-ROM or other storage device;
6. Any other information specified on the NOT in effect at the time of submittal; and
7. The following certification signed in accordance with Part V.G.1. (signatory requirements):

“I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed or (b) I am no longer an Owner or Operator at the construction site and a new Owner or Operator has assumed operational control of the permitted construction site where I previously had ownership or operational control; and that discharging pollutants in stormwater associated with construction activity to waters of Georgia is unlawful under the Georgia Water Quality Control Act and the Clean Water Act where the discharge is not authorized by a NPDES permit.”

C. Notice of Termination Submittal. All Notices of Termination (NOT) for this permit shall be submitted to EPD using the electronic submittal service provided by EPD and a copy to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq.

APPENDIX A

EPD DISTRICT OFFICES

A. For facilities/construction sites located in the following counties: Bibb, Bleckley, Chattahoochee, Crawford, Dooly, Harris, Houston, Jones, Lamar, Macon, Marion, Meriwether, Monroe, Muscogee, Peach, Pike, Pulaski, Schley, Talbot, Taylor, Troup, Twiggs, Upson

Information shall be submitted to: West Central District Office
Georgia Environmental Protection Division
2640 Shurling Drive
Macon, GA 31211-3576
(478) 751-6612

B. For facilities/construction sites located in the following counties: Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Johnson, Laurens, McDuffie, Montgomery, Richmond, Screven, Treutlen, Warren, Washington, Wheeler, Wilkinson

Information shall be submitted to: East Central District Office
Georgia Environmental Protection Division
3525 Walton Way Extension
Augusta, GA 30909-1821
(706) 667-4343

C. For facilities/construction sites located in the following counties: Baldwin, Banks, Barrow, Butts, Clarke, Elbert, Franklin, Greene, Hall, Hancock, Hart, Jackson, Jasper, Lincoln, Madison, Morgan, Newton, Oconee, Oglethorpe, Putnam, Stephens, Taliaferro, Walton, Wilkes

Information shall be submitted to: Northeast District Office
Georgia Environmental Protection Division
745 Gaines School Road
Athens, GA 30605-3129
(706) 369-6376

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

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
(229) 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
2 Martin Luther King Jr. Drive
Suite 1462 East
Atlanta, Georgia 30334
(404) 463-1511

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

		Trout Streams							
		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	25	50	75	150	300	500	500	500
	10.01-25	25	25	50	75	150	200	500	500
	25.01-50	25	25	25	50	75	100	300	500
	50.01-100	20	25	25	35	59	75	150	300
	100.01+	20	20	25	25	25	50	60	100

		Waters Supporting Warm Water Fisheries							
		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	75	150	200	400	750	750	750	750
	10.01-25	50	100	100	200	300	500	750	750
	25.01-50	50	50	100	100	200	300	750	750
	50.01-100	50	50	50	100	100	150	300	600
	100.01+	50	50	50	50	50	100	200	100

To use these tables, select the size (acres) of the construction site. Then, select the surface water drainage area (square miles). The NTU matrix value arrived at from the above tables is the one to use in Part III.D.4.

Example 1: For a site size of 12.5 acres and a “trout stream” drainage area of 37.5 square miles, the NTU value to use in Part III.D.4. is 75 NTU.

Example 2: For a site size of 51.7 acres and “waters supporting warm water fisheries” drainage area of 72 square miles, the NTU value to use in Part III.D.4. is 100 NTU.

Insert Yellow Sheet

Back of Yellow Sheet



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

**Authorization To Discharge Under The
National Pollutant Discharge Elimination System
Storm Water Discharges Associated With Construction Activity
For Infrastructure Construction Projects**

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p.416, as amended), hereinafter called the "State Act," the Federal Clean Water Act, as amended (33 U.S.C. 1251 et seq.), hereinafter called the "Clean Water Act," and the Rules and Regulations promulgated pursuant to each of these Acts, new and existing stormwater point sources within the State of Georgia that are required to have a permit, upon submittal of a Notice of Intent, are authorized to discharge stormwater associated with construction activity to the waters of the State of Georgia in accordance with the limitations, monitoring requirements and other conditions set forth in Parts I through VI hereof.

This permit shall become effective on August 1, 2018.

This permit and the authorization to discharge shall expire at midnight, July 31, 2023.

Signed this 16th day of May 2018.



Richard E. Dunn, Director
Environmental Protection Division

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Part I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit regulates point source discharges of stormwater to the waters of the State of Georgia from construction activities, as defined in this permit.

B. Definitions. All terms used in this permit shall be interpreted in accordance with the definitions as set forth in the Georgia Water Quality Control Act (Act) and the Georgia Rules and Regulations for Water Quality Control Chapter 391-3-6 (Rules), unless otherwise defined in this permit:

1. “Best Management Practices” (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
2. “Buffer” means the area of land immediately adjacent to the banks of State waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.
3. “Certified Personnel” means a person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission.
4. “Commencement of Construction” means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
5. “Construction Activity” means the disturbance of soils associated with clearing, grading, excavating, filling of land, or other similar activities which may result in soil erosion. Construction activity does not include agricultural and silvicultural practices, but does include agricultural buildings.
6. “CPESC” means Certified Professional in Erosion and Sediment Control with current certification by EnviroCert International, Inc.
7. “CWA” means Federal Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972).
8. “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. Design Professionals shall practice in a manner that complies with applicable Georgia law governing professional licensure.

9. “Director” means the Director of the Environmental Protection Division or an authorized representative.

10. “Division” means the Environmental Protection Division of the Department of Natural Resources.

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

12. “Erosion, Sedimentation and Pollution Control Plan” or “Plan” means a plan for the control of soil erosion, sediment and pollution resulting from a construction activity.

13. “Filling” means the placement of any soil or solid material either organic or inorganic on a natural ground surface or an excavation.

14. “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 a seeding of target crop perennials appropriate for the region). For infrastructure construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use.

15. “General Contractor” means the operator of the infrastructure construction or site.

16. “Impossible” means the monitoring location(s) are either physically or legally inaccessible, or access would cause danger to life or limb.

17. “Infeasible” means not technologically possible, or not economically practicable and achievable in light of best industry practices.

18. “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, stormwater or sewage.

19. “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.
20. “Local Issuing Authority” means the governing authority of any county or municipality which is certified pursuant to Official Code of Georgia Section 12-7-8(a).
21. “Mass Grading” means the movement of earth by mechanical means to alter the gross topographic features (elevations, slopes, etc.) to prepare a site for final grading and the construction of facilities (buildings, roads, parking, etc.).
22. “Nephelometric Turbidity Unit (NTU)” means a numerical unit of measure based upon photometric analytical techniques for measuring the light scattered by fine particles of a substance in suspension.
23. “NOI” means Notice of Intent to be covered by this permit (see Part II).
24. “Normal Business Hours” means Monday thru Friday, 8:00 AM to 5:00 PM, excluding any non-working Saturday, non-working Sunday and non-working Federal holiday.
25. “NOT” means Notice of Termination (see Part VI).
26. “Operator” means the entity that has the primary day-to-day operational control of those activities at the construction site necessary to ensure compliance with Erosion, Sedimentation and Pollution Control Plan requirements and permit conditions.
27. “Other Water Bodies” means ponds, lakes, marshes and swamps which are waters of the State.
28. “Outfall” means the location where stormwater, in a discernible, confined and discrete conveyance, leaves a facility or construction site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.
29. “Owner” means the legal title holder to the real property on which is located the facility or site where construction activity takes place. For purposes of this permit, this definition does not include the legal title holder to property on which the only construction activity planned and being conducted is by a infrastructure company or infrastructure contractor and the legal title holder has no significant control over design and implementation of the construction activity.
30. “Permittee” means any entity that has submitted a Notice of Intent and obtained permit coverage.
31. “Phase” or “Phased” means sub-parts, sections or segments of infrastructure construction sites where the sub-part, section or segment is constructed and stabilized prior to completing the entire construction site.

32. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure or container from which pollutants are or may be discharged. This term also means sheet flow which is later conveyed via a point source to waters of the State. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

33. "Primary Permittee" means the Owner or the Operator or both of a tract of land for a construction site subject to this permit.

34. "Proper design" and "properly designed" means designed in accordance with the design requirements and specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the Manual as approved by the GSWCC up until the date of NOI submittal.

35. "Receiving Water(s)" means all perennial and intermittent waters of the State into which the runoff of stormwater from a construction activity will actually discharge, either directly or indirectly.

36. "Roadway Project(s)" means traveled ways including but not limited to roads, sidewalks, multi-use paths and trails, and airport runways and taxiways. This term also includes the accessory components to a roadway project that are necessary for the structural integrity of the roadway and the applicable safety requirements. These accessory components include but are not limited to slopes, shoulders, stormwater drainage ditches and structures, guardrails, lighting, signage, cameras and fences and exclude subsequent landscaping and beautification projects.

37. "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.

38. "Sedimentation" means the action or process of forming or depositing sediment.

39. "Sheet flow" means runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel.

40. "Site" or "Construction Site" means a facility of any type on which construction activities are occurring or are to occur which may result in the discharge of pollutants from a point source into the waters of the State.

41. "Stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage.

42. "Structural Erosion and Sediment Control Practices" means measures for the stabilization of erosive or sediment producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss.

43. “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. Sub-contractors are not permittees unless they meet the definition of either a primary, secondary or tertiary permittee.

44. “Surface Water Drainage Area” means the hydrologic area starting from the lowest downstream point where the stormwater from the construction activity enters the receiving water(s) and following the receiving water(s) upstream to the highest elevation of land that divides the direction of water flow. This boundary will connect back with the stormwater entrance point. Boundary lines follow the middle of the highest ground elevation or halfway between contour lines of equal elevation.

45. “Trout Streams” means waters of the State classified as either primary trout waters or secondary trout waters, as designated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.

46. “USGS Topographic Map” means a current quadrangle, 7½ minute series map prepared by the United States Department of the Interior, Geological Survey.

47. “Vegetative Erosion and Sediment Control Practices” means measures for the stabilization of erosive or sediment producing areas by covering the soil with: (1) permanent seeding, sprigging or planting, producing long-term vegetative cover; (2) temporary seeding, producing short-term vegetative cover; or (3) sodding, covering areas with a turf of perennial sod forming grass.

48. “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.

49. “Waters of Georgia” or “Waters of the State” means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and all 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.

C. Eligibility.

1. Construction Activities. This permit authorizes, subject to the conditions of this permit:

- a. all discharges of stormwater associated with infrastructure construction projects that will result in contiguous land disturbances equal to or greater than one (1) acre occurring on or before, and continuing after, the effective date of this permit, (henceforth referred to as existing stormwater discharges from construction activities) except for discharges identified under Part I.C.3. Contiguous means areas of land disturbances that are in actual contact to create a connected, uninterrupted area of land disturbance. However, for the

purposes of this permit, 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;

b. all discharges of stormwater associated with infrastructure construction projects that will result in contiguous land disturbances equal to or greater than one (1) acre occurring after the effective date of this permit, (henceforth referred to as stormwater discharges from construction activities), except for discharges identified under Part I.C.3. Contiguous means areas of land disturbances that are in actual contact to create a connected, uninterrupted area of land disturbance. However, for purposes of this permit, 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;

c. coverage under this permit is not required for discharges of stormwater 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 construction activity 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 Georgia 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 stormwater 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 construction activity 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 Georgia 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

e. coverage under this permit is not required for discharge of stormwater 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 shall, as 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.

f. coverage under this permit is not required for discharge of stormwater associated with infrastructure road construction projects that consist solely of the installation of cable barriers and guard rail for an existing facility within the existing rights-of-way. The construction activity 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 Georgia 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, and (3) final stabilization must be implemented at the end of the project.

g. coverage under this permit is not required for discharge of stormwater associated with infrastructure construction projects that consist of the installation of buried utility lines and comply with the following conditions: (1) solely installed via vibratory plow, (2) the conduit does not exceed 4 inches in diameter, and (3) occurs within an existing stabilized right-of-way. The construction activity 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 Georgia 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) no tree clearing, (3) no change in grade, (4) the project shall be stabilized by the end of each day with temporary or permanent stabilization measures, and (5) final stabilization must be implemented at the end of the project.

2. Mixed Stormwater Discharges. This permit may only authorize a stormwater discharge from a construction site or construction activities mixed with a stormwater 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 stormwater 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. stormwater 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 permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

3. Limitations on Coverage. The following stormwater discharges from construction sites are not authorized by this permit:

- a. stormwater discharges associated with an industrial activity that originate from the site after construction activities have been completed and the site has undergone final stabilization;
- b. discharges that are mixed with sources of non-stormwater other than discharges which are identified in Part III.A.2. of this permit and which are in compliance with Part IV.D.7. (non-stormwater discharges) of this permit;
- c. stormwater discharges associated with industrial activity that are subject to an existing NPDES individual or general permit. Such discharges may be authorized under this permit after an existing permit expires provided the existing permit did not establish numeric limitations for such discharges; and
- d. stormwater discharges from construction sites that the Director (EPD) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard.

4. Compliance with Water Quality Standards. No discharges authorized by this permit shall cause violations of Georgia's in-stream water quality standards as provided by the Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03.

D. Authorization.

1. Any person desiring coverage under this permit must submit a Notice of Intent (NOI) to the EPD and the NOI must be received by the EPD in accordance with the requirements of Part II,

using the electronic submittal service provided by the EPD, in order for stormwater discharges from construction sites to be authorized.

2. Unless notified by the Director to the contrary, a permittee who submits an NOI in accordance with the requirements of this permit is authorized to discharge stormwater from construction sites under the terms and conditions of this permit fourteen (14) days after the date that the NOI is submitted and confirmation of submittal is received. The Director may deny coverage under this permit and require submittal of an application for an individual NPDES permit or alternative general NPDES permit based on a review of the NOI or other information. Should the Director deny coverage under this permit, coverage under this permit is authorized until the date specified in the notice of denial by the Director.

3. Where a new permittee is to begin work on-site after an NOI for the facility/construction site has been submitted, that new permittee must submit a new NOI in accordance with Part II.

E. Continuing Obligations of Permittees. Unless and until responsibility for a site covered under this permit is properly terminated or ownership changes according to the terms of the permit, the current permittee remains responsible for compliance with all applicable terms of the permit and for any violations of said terms.

Part II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for Notification.

1. Except as provided in Part II.A.2., II.A.3. and II.A.5., Owners or Operators or both who intend to obtain coverage under this general permit for stormwater discharges from a construction site (where construction activities begin after issuance of this permit), shall submit a Notice of Intent (NOI) in accordance with the requirements of this Part at least fourteen (14) days prior to the commencement of construction activities.

2. For sites where construction activities, subject to this permit, are occurring on the effective date of this permit, the Owner or Operator or both shall submit a re-issuance NOI for an existing construction site in accordance with the requirements of this Part no later than ninety (90) days after the effective date of this permit. Failure to comply with this requirement 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.

3. A discharger is not precluded from submitting an NOI in accordance with the requirements of this Part after the dates provided in Parts II.A.1. or II.A.2. of this permit. In such instances, EPD may bring an enforcement action for failure to submit an NOI in a timely manner or for any unauthorized discharges of stormwater associated with construction activity that have occurred on or after the dates specified in Part II.A.1. and II.A.2.

4. Where an Owner or an Operator or both changes after an NOI has been filed, the subsequent Owner or Operator or both must submit a modification NOI in accordance with this Part by the earlier to occur of (a) seven (7) days before beginning work at the facility/construction site; or (b) thirty (30) days from acquiring legal title to the facility/construction site. In the event a lender or other secured creditor acquires legal title to the facility/construction site, such party must submit a modification NOI in accordance with this Part by the earlier to occur of (a) seven (7) days before beginning work at the facility/construction site; or (b) thirty (30) days from acquiring legal title to the facility/construction site. Stabilization and BMP installation and/or maintenance measures of a disturbed site, by the subsequent Owner or Operator, may occur in advance of filing a new NOI, without violation of this permit. Failure to comply with this requirement 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.

5. For sites where construction activities will result in land disturbance equal to or greater than one (1) acre that are required as a result of storm- or emergency-related repair work, the Owner or Operator or both shall notify the appropriate EPD District Office within three (3) days of commencement of said construction activities. The Owner or Operator or both shall submit the NOI to the appropriate EPD District Office as soon as possible after the storm- or emergency-related event but no later than fourteen (14) days after the commencement of construction activities and shall submit the Plan in accordance with Part IV.A.6.

B. Notice of Intent Contents.

1. Primary Permittee. A single Notice of Intent for the primary permittee (i.e., one NOI signed by the Owner or the Operator or both) shall be signed in accordance with Part V.G.1. of this permit and shall include the following information:

- a. The project construction site name, GPS locations (decimal degrees) of the beginning and end of the infrastructure project, construction site location, city (if applicable) and county of the construction site for which the notification is submitted. The construction site location information must be sufficient to accurately locate the construction site;
- b. The Owner's legal name, address, telephone number and email address; and if available, the Operator's legal name, address, telephone number and email address; and if applicable, the Duly Authorized Representative's legal name and/or position name, telephone number and email address;
- c. The name, telephone number and email address of the individual to whom the permittee has assigned the responsibility for the daily operational control (i.e., construction superintendent, etc.) of the construction site;

d. The name of the initial receiving water(s) or if unnamed, the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.

e. The name of the receiving water(s) located 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) shown on Georgia's most current "305(b)/303(d) List Documents (Approved)" for the criteria violated/cause, "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);

f. An estimate of project start date and completion date, a schedule for the timing of the various construction activities, the number of acres of the site on which soil will be disturbed, and the surface water drainage area (if applicable). For projects that began on or before the effective date of this permit, the start date must be the actual start date of construction;

g. The following certification shall be signed in accordance with Part V.G.1. of this permit:

"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 permit requirements."

h. The type of construction activity category (from those listed on the NOI) conducted at the site;

i. The location of the receiving water(s) or outfall(s) or a combination of receiving water(s) and outfall(s) to be sampled on a map or drawing of appropriate scale. When it is determined by the primary permittee that some or all of the outfall(s) will be sampled, the applicable nephelometric turbidity unit (NTU) selected from Appendix B (i.e., based upon the size of the construction site and the surface water drainage area) must be shown for each outfall to be sampled.

j. A single NOI with multiple phases or multiple NOIs for multiple phases may be submitted for construction sites with a total planned disturbance greater than 5.0 acres,

provided that each phase shall not be less than 1.0 acre. Phased NOIs shall include all documentation required by this permit for each phase, including fees; and

k. Any other information specified on the NOI in effect at the time of submittal.

C. Notice of Intent Submittal. NOIs are to be submitted to EPD using the electronic submittal service provided by EPD and a copy to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated alternative location from commencement of construction until such time as a Notice of Termination (NOT) is submitted in accordance with Part VI.

D. Fees. Any applicable fees shall be submitted by the **Primary Permittee** in accordance with Rules and Regulations for Water Quality Control (Rules) promulgated by the Board of Natural Resources. By submitting an NOI for coverage under this permit the primary permittee agrees to pay any fees required, now or in the future, by such Rules authorized under O.C.G.A. Section 12-5-23(a)(5)(A), which allows the Board of Natural Resources to establish a fee system. Fees may be assessed on land disturbing activity proposed to occur on or after the effective date of this permit and shall be paid in accordance with such Rules.

E. Renotification. Upon issuance of a new or different general permit for some or all of the stormwater discharges covered by this permit, the permittee is required to notify the EPD of their intent to be covered by the new or different general permit. The permittee must submit a renewal Notice of Intent in accordance with the notification requirements of the new or different general permit.

PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, PERMIT VIOLATIONS AND OTHER LIMITATIONS

A. Prohibition on Non-Stormwater Discharges.

1. Except as provided in Part I.C.2. and III.A.2., all discharges covered by this permit shall be composed entirely of stormwater.
2. The following non-stormwater discharges may be authorized by this permit provided the non-stormwater component of the discharge is explicitly listed in the Erosion, Sedimentation and Pollution Control Plan and is in compliance with Part IV.D.7.; discharges from fire fighting activities; fire hydrant flushing; potable water sources including water line flushing; irrigation drainage; air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials or pollutants.
3. This permit does not authorize the discharge of soaps or solvents used in vehicle and equipment washing.

4. This permit does not authorize the discharge of wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.

B. Releases in Excess of Reportable Quantities.

1. The discharge of hazardous substances or oil in the stormwater discharge(s) from a site shall be prevented. This permit does not relieve the permittee of the reporting requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR Part 117 and 40 CFR Part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 or 40 CFR 302 occurs during a 24 hour period, the permittee is required to notify EPD at (404) 656-4863 or (800) 241-4113 and the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 and 40 CFR 302 as soon as he/she has knowledge of the discharge.

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

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

Any permittee who intends to obtain coverage under this permit for stormwater discharges 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 (Approved)” at the time of NOI submittal, must satisfy the requirements of Part III.C. of this permit if the Impaired Stream Segment has been listed for criteria violated/cause, “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). Those discharges that are located within one (1) linear mile of an Impaired Stream Segment, but are not located within the watershed of any portion of that stream segment, are excluded from this requirement. Georgia’s “305(b)/303(d) List Documents (Approved)” can be viewed on the EPD website.

1. If a Total Maximum Daily Load (TMDL) Implementation Plan for sediment has been 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. If the TMDL Implementation Plan establishes a specific numeric wasteload allocation that applies to a permittee’s discharge(s) to the Impaired Stream Segment, then the permittee must incorporate that allocation into the Erosion, Sedimentation and Pollution

Control Plan and implement all necessary measures to meet that allocation. A list of TMDL Implementation Plans can be viewed on the EPD website.

2. 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) of the following best management practices (BMPs) 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:

- a. During all construction activities as defined in this permit, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width pursuant to this section.
- b. Increase all temporary sediment basins and retrofitted stormwater management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
- c. Use baffles in all temporary sediment basins and retrofitted stormwater management basins to at least double the conventional flow path length to the outlet structure.
- d. A large sign (minimum 4 feet x 8 feet) must be posted on site by the actual start date of construction. The sign must be visible from a public roadway. The sign must identify the following: (1) the construction site, (2) the permittee(s), (3) the contact person(s) along with their telephone number(s), and (4) the permittee-hosted website where the Plan can be viewed. The permittee-hosted website where the Plan can be viewed must be provided on the submitted NOI. The sign must remain on site and the Plan must be available on the provided website until a NOT has been submitted.
- e. Use flocculants or coagulants and/or mulch to stabilize all areas left disturbed for more than seven (7) calendar days in accordance with Part III.D.1. of this permit.
- f. Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part IV.D.6.d. of this permit.
- g. Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6(a)(1).
- h. Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
- i. Limit the amount of disturbed area at any one time to no greater than 25 acres or 50% of the total planned site, whichever is less. All calculations must be included on the Plan.

- j. Use “Dirt II” techniques available on the EPD website, to model and manage all construction stormwater runoff (including sheet flow). All calculations must be included on the Plan.
- k. Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
- l. Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction stormwater (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
- m. Use appropriate erosion control slope stabilization instead of concrete in all construction stormwater ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
- n. Use flocculants or coagulants under a passive dosing method (e.g., flocculant blocks) within all construction stormwater ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
- o. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever construction stormwater (including sheet flow) may be discharged.
- p. Conduct soil tests to identify and to implement site-specific fertilizer needs.
- q. Certified personnel shall conduct inspections at least once every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(3).(a)–(c) of this permit.
- r. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
- s. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).
- t. Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
- u. Conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase of the project by the design professional who prepared the Plan in accordance with Part IV.A.5. of the permit.

- v. Install Post Construction BMPs (e.g., runoff reduction BMPs) which remove 80% TSS as outlined in the Georgia Stormwater Management Manual known as the Blue Book or an equivalent or more stringent design manual.

D. Management Practices and Permit Violations.

1. Best management practices, as set forth in this permit, are required for all construction activities, and must be implemented in accordance with the design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with Part III.D.4. and Part III.D.5.
2. Except as required to install the initial sediment storage requirements and perimeter control BMPs as described in Part IV.D.3., 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, sections or segments of the construction site. Failure to comply shall constitute a violation of this permit 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.
3. Failure to properly design, install, or maintain best management practices shall constitute a violation of this permit for each day on which such failure occurs. BMP maintenance as a result of the permittee's routine inspections shall not be considered a violation for the purposes of this paragraph. If during the course of the permittee's routine inspection BMP failures are observed which have resulted in sediment deposition into waters of the State, the permittee shall correct the BMP failures and shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit.
4. A discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such discharge results in the turbidity of receiving water(s) being increased by more than ten (10) nephelometric turbidity units for waters classified as trout streams or more than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries, regardless of a permittee's certification under Part II.B.1.i.
5. When the permittee has elected to sample outfall(s), the discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such condition results in the turbidity of the discharge exceeding the value selected from Appendix B applicable to the

construction site. As set forth therein, the nephelometric turbidity unit (NTU) value shall be selected from Appendix B based upon the size of the construction site, the surface water drainage area and whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.

6. Whenever a permittee finds that a BMP has failed or is deficient (beyond routine maintenance) and has resulted in sediment deposition into waters of the State, the permittee shall immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events. The permittee shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit and shall correct such BMP as follows:

- a. When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be repaired within two (2) business days from the time of discovery;
- b. When the repair requires a new or replacement BMP or significant repair, the installation of the new or modified BMP must be completed and the BMP must be operational by no later than seven (7) days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) days, the permittee must document why it is infeasible to complete the installation or repair within the seven (7) day timeframe and document the schedule for installing or repairing the BMPs and making the BMPs operational as soon as feasible after the seven (7) day timeframe.

Part IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN

A site-specific Erosion, Sedimentation and Pollution Control Plan (Plan) shall be designed, installed and maintained for the entire construction activity covered by this permit. The Erosion, Sedimentation and Pollution Control Plan must be prepared by a design professional as defined by this permit. All persons involved in Plan preparation shall have completed the appropriate certification course, pursuant to O.C.G.A. 12-7-19(b), approved by the Georgia Soil and Water Conservation Commission. The design professional preparing the Plan must include and sign the following certification in the Plan:

“I certify that the permittee’s Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document “Manual for Erosion and Sediment Control in Georgia” (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100002.”

The Plan shall include any additional certifications regarding the design professional's site visit in accordance with the Rules for Erosion and Sedimentation Control promulgated by the Board of Natural Resources;

“I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision.”

The Plan shall include, as a minimum, 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and O.C.G.A. 12-7-6, as well as the following:

(i). Except as provided in Part IV.(iii). below, no construction activities shall be conducted within a 25 foot buffer along the banks of all State waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director has determined 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 a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented, or along any ephemeral stream, or where bulkheads and seawalls must be constructed to prevent the erosion of the shoreline on Lake Oconee and Lake Sinclair. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and are implemented:

- (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;
- (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; 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.
- (ii). No construction activities shall be conducted within a 50 foot buffer, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any State waters classified as 'trout streams' except when approval is granted by the Director for alternate buffer requirements in accordance with the provisions of O.C.G.A. 12-7-6, or where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as 'trout streams' which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the permittee, pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources including notification of such to EPD and the Local Issuing Authority of the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream permittee's property, and the permittee must comply with the buffer requirement for any adjacent trout streams. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and are implemented:

- (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;
- (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 stormwater 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 200 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; and

- (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.

(iv). Except as provided above, for buffers required pursuant to Part IV.(i). and (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 stormwater 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 stormwater 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.

a. For all projects identified under Part I.C.1.b., in a jurisdiction where there is no certified Local Issuing Authority regulating that project, a single copy of the Plan must be submitted to the EPD Watershed Protection Branch and a second copy of the Plan must be submitted to the appropriate EPD District Office prior to or concurrent with the NOI submittal. The second copy of the Plan must be submitted electronically as a Portable Document Format (PDF) file through the electronic submittal service provided by EPD, or by return receipt certified mail or similar service as a PDF on CD-ROM or other storage device to the appropriate EPD District Office. The permittee shall retain a copy of the proof of the submittal at the construction site or the proof of submittal shall be readily available at a designated alternative location from commencement of construction until such a time as a Notice of Termination (NOT) is submitted in accordance with Part VI. The EPD Watershed Protection Branch will review Plans for deficiencies using the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted

b. For all projects where the construction activity as indicated on the existing NOI has changed, the amended Plans must be submitted in accordance with Part IV.A.4.a. In addition, the permittee must submit a modification NOI in accordance with Part II.

5. For infrastructure projects that begin construction activity after the effective date of this permit, the primary permittee must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control 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 projects, the primary permittee must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control Plan, or an alternative design professional approved by EPD in writing, to inspect (a) the installation of the sediment storage requirements

and perimeter control BMPs for the “*initial segment*” of the linear infrastructure project and (b) all sediment basins within the entire linear infrastructure project within seven (7) days after installation. For the purposes of the specific requirements in Part IV.A.5., the disturbed acreage of the “*initial segment*” of a linear infrastructure project 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. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required.

6. For storm- or emergency-related repair work, the permittee shall implement appropriate BMPs and certified personnel (provided by the primary permittee) shall inspect at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater. If the storm- or emergency-related repair work will not be completed within sixty (60) days of commencement of construction activity, a single copy of the Plan shall be submitted to EPD and the permittee shall comply with all requirements of this permit on the sixty-first (61st) day.

B. Signature and Plan Review.

1. The Erosion, Sedimentation and Pollution Control Plan shall be signed in accordance with Part IV., and be retained on the site (or, if not possible, at a readily accessible location) which generates the stormwater discharge in accordance with Part IV.F. of this permit.

2. The primary permittee shall make Plans available upon request to the EPD; to designated officials of the local government reviewing soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system.

3. EPD may notify the primary permittee at any time that the Plan does not meet one or more of the minimum requirements of this Part. Within seven (7) days of such notification (or as otherwise provided by EPD), the primary permittee shall make the required changes to the Plan and shall submit to EPD either the amended Plan or a written certification that the requested changes have been made.

C. Keeping Plans Current. The primary permittee(s) shall amend their Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on BMPs with a hydraulic component (i.e., those BMPs where the design is based upon rainfall intensity, duration and return frequency of storms) or if the Plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part IV.D.3. of this permit. Amendments to the Plan must be certified by a design professional as provided in this permit.

D. Contents of Plan. The Erosion, Sedimentation and Pollution Control Plan shall include, as a minimum, 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:

1. Checklist. Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the applicable Checklist as approved by the GSWCC up until the date of the NOI submittal. The applicable checklists are available on the GSWCC website.

2. Site description. Each site-specific Plan shall provide a description of pollutant sources and other information as indicated:

- a. A description of the nature of the construction activity;
- b. A detailed description and chart or timeline of the intended sequence of major activities which disturb soils for major portions of the site (i.e., initial sediment storage requirements and perimeter BMPs, clearing and grubbing activities, excavation activities, grading activities, infrastructure activities, immediate and final stabilization activities);
- c. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading, or other activities;
- d. 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;
- e. A site-specific map or series of drawings indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the Plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where stormwater is discharged to a surface water; and
- f. Identify the receiving water(s) and areal extent of wetland acreage at the site;

3. Controls. Each Plan shall include a description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage

requirements and perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. The Plan will clearly describe for each major activity identified in Part IV.D.2.b., appropriate control measures and the timing during the construction process that the measures will be implemented. The primary permittee is encouraged to utilize the document, Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites, EPA 833-R-060-04, May 2007, when preparing the Plan. The description and implementation of controls shall address the following minimum components:

a. Erosion and sediment controls.

(1). Stabilization measures. A description of interim and permanent stabilization measures, including site-specific scheduling of the implementation of the measures. Site plans should ensure that existing vegetation is preserved and that disturbed portions of the site are stabilized. Stabilization measures may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in the Plan. Except as provided in paragraphs IV.D.3.(a).(1).(a). below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

(a). Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently cease is precluded by snow cover or other adverse weather conditions, stabilization measures shall be initiated as soon as practicable.

(2). Structural practices. A description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA.

(3). Sediment basins. For common drainage locations a temporary (or permanent) sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent control measures, shall be provided until final

stabilization of the site. The 1800 cubic feet (67 cubic yards) of storage area per acre drained does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. For drainage locations where a temporary sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent controls is not attainable, sediment traps, silt fences, wood mulch berms or equivalent sediment controls are required for all side slope and down slope boundaries of the construction area. When the sediment fills to a volume at most of 22 cubic yards per acre for each acre of drainage area, the sediment shall be removed to restore the original design volume. This sediment must be properly disposed. Sediment basins may not be feasible at some construction sites. Careful consideration must be used to determine when a sediment basin cannot be used and/or when 67 cubic yards of storage per acre drained is not attainable and a written justification explaining the decision(s) must be included in the Plan. Perennial and intermittent waters of the State shall not be used for temporary or permanent sediment detention.

When discharging from sediment basins and impoundments, 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. Outlet structures that withdraw water from the surface are temporary BMPs and must be removed prior to submitting Notice of Termination. For construction activities where the NOI was submitted prior to January 1, 2014, this requirement of the permit is not applicable.

(4). Alternative BMPs. The use of alternative BMPs whose performance has been documented to be equivalent or superior to conventional BMPs as certified by a Design Professional may be allowed (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).

(5). High performance BMPs. The use of infiltration trenches, seep berms, sand filters, dry wells, flocculants or coagulants, etc. for minimizing point source discharges except for large rainfall events is encouraged.

b. Stormwater management. A description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of stormwater management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Operators are only responsible for the installation and maintenance of stormwater management measures prior to final stabilization of the site, and are not

responsible for maintenance after stormwater discharges associated with construction activity have been eliminated from the site.

(1). Such practices may include: stormwater detention structures (including wet ponds); stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices). The Plan shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

(2). Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water(s)).

(3). Installation and use of green infrastructure approaches and practices that mimic natural processes and direct stormwater where it can be infiltrated, evapotranspired or re-used with significant utilization of soils and vegetation rather than traditional hardscape collection, conveyance and storage structures are encouraged to the maximum extent practicable. Green Infrastructure practices or approaches include permeable or porous paving, vegetated swales instead of curbs and gutters, green roofs, tree boxes, rain gardens, constructed wetlands, infiltration planters, vegetated median strips, protection and enhancement of riparian buffers and floodplains, and the overall reduction in site disturbance and impervious area. Design information on Green Infrastructure practices and other ways to manage stormwater can be found in the Georgia Stormwater Management Manual and the Coastal Stormwater Supplement. Additional information on Green Infrastructure can be found at the USEPA website.

c. Other controls.

(1). Waste disposal. Locate waste collection areas away from streets, gutters, watercourses and storm drains. Waste collection areas, such as dumpsters, are often best located near construction site entrances to minimize traffic on disturbed soils. The Plan should include secondary containment around liquid waste collection areas to further minimize the likelihood of contaminated discharges. Solid materials, including building materials, shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

(2). For building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site, provide cover (e.g. plastic sheeting, temporary roofs) to minimize the exposure of these products to precipitation and to stormwater, or a similarly effective means designed to minimize the discharge

of pollutants from these areas. Minimization of exposure is not required in cases where exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk to stormwater contamination (such as final products and materials intended for outdoor use).

(3). Off-site vehicle tracking of dirt, soils, and sediments and the generation of dust shall be minimized or eliminated to the maximum extent practical. The Plan shall include the best management practice to be implemented at the site or construction activity.

(4). Nothing in this permit relieves a permittee from any obligations to comply with all applicable State and/or local regulations of waste disposal, sanitary sewer, septic and petroleum storage systems.

(5). The Plan shall include best management practices for the remediation of all petroleum spills and leaks as appropriate.

(6). The Plan shall include best management practices for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of vehicles. Washout of the drum at the construction site is prohibited. Additional information about best management practices for concrete washout is available at the USEPA website.

(7). All permittees are required to minimize the discharge of pollutants from dewatering trenches and excavations. Discharges are prohibited unless managed by appropriate controls.

4. Inspections.

a. Permittee requirements.

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. 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.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every fourteen (14) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). 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, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or

that portion of a construction site that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

5. Maintenance. The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements. This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. The following procedures constitute EPD's guidelines for sampling turbidity.

a. *Sampling Requirements* shall include the following:

(1). A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the infrastructure construction; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the stormwater is discharged and (b) the receiving water and/or outfall sampling locations for each representative stormwater outfall. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the stormwater(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2). A written narrative of site specific analytical methods used to collect and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3). When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

b. *Sample Type.* All sampling shall be collected by “grab samples” and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved), the guidance document titled “NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001” and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container.

(3). Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.

(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

c. *Sampling Points.*

(1). For construction activities the primary permittee must sample all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or all outfalls into such streams and other water bodies, or a combination thereof. However, provided for in and in accordance with Part IV.D.6.c.(2). of this permit, primary permittees on an infrastructure construction project may sample the representative perennial and intermittent streams, other water bodies or outfalls, or a combination thereof. Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the stormwater outfalls using the following minimum guidelines:

(a). The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first stormwater discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other stormwater discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

(b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last stormwater discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other stormwater discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

(c). Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the stormwater outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall stormwater channel.

(e). The sampling container should be held so that the opening faces upstream.

(f). The samples should be kept free from floating debris.

(g). Permittees do not have to sample sheet flow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, 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 a seeding of target crop perennials appropriate for the region). For infrastructure construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use.

(h). All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and

frequency) as to accurately reflect whether stormwater runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

(2). For infrastructure construction projects, the permittee is not required to sample a perennial or intermittent stream or other water bodies (or the associated outfall, if applicable) if the design professional preparing the Plan certifies that an increase in the turbidity of a specific identified receiving water to be sampled will be representative of the increase in the turbidity of a specific identified un-sampled receiving water. A written justification and detailed analysis shall be prepared by the design professional justifying such proposed sampling. A summary chart of the justification and analysis for the representative sampling must be included on the Plan. The justification and analysis shall include the location and description of the specified sampled and un-sampled receiving water and shall contain a detailed comparison and discussion of each such receiving water in the following areas:

(a). site land disturbances and characteristics;

(b). receiving water watershed sizes and characteristics; and

(c). site and watershed runoff characteristics utilizing the methods in Appendix A-1 (United States Department of Agriculture Soil Conservation Service's TR-55, Urban Hydrology for Small Watersheds) of the most recent version of the "Manual for Erosion and Sedimentation Control in Georgia" for the various precipitation events and any other such considerations necessary to show that the increase in the turbidity of a specific identified sampled receiving water will be representative of the increases in the turbidity of a specific identified un-sampled receiving waters.

(3). For infrastructure construction projects, when the permittee determines that some receiving water(s) will not be sampled due to representative sampling, the design professional making this determination and preparing the Plan must include and sign the following certification in the Plan:

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the

General NPDES Permit No. GAR100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water.”

(4). For infrastructure construction projects, if at any time during the life of the project a selected receiving water no longer represents another receiving water, then the permittee shall sample the latter receiving water until selection of an alternative representative receiving water.

(5). For infrastructure construction projects, if at any time during the life of the project a receiving water is determined not to be represented as certified in the Plan, the permittee shall sample that receiving water until a Notice of Termination is submitted or until the applicable phase is stabilized in accordance with this permit.

(6). For infrastructure construction projects, monitoring obligations shall cease for any phase of the project that has been stabilized in accordance with Part IV.D.6.c.(1).(g).

d. *Sampling Frequency.*

(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall location within forty-five (45) minutes or as soon as possible.

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee’s control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the representative sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the representative sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), 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 under (a), (b) or (c) above; and

(e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

7. Non-stormwater discharges. Except for flows from fire fighting activities, sources of non-stormwater listed in Part III.A.2. of this permit that are combined with stormwater discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge.

E. Reporting.

1. The applicable permittees are required to submit the sampling results to the EPD by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

- a. The rainfall amount, date, exact place and time of sampling or measurements;
- b. The name(s) of the certified personnel who performed the sampling and measurements;
- c. The date(s) analyses were performed;
- d. The time(s) analyses were initiated;
- e. The 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. The 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.

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

F. Retention of Records

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

- a. A copy of all Notices of Intent submitted to EPD;
- b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
- c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;

- d. A copy of all sampling information, results, and reports required by this permit;
- e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
- f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
- g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2). of this permit.

2. Copies of all Notices of Intent, Notices of Termination, inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

Part V. STANDARD PERMIT CONDITIONS

A. Duty to Comply.

1. Each permittee must comply with all applicable conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) and is grounds for enforcement action; for permit termination; or for denial of a permit renewal application. Failure of a primary permittee to comply with any applicable term or condition of this permit shall not relieve any other primary permittee from compliance with their applicable terms and conditions of this permit.
2. Each permittee must document in their records any and all known violations of this permit at his/her site within seven (7) days of his/her knowledge of the violation. A summary of these violations must be submitted to EPD by the permittee at the addresses shown in Part II.C. within fourteen (14) days of his/her discovery of the violation.
3. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Acts, any permit condition or limitation established pursuant

to the Acts, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director.

B. Continuation of the Expired General Permit. This permit expires on the date shown on the cover page of this permit. However, an expired general permit continues in force and effect until a new general permit is issued, final and effective.

C. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to Provide Information. The permittee shall furnish to the Director; a State agency approving soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system, any information which is requested to determine compliance with this permit. In the case of information submitted to the EPD such information shall be considered public information and available under the Georgia Open Records Act.

F. Other Information. When the permittee becomes aware that he/she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report required to be submitted to the EPD, the permittee shall promptly submit such facts or information.

G. Signatory Requirements. All Notices of Intent, Notice of Terminations, inspection reports, sampling reports, or other reports requested by the EPD shall be signed as follows:

1. All Notices of Intent and Notices of Termination shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this permit, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where

authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public facility: by either a principal executive officer or ranking elected official; and

d. Changes to authorization. If an authorization under Part II.B. is no longer accurate, a modification NOI satisfying the requirements of Part II.B. must be submitted to the EPD prior to or together with any inspection reports, sampling reports, or other reports requested by the EPD to be signed by a person described above or by a duly authorized representative of that person.

2. All inspection reports, sampling reports, or other reports requested by the EPD shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person(s) described above and submitted to the EPD;

b. The authorization specifies either an individual or a position having responsibility for specified operation(s) of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may be either a named individual or any individual occupying a named position); and

c. *Certification.* Reports delineated in Part V.G.2. shall be signed by the permittee or duly authorized representative and shall make the following certification:

“I certify under penalty of law that this report and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

H. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-60, et seq. or under Chapter 14 of Title 12 of the

Official Code of Georgia Annotated; nor is the Operator relieved from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or Section 106 of Comprehensive Environmental Response Compensation And Liability Act.

I. Property Rights. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

J. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Other Applicable Environmental Regulations and Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act. Nothing in this permit, unless explicitly stated, exempts the permittee from compliance with other applicable local, state and federal ordinances, rules, regulations, and laws. Furthermore, it is not a defense to compliance with this permit that a local government authority has approved the permittee's Erosion, Sedimentation and Pollution Control Plan or failed to take enforcement action against the permittee for violations of the Erosion, Sedimentation and Pollution Control Plan, or other provisions of this permit.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

L. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the required plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

M. Inspection and Entry. The permittee shall allow the Director or an authorized representative of EPA or EPD or, in the case of a construction site which discharges through a municipal separate storm sewer system with an NPDES permit, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

N. Permit Actions. This permit may be revoked and reissued, or terminated for cause including but not limited to changes in the law or regulations. The filing of a request by the permittee for termination of the permit, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

Part VI. TERMINATION OF COVERAGE

A. Notice of Termination Eligibility. Notice of Termination signed in accordance with Part V.G.1. of this permit must be submitted:

1. For infrastructure construction projects, by the permittee where the entire project has undergone final stabilization, all stormwater discharges associated with construction activity that are authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed. 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 stormwater discharges associated with construction activity for that phase authorized by this permit have ceased. Except for the final phase, the disturbed acreage for each phase must be equal to or greater than 25% of the total estimated disturbed acreage for the infrastructure project. 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. The Notice of Termination for each phase of the infrastructure project must include the GPS locations (decimal degrees) of the beginning and end of each phase and if applicable, a map identifying significant landmarks.

2. By the Owner or Operator or both when the Owner or Operator or both of the site changes. Where stormwater discharges will continue after the identity of the Owner or Operator or both changes, the permittee must, prior to filing the Notice of Termination, notify any subsequent Owner or Operator or both of the permitted site as to the requirements of this permit.

B. Notice of Termination Contents:

1. The NPDES permit number for the stormwater discharge associated with construction activity identified by the Notice of Termination (i.e., GAR100002 – Infrastructure);

2. The project construction site name, site location, GPS locations (decimal degrees) of the beginning and end of the infrastructure construction project or if applicable, of each phase in accordance with Part VI.A.1., construction site location and if applicable, a map identifying significant landmarks, city (if applicable) and county of the site for which the notification is submitted. This information must correspond to the similar information as provided on the NOI.

The construction site location information must be sufficient to accurately locate the construction site;

3. The owner's legal name, address, telephone number and email address and the operator's legal name, address, telephone and email address;
4. The name of the receiving water(s), and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4;
5. Copies of all sampling reports not previously submitted to EPD and/or a written justification why sampling was not conducted. Copies of all sampling reports may be submitted as a Portable Document Format (PDF) file on CD-ROM or other storage device;
6. Any other information specified on the NOT in effect at the time of submittal; and
7. The following certification signed in accordance with Part V.G.1. (signatory requirements):

“I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed or; (b) I am no longer an Owner or Operator at the construction site and a new Owner or Operator has assumed operational control of the permitted construction site where I previously had ownership or operational control; and that discharging pollutants in stormwater associated with construction activity to waters of Georgia is unlawful under the Georgia Water Quality Control Act and the Clean Water Act where the discharge is not authorized by a NPDES permit.”

C. Notice of Termination Submittal. All Notices of Termination (NOT) required by this permit shall be submitted to EPD using the electronic submittal service provided by EPD and a copy to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq.

APPENDIX A

EPD DISTRICT OFFICES

A. For facilities/construction sites located in the following counties: Bibb, Bleckley, Chattahoochee, Crawford, Dooly, Harris, Houston, Jones, Lamar, Macon, Marion, Meriwether, Monroe, Muscogee, Peach, Pike, Pulaski, Schley, Talbot, Taylor, Troup, Twiggs, Upson

Information shall be submitted to: West Central District Office
Georgia Environmental Protection Division
2640 Shurling Drive
Macon, GA 31211-3576
(478) 751-6612

B. For facilities/construction sites located in the following counties: Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Johnson, Laurens, McDuffie, Montgomery, Richmond, Screven, Treutlen, Warren, Washington, Wheeler, Wilkinson

Information shall be submitted to: East Central District Office
Georgia Environmental Protection Division
3525 Walton Way Extension
Augusta, GA 30909-1821
(706) 667-4343

C. For facilities/construction sites located in the following counties: Baldwin, Banks, Barrow, Butts, Clarke, Elbert, Franklin, Greene, Hall, Hancock, Hart, Jackson, Jasper, Lincoln, Madison, Morgan, Newton, Oconee, Oglethorpe, Putnam, Stephens, Taliaferro, Walton, Wilkes

Information shall be submitted to: Northeast District Office
Georgia Environmental Protection Division
745 Gaines School Road
Athens, GA 30605-3129
(706) 369-6376

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

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 31523-8251
(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
(229) 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
2 Martin Luther King Jr. Drive
Suite 1462 East
Atlanta, Georgia 30334
(404) 463-1511

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams

		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	25	50	75	150	300	500	500	500
	10.01-25	25	25	50	75	150	200	500	500
	25.01-50	25	25	25	50	75	100	300	500
	50.01-100	20	25	25	35	59	75	150	300
	100.01+	20	20	25	25	25	50	60	100

Waters Supporting Warm Water Fisheries

		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	75	150	200	400	750	750	750	750
	10.01-25	50	100	100	200	300	500	750	750
	25.01-50	50	50	100	100	200	300	750	750
	50.01-100	50	50	50	100	100	150	300	600
	100.01+	50	50	50	50	50	100	200	100

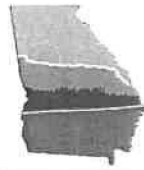
To use these tables, select the size (acres) of the construction site. Then, select the surface water drainage area (square miles). The NTU matrix value arrived at from the above tables is the one to use in Part III.D.4.

Example 1: For a site size of 12.5 acres and a “trout stream” drainage area of 37.5 square miles, the NTU value to use in Part III.D.4. is 75 NTU.

Example 2: For a site size of 51.7 acres and “waters supporting warm water fisheries” drainage area of 72 square miles, the NTU value to use in Part III.D.4. is 100 NTU.

Insert Yellow Sheet

Back of Yellow Sheet



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

**Authorization To Discharge Under The
National Pollutant Discharge Elimination System
Storm Water Discharges Associated With Construction Activity
For Common Development Construction Projects**

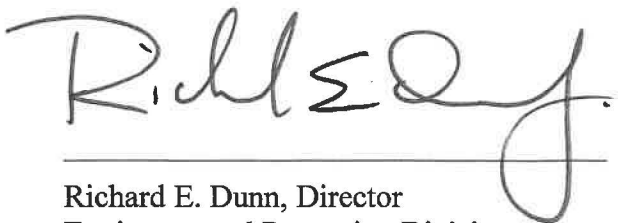
In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p.416, as amended), hereinafter called the "State Act," the Federal Clean Water Act, as amended (33 U.S.C. 1251 et seq.), hereinafter called the "Clean Water Act," and the Rules and Regulations promulgated pursuant to each of these Acts, new and existing stormwater point sources within the State of Georgia that are required to have a permit, upon submittal of a Notice of Intent, are authorized to discharge stormwater associated with construction activity to the waters of the State of Georgia in accordance with the limitations, monitoring requirements and other conditions set forth in Parts I through VI hereof.

This permit shall become effective on August 1, 2018.

This permit and the authorization to discharge shall expire at midnight, July 31, 2023.

Signed this 16th day of May 2018.





Richard E. Dunn, Director
Environmental Protection Division

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Part I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit regulates point source discharges of stormwater to the waters of the State of Georgia from construction activities, as defined in this permit.

B. Definitions. All terms used in this permit shall be interpreted in accordance with the definitions as set forth in the Georgia Water Quality Control Act (Act) and the Georgia Rules and Regulations for Water Quality Control Chapter 391-3-6 (Rules), unless otherwise defined in this permit:

1. “Best Management Practices” (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
2. “Blanket NOI” means a Notice of Intent to be used by utility companies and/or utility contractors acting as secondary permittees that covers all construction activities in common developments during the calendar year for which the NOI is submitted.
3. “Buffer” means the area of land immediately adjacent to the banks of State waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.
4. “Certified Personnel” means a person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission.
5. “Commencement of Construction” means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
6. “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.
7. “Construction Activity” means the disturbance of soils associated with clearing, grading, excavating, filling of land, or other similar activities which may result in soil erosion. Construction activity does not include agricultural and silvicultural practices, but does include agricultural buildings.
8. “CPESC” means Certified Professional in Erosion and Sediment Control with current certification by EnviroCert International, Inc.

9. “CWA” means Federal Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972).

10. “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. Design Professionals shall practice in a manner that complies with applicable Georgia law governing professional licensure.

11. “Director” means the Director of the Environmental Protection Division or an authorized representative.

12. “Division” means the Environmental Protection Division of the Department of Natural Resources.

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

14. “Erosion, Sedimentation and Pollution Control Plan” or “Plan” means a plan for the control of soil erosion, sediment and pollution resulting from a construction activity.

15. “Filling” means the placement of any soil or solid material either organic or inorganic on a natural ground surface or an excavation.

16. “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).

17. “General Contractor” means the operator of the common development or site.

18. “Impossible” means the monitoring location(s) are either physically or legally inaccessible, or access would cause danger to life or limb.

19. “Infeasible” means not technologically possible, or not economically practicable and achievable in light of best industry practices.

20. “Landfill” means an area of land or an excavation in which waste materials are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well or waste pile as defined by Georgia NPDES General Permit GAR050000, and which area of land or excavation must be certified by EPD before it can begin waste disposal operations.

21. "Landfill Cell(s)" means a defined area within a landfill where waste materials are permanently disposed and that must be certified by EPD for use before such cell(s) can begin receiving waste materials after which those activities associated with waste receipt and disposal in the landfill cell(s) shall not be considered construction activity as defined by this permit.
22. "Local Issuing Authority" means the governing authority of any county or municipality which is certified pursuant to Official Code of Georgia Section 12-7-8(a).
23. "Mass Grading" means the movement of earth by mechanical means to alter the gross topographic features (elevations, slopes, etc.) to prepare a site for final grading and the construction of facilities (buildings, roads, parking, etc.).
24. "Nephelometric Turbidity Unit (NTU)" means a numerical unit of measure based upon photometric analytical techniques for measuring the light scattered by fine particles of a substance in suspension.
25. "NOI" means Notice of Intent to be covered by this permit (see Part II).
26. "NOT" means Notice of Termination (see Part VI).
27. "Operator" means the entity that has the primary day-to-day operational control of those activities at the construction site necessary to ensure compliance with Erosion, Sedimentation and Pollution Control Plan requirements and permit conditions.
28. "Other Water Bodies" means ponds, lakes, marshes and swamps which are waters of the State.
29. "Outfall" means the location where stormwater, in a discernible, confined and discrete conveyance, leaves a facility or site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.
30. "Owner" means the legal title holder to the real property on which is located the facility or site where construction activity takes place.
31. "Permittee" means any entity that has submitted a Notice of Intent and obtained permit coverage.
32. "Phase" or "Phased" means sub-parts or segments of construction sites where the sub-part or segment is constructed and stabilized prior to completing the entire construction site.
33. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure or container from which pollutants are or may be discharged. This term also means sheet flow which is later conveyed via a point source to waters of the State. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

34. "Primary Permittee" means the Owner or the Operator or both of a tract of land for a construction project subject to this permit.
35. "Proper design" and "properly designed" means designed in accordance with the design requirements and specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the Manual as approved by the GSWCC up until the date of NOI submittal.
36. "Receiving Water(s)" means all perennial and intermittent waters of the State into which the runoff of stormwater from a construction activity will actually discharge, either directly or indirectly.
37. "Secondary Permittee" means an owner, individual builder, utility company, or utility contractor that conducts a construction activity within a common development with an existing primary permittee.
38. "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.
39. "Sedimentation" means the action or process of forming or depositing sediment.
40. "Service Line" means the final connection installed by a utility company or utility contractor between a structure and the closest main and/or trunk line.
41. "Sheet flow" means runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel.
42. "Site" or "Construction Site" means a facility of any type on which construction activities are occurring or are to occur which may result in the discharge of pollutants from a point source into the waters of the State.
43. "Stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage.
44. "Structural Erosion and Sediment Control Practices" means measures for the stabilization of erosive or sediment producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss.
45. "Sub-contractor" means an entity employed or retained by the permittee to conduct any type of construction activity (as defined in this permit) at a site or common development. 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. Sub-

contractors are not permittees unless they meet the definition of either a primary, secondary or tertiary permittee.

46. "Surface Water Drainage Area" means the hydrologic area starting from the lowest downstream point where the stormwater from the construction activity enters the receiving water(s) and following the receiving water(s) upstream to the highest elevation of land that divides the direction of water flow. This boundary will connect back with the stormwater entrance point. Boundary lines follow the middle of the highest ground elevation or halfway between contour lines of equal elevation.

47. "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 does not exist.

48. "Trout Streams" means waters of the State classified as either primary trout waters or secondary trout waters, as designated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.

49. "USGS Topographic Map" means a current quadrangle, 7½ minute series map prepared by the United States Department of the Interior, Geological Survey.

50. "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, stormwater or sewage.

51. "Vegetative Erosion and Sediment Control Practices" means measures for the stabilization of erosive or sediment producing areas by covering the soil with: (1) permanent seeding, sprigging or planting, producing long-term vegetative cover; (2) temporary seeding, producing short-term vegetative cover; or (3) sodding, covering areas with a turf of perennial sod forming grass.

52. "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.

53. "Waters of Georgia" or "Waters of the State" means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and all 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.

C. Eligibility.

1. Construction Activities. This permit authorizes, subject to the conditions of this permit:

a. all discharges of stormwater associated with common plans of development, or other construction activity where the primary permittee chooses to use secondary permittees, that will result in land disturbance equal to or greater than one (1) acre occurring on or before, and continuing after, the effective date of this permit, (henceforth referred to as existing stormwater discharges from construction activities) except for discharges identified under Part I.C.3. Stormwater discharges from construction activities involving less than one (1) acre where the primary permittee used secondary or tertiary permittees which are part of a larger common development (i.e., greater than one (1) acre; henceforth referred to as existing common development) occurring on or before, and continuing after, the effective date of this permit are authorized subject to the conditions of this permit;

b. all discharges of stormwater associated with common plans of development, or other construction activity where the primary permittee chooses to use secondary permittees, that will result in land disturbance equal to or greater than one (1) acre occurring after the effective date of this permit, (henceforth referred to as stormwater discharges from construction activities), except for discharges identified under Part I.C.3. Stormwater discharges from construction activities involving less than one (1) acre where the primary permittee uses secondary permittees or tertiary permittees which are part of a larger common development (i.e., greater than one (1) acre) are authorized subject to the conditions of this permit; and

c. coverage under this permit is not required for discharges of stormwater associated with minor land disturbing activities (such as home gardens and individual home landscaping, repairs, maintenance work, fences and other related activities which result in minor soil erosion) conducted outside of the 25 foot buffer along the banks of all State waters requiring a buffer and outside of the 50 foot buffer along the banks of all State waters classified as 'trout streams' requiring a buffer on individual residential lots sold to homeowners where all planned construction activities on that lot have been completed and have undergone final stabilization.

2. Mixed Stormwater Discharges. This permit may only authorize a stormwater discharge from a construction site or construction activities mixed with a stormwater 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 stormwater 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. stormwater 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 permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

3. Limitations on Coverage. The following stormwater discharges from construction sites are not authorized by this permit:

a. stormwater discharges associated with an industrial activity that originate from the site after construction activities have been completed and the site has undergone final stabilization;

b. discharges that are mixed with sources of non-stormwater other than discharges which are identified in Part III.A.2. of this permit and which are in compliance with Part IV.D.7. (non-stormwater discharges) of this permit;

c. stormwater discharges associated with industrial activity that are subject to an existing NPDES individual or general permit. Such discharges may be authorized under this permit after an existing permit expires provided the existing permit did not establish numeric limitations for such discharges; and

d. stormwater discharges from construction sites that the Director (EPD) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard.

4. Compliance with Water Quality Standards. No discharges authorized by this permit shall cause violations of Georgia's in-stream water quality standards as provided by the Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03.

D. Authorization.

1. Any person desiring coverage under this permit as either a primary permittee, a secondary permittee or a tertiary permittee must submit a Notice of Intent (NOI) to the EPD and the NOI must be received by the EPD in accordance with the requirements of Part II, using the electronic submittal service provided by the EPD, in order for stormwater discharges from construction sites to be authorized. A Notice of Intent for secondary permittee coverage can be submitted either concurrently with or after the submittal of a Notice of Intent by the primary permittee.

2. Unless notified by the Director to the contrary, a permittee (either primary, secondary or tertiary) who submits an NOI in accordance with the requirements of this permit is authorized to discharge stormwater from construction sites under the terms and conditions of this permit fourteen (14) days after the date that the NOI is submitted and confirmation is received. The Director may deny coverage under this permit and require submittal of an application for an individual NPDES permit or alternative general NPDES permit based on a review of the NOI or

other information. Should the Director deny coverage under this permit, coverage under this permit is authorized until the date specified in the notice of denial by the Director.

3. Where a new primary or secondary permittee is to begin work on-site after an NOI for the facility/construction site has been submitted, that new primary or secondary permittee must submit a new NOI in accordance with Part II. A secondary permittee is not required to submit a new NOI or re-submit an NOI when a new primary permittee is named.

E. Continuing Obligations of Permittees. Unless and until responsibility for a site covered under this permit is properly terminated or ownership changes according to the terms of the permit, the current permittee remains responsible for compliance with all applicable terms of the permit and for any violations of said terms.

Part II. NOTICE OF INTENT REQUIREMENTS

A. Deadlines for Notification.

1. Except as provided in Part II.A.2., II.A.3. and II.A.5., Owners or Operators or both who intend to obtain coverage under this general permit for stormwater discharges from a construction site (where construction activities begin after issuance of this permit), shall submit a Notice of Intent (NOI) in accordance with the requirements of this Part at least fourteen (14) days prior to the commencement of construction activities.

2. For sites where construction activities, subject to this permit, are occurring on or before the effective date of this permit, the Owner or Operator or both shall submit a re-issuance NOI for an existing construction site in accordance with the requirements of this part no later than ninety (90) days after the effective date of this permit. Failure to comply with this requirement 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.

3. A discharger is not precluded from submitting an NOI in accordance with the requirements of this part after the dates provided in Parts II.A.1. or II.A.2. of this permit. In such instances, EPD may bring an enforcement action for failure to submit an NOI in a timely manner or for any unauthorized discharges of stormwater associated with construction activity that have occurred on or after the dates specified in Part II.A.1. and II.A.2.

4. Where an Owner or an Operator or both changes after an NOI has been filed, the subsequent Owner or Operator or both must submit a modification NOI in accordance with this Part by the earlier to occur of (a) seven (7) days before beginning work at the facility/construction site or (b) thirty (30) days from acquitting legal title to the facility/construction site. In the event a lender or other secured creditor acquires legal title to the facility/construction site, such party must submit a modification NOI in accordance with this Part by the earlier to occur of (a) seven (7)

days before beginning work at the facility/construction site; or (b) thirty (30) days from acquiring legal title to the facility/construction site. Stabilization and BMP installation and/or maintenance measures of a disturbed site, by the subsequent Owner or Operator, may occur in advance of filing a new NOI, without violation of this permit. A secondary permittee is not required to submit a modification NOI when a new primary permittee is named. Failure to comply with this requirement 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.

5. For sites where construction activities will result in land disturbance equal to or greater than one (1) acre that are required as a result of storm- or emergency-related repair work, the Owner or Operator or both shall notify the appropriate EPD District Office within three (3) days of commencement of said construction activities. The Owner or Operator or both shall submit the NOI to the appropriate EPD district office as soon as possible after the storm- or emergency-related event but no later than fourteen (14) days after the commencement of construction activities and shall submit the Plan in accordance with Part IV.A.6.

B. Notice of Intent Contents.

1. Primary Permittee. A single Notice of Intent for the primary permittee (i.e., one NOI signed by the Owner or the Operator or both) shall be signed in accordance with Part V.G.1. of this permit and shall include the following information:

- a. The project construction site name, GPS location (decimal degrees) of construction exit, construction site location (e.g., street address), common development name (if applicable), city (if applicable) and county of the construction site for which the notification is submitted. The construction site location information must be sufficient to accurately locate the construction site;
- b. The Owner's legal name, address, telephone number and email address; and if available, the Operator's legal name, address, telephone number and email address; and if applicable, the Duly Authorized Representative's legal name and/or position name, telephone number and email address;
- c. The name, telephone number and email address of the individual to whom the permittee has assigned the responsibility for the daily operational control (i.e., construction superintendent, etc.) of the construction site;
- d. The name of the initial receiving water(s) or if unnamed the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's

determination of whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6;

e. The name of the receiving water(s) located 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) shown on Georgia’s most current “305(b)/303(d) List Documents (Approved)” for the criteria violated/cause, “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);

f. An estimate of project start date and completion date, a schedule for the timing of the various construction activities, the number of acres of the site on which soil will be disturbed and the surface water drainage area (if applicable). For projects that began on or before the effective date of this permit, the start date must be the actual start date of construction;

g. The following certification shall be signed in accordance with Part V.G.1. of this permit:

“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.”

h. An estimate of the number of secondary permittees, if applicable;

i. The type of construction activity category (from those listed on the NOI) conducted at the site;

j. The location of the receiving water(s) or outfall(s) or a combination of receiving water(s) and outfall(s) to be sampled on a map or drawing of appropriate scale. When it is determined by the primary permittee that some or all of the outfall(s) will be sampled, the applicable nephelometric turbidity unit (NTU) selected from Appendix B (i.e., based upon the size of the common development construction site and the surface water drainage area) must be shown for each outfall to be sampled;

k. NOIs may be submitted for separate phases of projects with a total planned disturbance greater than 5.0 acres, provided that each phase shall not be less than 1.0 acre. Phased NOIs shall include all documentation required by this permit for each phase, including applicable fees, and

l. Any other information specified on the NOI in effect at the time of submittal.

2. Secondary Permittee. The Notice of Intent for each secondary permittee shall be signed in accordance with Part V.G.1. of this permit. The Notice of Intent shall include the following information:

- a. The project construction site name, construction site location (e.g., street address), common development name (if applicable), lot number(s) (if applicable), city (if applicable) and county of the construction site for which the notification is submitted. The construction site location information must be sufficient to accurately locate the construction site;
- b. The secondary permittee's legal name, address, telephone number and email address and if applicable, the Duly Authorized Representative's legal name and/or position name, telephone number and email address;
- c. The name, address, telephone number and email address of the primary permittee (as shown on the primary permittee's NOI);
- d. If this submittal is by a blanket secondary permittee, the legal name, address, telephone number and email address of the utility sub-contractor;
- e. The name, telephone number and email address of the individual to whom the secondary permittee has assigned the responsibility for the daily operational control of the construction site;
- f. The name of the initial receiving water(s) or if unnamed, the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6;
- g. The name of the receiving water(s) located 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) shown on Georgia's most current "305(b)/303(d) List Documents (Approved)" for the criteria violated/cause, "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);
- h. An estimate of project start date and completion date of the construction activity by the entity making this submission, and an estimate of the number of acres of the site on

which soil will be disturbed by the entity making this submission. For projects that began on or before the effective date of this permit, the start date must be the actual start date of construction;

i. A certification that the provisions of the primary permittee's Erosion, Sedimentation and Pollution Control Plan applicable to the secondary permittee's activities will be adhered to while conducting any construction activity at this site. (A copy of the Plans should not be included with the NOI submission by the secondary permittee);

j. The type of construction activity category (from those listed on the NOI) conducted at the site for this submission;

k. Any other information specified on the NOI in effect at the time of submittal; and

l. As an alternative to submitting a project specific NOI in accordance with subparts a. through k. above, a utility company may submit an annual Blanket Notice of Intent covering all construction activities within common developments statewide on or before January 15 of the year in which coverage is desired, but in no case less than seven (7) days before commencement of construction activities. The Blanket NOI will contain the information contained in subparts b, d, i and j above. A copy of the Blanket NOI or equivalent written contact information shall be provided to the primary permittee no less than seven (7) days prior to the commencement of construction activities by the secondary permittee at each site. The primary permittee shall provide appropriate means for posting this information or otherwise making it publicly accessible.

3. Tertiary Permittee. The Notice of Intent for each tertiary permittee shall be signed in accordance with Part V.G.1. of this permit and shall include the following information:

a. The project construction site name, GPS location (decimal degrees) of construction exit, construction site location (e.g., street address), common development name (if applicable), lot number(s) (if applicable), city (if applicable) and county of the construction site for which the notification is submitted. The construction site location information must be sufficient to accurately locate the construction site;

b. The Owner's legal name, address, telephone number and email address; and if available, the Operator's legal name, address, telephone number and email address; and if applicable, the Duly Authorized Representative's legal name and/or position name, telephone number and email address;

c. If available, the original primary permittee's legal name, address, telephone number and email address;

d. The name, telephone number and email address of the individual to whom the permittee has assigned the responsibility for the daily operational control (i.e., construction superintendent, etc.) of the construction site;

e. The name of the initial receiving water(s) or if unnamed, the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6;

f. The name of the receiving water(s) located within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as "partially supporting" or "not supporting" its designated use(s) shown on Georgia's most current "305(b)/303(d) List Documents (Approved)" listed for Biota due to sediment (i.e., "Bio F" or "Bio M") and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff). This requirement of this permit 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;

g. An estimate of project start date and completion date, a schedule for the timing of the various construction activities, the number of acres of the site on which soil will be disturbed and the surface water drainage area (if applicable);

h. The following certification shall be signed in accordance with Part V.G.1. of this permit:

"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."

i. The type of construction activity category (from those listed on the NOI) conducted at the site;

j. The location of the receiving water(s) or outfall(s) or a combination of receiving water(s) and outfall(s) to be sampled on a map or drawing of appropriate scale. When it is determined by the tertiary permittee that some or all of the outfall(s) will be sampled, the applicable nephelometric turbidity unit (NTU) selected from Appendix B (i.e., based upon the size of the construction site and the surface water drainage area) must be shown for each outfall to be sampled;

k. NOIs may be submitted for separate phases of projects with a total planned disturbance greater than 5.0 acres, provided that each phase shall not be less than 1.0 acre. Phased NOIs shall include all documentation required by this permit for each phase; and

l. Any other information specified on the NOI in effect at the time of submittal.

C. Notice of Intent Submittal. NOIs are to be submitted to EPD using the electronic submittal service provided by EPD and a copy to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a Notice of Termination (NOT) is submitted in accordance with Part VI.

D. Fees. Any applicable fees shall be submitted by the **Primary Permittee** in accordance with Rules and Regulations for Water Quality Control (Rules) promulgated by the Board of Natural Resources. By submitting an NOI for coverage under this permit the primary permittee agrees to pay any fees required, now or in the future, by such Rules authorized under O.C.G.A. Section 12-5-23(a)(5)(A), which allows the Board of Natural Resources to establish a fee system. Fees may be assessed on land disturbing activity proposed to occur on or after the effective date of this permit and shall be paid in accordance with such Rules.

E. Renotification. Upon issuance of a new or different general permit for some or all of the stormwater discharges covered by this permit, the permittee is required to notify the EPD of their intent to be covered by the new or different general permit. The permittee must submit a renewal Notice of Intent (NOI) in accordance with the notification requirements of the new or different general permit.

PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, PERMIT VIOLATIONS AND OTHER LIMITATIONS

A. Prohibition on Non-Stormwater Discharges.

1. Except as provided in Part I.C.2. and III.A.2., all discharges covered by this permit shall be composed entirely of stormwater.

2. The following non-stormwater discharges may be authorized by this permit provided the non-stormwater component of the discharge is explicitly listed in the Erosion, Sedimentation and Pollution Control Plan and is in compliance with Part IV.D.7.; discharges from fire fighting activities; fire hydrant flushing; potable water sources including water line flushing; irrigation drainage; air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials or pollutants.

3. This permit does not authorize the discharge of soaps or solvents used in vehicle and equipment washing.

4. This permit does not authorize the discharge of wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.

B. Releases in Excess of Reportable Quantities.

1. The discharge of hazardous substances or oil in the stormwater discharge(s) from a site shall be prevented. This permit does not relieve the permittee of the reporting requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR Part 117 and 40 CFR Part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 or 40 CFR 302 occurs during a 24 hour period, the permittee is required to notify EPD at (404) 656-4863 or (800) 241-4113 and the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 and 40 CFR 302 as soon as he/she has knowledge of the discharge.

2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

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

The requirements of Part III.C. of this permit are not applicable to utility companies and utility contractors if they are secondary permittees provided that the utility companies and utility contractors implement the applicable best management practices detailed in the primary permittee's Plan. The requirements of Part III.C. of this permit are 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.

Any permittee who intends to obtain coverage under this permit for stormwater discharges 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 (Approved)" at the time of NOI submittal, must satisfy the requirements of Part III.C. of this permit if the Impaired Stream Segment has been listed for criteria violated/cause, "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). Those discharges that are located within one (1) linear mile of an Impaired Stream Segment, but are not located within the watershed of any portion of that stream segment, are excluded from this requirement. Georgia's "305(b)/303(d) List Documents (Approved)" can be viewed on the EPD website.

1. If a Total Maximum Daily Load (TMDL) Implementation Plan for sediment has been 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. If the TMDL Implementation Plan establishes a specific numeric wasteload allocation that applies to a permittee's discharge(s) to the Impaired Stream Segment, then the permittee must incorporate that allocation into the Erosion, Sedimentation and Pollution Control Plan and implement all necessary measures to meet that allocation. A list of TMDL Implementation Plans can be viewed on the EPD website.

2. 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) of the following best management practices (BMPs) for those areas of the site which discharge to the Impaired Stream Segment:

a. During all construction activities as defined in this permit, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width pursuant to this section.

b. Increase all temporary sediment basins and retrofitted stormwater management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.

c. Use baffles in all temporary sediment basins and retrofitted stormwater management basins to at least double the conventional flow path length to the outlet structure.

d. A large sign (minimum 4 feet x 8 feet) must be posted on site by the actual start date of construction. The sign must be visible from a public roadway. The sign must identify the following: (1) the construction site, (2) the permittee(s), (3) the contact person(s) along with their telephone number(s), and (4) the permittee-hosted website where the Plan can be viewed. The permittee-hosted website where the Plan can be viewed must be provided on the submitted NOI. The sign must remain on site and the Plan must be available on the provided website until a NOT has been submitted.

e. Use flocculants or coagulants and/or mulch to stabilize all areas left disturbed for more than seven (7) calendar days in accordance with Part III.D.1. of this permit.

f. Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part IV.D.6.d. of this permit.

g. Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6(a)(1).

- h. Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
- i. Limit the amount of disturbed area at any one time to no greater than 25 acres or 50% of the total planned site, whichever is less. All calculations must be included on the Plan.
- j. Use “Dirt II” techniques available on the EPD website, to model and manage construction stormwater runoff (including sheet flow). All calculations must be included on the Plan.
- k. Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
- l. Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction stormwater (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
- m. Use appropriate erosion control slope stabilization instead of concrete in all construction stormwater ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
- n. Use flocculants or coagulants under a passive dosing method (e.g., flocculant blocks) within all construction stormwater ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
- o. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever construction stormwater (including sheet flow) may be discharged.
- p. Conduct soil tests to identify and to implement site-specific fertilizer needs.
- q. Certified personnel shall conduct inspections at least twice every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(3).(a)–(c), Part IV.D.4.b.(3).(a)–(c) or Part IV.D.4.c.(3).(a)–(c) of this permit, as applicable.
- r. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
- s. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).

- t. Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any State mandated buffer areas from such calculations). All calculations must be included in the Plan.
- u. Conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase of the project by the design professional who prepared the Plan in accordance with Part IV.A.5. of the permit.
- v. Install Post Construction BMPs (e.g., runoff reduction BMPs) which remove 80% TSS as outlined in the Georgia Stormwater Management Manual known as the Blue Book or an equivalent or more stringent design manual.

D. Management Practices and Permit Violations.

1. Best management practices, as set forth in this permit, are required for all construction activities, and must be implemented in accordance with the design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with Part III.D.4. and Part III.D.5.
2. Except as required to install the initial sediment storage requirements and perimeter control BMPs as described in Part IV.D.3., 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 this permit 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.
3. Failure to properly design, install, or maintain best management practices shall constitute a violation of this permit for each day on which such failure occurs. BMP maintenance as a result of the permittee's routine inspections shall not be considered a violation for the purposes of this paragraph. If during the course of the permittee's routine inspection BMP failures are observed which have resulted in sediment deposition into Waters of the State, the permittee shall correct the BMP failures and shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit.
4. A discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such discharge results in the turbidity of receiving water(s) being increased by more than ten (10) nephelometric turbidity units for waters classified as trout streams or more

than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries, regardless of a permittee's certification under Part II.B.1.j. and Part II.B.3.j.

5. When the permittee has elected to sample outfall(s), the discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such condition results in the turbidity of the discharge exceeding the value selected from Appendix B applicable to the construction site. As set forth therein, the nephelometric turbidity unit (NTU) value shall be selected from Appendix B based upon the size of the construction site, the surface water drainage area and whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.

6. Whenever a permittee finds that a BMP has failed or is deficient (beyond routine maintenance) and has resulted in sediment deposition into waters of the State, the permittee shall immediately take all reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events. The permittee shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit and shall correct such BMP as follows:

- a. When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be repaired within two (2) business days from the time of discovery;
- b. When the repair requires a new or replacement BMP or significant repair, the installation of the new or modified BMP must be completed and the BMP must be operational by no later than seven (7) days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) days, the permittee must document why it is infeasible to complete the installation or repair within the seven (7) day timeframe and document the schedule for installing or repairing the BMPs and making the BMPs operational as soon as feasible after the seven (7) day timeframe.

Part IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN

A site-specific Erosion, Sedimentation and Pollution Control Plan (Plan) shall be designed, installed and maintained for the phase or phases of the common development covered by this permit. The Erosion, Sedimentation and Pollution Control Plan must be prepared by a design professional as defined by this permit. All persons involved in Plan preparation shall have completed the appropriate certification course, pursuant to O.C.G.A. 12-7-19(b), approved by the Georgia Soil and Water Conservation Commission. The design professional preparing the Plan must include and sign the following certification in the Plan:

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water

Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the stormwater outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100003.”

The Plan shall include any additional certifications regarding the design professional's site visit in accordance with the Rules for Erosion and Sedimentation Control promulgated by the Board of Natural Resources:

“I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision.”

The Plan shall include, as a minimum, 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and O.C.G.A. 12-7-6, as well as the following:

(i). Except as provided in Part IV.(iii). below, no construction activities shall be conducted within a 25 foot buffer along the banks of all State waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director has determined 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 a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented, or along any ephemeral stream, or where bulkheads and seawalls must be constructed to prevent the erosion of the shoreline on Lake Oconee and Lake Sinclair. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and 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; and
- (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.

(ii). No construction activities shall be conducted within a 50 foot buffer, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any State waters classified as 'trout streams' except when approval is granted by the Director for alternate buffer requirements in accordance with the provisions of O.C.G.A. 12-7-6, or where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as 'trout streams' which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the permittee, pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources including notification of such to EPD and the Local Issuing Authority of the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream permittee's property, and the permittee must comply with the buffer requirement for any adjacent trout streams. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications and 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; and
- (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 stormwater 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; and
- (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.

(iv). Except as provided above, for buffers required pursuant to Part IV.(i). and (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 stormwater 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 stormwater 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 for a common development must be prepared by the primary permittee for all sites within the common development whether or not all of the sites within the common development are owned or operated by a single entity or by multiple entities. The Erosion, Sedimentation and Pollution Control Plan must address the best management practices for the phase or phases of the common development which includes all sites (i.e., individual home lots, out-parcels, etc) regardless of who owns or operates the individual sites.

The primary permittee must provide a copy of the Plan or applicable portions of the Plan and copy of the primary permittee's most current Notice of Intent to each secondary permittee prior to the secondary permittee conducting any construction activity. Any revisions to the Plan and/or the Notice of Intent must be provided to the secondary permittees in a timely manner. A written acknowledgment of receipt of the Plan and Notice of Intent must be made by the secondary permittee and a copy of such be retained in the primary permittee's records in accordance with Part IV.F. of this permit. If the primary permittee changes after the Plan is prepared and implemented, any subsequent primary permittee must ensure that the Plan complies with all terms and conditions of this permit and that each secondary permittee is provided with any revisions to the Plan and Notice of Intent made by the new primary permittee. A written acknowledgment of receipt of the Plan or amendments to the Plan and Notice of Intent must be made by the secondary permittee and a copy of such be retained in the new primary permittee's records in accordance with Part IV.F. of this permit.

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 regulations under the previous general 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 and all secondary permittee(s) shall implement the applicable portion of the Plan on or before the day construction activities begin.

4. Additional Plan Submittals.

a. For all projects identified under Part I.C.1.b., which begin after the effective date of this permit, in a jurisdiction where there is no certified Local Issuing Authority regulating that project, a single copy of the Plan must be submitted to the EPD Watershed Protection Branch and a second copy of the Plan must be submitted to the appropriate EPD District Office prior to or concurrent with the NOI submittal. The second copy of the Plan must be submitted electronically as a Portable Document Format (PDF) file through the electronic submittal service provided by EPD, or by return receipt certified mail or similar service as a PDF on CD-ROM or other storage device to the appropriate EPD District Office. The permittee shall retain a copy of the proof of the submittal at the construction site or the proof of submittal shall be readily available at a designated alternative location from commencement of construction until such a time as a Notice of Termination (NOT) is submitted in accordance with Part VI. The EPD Watershed Protection Branch will review Plans for deficiencies using the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted.

b. For all projects where the construction activity as indicated on the existing NOI has changed, the amended Plans must be submitted in accordance with Part IV.A.4.a. In addition, the permittee must file submit a modification NOI in accordance with Part II.

5. For common developments that begin construction activity after the effective date of this permit, the primary permittee and tertiary permittee(s) must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control 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. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall 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 from the design professional unless weather related site conditions are such that additional time is required. This requirement of this permit 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.

6. For storm- or emergency-related repair work, the permittee shall implement appropriate BMPs and certified personnel (provided by the primary permittee) shall inspect at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater. If the storm- or emergency-related repair work will not be completed within sixty (60) days of commencement of construction activity, a single copy of the Plan shall be submitted to EPD and the permittee shall comply with all requirements of this permit on the sixty-first (61st) day.

B. Signature and Plan Review.

1. The Erosion, Sedimentation and Pollution Control Plan shall be signed in accordance with Part IV., and be retained on the site (or, if not possible, at a readily accessible location) which generates the stormwater discharge in accordance with Part IV.F. of this permit. The primary permittee shall ensure, as provided for elsewhere in this permit, that each secondary permittee is provided with a copy of the Plan and that the secondary permittee understands their role in implementing the Plan. The secondary permittee shall sign the Plan or the portion of the Plan applicable to their site in accordance with Part V.G.1. and the Plan or applicable portion thereof shall be retained on the site or be readily available at a designated alternate location from the date of project initiation to the date of final stabilization.

2. The primary permittee and tertiary permittee(s) shall make Plans available upon request to the EPD; to designated officials of the local government reviewing soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system. A secondary shall make the Plan or portion of the Plan applicable to their site available upon request to the EPD; to the local government reviewing soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system. The Plan must be submitted to EPD or to the local government within three business days of such notification or within an alternate time frame established by EPD.

3. EPD may notify the primary, secondary or tertiary permittee at any time that the Plan does not meet one or more of the minimum requirements of this Part. Within seven (7) days of such notification (or as otherwise provided by EPD), the primary or tertiary permittee shall make the required changes to the Plan and shall submit to EPD either the amended Plan or a written certification that the requested changes have been made. For sites commencing construction on or before the effective date of this permit, EPD may notify the secondary permittee at any time that the Plan does not meet one or more of the minimum requirements of this permit. Within seven (7) days of such notification (or as otherwise provided by EPD), the secondary permittee shall implement the required changes to the Plan and shall submit to EPD either the amended Plan or a written certification that the requested changes have been made. For sites commencing construction after the effective date of this permit, when EPD notifies a secondary permittee of any Plan deficiencies, the secondary permittee must notify the primary permittee within 24-hours

of the deficiencies. The primary permittee must amend the Plan in accordance with this paragraph to address those deficient BMPs within seven (7) days of being notified by the secondary permittee. When the Plan is amended, the primary permittee must notify and provide a copy of the amendment to any and all affected secondary permittees within this seven (7) day period. The secondary permittees must implement any new Plan requirements within 48-hours of notification by the primary permittee.

C. Keeping Plans Current. The primary, secondary or tertiary permittees, as applicable, shall amend their Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on BMPs with a hydraulic component (i.e., those BMPs where the design is based upon rainfall intensity, duration and return frequency of storms) or if the Plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part IV.D.3. of this permit. Amendments to the Plan must be certified by a design professional as provided in this permit. Secondary permittees must notify the primary permittee within 24-hours of becoming aware of any suspected BMP designed deficiencies which are not effective in controlling the discharge of pollutants from the secondary permittee's site. The primary permittee must evaluate whether these deficiencies exist within 48-hours of such notice, and if these deficiencies are found to exist must amend the Plan in accordance with this paragraph to address those deficient BMPs within seven (7) days of being notified by the secondary permittee. When the Plan is amended, the primary permittee must notify and provide a copy of the amendment to all affected secondary permittees within this seven (7) day period. The secondary permittee(s) must implement any new Plan requirements affecting their site(s) within 48-hours of notification by the primary permittee. Notwithstanding the foregoing, the primary or tertiary permittee remains responsible for insuring that the Plan, as appropriate, meets the requirements of this permit.

D. Contents of Plan. The Erosion, Sedimentation and Pollution Control Plan shall include, as a minimum, 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 Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:

1. Checklist. Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the Georgia Soil and Water Conservation Commission (GSWCC) as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the applicable Checklist as approved by the GSWCC up until the date of the NOI submittal. The applicable checklists are available on the GSWCC website.

2. Site description. Each site-specific Plan shall provide a description of pollutant sources and other information as indicated:

- a. A description of the nature of the construction activity;

- b. A detailed description and chart or timeline of the intended sequence of major activities which disturb soils for major portions of the site (i.e., initial sediment storage requirements and perimeter BMPs, clearing and grubbing activities, excavation activities, grading activities, utility activities, immediate and final stabilization activities). This requirement of this permit is not applicable to 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;
- c. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading, or other activities;
- d. 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. This requirement of this permit is not applicable to 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;
- e. A site-specific map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the Plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where stormwater is discharged to a surface water;
- f. Identify the receiving water(s) and areal extent of wetland acreage at the site; and
- g. For Plans prepared by a primary permittee for a common development, a list of the names and addresses of all secondary permittees must be included in the Plan and be amended as appropriate. These amendments are not subject to the design professional certification requirements specified in Part IV.C.

3. Controls. Each Plan shall include a description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. Plans submitted after the effective date of this permit shall limit the amount of disturbed area to no greater than 50 acres for each individual permittee (i.e., primary, secondary or tertiary permittees) at any one time, and to no more than 50 contiguous acres total at any one time, without prior written authorization from the appropriate EPD District Office according to the schedule in Appendix A of this permit. EPD will approve or disapprove such requests within 35 days of receipt. Failure of EPD to act within 35 days shall be

considered an approval of such requests. If the EPD District Office approves a request to disturb 50 acres or more at any one time, the Plan must include at least four (4) of the best management practices listed in Part III.C.2. of this permit.

The Plan will clearly describe for each major activity identified in Part IV.D.1.b. appropriate control measures and the timing during the construction process that the measures will be implemented. The primary permittee and tertiary permittee(s) are encouraged to utilize the document, *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*, EPA 833-R-060-04, May 2007, when preparing the Plan. The description and implementation of controls shall address the following minimum components:

a. Erosion and sediment controls.

(1). Stabilization measures. A description of interim and permanent stabilization measures, including site-specific scheduling of the implementation of the measures. Site plans should ensure that existing vegetation is preserved and that disturbed portions of the site are stabilized. Stabilization measures may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in the Plan. Except as provided in paragraphs IV.D.3.(a).(1).(a). below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

(a). Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover or other adverse weather conditions, stabilization measures shall be initiated as soon as practicable.

(2). Structural practices. A description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA.

(3). Sediment basins. For common drainage locations a temporary (or permanent) sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per

acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 1800 cubic feet (67 cubic yards) of storage area per acre drained does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. For drainage locations where a temporary sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent controls is not attainable, sediment traps, silt fences, wood mulch berms or equivalent sediment controls are required for all side slope and down slope boundaries of the construction area. When the sediment fills to a volume at most of 22 cubic yards per acre for each acre of drainage area, the sediment shall be removed to restore the original design volume. This sediment must be properly disposed. Sediment basins may not be feasible at some construction sites. Careful consideration must be used to determine when a sediment basin cannot be used and/or 67 cubic yards of storage per acre drained is not attainable and a written justification explaining the decision(s) must be included in the Plan. Perennial and intermittent waters of the State shall not be used for temporary or permanent sediment detention.

When discharging from sediment basins and impoundments, 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. Outlet structures that withdraw water from the surface are temporary BMPs and must be removed prior to submitting a Notice of Termination. For construction activities where the NOI was submitted prior to January 1, 2014, this requirement of the permit is not applicable.

(4). Alternative BMPs. The use of alternative BMPs whose performance has been documented to be equivalent or superior to conventional BMPs as certified by a Design Professional may be allowed (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission).

(5). High performance BMPs. The use of infiltration trenches, seep berms, sand filters, dry wells, flocculants or coagulants, etc. for minimizing point source discharges except for large rainfall events is encouraged.

b. Stormwater management. A description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of stormwater management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Operators are only responsible for the installation and maintenance of stormwater management measures prior to final stabilization of the site, and are not

responsible for maintenance after stormwater discharges associated with construction activity have been eliminated from the site.

(1). Such practices may include: stormwater detention structures (including wet ponds); stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices). The Plan shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

(2). Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. no significant changes in the hydrological regime of the receiving water(s)).

(3). Installation and use of green infrastructure approaches and practices that mimic natural processes and direct stormwater where it can be infiltrated, evapotranspired or re-used with significant utilization of soils and vegetation rather than traditional hardscape collection, conveyance and storage structures are encouraged to the maximum extent practicable. Green infrastructure practices or approaches include permeable or porous paving, vegetated swales instead of curbs and gutters, green roofs, tree boxes, rain gardens, constructed wetlands, infiltration planters, vegetated median strips, protection and enhancement of riparian buffers and floodplains, and the overall reduction in site disturbance and impervious area. Design information on green infrastructure practices and other ways to manage stormwater can be found in the Georgia Stormwater Management Manual and Coastal Stormwater Supplement. Additional information on green infrastructure can be found on USEPA's website

c. Other controls.

(1). Waste disposal. Locate waste collection areas away from streets, gutters, watercourses and storm drains. Waste collection areas, such as dumpsters, are often best located near construction site entrances to minimize traffic on disturbed soils. The Plan should include secondary containment around liquid waste collection areas to further minimize the likelihood of contaminated discharges. Solid materials, including building materials, shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

(2). For building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site, provide cover (e.g. plastic sheeting, temporary roofs) to minimize the exposure of these products to precipitation and to stormwater, or a similarly effective means designed to minimize the discharge

of pollutants from these areas. Minimization of exposure is not required in cases where exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk to stormwater contamination (such as final products and materials intended for outdoor use).

(3). Off-site vehicle tracking of dirt, soils, and sediments and the generation of dust shall be minimized or eliminated to the maximum extent practical. The Plan shall include the best management practice to be implemented at the site or common development.

(4). Nothing in this permit relieves a permittee from any obligation to comply with all applicable State and local regulations of waste disposal, sanitary sewer, septic and petroleum storage systems.

(5). The Plan shall include best management practices for the remediation of all petroleum spills and leaks as appropriate.

(6). The Plan shall include best management practices for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of vehicles. Washout of the drum at the construction site is prohibited. Additional information about best management practices for concrete washout is available at the USEPA website.

(7). All permittees are required to minimize the discharge of pollutants from dewatering trenches and excavations. Discharges are prohibited unless managed by appropriate controls.

4. Inspections.

a. Primary Permittee.

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

(2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. 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.

(3). Certified personnel (provided by the primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). 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, the permittee must comply with Part IV.D.4.a.(4). These inspections must be conducted until a Notice of Termination is submitted.

(4). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection. The primary permittee must amend the Plan in accordance with Part IV.D.4.b.(5). when a secondary permittee notifies the primary permittee of any Plan deficiencies.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in

accordance with Part IV.D.4.a.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction site that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify an incident, the inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit.

b. Secondary Permittee.

(1). Each day when any type of construction activity has taken place at a secondary permittee's site, certified personnel provided by the secondary permittee shall inspect: (a) all areas used by the secondary permittee where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment; and (b) all locations at the secondary permittee site where that permittee's vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors if they are secondary permittees.

(2). Certified personnel (provided by the utility companies and utility contractors if they are secondary permittees) shall inspect the following each day any type of construction activity has taken place at the construction site: (a) areas of the construction site disturbed by the utility companies and utility contractors that have not undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region; (b) areas used by the utility companies and utility contractors for storage of materials that are exposed to precipitation that have not undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region or established a crop of annual vegetation and a seeding of target perennials appropriate for the region; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the utility companies and utility contractors' construction activities shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). This paragraph is not applicable to utility companies and utility contractors when they are secondary permittees performing service line installations or when conducting repairs on existing line installations.

(3). Certified personnel (provided by the secondary permittee) shall inspect the following at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the secondary permittee's construction site; (b) areas used by the secondary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the secondary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). 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, the permittee must comply with Part IV.D.4.b.(4). These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors if they are secondary permittees.

(4). Certified personnel (provided by the secondary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of their sites that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). This paragraph is not applicable to utility companies and utility contractors if they are secondary permittees.

(5). Based on the results of each inspection, the secondary permittee must notify the primary permittee within 24-hours of any suspected BMP design deficiencies. The primary permittee must evaluate whether these deficiencies exist within 48-hours of such notice, and if these deficiencies are found to exist must amend the Plan in accordance with Part IV.C. of this permit to address those deficient BMPs within seven (7) days of being notified by the secondary permittee. When the Plan is amended, the primary permittee must notify and provide a copy of the amendment to all affected secondary permittee(s) within this seven (7) day period. The secondary permittees must implement any new Plan requirements affecting their site(s) within 48-hours of notification by the primary permittee.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.b.(5). of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by the end of the second business day and /or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit. This paragraph is not applicable to utility companies and utility contractors if they are secondary permittees performing only service line installations or when conducting repairs on existing line installations.

c. Tertiary Permittee.

(1). Each day when any type of construction activity has taken place at a tertiary permittee's site, certified personnel provided by the tertiary permittee shall inspect: (a) all areas used by the tertiary permittee where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment; and (b) all locations at the tertiary permittee site where that permittee's vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.

(2). Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. 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.

(3). Certified personnel (provided by the tertiary permittee) shall inspect at least the following once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the tertiary permittee's construction site; (b) areas used by the

tertiary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the tertiary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). 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, the permittee must comply with Part IV.D.4.c.(4). These inspections must be conducted until a Notice of Termination is submitted. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.

(4). Certified personnel (provided by the tertiary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of their sites that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.

(5). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following the inspection.

(6). A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.c.(5) of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by the end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall

contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of this permit. This paragraph is not applicable to utility companies and utility contractors performing only service line installations or when conducting repairs on existing line installations.

5. Maintenance. The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

6. Sampling Requirements. This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. This section is applicable to primary permittees with a total planned disturbance equal to or greater than one (1) acre and tertiary permittees with a total planned disturbance equal to or greater than five (5) acres. This section is not applicable to secondary permittees. The following procedures constitute EPD's guidelines for sampling turbidity.

a. *Sampling Requirements* shall include the following:

(1). A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the site or the common development; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the stormwater is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the stormwater(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2). The analytical method used to collect and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3). When the permittee has determined that some or all outfalls will be sampled, a rationale must be included on the Plan for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

b. *Sample Type.* All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container.

(3). Large mouth, clean and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed using a direct reading, properly calibrated turbidimeter. Samples are not required to be cooled.

(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

c. *Sampling Points.*

(1). For construction activities the primary permittee with a total planned disturbance equal to or greater than one (1) acre and tertiary permittee with a total planned disturbance equal to or greater than five (5) acres must sample all receiving water(s), or all outfall(s), or a combination of receiving water(s) and outfall(s). Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the stormwater outfalls using the following minimum guidelines:

(a). The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first stormwater discharge from the permitted activity (i.e., the discharge farthest upstream at the site)

but downstream of any other stormwater discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

(b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last stormwater discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other stormwater discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

(c). Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the stormwater outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall stormwater channel.

(e). The sampling container should be held so that the opening faces upstream.

(f). The samples should be kept free from floating debris.

(g). Permittees do not have to sample sheet flow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, 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).

(h). All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether stormwater runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

d. *Sampling Frequency.*

(1). The primary permittee with a total planned disturbance equal to or greater than one (1) acre and tertiary permittee with a total planned disturbance equal to or greater than five (5) acres must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall within forty-five (45) minutes or as soon as possible.

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.

(3). Sampling by the permittee shall occur for the following qualifying events:

(a). For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that allows for sampling during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained;

(d). Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the primary permittee, in accordance with Part IV.D.4.a.(6)., or the tertiary permittee,

in accordance with Part IV.D.4.c.(6)., 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 under (a), (b) or (c) above; and

(e). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

*Note that the Permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of the day or week.

7. Non-stormwater discharges. Except for flows from fire fighting activities, sources of non-stormwater listed in Part III.A.2. of this permit that are combined with stormwater discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge.

E. Reporting.

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any stormwater discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G.2. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information:

- a. The rainfall amount, date, exact place and time of sampling or measurements;
- b. The name(s) of the certified personnel who performed the sampling and measurements;
- c. The date(s) analyses were performed;
- d. The time(s) analyses were initiated;
- e. The 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. The 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.
3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The applicable permittees shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

F. Retention of Records.

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:
 - a. A copy of all Notices of Intent submitted to EPD;
 - b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
 - c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
 - d. A copy of all sampling information, results, and reports required by this permit;
 - e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
 - f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
 - g. Daily rainfall information collected in accordance with Part IV.D.4.a.(2). of this permit.
2. Each secondary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:
 - a. A copy of all Notices of Intent submitted to EPD;
 - b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit or the applicable portion of the Erosion, Sedimentation and Pollution Control Plan for their activities at the construction site required by this permit;
 - c. A copy of all inspection reports generated in accordance with Part IV.D.4.b. of this permit; and
 - d. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit.

3. Each tertiary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

- a. A copy of all Notices of Intent submitted to EPD;
- b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
- c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
- d. A copy of all sampling information, results, and reports required by this permit;
- e. A copy of all inspection reports generated in accordance with Part IV.D.4.c. of this permit;
- f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and.
- g. Daily rainfall information collected in accordance with Part IV.D.4.c.(2). of this permit.

4. Copies of all Notices of Intent, Notices of Termination, inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

Part V. STANDARD PERMIT CONDITIONS

A. Duty to Comply.

1. Each permittee must comply with all applicable conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) and is grounds for enforcement action; for permit termination; or for denial of a permit renewal application. Failure of a primary permittee, secondary permittee or tertiary permittee to comply with any applicable term or condition of this permit shall not relieve any other primary, secondary or tertiary permittee from compliance with their applicable terms and conditions of this permit.

2. Each permittee must document in their records any and all known violations of this permit at his/her site within seven (7) days of his/her knowledge of the violation. A summary of these violations must be submitted to EPD by the permittee at the addresses shown in Part II.C. within fourteen (14) days of his/her discovery of the violation.

3. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Acts, any permit condition or limitation established pursuant to the Acts, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director.

B. Continuation of the Expired General Permit. This permit expires on the date shown on the cover page of this permit. However, an expired general permit continues in force and effect until a new general permit is issued, final and effective.

C. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to Provide Information. The permittee shall furnish to the Director; a State or local agency approving soil Erosion Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system, any information which is requested to determine compliance with this permit. In the case of information submitted to the EPD such information shall be considered public information and available under the Georgia Open Records Act.

F. Other Information. When the permittee becomes aware that he/she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report required to be submitted to the EPD, the permittee shall promptly submit such facts or information.

G. Signatory Requirements. All Notices of Intent, Notice of Terminations, inspection reports, sampling reports, or other reports requested by the EPD shall be signed as follows:

1. All Notices of Intent and Notices of Termination shall be signed as follows:

- a. For a corporation: by a responsible corporate officer. For the purpose of this permit, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures; or
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal, or other public facility: by either a principal executive officer or ranking elected official; and
 - d. Changes to authorization. If an authorization under Part II.B. is no longer accurate, a modification NOI satisfying the requirements of Part II.B. must be submitted to the EPD prior to or together with any inspection reports, sampling reports, or other reports requested by the EPD to be signed by a person described above or by a duly authorized representative of that person.
2. All inspection reports, sampling reports, or other reports requested by the EPD shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person(s) described above and submitted to the EPD;
 - b. The authorization specifies either an individual or a position having responsibility for specified operation(s) of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may be either a named individual or any individual occupying a named position); and
 - c. *Certification.* Reports delineated in Part V.G.2. shall be signed by the permittee or duly authorized representative and shall make the following certification:

"I certify under penalty of law that this report and all attachments were prepared under my direction or supervision in accordance with a system designed to assure

that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-60, et seq. or under Chapter 14 of Title 12 of the Official Code of Georgia Annotated; nor is the Operator relieved from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or Section 106 of Comprehensive Environmental Response Compensation And Liability Act.

I. Property Rights. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

J. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Other Applicable Environmental Regulations and Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act. Nothing in this permit, unless explicitly stated, exempts the permittee from compliance with other applicable local, state and federal ordinances, rules, regulations, and laws. Furthermore, it is not a defense to compliance with this permit that a local government authority has approved the permittee's Erosion, Sedimentation and Pollution Control Plan or failed to take enforcement action against the permittee for violations of the Erosion, Sedimentation and Pollution Control Plan, or other provisions of this permit.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

L. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the required plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance

requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

M. Inspection and Entry. The permittee shall allow the Director or an authorized representative of EPA, EPD or to designated officials of the local government reviewing soil Erosion, Sedimentation and Pollution Control Plans, grading plans, or stormwater management plans; or, in the case of a construction site which discharges through a municipal separate storm sewer system, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit; and
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

N. Permit Actions. This permit may be revoked and reissued, or terminated for cause including but not limited to changes in the law or regulations. The filing of a request by the permittee for termination of the permit, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

Part VI. TERMINATION OF COVERAGE

A. Notice of Termination Eligibility. Notice of Termination signed in accordance with Part V.G.1. of this permit must be submitted:

1. For construction activities, by the primary permittee where the entire common development has undergone final stabilization, all stormwater discharges associated with construction activity that are authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed. For construction activities where the primary permittee has elected to submit NOIs for separate phases of the common development, the phase or phases of the common development on the NOT shall correspond to the phase or phases on the NOI.

In addition, 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 signed in accordance with Part V.G.1. of this permit (excluding utility companies and/or utility contractors working under a Blanket NOI); (d) the site is in compliance with this permit; and (e) all temporary BMPs have been removed.

2. After the filing of the Notice of Termination, the primary permittee shall notify by written correspondence with ***return receipt certified mail*** (or similar service) to the subsequent legal title holder of each remaining lot(s) that these lot Owners or Operators will become tertiary permittees for purposes of this permit and these tertiary permittees will be responsible for off-site best management practices, as applicable.

(i). If a person currently owns or purchases one or more of the remaining undeveloped lots within a common development for the purpose of engaging in construction activity in which a Notice of Termination has been filed by the primary permittee and all secondary permittees (excluding utility companies and/or utility contractors working under a Blanket NOI) or where a primary permittee no longer exists, then the person must file a Notice of Intent as a tertiary permittee (as set forth in Part II.B.3.). Except as provided in Part IV.A.2., a tertiary permittee must prepare and submit a new Erosion, Sedimentation and Pollution Control Plan in accordance with Part IV. 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 an Erosion, Sedimentation and Pollution Control Plan(s) for a typical individual lot(s). EPD may notify the tertiary permittee at any time that the Plan does not meet one or more of the minimum requirements of the permit. The tertiary permittee must correct and implement any required changes to the Plan in accordance with Part IV.B.3. of this permit within the time frame established by EPD.

(ii). Tertiary permittees must submit a Notice of Termination when their sites within a common development have undergone final stabilization, all stormwater discharges from their construction activities have ceased, their construction sites are in compliance with this permit and all temporary BMPs have been removed. 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.

3. By the Owner or Operator or both when the Owner or Operator of the site changes. Where stormwater discharges will continue after the identity of the Owner or Operator or both changes, the permittee must, prior to filing the Notice of Termination, notify any subsequent Owner or Operator or both of the permitted site as to the requirements of this permit;

4. By secondary permittees when their sites within a common development have undergone final stabilization, all stormwater discharges from their construction activities have ceased, their sites are in compliance with this permit and all temporary BMPs have been removed; and

5. By secondary permittees working under a Blanket NOI postmarked no later than January 15 of the subsequent year in which the NOI was filed. The NOT shall contain the information contained in Part II. B. 2. a., b., c. and h.

B. Notice of Termination Contents:

1. The NPDES permit number for the stormwater discharge associated with construction activity identified by the Notice of Termination (i.e., GAR100003 – Common Development);
2. The project construction site name, GPS location (decimal degrees) of construction exit of the project or if applicable, of each typical lot in accordance with Part VI.A.6., construction site location, common development name (if applicable), lot number(s) (if applicable), city (if applicable) and county of the construction site for which the notification is submitted. This information must correspond to the similar information as provided on the NOI. Where an address for the construction site is not available, the construction site location information must be sufficient to accurately locate the construction site;
3. The owner's legal name, address, telephone number and email address and the operator's legal name, address, telephone and email address;
4. An indication as to whether the permittee is a primary, secondary or tertiary permittee;
5. When the NOT is submitted by a secondary permittee, the primary permittee's legal name, address, telephone number and email address;
6. A listing of the legal name, address, telephone number and email address of all secondary permittees at the site for which this notification is submitted, if applicable;
7. The name of the receiving water(s), and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4;
8. When sampling is required by this permit, copies of all sampling reports not previously submitted to EPD and/or a written justification why sampling was not conducted. Copies of all sampling reports may be submitted as a Portable Document Format (PDF) file on CD-ROM or other storage device;
9. Any other information specified on the NOT in effect at the time of submittal; and
10. The following certification signed in accordance with Part V.G.1. (signatory requirements):

“I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity authorized by this permit have ceased, the site is in compliance with this permit and all temporary BMPs have been removed or (b) I am no longer an Owner or Operator at the construction site and a new Owner or Operator has assumed operational control of the permitted construction site where I previously had ownership or operational control. If I am a primary permittee filing this Notice of Termination under Part VI.A.2. of this permit, I will notify by written correspondence to the subsequent

legal title holder of any remaining lots that these lot Owners or Operators will become tertiary permittees for purposes of this permit and I will provide these tertiary permittees with the primary permittee's Erosion, Sedimentation and Pollution Control Plan and Notice of Termination. I understand that by submitting this Notice of Termination, that I am no longer authorized to discharge stormwater associated with construction activity by the general permit, and that discharging pollutants in stormwater associated with construction activity to waters of Georgia is unlawful under the Georgia Water Quality Control Act and the Clean Water Act where the discharge is not authorized by a NPDES permit."

C. Notice of Termination Submittal. All Notices of Termination (NOT) by this permit shall be submitted to EPD using the electronic submittal service provided by EPD and a copy to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq.

APPENDIX A

EPD DISTRICT OFFICES

A. For facilities/construction sites located in the following counties: Bibb, Bleckley, Chattahoochee, Crawford, Dooly, Harris, Houston, Jones, Lamar, Macon, Marion, Meriwether, Monroe, Muscogee, Peach, Pike, Pulaski, Schley, Talbot, Taylor, Troup, Twiggs, Upson

Information shall be submitted to: West Central District Office
Georgia Environmental Protection Division
2640 Shurling Drive
Macon, GA 31211-3576
(478) 751-6612

B. For facilities/construction sites located in the following counties: Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Johnson, Laurens, McDuffie, Montgomery, Richmond, Screven, Treutlen, Warren, Washington, Wheeler, Wilkinson

Information shall be submitted to: East Central District Office
Georgia Environmental Protection Division
3525 Walton Way Extension
Augusta, GA 30909-1821
(706) 667-4343

C. For facilities/construction sites located in the following counties: Baldwin, Banks, Barrow, Butts, Clarke, Elbert, Franklin, Greene, Hall, Hancock, Hart, Jackson, Jasper, Lincoln, Madison, Morgan, Newton, Oconee, Oglethorpe, Putnam, Stephens, Taliaferro, Walton, Wilkes

Information shall be submitted to: Northeast District Office
Georgia Environmental Protection Division
745 Gaines School Road
Athens, GA 30605-3129
(706) 369-6376

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

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 31523-8251
(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
(229) 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
2 Martin Luther King Jr. Drive
Suite 1462 East
Atlanta, Georgia 30334
(404) 463-1511

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams

		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	25	50	75	150	300	500	500	500
	10.01-25	25	25	50	75	150	200	500	500
	25.01-50	25	25	25	50	75	100	300	500
	50.01-100	20	25	25	35	59	75	150	300
	100.01 +	20	20	25	25	25	50	60	100

Waters Supporting Warm Water Fisheries

		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	75	150	200	400	750	750	750	750
	10.01-25	50	100	100	200	300	500	750	750
	25.01-50	50	50	100	100	200	300	750	750
	50.01-100	50	50	50	100	100	150	300	600
	100.01 +	50	50	50	50	50	100	200	100

To use these tables, select the size (acres) of the construction site. Then, select the surface water drainage area (square miles). The NTU matrix value arrived at from the above tables is the one to use in Part III.D.4.

Example 1: For a site size of 12.5 acres and a “trout stream” drainage area of 37.5 square miles, the NTU value to use in Part III.D.4. is 75 NTU.

Example 2: For a site size of 51.7 acres and ”waters supporting warm water fisheries” drainage area of 72 square miles, the NTU value to use in Part III.D.4. is 100 NTU.

Insert Tab 5

Local Program

Back of Tab

LOCAL PROGRAMS

Principles & Processes



Level 1B: Advanced Fundamentals
Effective August 2018



1

Overview

- ▶ Purpose of the Local Program
- ▶ Principles of the Local Program
 - Five key standards of an effective program
- ▶ Processes of the Local Program
 - Ordinance Adoption & Implementation
 - Program Administration
 - Plan Preparation & Review
 - Inspection & Enforcement
 - Education & Training
- ▶ Program Oversight

2

Purpose of the Local Program

- ▶ The E&S Act of 1975 states that the governing authority of each county and municipality shall adopt a comprehensive ordinance establishing procedures governing land disturbing activities conducted within their boundaries
- ▶ If counties and municipalities fail to adopt such an ordinance, then the State Board of Natural Resources will adopt rules governing land disturbing activities within those areas

3

Intent of the Law

- ▶ The emphasis of the law is truly on implementation of a *Local* erosion and sediment control programs
- ▶ Local officials/employees have *Local*
 - Knowledge
 - Authority
 - Responsibility



4

5 Key Principles of an Effective Program

- » Stay Informed
- » Appropriate Certification
- » Be Knowledgeable
- » Plan Ahead
- » Evaluations

2016 Manual for Erosion & Sediment Control in Georgia
Chapter 4

5

#1 Stay Informed

- ▶ Erosion & Sediment control should become a stated policy of all concerned, including:
 - Public agencies
 - Developers
 - Landowners
 - Consultants
 - Design Professional



6

#2 Appropriate Certification

- ▶ The appropriate GSWCC certification of persons involved in land development design, review, permitting, construction, monitoring, or inspection of land-disturbing activity



7

#3 Be Knowledgeable

- ▶ Competent technical personnel knowledgeable in local soil and climatic conditions, workable procedures, and inspections are necessary for successful erosion and sediment control



8

#4 Plan Ahead



- ▶ To be effective, provisions for erosion and sediment control must be made in the planning stage. Practical combinations of the basic design principals contained in Chapter 2 of the Manual should be skillfully planned and applied in a timely manner

9

#5 Evaluations

- ▶ Research, observations, and evaluations should be conducted to provide needed information for improvement of the erosion and sediment control program
- ▶ The SWCD and/or GSWCC are required by GESA to semi-annually review the erosion and sediment control programs for effectiveness of the cities and counties that have been certified as a LIA



10

Processes of the Local Program

- » Ordinance Development and Implementation
- Program Administration
- Plan Preparation and Review
- Inspection and Enforcement
- Information, Education, and Training

11

Ordinance Development/Implementation

- ▶ A model ordinance has been developed by the GSWCC and the GA EPD for use by officials in municipalities and counties
- ▶ The model is intended primarily to provide guidelines for control of urban soil erosion and sediment pollution
- ▶ It is designed to meet state requirements and comply with the NPDES permits
- ▶ A copy is contained within Appendix D of the Manual and at www.gaswcc.georgia.gov

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Ordinance Development/Implementation

- ▶ A review of the final draft by the county or city attorney should be mandatory
- ▶ A LIA must review and amend its ordinance within 12 months of any amendment to the E&S Act
- ▶ The adoption of an ordinance should be considered as only the 1st step toward a sound soil erosion and sedimentation control program
- ▶ It is essential that sufficient lead time be provided for education of the public and technical training of those involved directly

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Written Procedures

- ▶ Organizations need a set of written instructions that document an "organizational culture"
- ▶ Why is this important?
 - Demonstrates that the program is being operated in an efficient manner
 - Provides program credibility
 - Allows the staff to understand their expectations
 - Provides quicker recovery in times of staff turnover
 - Helps to identify workplace inefficiencies

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Record Keeping System

- ▶ The record system should contain a detailed filing system for all land-disturbing activities
- ▶ The file should contain
 - Permit application
 - Approved Plan
 - Inspection reports
 - Photographic evidence
 - Correspondence
 - Complaint info
 - Record of enforcement action



15

Trained Personnel

- ▶ Regulatory Inspectors
 - Local program inspectors **must** be certified inspectors (Level 1B) within 6 months of their hire date
 - Should participate in continuing education courses and stay up to date on current regulations
- ▶ Plan Reviewers (MOA)
 - Must possess a Level II certification to review plans on behalf of the Local Issuing Authority
 - Requires a minimum of 6 months work experience

16

Program Administration

- ▶ Commonly seen problems
 - Staffing
 - If we had more people/time/support/resources
 - Policies & Procedures
 - This is the way we've always done it
 - This is how I think we do it
 - This is how my boss says to do it but I think...
 - Program Growth
 - We have a proactive program with excellent personnel, why would we need to change?

17

Plan Preparation and Review

- ▶ All parties involved in the plan development and review process must realize without exception that there is more than one approach to minimizing erosion and sedimentation damages
- ▶ Flexibility without compromising the primary objective must be encouraged to arrive at a common solution to the problem
- ▶ Local officials should provide assistance to the developer and engineer prior to plan submission so that processing time can be more effective

18

Inter-departmental Cooperation

- ▶ Many departments are either directly or indirectly involved with E&S activities
- ▶ These include
 - Planning & Zoning
 - Engineering
 - Public Works
 - Code Enforcement
- ▶ Different departments must be able to communicate and have clear responsibilities

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Plan Processing

- ▶ The owner, developer, or authorized agent submits the plan to the Local permit-issuing Authority after completing an application for a permit
- ▶ It is suggested that a minimum of 3 copies of the plan be submitted
- ▶ A letter of transmittal containing the following should accompany the plan:
 - Name, address, phone number of applicant, land owner, contractor, design professional
 - Location of the proposed activity
 - Any other relevant info

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Plan Processing

- ▶ It is suggested that the Local Issuing Authority delegate authority for receiving applications and processing permits to a qualified individual who is knowledgeable in the processing of site development plans
- ▶ A minimum of 2 copies of the ES&PC Plan shall be forwarded as soon as possible to the local SWCD for review (see Local Ordinance for specifications on # of copies required)
 - Technical review is conducted by GSWCC or NRCS
- ▶ The Local Issuing Authority issues or denies a permit
 - Any necessary modifications should be specified in writing

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MOA Concurrence Process

- ▶ A Memorandum of Agreement (MOA) is an agreement between the Local SWCD and a LIA, with concurrence from the GSWCC, to allow the LIA to conduct its own technical review and approval of ES&PC Plans
- ▶ The initial request should be made by the LIA to their Local SWCD

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MOA Concurrence Process

- ▶ Overviews
 - The LIA will need to pass at least 2 consecutive overviews that occur at least 6 months apart
- ▶ Co-Plan Review Period
 - During the 6 month Co-Plan Review Period, the LIA will receive the ES&PC Plan, review the Plan, and submit the Plan to the SWCD with their recommendation to approve or deny
 - GSWCC staff will conduct technical review and recommend the plan be approved/denied by the SWCD

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MOA Concurrence Process

- ▶ Once the process is completed, GSWCC Urban Program will determine, based on all documentation, whether the LIA has demonstrated their ability to conduct quality Plan review
- ▶ Technical staff will forward their recommendation to the GSWCC Board to approve, deny, extend, or add restrictive language to the MOA
- ▶ Copies of the agreement have to be signed and notarized by all parties

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Inspection and Enforcement

- ▶ These responsibilities begin after the issuance of a permit
- ▶ A crucial element in any program is adequate field inspection for evaluating compliance to the approved E&S Plan
- ▶ The inspector, regardless of background, should have some knowledge in the field of soil and water conservation and GSWCC Level 1B Certification
- ▶ An inspection checklist should be used by the inspector to assist him or her in fulfilling his responsibilities

Inspection Process Issues

- ▶ Commonly seen problems
 - Inspection frequency
 - Inconsistent approach to an inspection
 - “Drive-by” Inspection
 - Lack of documentation
 - Follow-up inspections
 - Reasonable ratio of sites to inspectors

INSPECTION REPORT

Project Name: _____ Site No.: _____
 Inspector: _____

OFFICE OF WATER QUALITY

... Permitted/Compliance ... Regulatory ... Monitoring
 ... Erosion Control ... Sediment Control ... Best Management Practices

GENERAL CONSTRUCTION

1. Is the site located in a riparian area? Yes No

2. Is the site located in a riparian area? Yes No

3. Is the site located in a riparian area? Yes No

4. Is the site located in a riparian area? Yes No

5. Is the site located in a riparian area? Yes No

6. Is the site located in a riparian area? Yes No

7. Is the site located in a riparian area? Yes No

8. Is the site located in a riparian area? Yes No

9. Is the site located in a riparian area? Yes No

10. Is the site located in a riparian area? Yes No

11. Is the site located in a riparian area? Yes No

12. Is the site located in a riparian area? Yes No

13. Is the site located in a riparian area? Yes No

14. Is the site located in a riparian area? Yes No

15. Is the site located in a riparian area? Yes No

16. Is the site located in a riparian area? Yes No

17. Is the site located in a riparian area? Yes No

18. Is the site located in a riparian area? Yes No

Comments: _____

Pre-construction Meeting

- ▶ To assure that the enforcing agency and the permit applicant are in agreement about the control procedures, a pre-construction conference would be desirable
- ▶ All facets of the proposed work should be discussed at this meeting and anticipated problems addressed
- ▶ The need for installing initial sediment storage requirements and perimeter control BMPs prior to any actual clearing shall be emphasized
- ▶ The contractor should be informed of the local inspection policies and schedules

Inspection Schedule

- ▶ The institution of both random and scheduled inspections would be appropriate
- ▶ A scheduled (once every 7 calendar days) inspection would be a routine inspection related directly to construction operations and carried out in a rigid format
- ▶ Random or impromptu site inspections would assume continuing compliance and the proper maintenance of BMPs

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Notice to Comply

- ▶ In the event that an inspection indicates a violation, some type of system for notifying the permittee would be necessary
- ▶ An effective system often utilized by authorities involves a written "Notice to Comply"
- ▶ Enforcement orders should contain specific measures or corrections which need to be addressed and specify a timely deadline for completion

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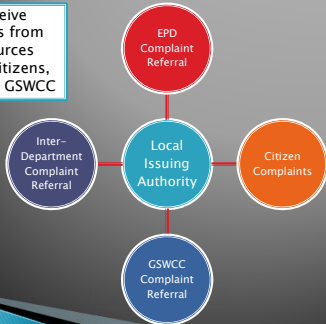
Complaint Investigation

- ▶ A Local Issuing Authority must follow a Complaint Investigation Process
 - Investigation of the complaint by the Local Issuing Authority within 5 business days
 - Mechanism for referral of unresolved complaints to the EPD
 - Monthly log of complaints and inquiries including actions taken

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Complaint Investigation

LIAs receive complaints from many sources including citizens, EPD and the GSWCC



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Education & Training

- ▶ One of the most important processes in any erosion and sediment control program is an effective information and education effort
- ▶ A local program must have the support of the persons most affected.... the developers, engineers, planners, as well as the general public
- ▶ Consideration should be given to training seminars, conferences, and educational material for the developer and his or her consultants or planners

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Education & Training

- ▶ Initial training programs for new employees is mandatory
- ▶ Training seminars for Local Issuing Authority personnel who are authorized to perform inspections, enforcement, and administrative duties should be planned
- ▶ Assistance in planning and conducting local training programs may be obtained through the local Soil & Water Conservation District

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Program Oversight

» Internal Evaluation
State Oversight

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Internal Program Evaluation

- ▶ Overall program should be systematically reviewed on periodic basis
 - Are policies current and reflective of current regulations?
 - Do written procedures need to be changed?
 - Are inspections being done regularly and consistently?
- ▶ Where is there room for improvement?

35

Semi-Annual Reports

Soil & Water Conservation District
Erosion, Sedimentation, and Pollution Control Activities
Semi-Annual Report
January 1 - June 30
Plan Review Summary

1. ES&P Plan Reviews

A. Total number of ES&P Plan reviews approved by LIA: _____

B. Total number of ES&P Plan reviews approved by LIA that are GSWCC Law 6 Certified: _____

2. ES&P Plan Reviews

A. Total number of ES&P Plan reviews under review calendar: _____

B. Average turnaround time for review of initial ES&P Plans: _____

C. Total number of ES&P Plans reviewed that were denied and resubmitted: _____

D. Average turnaround time for review of resubmitted plans that were re-submitted: _____

E. Total number of ES&P Plans that were denied and sent back for revision: _____

F. Total number of ES&P Plans approved: _____

Permitting Summary

1. Permits Issued

A. Total number of ES&P and Construction Activity Permits issued by the LIA for Primary Permitted or SF Land Use Construction Projects: _____

B. Total number of ES&P and Construction Activity Permits issued by the LIA for Primary Permitted or State New Construction Projects: _____

C. Total number of ES&P and Construction Activity Permits issued by the LIA for Secondary Permitted or Construction-Related Construction Projects: _____

D. Total number of ES&P and Construction Activity Permits issued by the LIA for Tertiary Permitted or Construction-Related Construction Projects: _____

E. Total number of ES&P and Construction Activity Permits issued by the LIA: _____

F. Total number of ES&P and Construction Activity Permits issued by the LIA: _____

2. Areas Discovered

A. Total number of errors found permitted within the LIA's jurisdiction: _____

Inspection Summary

1. Inspections

A. Total number of ES&P inspections completed by the LIA: _____

- ▶ GSWCC is required by law to conduct overviews semi-annually
- ▶ LIAs are required to complete and submit the Semi - Annual Report to GSWCC (Jan and July)
- ▶ GSWCC review of the report will determine if a more in depth overview is required

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Local Program Overview

- ▶ Purpose
 - To provide administrative and technical assistance in an effort to improve the effectiveness of local programs
- ▶ Local program overviews are performed by a **District Assessment Team** (DAT) that includes the:
 - GA Soil and Water Conservation Commission
 - Local Soil and Water Conservation District
 - Natural Resources Conservation Service
 - May include EPD representatives

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Overview

- ▶ The overview process begins with a letter from the GASWCC and/or Local SWCD scheduling an overview.
- ▶ The LIA will receive a questionnaire that must be filled out prior to the day of the overview.
- ▶ The DAT will conduct an office visit that consists of a review of the questionnaire and evaluates the program's administration and recordkeeping.
- ▶ Randomly chosen sites are visited to compare the inspection and enforcement record with site conditions.

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Overview Questionnaire

Overview Criteria for E&SC Programs of Local Governments

1. Program Administration & Record Keeping

What is the status of the current E&SC Ordinance? Has it been certified by EPD?
*Attach ordinance.
Awaiting approval from EPD*

Does the ordinance follow the provisions of the state law and model ordinance or is it more stringent? If more stringent, in what way?
More stringent. Follows the Model Ordinance except requires a 100 ft buffer along State Waters.

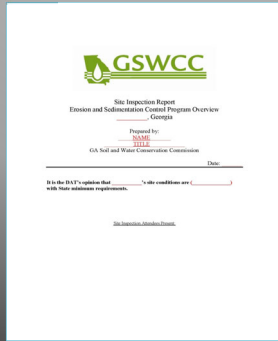
What type of permits is issued? Timber harvest, clearing and grubbing, grading?
*Are denotation permits issued?
Land Disturbance permits, Demolition Permits are issued*

Is there a log of permits issued? Who receives the permit?
*No running log is kept in spreadsheet form but files are kept on each site.
The permit applicant or his designee receives the permit*

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Overview Report

- ▶ Outline of findings
- ▶ Notes strong points and deficiencies
- ▶ Recommendations for improvement
- ▶ Rating
 - Exceptional
 - Passing
 - Needs Plan for Improvement
 - Failed-Notify EPD



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EPD Oversight

- ▶ Purpose
 - Ensure LIAs are properly implementing the requirements of the E&S Act
 - Review of Certification Status
- ▶ May be done in response to notification by SWCD and/or GSWCC to investigate an ineffective local program
- ▶ LIA must submit documentation showing continued compliance and a plan for improvement

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De-certification Process

- ▶ The EPD may initiate the de-certification process based on a request by the local SWCD, GSWCC, or EPD if:
 - LIA's ordinance is not up to date
 - Inadequate inspection personnel
 - Inadequate recordkeeping
 - Failure to utilize the Complaint Investigation Process
- ▶ The EPD investigates and notifies the LIA within 60 days of perceived deficiencies

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De-certification Process

- ▶ The LIA must respond within 30 days in one of the following ways:
 - Acknowledge the deficiencies and agree to comply
 - Offer explanation and solution with deadline for compliance within 90 days
 - Disagree with the deficiencies and request mediation
- ▶ If the LIA does not take corrective action within 90 days, the EPD shall revoke the certification of the Local Issuing Authority

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Summary

- ▶ Effectiveness of a local program depends on the adoption of credible procedures and implementation of those procedures
- ▶ Inspections should be conducted by individuals with proven experience
- ▶ Recordkeeping is vital to a program's success
- ▶ A periodic internal review is necessary for a program's success
- ▶ SWCD, GSWCC, EPD may perform periodic overviews of the local program

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Questions?

» GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



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Insert Yellow Sheet

Back of Yellow Sheet

Model Soil Erosion, Sedimentation And Pollution Control Ordinance

NOW, THEREFORE, BE IT ORDAINED,
BY

SECTION I TITLE

This ordinance will be known as “_____”
Soil Erosion, Sedimentation and Pollution
Control Ordinance.”

SECTION II DEFINITIONS

The following definitions shall apply in the
interpretation and enforcement of this
ordinance, unless otherwise specifically stated:

1. **Best Management Practices (BMPs):** These include 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’ published by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
2. **Board:** The Board of Natural Resources.
3. **Buffer:** The area of land immediately adjacent to the banks of state waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.
4. **Certified Personnel:** A person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission.
5. **Coastal Marshlands:** Shall have the same meaning as in O.C.G.A. 12-5-282.
6. **Commission:** The Georgia Soil and Water Conservation Commission (GSWCC).
7. **CPESC:** Certified Professional in Erosion and Sediment Control with current certification by EnviroCert, Inc., which is also referred to as CPESC or CPESC, Inc.
8. **Cut:** A portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to the excavated surface. Also known as excavation.
9. **Department:** The Georgia Department of Natural Resources (DNR).
10. **Design Professional:** 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, Inc. Design Professionals shall practice in a manner that complies with applicable Georgia law governing professional licensure.
11. **Director:** The Director of the Environmental Protection Division or an authorized representative.
12. **District:** The _____ Soil and Water Conservation District.
13. **Division:** The Environmental Protection Division (EPD) of the Department of Natural Resources.
14. **Drainage Structure:** A device composed of a virtually nonerrodible 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.
15. **Erosion:** The process by which land surface is worn away by the action of wind, water, ice or gravity.
16. **Erosion, Sedimentation and Pollution Control Plan:** A plan required by the Erosion and Sedimentation Act, O.C.G.A. Chapter 12-7, that includes, as a minimum protections at least as stringent as the State General Permit, best management practices, and requirements in section IV.C. of this ordinance.
17. **Fill:** A portion of land surface to which soil or other solid material has been

- added; the depth above the original ground surface or an excavation.
18. **Final Stabilization:** 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 landscape 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). Final stabilization applies to each phase of construction.
 19. **Finished Grade:** The final elevation and contour of the ground after cutting or filling and conforming to the proposed design.
 20. **Grading:** Altering the shape of ground surfaces to a predetermined condition; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the land in its cut or filled condition.
 21. **Ground Elevation:** The original elevation of the ground surface prior to cutting or filling.
 22. **Land-Disturbing Activity:** Any activity which may result in soil erosion from water or wind 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 agricultural practices as described in Section III, Paragraph 5.
 23. **Larger Common Plan of Development or Sale:** A contiguous area where multiple separate and distinct construction activities are occurring under one plan of development or sale. For the purposes of this paragraph, "plan" means an announcement; piece of documentation such as a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, or computer design; or physical demarcation such as boundary signs, lot stakes, or surveyor markings, indicating that construction activities may occur on a specific plot.
 24. **Local Issuing Authority:** The governing authority of any county or municipality which is certified pursuant to subsection (a) O.C.G.A. 12-7-8.
 25. **Metropolitan River Protection Act (MRPA):** A state law referenced as O.C.G.A. 12-5-440 et.seq. which addresses environmental and developmental matters in certain metropolitan river corridors and their drainage basins.
 26. **Natural Ground Surface:** The ground surface in its original state before any grading, excavation or filling.
 27. **Nephelometric Turbidity Units (NTU):** Numerical units of measure based upon photometric analytical techniques for measuring the light scattered by finely divided particles of a substance in suspension. This technique is used to estimate the extent of turbidity in water in which colloiddally dispersed or suspended particles are present.
 28. **NOI:** A Notice of Intent form provided by EPD for coverage under the State General Permit.
 29. **NOT:** A Notice of Termination form provided by EPD to terminate coverage under the State General Permit.
 30. **Operator:** The party or parties that have:
(A) operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; or (B) day-to-day operational control of those activities that are necessary to ensure compliance with an erosion, sedimentation and pollution control plan for the site or other permit conditions, such as a person authorized to direct workers at a site to carry out activities required by the erosion, sedimentation and pollution control plan or to comply with other permit conditions.

31. **Outfall:** The location where storm water in a discernible, confined and discrete conveyance, leaves a facility or site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.
32. **Permit:** The authorization necessary to conduct a land-disturbing activity under the provisions of this ordinance.
33. **Person:** 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 of the State of Georgia, any interstate body or any other legal entity.
34. **Phase or Phased:** Sub-parts or segments of construction projects where the sub-part or segment is constructed and stabilized prior to completing construction activities on the entire construction site.
35. **Project:** The entire proposed development project regardless of the size of the area of land to be disturbed.
36. **Properly Designed:** Designed in accordance with the design requirements and specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the Manual as approved by the Commission up until the date of NOI submittal.
37. **Roadway Drainage Structure:** A device such as a bridge, culvert, or ditch, composed of a virtually nonerodible 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.
38. **Sediment:** 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.
39. **Sedimentation:** The process by which eroded material is transported and deposited by the action of water, wind, ice or gravity.
40. **Soil and Water Conservation District Approved Plan:** An erosion, sedimentation and pollution control plan approved in writing by the _____ Soil and Water Conservation District.
41. **Stabilization:** The process of establishing an enduring soil cover of vegetation by the installation of 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.
42. **State General Permit:** The National Pollution Discharge Elimination System (NPDES) general permit or permits for storm water runoff from construction activities as is now in effect or as may be amended or reissued in the future pursuant to the state's authority to implement the same through federal delegation under the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251, et seq., and subsection (f) of Code Section 12-5-30.
43. **State Waters:** 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 Georgia which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.
44. **Structural Erosion, Sedimentation and Pollution Control Practices:** Practices for the stabilization of erodible or sediment-producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss. Examples of structural erosion and sediment control practices are riprap, sediment basins, dikes, level

spreaders, waterways or outlets, diversions, grade stabilization structures and sediment traps, etc. Such practices can be found in the publication *Manual for Erosion and Sediment Control in Georgia*.

45. **Trout Streams:** All streams or portions of streams within the watershed as designated by the Wildlife Resources Division of the Georgia Department of Natural Resources under the provisions of the Georgia Water Quality Control Act, O.C.G.A. 12-5-20, in the rules and regulations for Water Quality Control, Chapter 391-3-6 at

www.epd.georgia.gov. 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.

46. **Vegetative Erosion and Sedimentation Control Measures:** Measures for the stabilization of erodible or sediment-producing areas by covering the soil with:
- Permanent seeding, sprigging or planting, producing long-term vegetative cover, or
 - Temporary seeding, producing short-term vegetative cover; or
 - Sodding, covering areas with a turf of perennial sod-forming grass.

Such measures can be found in the publication *Manual for Erosion and Sediment Control in Georgia*.

47. **Watercourse:** Any natural or artificial watercourse, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows either continuously or intermittently and which has a definite channel, bed and banks, and including any area adjacent thereto subject to

inundation by reason of overflow or floodwater.

48. **Wetlands:** Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

SECTION III EXEMPTIONS

This ordinance shall apply to any land-disturbing activity undertaken by any person on any land except for the following

- Surface mining, as the same is defined in O.C.G.A. 12-4-72, "The Georgia Surface Mining Act of 1968".
- Granite quarrying and land clearing for such quarrying;
- Such minor land-disturbing activities as home gardens and individual home landscaping, repairs, maintenance work, fences, and other related activities which result in minor soil erosion;
- The construction of single-family residences, when such construction disturbs less than one (1) acre and is not a part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one (1) acre and not otherwise exempted under this paragraph; provided, however, that construction of any such residence shall conform to the minimum requirements as set forth in O.C.G.A. 12-7-6 and this paragraph. For single-family residence construction covered by the provisions of this paragraph, there shall be a buffer zone between the residence and any state waters classified as trout streams pursuant to Article 2 of Chapter 5 of the Georgia Water Quality Control Act. In any such buffer zone, no land-disturbing activity shall be constructed between the residence and the point where vegetation has been wrested by normal stream flow or wave action from

- the banks of the trout waters. For primary trout waters, the buffer zone shall be at least 50 horizontal feet, and no variance to a smaller buffer shall be granted. For secondary trout waters, the buffer zone shall be at least 50 horizontal feet, but the Director may grant variances to no less than 25 feet. Regardless of whether a trout stream is primary or secondary, for first order trout waters, which are streams into which no other streams flow except for springs, the buffer shall be at least 25 horizontal feet, and no variance to a smaller buffer shall be granted. The minimum requirements of subsection (b) of O.C.G.A. 12-7-6 and the buffer zones provided by this paragraph shall be enforced by the Local Issuing Authority;
5. Agricultural operations as defined in O.C.G.A. 1-3-3, "definitions", to include raising, harvesting or storing of products of the field or orchard; feeding, breeding or managing livestock or poultry; producing or storing feed for use in the production of livestock, including but not limited to cattle, calves, swine, hogs, goats, sheep, and rabbits or for use in the production of poultry, including but not limited to chickens, hens and turkeys; producing plants, trees, fowl, or animals; the production of aqua culture, horticultural, dairy, livestock, poultry, eggs and apiarian products; farm buildings and farm ponds;
 6. Forestry land management practices, including harvesting; provided, however, that when such exempt forestry practices cause or result in land-disturbing or other activities otherwise prohibited in a buffer, as established in paragraphs (15) and (16) of Section IV C. of this ordinance, no other land-disturbing activities, except for normal forest management practices, shall be allowed on the entire property upon which the forestry practices were conducted for a period of three (3) years after completion of such forestry practices;
 7. Any project carried out under the technical supervision of the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture;
 8. Any project involving less than one (1) acre of disturbed area; provided, however, that this exemption shall not apply to any land-disturbing activity within a larger common plan of development or sale with a planned disturbance of equal to or greater than one (1) acre or within 200 feet of the bank of any state waters, and for purposes of this paragraph, "State Waters" excludes channels and drainage ways which have water in them only during and immediately after rainfall events and intermittent streams which do not have water in them year-round; provided, however, that any person responsible for a project which involves less than one (1) acre, which involves land-disturbing activity, and which is within 200 feet of any such excluded channel or drainage way, must prevent sediment from moving beyond the boundaries of the property on which such project is located and provided, further, that nothing contained herein shall prevent the Local Issuing Authority from regulating any such project which is not specifically exempted by paragraphs 1, 2, 3, 4, 5, 6, 7, 9 or 10 of this section;
 9. Construction or maintenance projects, or both, undertaken or financed in whole or in part, or both, by the Department of Transportation, the Georgia Highway Authority, or the State Road and Tollway Authority; or any road construction or maintenance project, or both, undertaken by any county or municipality; provided, however, that construction or maintenance projects of the Department of Transportation or the State Road and Tollway Authority which disturb one or more contiguous acres of land shall be subject to provisions of O.C.G.A. 12-7-7.1; except where the Department of Transportation, the Georgia Highway Authority, or the State Road and Tollway Authority is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case a copy of a notice of intent under the state

general permit shall be submitted to the Local Issuing Authority, the Local Issuing Authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders;

10. Any land-disturbing activities conducted 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 O.C.G.A. 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power; except where an 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 O.C.G.A. 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case the Local Issuing Authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders; and
11. Any public water system reservoir.

**SECTION IV
MINIMUM REQUIREMENTS FOR
EROSION, SEDIMENTATION AND
POLLUTION CONTROL USING BEST
MANAGEMENT PRACTICES**

A. GENERAL PROVISIONS

Excessive soil erosion and resulting sedimentation can take place during land-disturbing activities if requirements of the ordinance and the NPDES General Permit are not met. Therefore, plans for those land-disturbing activities which are not exempted by this ordinance shall contain provisions for application of soil erosion, sedimentation and pollution control measures and practices. The provisions shall be incorporated into the erosion, sedimentation and pollution control plans. Soil erosion, sedimentation and pollution control measures and practices shall conform to the minimum requirements of Section IV B. & C. of this ordinance. The application of measures and practices shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion, sedimentation and pollution during all stages of any land-disturbing activity in accordance with requirements of this ordinance and the NPDES General Permit.

B. MINIMUM REQUIREMENTS/ BMPs

1. Best management practices as set forth in Section IV B. & C. of this ordinance shall be required for all land-disturbing activities. Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with paragraph (2) of this subsection or any substantially similar terms contained in a permit for the discharge of storm water issued pursuant to subsection (f) of O.C.G.A. 12-5-30, the "Georgia Water Quality Control Act". As used in this subsection the terms "proper design" and "properly designed" mean designed in accordance with the hydraulic design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" specified in O.C.G.A. 12-7-6 subsection (b).
2. A discharge of storm water runoff from disturbed areas where best management practices have not been

- properly designed, installed, and maintained shall constitute a separate violation of any land-disturbing permit issued by a local Issuing Authority or of any state general permit issued by the Division pursuant to subsection (f) of O.C.G.A. 12-5-30, the "Georgia Water Quality Control Act", for each day on which such discharge results in the turbidity of receiving waters being increased by more than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries or by more than ten (10) nephelometric turbidity units for waters classified as trout waters. The turbidity of the receiving waters shall be measured in accordance with guidelines to be issued by the Director. This paragraph shall not apply to any land disturbance associated with the construction of single family homes which are not part of a larger common plan of development or sale unless the planned disturbance for such construction is equal to or greater than five (5) acres.
3. Failure to properly design, install, or maintain best management practices shall constitute a violation of any land-disturbing permit issued by a Local Issuing Authority or of any state general permit issued by the Division pursuant to subsection (f) of Code Section 12-5-30, the "Georgia Water Quality Control Act", for each day on which such failure occurs.
 4. The Director may require, in accordance with regulations adopted by the Board, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land disturbing activities occur.
 5. The LIA may set more stringent buffer requirements than stated in C.15,16 and 17, in light of O.C.G.A. § 12-7-6 (c).
- C. The rules and regulations, ordinances, or resolutions adopted pursuant to O.C.G.A. 12-7-1 et. seq. for the purpose of governing land-disturbing activities shall require, as a minimum, protections at least as stringent as the state general permit; and 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* published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:
1. Stripping of vegetation, regrading and other development activities shall be conducted in a manner so as to minimize erosion;
 2. Cut-fill operations must be kept to a minimum;
 3. Development plans must conform to topography and soil type so as to create the lowest practicable erosion potential;
 4. Whenever feasible, natural vegetation shall be retained, protected and supplemented;
 5. The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum;
 6. Disturbed soil shall be stabilized as quickly as practicable;
 7. Temporary vegetation or mulching shall be employed to protect exposed critical areas during development;
 8. Permanent vegetation and structural erosion control practices shall be installed as soon as practicable;
 9. To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of O.C.G.A. 12-7-1 et. seq.;
 10. Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping of fills;
 11. Cuts and fills may not endanger adjoining property;
 12. Fills may not encroach upon natural watercourses or constructed channels in

a manner so as to adversely affect other property owners;

13. Grading equipment must cross flowing streams by means of bridges or culverts except when such methods are not feasible, provided, in any case, that such crossings are kept to a minimum;
14. Land-disturbing activity plans for erosion, sedimentation and pollution control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on-site or preclude sedimentation of adjacent waters beyond the levels specified in Section IV B. 2. of this ordinance;
15. Except as provided in paragraph (16) and (17) of this subsection, there is established a 25 foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director determines to allow a variance that is at least as protective of natural resources and the environment, where otherwise allowed by the Director pursuant to O.C.G.A. 12-2-8, where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications, and are implemented; or where bulkheads and sea walls are installed to prevent shoreline erosion on Lake Oconee and Lake Sinclair; or along any ephemeral stream. As used in this provision, the term 'ephemeral stream' means a stream: that under normal circumstances has water flowing only during and for a short duration after precipitation events; that has the channel located above the ground-water table year round; for which ground water is not a source of water; and for which runoff from precipitation is the primary source of water flow, Unless exempted as along an ephemeral stream, the buffers of at least 25 feet established pursuant to part 6 of Article 5, Chapter 5

of Title 12, the "Georgia Water Quality Control Act", shall remain in force unless a variance is granted by the Director as provided in this paragraph. The following requirements shall apply to any such buffer:

- a. No land-disturbing 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. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; 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 as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; and
 - b. The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented: (i) Stream crossings for water lines; or (ii) Stream crossings for sewer lines; and
16. There is established a 50 foot buffer as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any

state waters classified as "trout streams" pursuant to Article 2 of Chapter 5 of Title 12, the "Georgia Water Quality Control Act", except where a roadway drainage structure must be constructed ; provided, however, that small springs and streams classified as trout streams which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the landowner, pursuant to the terms of a rule providing for a general variance promulgated by the Board, so long as any such pipe stops short of the downstream landowner's property and the landowner complies with the buffer requirement for any adjacent trout streams. The Director may grant a variance from such buffer to allow land-disturbing activity, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. The following requirements shall apply to such buffer:

- a. No land-disturbing 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. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed: 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 as long as protective vegetative cover remains to protect

water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; and

- b. The buffer shall not apply to the following land-disturbing activities, provided that they occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream; cause a width of disturbance of not more than 50 feet within the buffer; and adequate erosion control measures are incorporated into the project plans and specifications and are implemented: (i) Stream crossings for water lines; or (ii) Stream crossings for sewer lines; and
17. There is established a 25 foot buffer along coastal marshlands, as measured horizontally from the coastal marshland-upland interface, as determined in accordance with Chapter 5 of Title 12 of this title, 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, where otherwise allowed by the director pursuant to Code Section 12-2-8, where an alteration within the buffer area has been authorized pursuant to Code Section 12-5-286, 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, where a drainage structure or roadway drainage structure is constructed or maintained;

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, 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, however, that adequate erosion control measures are incorporated into the project plans and specifications and such measures are fully implemented. For the purposes of this paragraph maintenance shall be defined as 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 and serviceable shall be defined as usable in its current state or with minor maintenance but not so degraded as to essentially require reconstruction.

- a. No land-disturbing 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. Once the final stabilization of the site is achieved, a buffer may be

thinned or trimmed of vegetation as 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 as long as protective vegetative cover remains to protect water quality and aquatic habitat; and

- b. The buffer 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.
- c. The buffer shall not apply to 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 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.
- d. Activities where the area within the

buffer is not more than 500 square feet or 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 are deemed to have an approved buffer variance by rule. Bank stabilization structures are not eligible for coverage under the variance by rule and notification shall be made to the Division at least 14 days prior to the commencement of land disturbing activities.

- D. Nothing contained in O.C.G.A. 12-7-1 et. seq. shall prevent any Local Issuing Authority from adopting rules and regulations, ordinances, or resolutions which contain stream buffer requirements that exceed the minimum requirements in Section IV B. & C. of this ordinance.
- E. The fact that land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this ordinance or the terms of the permit.

SECTION V APPLICATION/PERMIT PROCESS

A. GENERAL

The property owner, developer and designated planners and engineers shall design and review before submittal the general development plans. The Local Issuing Authority shall review the tract to be developed and the area surrounding it. They shall consult the zoning ordinance, storm water management ordinance, subdivision ordinance, flood damage prevention ordinance, this ordinance, and any other ordinances, rules, regulations or permits, which regulate the development of land within the jurisdictional boundaries of the Local Issuing Authority. However, the owner and/or operator are the only parties who may obtain a permit.

B. APPLICATION REQUIREMENTS

- 1. No person shall conduct any land-disturbing activity within the jurisdictional boundaries of _____ without first obtaining a permit from the

_____ to perform such activity and providing a copy of Notice of Intent submitted to EPD if applicable.

- 2. The application for a permit shall be submitted to the _____ and must include the applicant's erosion, sedimentation and pollution control plan with supporting data, as necessary. Said plans shall include, as a minimum, the data specified in Section V C. of this ordinance. Erosion, sedimentation and pollution control plans, together with supporting data, must demonstrate affirmatively that the land disturbing activity proposed will be carried out in such a manner that the provisions of Section IV B. & C. of this ordinance will be met. Applications for a permit will not be accepted unless accompanied by _____ copies of the applicant's erosion, sedimentation and pollution control plans. All applications shall contain a certification stating that the plan preparer or the designee thereof visited the site prior to creation of the plan in accordance with EPD Rule 391-3-7-.10.
- 3. In addition to the local permitting fees, fees will also be assessed pursuant to paragraph (5) subsection (a) of O.C.G.A. 12-5-23, provided that such fees shall not exceed \$80.00 per acre of land-disturbing activity, and these fees shall be calculated and paid by the primary permittee as defined in the state general permit for each acre of land-disturbing activity included in the planned development or each phase of development. All applicable fees shall be paid prior to issuance of the land disturbance permit. In a jurisdiction that is certified pursuant to subsection (a) of O.C.G.A. 12-7-8 half of such fees levied shall be submitted to the Division; except that any and all fees due from an entity which is required to give notice pursuant to paragraph (9) or (10) of O.C.G.A. 12-7-17 shall be submitted in full to the Division, regardless of the existence of a Local Issuing Authority in the jurisdiction.

4. Immediately upon receipt of an application and plan for a permit, the Local Issuing Authority shall refer the application and plan to the District for its review and approval or disapproval concerning the adequacy of the erosion, sedimentation and pollution control plan. The District shall approve or disapprove a plan within 35 days of receipt. Failure of the District to act within 35 days shall be considered an approval of the pending plan. The results of the District review shall be forwarded to the Local Issuing Authority. No permit will be issued unless the plan has been approved by the District, and any variances required by Section IV C. 15, 16 and 17 have been obtained, all fees have been paid, and bonding, if required as per Section V B.6., have been obtained. Such review will not be required if the Local Issuing Authority and the District have entered into an agreement which allows the Local Issuing Authority to conduct such review and approval of the plan without referring the application and plan to the District. The Local Issuing Authority with plan review authority shall approve or disapprove a revised Plan submittal within 35 days of receipt. Failure of the Local Issuing Authority with plan review authority to act within 35 days shall be considered an approval of the revised Plan submittal.
5. If a permit applicant has had two or more violations of previous permits, this ordinance section, or the Erosion and Sedimentation Act, as amended, within three years prior to the date of filing the application under consideration, the Local Issuing Authority may deny the permit application.
6. The Local Issuing Authority may require the permit applicant to post a bond in the form of government security, cash, irrevocable letter of credit, or any combination thereof up to, but not exceeding, \$3,000.00 per acre or fraction thereof of the proposed land-disturbing activity, prior to issuing the permit. If the applicant does not comply

with this section or with the conditions of the permit after issuance, the Local Issuing Authority may call the bond or any part thereof to be forfeited and may use the proceeds to hire a contractor to stabilize the site of the land-disturbing activity and bring it into compliance.

These provisions shall not apply unless there is in effect an ordinance or statute specifically providing for hearing and judicial review of any determination or order of the Local Issuing Authority with respect to alleged permit violations.

C. PLAN REQUIREMENTS

1. Plans must be prepared to meet the minimum requirements as contained in Section IV B. & C. of this ordinance, or through the use of more stringent, alternate design criteria which conform to sound conservation and engineering practices. The *Manual for Erosion and Sediment Control in Georgia* is hereby incorporated by reference into this ordinance. The plan for the land-disturbing activity shall consider the interrelationship of the soil types, geological and hydrological characteristics, topography, watershed, vegetation, proposed permanent structures including roadways, constructed waterways, sediment control and storm water management facilities, local ordinances and State laws. Maps, drawings and supportive computations shall bear the signature and seal of the certified design professional. Persons involved in land development design, review, permitting, construction, monitoring, or inspections or any land disturbing activity shall meet the education and training certification requirements, dependent on his or her level of involvement with the process, as developed by the Commission and in consultation with the Division and the Stakeholder Advisory Board created pursuant to O.C.G.A. 12-7-20.
2. Data Required for Site Plan shall include all the information required from the appropriate Erosion, Sedimentation and Pollution Control Plan Review Checklist

established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.

D. PERMITS

1. Permits shall be issued or denied as soon as practicable but in any event not later than forty-five (45) days after receipt by the Local Issuing Authority of a completed application, providing variances and bonding are obtained, where necessary and all applicable fees have been paid prior to permit issuance. The permit shall include conditions under which the activity may be undertaken.
2. No permit shall be issued by the Local Issuing Authority unless the erosion, sedimentation and pollution control plan has been approved by the District and the Local Issuing Authority has affirmatively determined that the plan is in compliance with this ordinance, any variances required by Section IV C. 15, 16 and 17 are obtained, bonding requirements, if necessary, as per Section V B. 6. are met and all ordinances and rules and regulations in effect within the jurisdictional boundaries of the Local Issuing Authority are met. If the permit is denied, the reason for denial shall be furnished to the applicant.
3. Any land-disturbing activities by a local issuing authority shall be subject to the same requirements of this ordinance, and any other ordinances relating to land development, as are applied to private persons and the division shall enforce such requirements upon the local issuing authority.
4. If the tract is to be developed in phases, then a separate permit shall be required for each phase.
5. The permit may be suspended, revoked, or modified by the Local Issuing Authority, as to all or any portion of the land affected by the plan, upon finding that the holder or his successor in the title is not in compliance with the approved erosion and sedimentation control plan or that the holder or his successor in title is in violation of this

ordinance. A holder of a permit shall notify any successor in title to him as to all or any portion of the land affected by the approved plan of the conditions contained in the permit.

6. The LIA may reject a permit application if the applicant has had two or more violations of previous permits or the Erosion and Sedimentation Act permit requirements within three years prior to the date of the application, in light of O.C.G.A. 12-7-7 (f) (1).

SECTION VI
INSPECTION AND ENFORCEMENT

- A. The _____ will periodically inspect the sites of land-disturbing activities for which permits have been issued to determine if the activities are being conducted in accordance with the plan and if the measures required in the plan are effective in controlling erosion and sedimentation. Also, the Local Issuing Authority shall regulate primary, secondary and tertiary permittees as such terms are defined in the state general permit. Primary permittees shall be responsible for installation and maintenance of best management practices where the primary permittee is conducting land-disturbing activities. Secondary permittees shall be responsible for installation and maintenance of best management practices where the secondary permittee is conducting land-disturbing activities. Tertiary permittees shall be responsible for installation and maintenance where the tertiary permittee is conducting land-disturbing activities. If, through inspection, it is deemed that a person engaged in land-disturbing activities as defined herein has failed to comply with the approved plan, with permit conditions, or with the provisions of this ordinance, a written notice to comply shall be served upon that person. The notice shall set forth the measures necessary to achieve compliance and shall state the time within

which such measures must be completed. If the person engaged in the land-disturbing activity fails to comply within the time specified, he shall be deemed in violation of this ordinance.

- B. The Local Issuing Authority must amend its ordinances to the extent appropriate within twelve (12) months of any amendments to the Erosion and Sedimentation Act of 1975.
- C. The _____ shall have the power to conduct such investigations as it may reasonably deem necessary to carry out duties as prescribed in this ordinance, and for this purpose to enter at reasonable times upon any property, public or private, for the purpose of investigation and inspecting the sites of land-disturbing activities.
- D. No person shall refuse entry or access to any authorized representative or agent of the Local Issuing Authority, the Commission, the District, or Division who requests entry for the purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out his official duties.
- E. The District or the Commission or both shall semi-annually review the actions of counties and municipalities which have been certified as Local Issuing Authorities pursuant to O.C.G.A. 12-7-8 (a). The District or the Commission or both may provide technical assistance to any county or municipality for the purpose of improving the effectiveness of the county's or municipality's erosion, sedimentation and pollution control program. The District or the Commission shall notify the Division and request investigation by the Division if any deficient or ineffective local program is found.
- F. The Division may periodically review the actions of counties and municipalities which have been certified as Local Issuing Authorities pursuant to Code Section 12-7-8 (a). Such review may include, but shall not be limited to, review of the administration and enforcement of a governing authority's ordinance and review of conformance with an agreement, if any, between the district and the governing authority. If such review indicates that the governing authority of any

county or municipality certified pursuant to O.C.G.A. 12-7-8 (a) has not administered or enforced its ordinances or has not conducted the program in accordance with any agreement entered into pursuant to O.C.G.A. 12-7-7 (e), the Division shall notify the governing authority of the county or municipality in writing. The governing authority of any county or municipality so notified shall have 90 days within which to take the necessary corrective action to retain certification as a Local Issuing Authority. If the county or municipality does not take necessary corrective action within 90 days after notification by the division, the division shall revoke the certification of the county or municipality as a Local Issuing Authority.

SECTION VII PENALTIES AND INCENTIVES

- A. **FAILURE TO OBTAIN A PERMIT FOR LAND-DISTURBING ACTIVITY**

If any person commences any land-disturbing activity requiring a land-disturbing permit as prescribed in this ordinance without first obtaining said permit, the person shall be subject to revocation of his business license, work permit or other authorization for the conduct of a business and associated work activities within the jurisdictional boundaries of the Local Issuing Authority.
- B. **STOP-WORK ORDERS**
 - 1. For the first and second violations of the provisions of this ordinance, the Director or the Local Issuing Authority shall issue a written warning to the violator. The violator shall have five days to correct the violation. If the violation is not corrected within five days, the Director or the Local Issuing Authority shall issue a stop-work order requiring that land-disturbing activities be stopped until necessary corrective action or mitigation has occurred; provided, however, that, if the violation presents an imminent threat to public health or waters of the state or if the land-disturbing activities are conducted without obtaining the necessary permit, the Director or the

Local Issuing Authority shall issue an immediate stop-work order in lieu of a warning;

2. For a third and each subsequent violation, the Director or the Local Issuing Authority shall issue an immediate stop-work order; and;
3. All stop-work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred.
4. When a violation in the form of taking action without a permit, failure to maintain a stream buffer, or significant amounts of sediment, as determined by the Local Issuing Authority or by the Director or his or her Designee, have been or are being discharged into state waters and where best management practices have not been properly designed, installed, and maintained, a stop work order shall be issued by the Local Issuing Authority or by the Director or his or her Designee. All such stop work orders shall be effective immediately upon issuance and shall be in effect until the necessary corrective action or mitigation has occurred. Such stop work orders shall apply to all land-disturbing activity on the site with the exception of the installation and maintenance of temporary or permanent erosion and sediment controls.

C. BOND FORFEITURE

If, through inspection, it is determined that a person engaged in land-disturbing activities has failed to comply with the approved plan, a written notice to comply shall be served upon that person. The notice shall set forth the measures necessary to achieve compliance with the plan and shall state the time within which such measures must be completed. If the person engaged in the land-disturbing activity fails to comply within the time specified, he shall be deemed in violation of this ordinance and, in addition to other penalties, shall be deemed to have forfeited his performance bond, if required to post one under the provisions of Section V B. 6. The Local

Issuing Authority may call the bond or any part thereof to be forfeited and may use the proceeds to hire a contractor to stabilize the site of the land-disturbing activity and bring it into compliance.

D. MONETARY PENALTIES

1. Any person who violates any provisions of this ordinance, or any permit condition or limitation established pursuant to this ordinance, or who negligently or intentionally fails or refuses to comply with any final or emergency order of the Director issued as provided in this ordinance shall be liable for a civil penalty not to exceed \$2,500.00 per day. For the purpose of enforcing the provisions of this ordinance, notwithstanding any provisions in any City charter to the contrary, municipal courts shall be authorized to impose penalty not to exceed \$2,500.00 for each violation. Notwithstanding any limitation of law as to penalties which can be assessed for violations of county ordinances, any magistrate court or any other court of competent jurisdiction trying cases brought as violations of this ordinance under county ordinances approved under this ordinance shall be authorized to impose penalties for such violations not to exceed \$2,500.00 for each violation. Each day during which violation or failure or refusal to comply continues shall be a separate violation.

**SECTION VIII
EDUCATION AND
CERTIFICATION**

- A. Persons involved in land development design, review, permitting, construction, monitoring, or inspection or any land-disturbing activity shall meet the education and training certification requirements, dependent on their level of involvement with the process, as developed by the commission in consultation with the division and the stakeholder advisory board created pursuant to O.C.G.A. 12-7-20.
- B. For each site on which land-disturbing activity occurs, each entity or person acting

as either a primary, secondary, or tertiary permittee, as defined in the state general permit, shall have as a minimum one person who is in responsible charge of erosion and sedimentation control activities on behalf of said entity or person and meets the applicable education or training certification requirements developed by the Commission present on site whenever land-disturbing activities are conducted on that site. A project site shall herein be defined as any land-disturbance site or multiple sites within a larger common plan of development or sale permitted by an owner or operator for compliance with the state general permit.

- C. Persons or entities involved in projects not requiring a state general permit but otherwise requiring certified personnel on site may contract with certified persons to meet the requirements of this ordinance.
- D. If a state general permittee who has operational control of land-disturbing activities for a site has met the certification requirements of paragraph (1) of subsection (b) of O.C.G.A. 12-7-19, then any person or entity involved in land-disturbing activity at that site and operating in a subcontractor capacity for such permittee shall meet those educational requirements specified in paragraph (4) of subsection (b) of O.C.G.A. 12-7-19 and shall not be required to meet any educational requirements that exceed those specified in said paragraph.

**SECTION IX
ADMINISTRATIVE APPEAL
JUDICIAL REVIEW**

- A. **ADMINISTRATIVE REMEDIES**
The suspension, revocation, modification or grant with condition of a permit by the Local Issuing Authority upon finding that the holder is not in compliance with the approved erosion, sediment and pollution control plan; or that the holder is in violation of permit conditions; or that the holder is in violation of any ordinance; shall entitle the person submitting the plan or holding the permit to a hearing before the _____ within _____ days after receipt by the

Local Issuing Authority of written notice of appeal.

- B. **JUDICIAL REVIEW**
Any person, aggrieved by a decision or order of the Local Issuing Authority, after exhausting his administrative remedies, shall have the right to appeal denovo to the Superior Court of _____.

**SECTION X
EFFECTIVITY, VALIDITY
AND LIABILITY**

- A. **EFFECTIVITY**
This ordinance shall become effective on the _____ day of _____, 20__.
- B. **VALIDITY**
If any section, paragraph, clause, phrase, or provision of this ordinance shall be adjudged invalid or held unconstitutional, such decisions shall not affect the remaining portions of this ordinance.
- C. **LIABILITY**
 1. Neither the approval of a plan under the provisions of this ordinance, nor the compliance with provisions of this ordinance shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law nor impose any liability upon the Local Issuing Authority or District for damage to any person or property.
 2. The fact that a land-disturbing activity for which a permit has been issued results in injury to the property of another shall neither constitute proof of nor create a presumption of a violation of the standards provided for in this ordinance or the terms of the permit.
 3. No provision of this ordinance shall permit any persons to violate the Georgia Erosion and Sedimentation Act of 1975, the Georgia Water Quality Control Act or the rules and regulations promulgated and approved thereunder or pollute any Waters of the State as defined thereby.

Revised June 2016

ATTEST:

Signature

Signature

Insert Yellow Sheet

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Soil & Water Conservation District

Erosion, Sedimentation, and Pollution Control Activities Semi-Annual Report January 1 - June 30

Plan Review Summary

1 ES&PC Plan Reviewers

- A. Total number of ES&PC Plan reviewers employed by LIA. _____
- B. Total number of ES&PC Plan reviewers employed by LIA that are GSWCC Level II Certified. _____

2 ES&PC Plans Reviewed

- A. Total number of ES&PC Plans reviewed for initial submittals. _____
- B. Average turnaround time for review of initial ES&PC Plans. _____
- C. Total number of ES&PC Plans reviewed that were revised and re-submitted. _____
- D. Average turnaround time for review of revised plans that were re-submitted. _____
- E. Total number of ES&PC Plans that were denied and sent back for revision. _____
- F. Total number of ES&PC Plans approved. _____

Permitting Summary

1 Permits Issued

- A. Total number of Land Disturbance Activity Permits issued by the LIA for Primary Permittees of Infrastructure Construction Projects. _____
- B. Total number of Land Disturbance Activity Permits issued by the LIA for Primary Permittees of Stand Alone Construction Projects. _____
- C. Total number of Land Disturbance Activity Permits issued by the LIA for Primary Permittees of Common Development Construction Projects. _____
- D. Total number of Land Disturbance Activity Permits issued by the LIA for Secondary Permittees of Common Development Construction Projects. _____
- E. Total number of Land Disturbance Activity Permits issued by the LIA for Tertiary Permittees of Common Development Construction Projects. _____
- F. Total number of Land Disturbance Activity Permits issued by the LIA. _____

2 Acres Disturbed

- A. Total number of disturbed acres permitted within the LIA's jurisdiction _____

Inspection Summary

1 Inspectors

- A. Total number of ES&PC inspectors employed by the LIA. _____

B. Total number of ES&PC inspectors employed by the LIA that are GSWCC Level 1B certified. _____

2 Site Inspections

A. Total number of ES&PC inspections performed on permitted infrastructure projects. _____

B. Total number of ES&PC inspections performed on permitted stand alone projects. _____

C. Total number of ES&PC inspections performed on permitted common development projects for primary Permittees. _____

D. Total number of ES&PC inspections performed on permitted common development projects for secondary Permittees. _____

E. Total number of ES&PC inspections performed on permitted common development projects for tertiary Permittees. _____

F. Total number of ES&PC inspections performed on permitted projects by the LIA. _____

Enforcement Summary

1 Non-Compliance

A. Total number of ES&PC inspections resulting in a Notice of Violation or Notice to Comply. _____

B. Total number of ES&PC inspections resulting in a Stop-Work Order. _____

C. Total number of Land Disturbance Activities issued a citation for ES&PC non-compliance. _____

D. Total amount of fines collected for ES&PC non-compliance. _____

Complaint Summary

1 Complaints Received by the LIA

A. Total number of ES&PC complaints received by the LIA. _____

B. Total number of ES&PC complaints received by the LIA that were resolved. _____

C. Average amount of time taken by the LIA to resolve ES&PC complaints. _____

D. Total number of ES&PC complaints referred to EPD that the LIA was not able to resolve. _____

"I certify that the above information provided is, to the best of my knowledge and belief, true, accurate, and complete."

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Name

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Contact Phone Number

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Contact E-mail Address

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Title

Soil & Water Conservation District

Erosion, Sedimentation and Pollution Control Activities Semi-Annual Report July 1 - December 31

Plan Review Summary

1 ES&PC Plan Reviewers

- A. Total number of ES&PC Plan reviewers employed by LIA. _____
- B. Total number of ES&PC Plan reviewers employed by LIA that are GSWCC Level II Certified. _____

2 ES&PC Plans Reviewed

- A. Total number of ES&PC Plans reviewed for initial submittals. _____
- B. Average turnaround time for review of initial ES&PC Plans. _____
- C. Total number of ES&PC Plans reviewed that were revised and re-submitted. _____
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- A. Total number of disturbed acres permitted within the LIA's jurisdiction _____

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2 Site Inspections

- A. Total number of ES&PC inspections performed on permitted infrastructure projects. _____
- B. Total number of ES&PC inspections performed on permitted stand alone projects. _____
- C. Total number of ES&PC inspections performed on permitted common development projects for primary Permittees. _____
- D. Total number of ES&PC inspections performed on permitted common development projects for secondary Permittees. _____
- E. Total number of ES&PC inspections performed on permitted common development projects for tertiary Permittees. _____
- F. Total number of ES&PC inspections performed on permitted projects by the LIA. _____

Enforcement Summary

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- A. Total number of ES&PC inspections resulting in a Notice of Violation or Notice to Comply. _____
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Complaint Summary

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- A. Total number of ES&PC complaints received by the LIA. _____
- B. Total number of ES&PC complaints received by the LIA that were resolved. _____
- C. Average amount of time taken by the LIA to resolve ES&PC complaints. _____
- D. Total number of ES&PC complaints referred to EPD that the LIA was not able to resolve. _____

"I certify that the above information provided is, to the best of my knowledge and belief, true, accurate, and complete."

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Name

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Contact Phone Number

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Contact E-mail Address

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Title

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The Georgia Soil and Water Conservation Commission

MOA Concurrence Process

A memorandum of agreement (MOA) is an agreement between the local Soil and Water Conservation District (SWCD) and a Local Issuing Authority (LIA), with concurrence from the Georgia Soil and Water Conservation Commission (GSWCC), to allow the LIA to conduct its own technical review and approval of ES&PC plans. It is recommended that this process be communicated with the SWCDs when the initial request is made by the LIA.

GSWCC Concurrence Process

(See MOA worksheet)

- 1. Overviews** – To be eligible for consideration the LIA will need to have had two consecutive passing overviews (overviews should occur at least 6 months apart). The second overview should have been conducted within 1 calendar year of applying for an MOA.
 - The overview report should rate the effectiveness of the LIA's program based on program administration/record keeping, qualifications and training of ES&PC staff, complaint resolution, inspection frequency, level of enforcement and site conditions.
 - The overview reports should not raise any red flags (i.e. relying solely on the design professional who prepares the plan to make state waters determinations).
- 2. Six Month Co-plan Review Period*** - During the co-plan review period the following should occur:
 - The LIA receives the ES&PC plan. The individual(s) that will be responsible for reviewing plans will conduct an initial plan review using the appropriate checklist.
 - The LIA will then submit the plan to the SWCD with their completed checklist and their recommendation to approve or deny the plan.
 - GSWCC/NRCS staff will conduct a technical review and recommend the plan be approved/denied by the SWCD for official ratification. If additional comments are made, they will be forwarded to the LIA.
- 3. MOA Worksheet** -The Regional Representative must submit the MOA worksheet and supporting documentation to the Urban Program for review.
- 4. Urban Program Technical Review** - GSWCC's Urban Program will use worksheet, supporting documentation and the GSWCC/NRCS reviewer's recommendation to determine whether or not the LIA has demonstrated their ability to conduct quality ES&PC plan reviews. Technical staff will forward recommendation to the GSWCC Board to approve, deny, extend or add restrictive language to the MOA.
- 5. MOA Written and Signed** - It is recommended that the MOA is not signed by any party until the co-plan review period and the Urban Program technical review has ended. Once the co-plan review period and the Urban Program technical review have ended the MOA language should be drafted and signed by the SWCD and LIA, then forwarded to the GSWCC Board for concurrence. If the SWCD alters the standard MOA, Regional Representatives should notify the Urban Program of the changes before the MOA is signed by any party.

Once signed by LIA and SWCD, the Regional Representative needs to contact Urban Program in advance to ensure the MOA is placed on the GSWCC Board agenda (recommend at least 1 month). Three signed and notarized copies of the MOA should be forwarded to GSWCC Athens office before the GSWCC Board meeting

A signed and notarized copy of the MOA will be sent to the SWCD, LIA and GSWCC.

* If an inadequate number of plans have been submitted during the co-plan review period, the co-plan review period needs to be extended until there have been enough plans submitted for the reviewer to make a sound recommendation.

Insert Tab 6

Stormwater Management

Back of Tab

STORMWATER MANAGEMENT

Green Infrastructure



Level 1B: Advanced Fundamentals
Effective August 2018



1

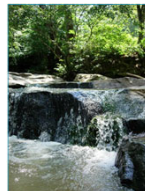
Stormwater Management

- » Purpose
- History
- Impact
- Pollutants
- Blue Book
- Green Infrastructure

2

Stormwater Management

- ▶ Stormwater is
 - Water that does not soak into the ground
 - Runoff that can carry pollutants



3

Stormwater Management



- ▶ Why manage stormwater?
 - To mimic natural hydrology
 - To reduce physical, chemical and biological degradation of streams.
 - To meet local, state and federal requirements.
 - To allow for future growth & development

4

Stormwater Management

- ▶ Why is stormwater management so important?
 - From "River of Fire" to Clean Water Act
 - Cuyahoga River 1949-1969



5

Stormwater Management

- ▶ Stormwater is a leading cause of water quality impairment
 - Growth in Georgia
 - 2000 -2010 GA gained 1.5 million new residents (2010 Census Data)
 - 2010-2018: estimated 2.3 million new residents
 - Georgia State Water Plan
 - In all water planning regions, assessments identified water bodies that currently have poor water quality, often due to the pollutants carried by stormwater.
 - Actions are needed to protect or restore the water quality in these streams, rivers, lakes, and estuaries.

Highlights of Regional Water Planning 2009-2011

6

Stormwater Management

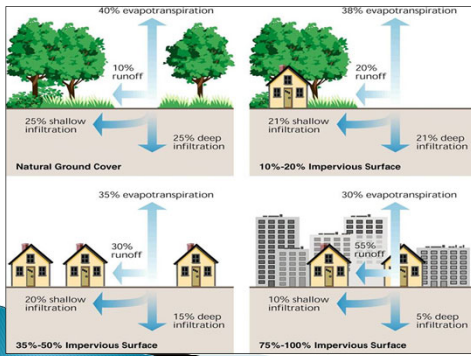
▶ What happens with increased impervious surfaces?

- Increased volume of runoff
- Increased peak discharge
- Increased velocities
- Shorter time to peak flow
- More frequent bank-full events
- Increased flooding
- Lower stream baseflow
- Less ground water recharge



Atlanta, Georgia
Courtesy: NCSU

Impervious Cover



Impacts of Development

- ▶ Tree canopy and topsoil removal
- ▶ Compacted soils
- ▶ Impervious surfaces prevent infiltration
- ▶ Concentrated runoff
- ▶ Flash flooding

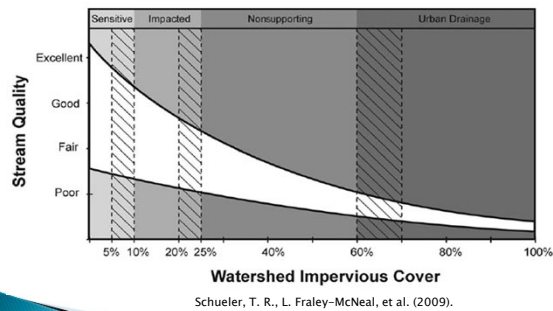


Impacts to the Environment

- ▶ Stream channel enlargement (down-cutting & widening - entrenchment)
- ▶ Reduced base flow in streams
- ▶ Loss of riparian vegetation (filtration, treatment, flood abatement)
- ▶ Floodplain degradation
- ▶ Degradation of habitat
- ▶ Degradation of water quality
- ▶ Decline in wildlife diversity & abundance

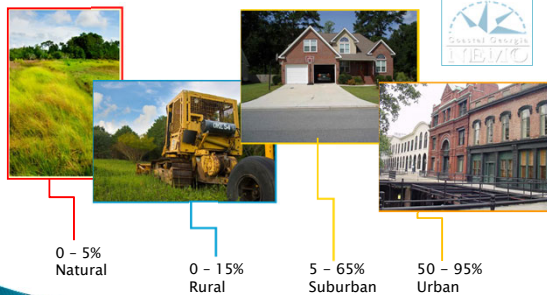
10

Reformulated Impervious Cover Model



11

Urban Growth & Impervious Surfaces



12

Stormwater Management

- ▶ Channel protection is very important due to impervious surfaces and uncontrolled runoff

Protect the integrity of streams, wetlands and other natural drainage features

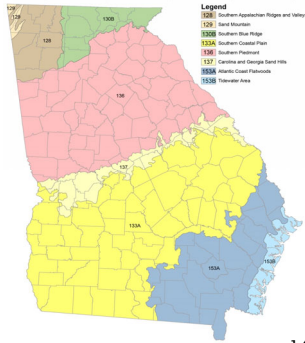


13

Pollutants

- ▶ Major Pollutant Categories
 - Nutrients
 - Pathogens
 - Sediment
 - Toxic Contaminants
 - Debris
 - Thermal Stress

These major pollutants can be found in all major land use areas.



14

Pollutants



15

Pollutants

- ▶ Nutrients
 - N & P have “escalated dramatically” in past 50 years
 - 50% of U.S. streams have medium to high N & P
 - 78% of assessed coastal waters exhibit eutrophication
 - Nitrate violations in drinking water have increased
 - USGS reported elevated N & P in shallow ground water
 - Algal blooms increasing (associated toxins)
 - N & P pollution expected to increase



March 16, 2011 EPA Memorandum
Nancy Stoner, Acting Assistant Administrator 16

The Pollutants in Polluted Runoff

➔ Sediment

- ▶ Toxic Contaminants
- ▶ Debris
- ▶ Thermal Stress
- ▶ Nutrients
- ▶ Pathogens



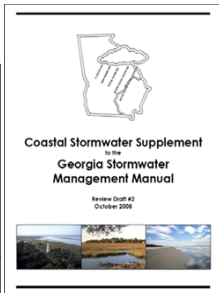
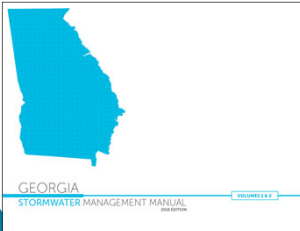
Photo courtesy of Weeks Bay Watershed Project

Sediment is eroded soil or sand which smothers aquatic habitat, carries pollutants, and reduces water clarity.

Sources: road sand, construction sites, agricultural fields, disturbed areas

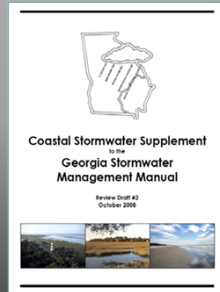
GA Stormwater Manual 2016

Guidance



GA Stormwater Manuals

- ▶ Coastal Supplement
 - Adaptations for coastal constraints
 - Additional content to promote natural resource protection
 - Includes stormwater runoff volume reduction (Green Infrastructure)
 - Provides better protection of water quality and aquatic and terrestrial resources



GA Stormwater Manuals

- ▶ Georgia Stormwater Manual (Blue Book)
 - New Recommended WQ Performance Standards
 - Given that an 80% TSS removal rate for the 1.2 inch rainfall event is the standard for addressing water quality, 100% TSS removal through volume reduction of the 1.0 inch rainfall event will address the same requirement. In another method of describing total TSS removal, 80% of 1.2 inches (0.96) approximately equates to 100% of 1.0 inches.

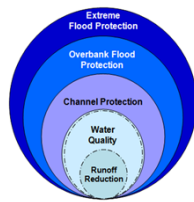


Figure 2.2.3-1 Representation of the Unified Stormwater Sizing Criteria

GA Stormwater Manuals

▶ New Recommended WQ Performance Standards



- Runoff Reduction (RRv) – i.e. Green Infrastructure
 - Runoff reduction practices should be sized and designed to retain the first 1.0 inch of rainfall on the site to the maximum extent practicable.
- Water Quality (WQv) – i.e. Stormwater Management Pond
 - Stormwater management systems should be designed to retain or treat the runoff from 85% of the storms that occur in an average year [1.2 inches], and reduce average annual post-development total suspended solids loadings by 80%.

GA Stormwater Manuals

- ▶ Runoff Reduction (RRv) Method
 - Reduces volume of runoff AND removes pollutants
 - Promotes 'Green Infrastructure' Techniques
 - Promotes infiltration rather than detention
 - Every land surface can act as stormwater control
 - Reduces amount of detention volume required
 - Limitations: highly compacted clay soils & contaminated sites



22

Green Infrastructure

- ▶ Many different terms
 - Low Impact Development, Green Infrastructure, & Runoff Reduction
- ▶ The U.S. EPA uses the term to mean an approach to managing stormwater
 - Utilizing natural systems or engineered systems that mimic natural landscapes to capture, cleanse and reduce stormwater runoff through plant, soil and microbial processes
 - Infiltration, evapotranspiration & reuse
 - Manages wet weather flow by managing rain water on the site where it falls



23

Green Infrastructure

Gray

vs.


Green




Slow, Infiltrate, and Clean Stormwater

24

Green Infrastructure

VIDEO 


hover cursor over slide to activate control bar at bottom



Credit: City of Atlanta

25

Smarter Stormwater Management





- ▶ Traditional approach
 - Convey stormwater quickly from site to waterbody or detention ponds
 - Manage peak flows for flood control, drainage and large scale downstream erosion.
- ▶ Green Infrastructure Approach
 - Encourage integration of green infrastructure in the design of the project
 - View stormwater as a resource
 - Slow down the flow, allow to infiltrate
 - Reduces pollutant loads to waterbodies
 - Obtain multiple community benefits

Credit: USEPA

26

Traditional vs. Green Infrastructure

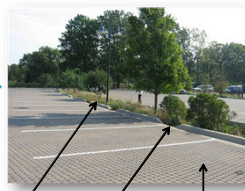
Traditional



Domed Landscape
Impermeable Surface

➡

Green Infrastructure

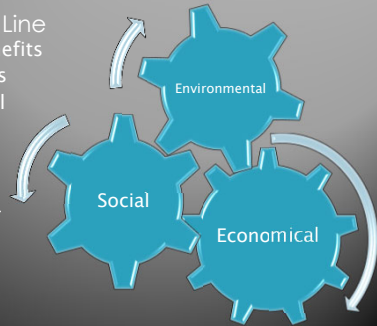


Bioretention
Curb Cut
Permeable Paving

27

Green Infrastructure

- ▶ Triple Bottom Line
 - Economic benefits
 - Social benefits
 - Environmental benefits
- ▶ Leads to Sustainable Development



28

Examples of RR/Green Infrastructure

- ▶ Soil Restoration
- ▶ Site Reforestation
- ▶ Green Roofs
- ▶ Permeable Pavements
- ▶ Undisturbed Pervious Areas (greenspace)
- ▶ Vegetated Filter Strips
- ▶ Downspout Disconnection
- ▶ Rain Gardens
- ▶ Stormwater Planters
- ▶ Dry wells
- ▶ Rainwater Harvesting
- ▶ Bioretention
- ▶ Infiltration Practices
- ▶ Dry Swales
- ▶ Grass Channels

29

Bioretention



Source: Breedlove Land Planning

30

Bioretention



Source: Breedlove Land Planning

31

Bioretention



Source: City of Atlanta

32

Bioswale



Source: City of Atlanta

33

Permeable Pavement (Pavers)

Impervious surface



34

Permeable Pavement (Porous Concrete)



35

"Green" Street

▶ Stormwater Planter and Permeable Pavers



36

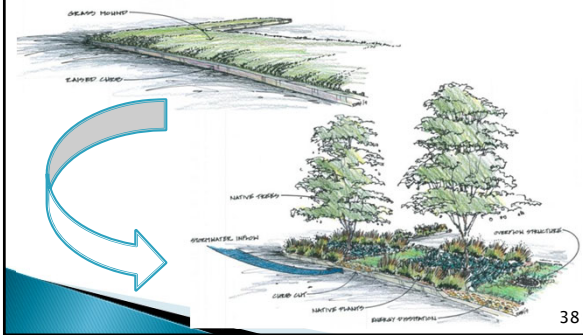
Green Roof



37

Retrofit Examples: Landscape Islands

Source: City of Atlanta GI for Small Commercial Development



Green Infrastructure Can Compete for Space

- ▶ Creativity with site layout
 - Upfront coordination between Civil, Landscape Architect, and Architect
- ▶ Dual purpose practices:
 - permeable pavement → parking lots
 - bioretention → landscape islands
 - green roof → typical roof
- ▶ Able to meet tree planting and runoff reduction requirements with one practice



Source: Kimley-Horn & Associates

39

Infiltration Practices

- ▶ Soils analysis should be conducted prior to design
 - Infiltration rates, high water table, bedrock, contaminated soils
- ▶ Piedmont soils (silt and clay) and compaction
 - Loosening compacted soils on redevelopment sites
 - Prevent compaction during construction
 - Innovative designs (upturned underdrain) to encourage surface drainage and promote infiltration in clay soils
- ▶ Erosion control
 - Phasing installation to prevent sedimentation issues
 - Installation of appropriate BMPs
 - Routing runoff around green infrastructure until final stabilization

40

Construction Practices

- ▶ Installation should occur after the contributing drainage areas to the infiltration practice area have been stabilized.
- ▶ If this is not feasible, stormwater flow should be diverted around the infiltration practice area.
- ▶ During excavation, heavy machinery shall not drive over exposed underlying soils.
- ▶ Excavate in dry conditions as much as practicable.
- ▶ Excavate final 9" to 12" with teeth of bucket (do not smear).

41

Construction Practices

- ▶ Loosen subgrade soils that have been compacted or smeared by raking, disking or tilling to a minimum depth of 6".
- ▶ Subsoils should be scarified (not compacted) prior to placement of clean, washed drainage stone.
- ▶ To prevent compaction within the limits of the basins, only hand laborers, light equipment with turf ties, or wide-track loaders should be used.
- ▶ Soil surfaces should be scarified to aerate and reduce soil compaction.

42

Erosion Control and Phasing

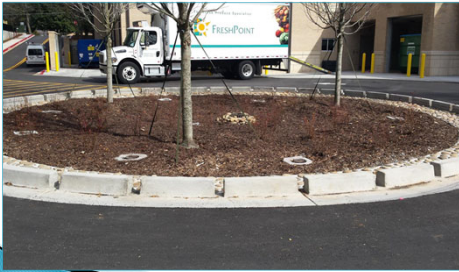
- ▶ After installation, no BMPs (Sd2s – Sediment Inlet Traps) were installed in front of curb cuts.



43

Erosion Control and Phasing

- ▶ Sediment removed and bioretention cell restored



44

Erosion Control and Phasing

- ▶ Small area of disturbed soil and concentrated flow can lead to major clogging



45

Erosion Control and Phasing

- ▶ Green Infrastructure should be installed once all surrounding areas are stabilized



46

Summary

- ▶ Development activities impact the volume and quality of stormwater runoff
- ▶ Stormwater management plays an important role in the overall health of our surface waters
- ▶ When properly designed, installed, and maintained, stormwater management practices, including green infrastructure, can mitigate the negative impacts of development
- ▶ Uncontrolled sedimentation can impact stormwater management practices both during and after construction

47

Questions?

» GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



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Insert Tab 7

Role of the Inspector

Back of Tab

ENFORCEMENT

Role of the Inspector



Level 1B: Advanced Fundamentals
Effective August 2018



1

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

2

Role of the Inspector

Duties that can be expected of an inspector

- ▶ Official Representative
- ▶ Fact Finder
- ▶ Provider of enforcement presence
- ▶ Enforcement case developer
- ▶ Technical educator
- ▶ Technical authority

3

Characteristics of an Exceptional Inspector

- ▶ Inquisitive
- ▶ Determined
- ▶ Professional appearance
- ▶ Integrity and impartiality
- ▶ Avoids conflicts of interest
- ▶ Maintains standards of conduct
- ▶ Consistently applies ordinance to all individuals

4

Certified Local Issuing Authorities

- ▶ 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

5

The Site Inspection

- » Do's & Don'ts
- Sequence
- What should be on site?
- Documentation

6

Before an Inspection

- ▶ Review the approved ES&PC Plan
 - Check contours, critical areas, delineated state waters
- ▶ Have a copy of the Plan with you or on site at all times
- ▶ Bring any inspection files or forms that will be needed
- ▶ Secure any additional equipment you may need, such as cameras, hardhats, safety vests, etc...
- ▶ Review all phases of the approved plan to understand the scope of the construction activity

7

Equipment

- ▶ 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
 - GSWCC Field Manual



8

1st Visit

- ▶ Present your credentials and provide contact info
- ▶ Walk the perimeter of the site
- ▶ Start from the lowest point of the site and work your way up
- ▶ Ensure that the initial sediment storage and perimeter control BMPs have been installed properly
- ▶ Document any observations along the way
 - Note date, time, and weather conditions

9

The ES&PC Plan

- ▶ 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

10

What to Inspect

- ▶ Construction exits
- ▶ Inspect discharge points & downstream areas for impact
- ▶ Walk the perimeter of the site
- ▶ Inspect active areas
- ▶ Inspect disturbed areas that are not currently being worked
- ▶ Inspect areas that have undergone final stabilization
- ▶ Take into account the entire site, phase of the Plan, and ensure that the project is reflective of the Plan

11

What Should Be On Site?

- ▶ 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

12

What Should Be On Site?

- ▶ 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

13

Documentation

- ▶ 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

14

Structural BMPs

- » What to look for?

15

Cd - Check Dam

▶ What to look for:

- Is the center of the check dam lower than the outer edges?
- Is the toe of the upstream dam at the same elevation as the top of the downstream dam?
- Does the channel flow exceed 2 cfs? If yes, then other BMPs are needed
- If Cd-Hb, has a splash pad been installed?



16

Co - Construction Exit

▶ 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?
- Is sediment tracked onto the roadway?



- No rock
- No geotextile
- Sediment tracked on road

17

Di - Diversion

▶ What to look for:

- Does the diversion have a ridge?
- Does the ridge have a minimum width of 4 feet?
- Does the diversion have an adequate outlet?



18

Dn - Downdrain Structure

- ▶ What to look for:
 - Is the structure properly staked?
 - If the slope is steeper than 2:1, are the drains placed diagonally across the slope?
 - Has outlet protection been installed?
 - Is the pipe diameter appropriate for the drainage area?



19

Fr - Filter Ring

- ▶ What to look for:
 - Is the filter ring constructed with the proper stone size?
 - Are other BMP control measures being used?
 - Is it a minimum of 2 feet tall?
 - Is the filter ring kept clear of trash & debris?



- Sediment overtopping
- Maintenance

20

Rt - Retrofit

- ▶ 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 1/3rd full?



- Not securely attached to structure
- Improper hole size & spacing

21

Sd1 – Sediment Barrier

- ▶ What to look for:
 - Has the appropriate type been installed?
 - Is the silt fence trenched in?
 - Is the barrier being cleaned out at ½ full?
 - Has the barrier been installed in an area of concentrated flow?
 - Is the barrier being maintained at 80% of its original height?



- Maintenance
- Not trenched in

22

Sd2 – Inlet Sediment Trap

- ▶ What to look for:
 - Is the trap self draining?
 - Does the installed practice match the need?
 - Is the trap being cleaned out at ½ the height?



- Maintenance
- Installation

23

Sd3 – Temporary Sediment Basin

- ▶ 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?
 - Is a trash rack in place?



- Proper construction

24

Sd4 - Temporary Sediment Trap

- ▶ What to look for:
 - Has the appropriate sediment trap been constructed? (A, B, or C)
 - Is the length:width ratio greater than 2:1?
 - Is the trap being maintained at 1/3 full?



• No outlet

• Proper installation



25

Sk - Floating Surface Skimmer

- ▶ What to look for:
 - Is the skimmer stuck in the mud?
 - Has the device been damaged or clogged?
 - Is the skimmer properly attached to the outlet structure?
 - Is a portion of the skimmer visible at all times?



• Damaged - needs repair

26

Tp - Topsoiling

- ▶ What to look for:
 - Has the stockpile been stabilized properly?
 - Is it contained by a sediment barrier?
 - Is a uniform application of 5" unsettled being used when applying topsoil?



• No sediment barrier
• Not stabilized

27

Vegetative Practices


» What to look for?

28

Bf - Buffer Zone

» What to look for:

- Is a buffer delineated on the Plan?
- Is there a buffer encroachment?
- In sensitive areas, have 2 rows Sd1-S been installed?



- Cleared entire buffer
- Not two rows Sd1-S

29

Ds1 - Mulching

» What to look for:

- Has mulch been applied to all disturbed areas within 14 days?
- Has it been applied to an appropriate depth?
- Has it been anchored?
- Is it older than 6 months?



- Not applied at proper depth
- Coverage not maintained

30

Ds2 - Temporary Seeding

- ▶ 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?



• Adequate stand present

31

Ds3 - Permanent Seeding

- ▶ 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?



• Uniformly covered

32

Du - Dust Control

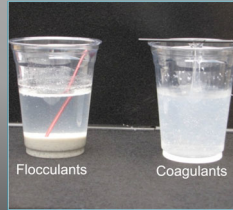
- ▶ What to look for:
 - Is there evidence of dust on site?
 - What control method is being used?
 - If using the spray method, has traffic flow been prohibited?



33

Fl-Co – Flocculants & Coagulants

- ▶ 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?



34

Ss – Slope Stabilization

- ▶ What to look for:
 - Have the blankets been rolled & anchored properly?
 - Does the Plan specify RECP or HECP?
 - Are there any failures, washouts, or dislocations?
 - Has HECP been applied per manufacturer's directions?



• Incorrect installation

35

Tac - Tackifiers

- ▶ What to look for:
 - What type of tackifier is being used?
 - Are only anionic forms being used?
 - Are tackified areas checked after rain events?
 - Have soil infiltration rates been reduced?



36

Enforcement


» Violations Interactions



37

Notice of Violation

- ▶ **First & Second Violation**
 - A written warning is issued to the permittee
 - The permittee shall have five (5) days to correct the violation
 - If the violation is not corrected within five (5) days, an immediate stop work shall be issued
- ▶ **Third Violation**
 - An immediate stop work order shall be issued



38

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

39

Interactions at the Site

- ▶ 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



40

Dealing with Difficult People

- ▶ 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

41

Key Steps

- ▶ 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

42

Key Steps

- ▶ 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

43

Key Steps

- ▶ 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

44

Key Steps

- ▶ 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

45

Key Steps

- ▶ Handle the problem
 - Be positive
 - Focus on the most feasible solution
 - Decide on a follow-up action to ensure the problem has been resolved

46

References

- ▶ Manual for Erosion and Sediment Control in Georgia
 - 2016 Edition - GSWCC
- ▶ NPDES Permits GAR100001,100002,100003
- ▶ Conducting Environmental Compliance Inspections: Inspector's Field Manual, International Edition
 - Office of Enforcement and Compliance Assurance - Environmental Protection Agency
- ▶ Florida Erosion and Sediment Control Inspector's Manual
 - Florida Department of Environmental Protection

47

Summary

- ▶ 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

48

Questions?

» GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
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Insert Tab 8

Agency Roles

Back of Tab

AGENCY ROLES

Local, State, & Federal



Level 1B: Advanced Fundamentals
Effective August 2018



1

Agencies Involved

- ▶ Local
 - Local Issuing Authorities (County/Municipality)
- ▶ State
 - Georgia Soil & Water Conservation Commission
 - Soil & Water Conservation Districts
 - Georgia Environmental Protection Division
- ▶ Federal
 - USDA – Natural Resources Conservation Service
 - U.S. Army Corps of Engineers
 - Environmental Protection Agency

2

Local Issuing Authorities

»

3

Local Issuing Authorities

Certified LIA

City or county has adopted an ordinance which is in compliance with the provisions of O.C.GA 12-7

City or county has inspection personnel, who are or will be certified inspectors (IB certified) in erosion and sediment control.

Local Issuing Authorities

County	Local Issuing Authority	LIA	SWCD
Appling	Baxley	Yes	Atamaha
Atkinson	Atkinson County	No	Satilla River
Atkinson	Pearson	Yes	Satilla River
Atkinson	Willacoochee	No	Satilla River
Baldwin	Baldwin County	Yes	Piedmont
Baldwin	Milledgeville	Yes	Piedmont
Banks	Banks County	Yes	Broad River
Banks	Homer	Yes	Broad River
Banks	Maysville	Yes	Broad River
Barrow	Auburn	Yes	Oconee River
Barrow	Barrow County	Yes	Oconee River
Barrow	Adairsville	Yes	Cocosa River
Barrow	Barrow County	Yes	Cocosa River
Barrow	Barrow County	Yes	Cocosa River
Barrow	Cartersville	Yes	Cocosa River
Barrow	Cartersville	Yes	Cocosa River
Barrow	Cartersville	Yes	Cocosa River
Barrow	Cartersville	Yes	Cocosa River
Barrow	Emmonson	Yes	Cocosa River
Barrow	Euharlee	Yes	Cocosa River

Please refer to the "Resource Information" in the back of this section for a complete list of all Local Issuing Authorities in the State of Georgia

LIA Role in E&SC in Georgia

- ▶ Process LDA applications
- ▶ Forward ES&PC plans to SWCD for review
- ▶ Issue permits
- ▶ Maintain list of active permits
- ▶ Conduct inspections
- ▶ Enforce ordinance
- ▶ Collect fees
- ▶ Handle E&S complaints

Georgia Soil & Water
Conservation Commission

» 

7

GSWCC

The **Georgia Soil & Water Conservation Commission** is a non-regulatory agency charged by law to provide information, education and technical assistance to Georgia citizens to better protect the state's land and water resources

8

GSWCC

State Headquarters
4310 Lexington Road
Athens, GA 30605
(706) 552-4470

Education & Certification Program
(706) 552-4474
certification@gaswcc.ga.gov

Georgia Soil and Water Conservation Commission
www.gaswcc.ga.gov



- ★ Headquarters
4310 Lexington Rd
Athens, GA 30605
(706) 552-4470
- 1 Central Office
2000 Old US Hwy 208 Ste 100
Dublin, GA 31021
(706) 881-1120
- 2 Midland Office
127 Peachtree St
Milledgeville, GA 31021
(706) 791-4000
- 3 State Office
88 Avenue St
Macon, GA 31201
(706) 241-8000

Revised July 11, 2017

9

GSWCC Role in E&SC in Georgia

- ▶ Urban Water Resource Program
 - Certification Program
 - Course design and development w/ SAB
 - Administration of certification program
 - Offer training opportunities around the State
 - Audit approved trainers
 - Technical Program
 - Publication of Design and Field Manuals
 - Development and implementation of Plan Review Checklists
 - Provides technical assistance to SWCDs, other government agencies, various stakeholders
 - Technical review ES&PC Plans
 - Participant in Complaint Resolution Process

10

GSWCC role in E&SC in Georgia

- ▶ Rural Water Resources Program
 - Contact concerning any agricultural type E&SC complaints

11

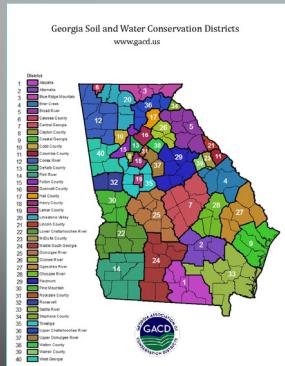
Soil & Water Conservation Districts



12

SWCD

- ▶ Created in 1937 by GA legislature
- ▶ There are 40 Soil & Water Conservation Districts in Georgia with 370 Supervisor positions
 - Each county has at least two supervisors
 - Supervisors are elected and appointed
 - Unpaid public servants



13

SWCD Role in E&SC in Georgia

- ▶ Approve/deny ES&PC Plans
- ▶ Participate in District Assessment Teams (DAT) and overview Local Issuing Authority programs
- ▶ Memorandums of Agreement with Local Issuing Authorities
- ▶ Participant in Conservation partnership

14

Georgia Environmental Protection Division




15

GA EPD

The **Environmental Protection Division** of the Georgia Department of Natural Resources is a state agency charged with protecting Georgia's air, land, and water resources through the authority of state and federal environmental statutes.

GA DNR
Environmental Protection Division
epd.georgia.gov



West Central District
2640 Northing Drive
Macon, GA 31204
(478) 735-6644

Mountain District
15151
4214 International
Parkway
Atlanta, GA 30334
(404) 362-3871

Northeast District
775 Gates School Road
Athens, GA 30605
(706) 369-4379

Mountain District
Cantonville
P.O. Box 2039
44 Center Road
Cantonville, GA 30149
(770) 382-4947

Southwest District
2024 Avenue Road
Albany, GA 31705
(229) 437-4144

Coastal District
404 Commerce Center Dr.
Brunswick, GA 31520
(912) 264-7584

East Central District
2102 Walker Way SW
Milledgeville, GA 31069
(706) 667-4343

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EPD Role in E&SC in Georgia

- ▶ Selective enforcement
- ▶ Certification/De-certification of Local Issuing Authorities
- ▶ Complaint Resolution
- ▶ State Waters determinations

USDA-Natural Resources Conservation Service

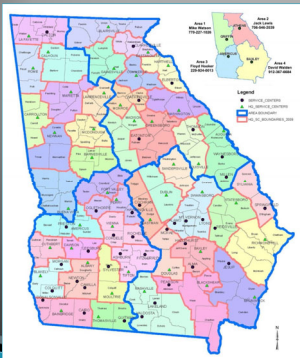


USDA-NRCS

The **Natural Resources Conservation Service** of the United States Department of Agriculture provides technical expertise and conservation planning for farmers, ranchers and forest landowners wanting to make conservation improvements to their land.

USDA-NRCS

NRCS also operates Service Centers across Georgia to meet the needs of each of Georgia's 159 counties.



Area 1 Griffin
201 W Solomon St
Griffin, GA 30223

Area 2 Athens
355 E Hancock Ave
Athens, GA 30601

Area 3 Americus
295 Morris Dr
Americus, GA 31719

Area 4 Baxley
239 NE Park Ave
Baxley, GA 31513

State Office
355 E Hancock Ave
Athens, GA 30601

NRCS Role in E&SC in Georgia

- ▶ Technical review of ES&PC plans
- ▶ Technical guidance and support as requested
- ▶ Participant in Conservation Partnership

22

U.S. Army Corps of Engineers



23

USACE

The Regulatory Program of the **United States Army Corps of Engineers** is committed to protecting the Nation's aquatic resources and navigation capacity, while allowing reasonable development through fair and balanced decisions.

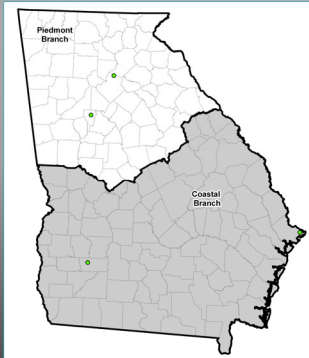
24

USACE

Savannah District
Regulatory Division
U.S. Army Corps of Engineers
ATTN: CESAS-RD
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3604

Piedmont Branch
U.S. Army Corps of Engineers
1590 Adamson Parkway
The Plaza, Suite 200
Morrow, GA 30260-1777

Coastal Branch
U.S. Army Corps of Engineers
ATTN: CESAS-RD-C
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3604



USACE Role in E&SC in Georgia

- ▶ Evaluate permit applications for construction activities that occur in the Nation's waters
- ▶ Jurisdiction
 - Section 10 - Rivers and Harbors Act of 1899
 - Regulates structures, or work in or affecting, navigable waters of the United States
 - Section 404 - Clean Water Act of 1972
 - Regulates discharges of dredged or fill material into wetlands and other waters of the United States

Environmental Protection Agency

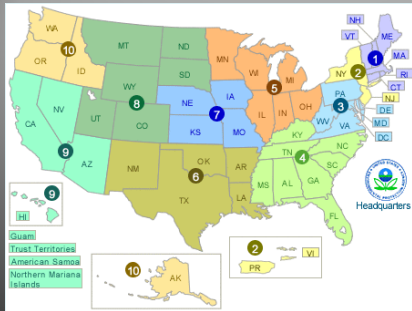


EPA

The **Environmental Protection Agency** leads the nation's environmental science, research, education and assessment efforts and protects Americans from significant risks to human health and the environment where they live, learn, and work

EPA

EPA Region 4 Office
61 Forsyth Street SW
Atlanta, GA 30303
(800) 241-1754



EPA Role in E&SC in Georgia

- ▶ Develops and enforces environmental regulations
- ▶ Offers financial assistance in the form of grants
- ▶ Performs environmental research
- ▶ Sponsors voluntary projects and programs
- ▶ Furthers environmental education
- ▶ Provides technical information

Additional Agencies

- ▶ Georgia Forestry Commission
 - Purpose is to minimize erosion and stream sedimentation from forestry practices
 - Accept E&SC complaints relating to logging/silviculture
- ▶ GA DNR Coastal Resources Division
 - Primary responsibility is managing Georgia's marshes, beaches, and marine fishery resources
 - Responsible for determining marsh jurisdictional lines relating to buffers



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Summary

- ▶ Local, State and Federal agencies are involved in erosion and sediment control regulation, enforcement and technical guidance
- ▶ Contact information for participating agencies available in "Resource Information" section of course notebook

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Questions?

- » GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



33

Insert Tab 9

Structural Measures

Back of Tab

BEST MANAGEMENT PRACTICES



Structural Measures

Level 1B: Advanced Fundamentals
Effective August 2018



The Manual for Erosion & Sediment Control in Georgia

- ▶ Also known as the "Manual" or "Green Book"
- ▶ Chapter 6, Section 3 contains standards for structural practices and provides instructions for the preparation of erosion and sediment control plans for land-disturbing activities.
- ▶ The current edition of the Manual can be found at: www.gaswcc.georgia.gov



Equivalent Product List

- ▶ The products and practices presented in this presentation 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.
- ▶ The current Equivalent BMP List can be found at: <http://gaswcc.georgia.gov/> under "Documents List"

Shall/Will, Should, and May

- ▶ **Shall** or **Will** – A mandatory condition. When certain requirements are described with the “shall” or “will” stipulations, it is mandatory that the requirements be met.
- ▶ **Should** – An advisory condition. Considered to be recommended but not mandatory
- ▶ **May** – A permissive condition. No requirement is intended.

4

Structural BMPs

▶▶	Cd Cd – Slide 6	Gr Gr – Slide 44	SpB SpB – Slide 100
	Ch Ch – Slide 14	Lv Lv – Slide 49	Sr Sr – Slide 103
	Co Co – Slide 18	Rd Rd – Slide 53	St St – Slide 107
	Cr Cr – Slide 21	Re Re – Slide 56	Su Su – Slide 110
	Dc Dc – Slide 24	Rt Rt – Slide 58	Tc Tc – Slide 115
	Di Di – Slide 27	Sd1 Sd1 – Slide 65	Tp Tp – Slide 117
	Dn1 Dn1 – Slide 31	Sd2 Sd2 – Slide 75	Tr Tr – Slide 120
	Dn2 Dn2 – Slide 36	Sd3 Sd3 – Slide 86	Wt Wt – Slide 122
	Fr Fr – Slide 39	Sd4 Sd4 – Slide 90	
	Ga Ga – Slide 42	Sk Sk – Slide 96	

5

Check Dam

Cd

- ▶ Definition
 - A temporary grade control structure, or dam constructed across a swale, drainage ditch, or area of concentrated flow.
- ▶ Purpose
 - Reduce velocity of storm water
 - Filter sediment
 - Stabilize the grade
- ▶ Not to be used in a live stream

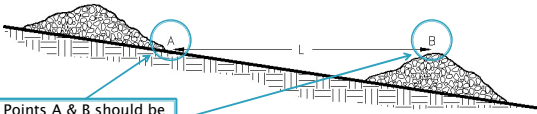
6

Check Dam

Cd

Installation Criteria

- Side slopes shall be 2:1 or flatter
- Drainage Area
 - (2) acres for Stone Check Dams
 - (1) acre for Straw-Bale & Compost Filter Sock Check Dams



Points A & B should be at the same elevation

7

Stone Check Dams

Cd

Installation Criteria

- The center of the check dam shall be at least 9" lower than the outer edges.
- Geotextile should be used as a separator between the stone and soil base
- Stone size shall be between 2"-10"
- The maximum spacing between dams should be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam
- Dam height should always be a maximum of 2 feet measured to the center of the check dam

8

Stone Check Dams

Cd-S



The center of the check dam is lower than the outer edges.

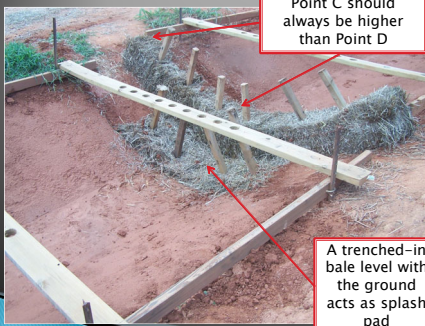
9

Straw-Bale Check Dams Cd-Hb

- ▶ Installation Criteria
 - Bales should be bound with wire or nylon string
 - The bales should be placed in rows with bale ends tightly abutting the adjacent bales
 - The bales in the upstream row should be buried at least 6" deep
 - The 2nd row of bales act as a splash pad and should be entrenched so that the wide side is level with the ground

10

Straw-Bale Check Dams Cd-Hb



11

Straw-Bale Check Dams Cd-Hb



hover cursor over slide to activate control bar at bottom



12

Compost Filter Sock

Cd-Fs

1 stake is placed at the center of the ditch/channel

Maximum staking depth is 18"

EXCESS SOCK MATERIAL TO BE DRAWN IN AND TIED OFF TO STAKE AT BOTH ENDS

COMPOST SOCKS SIZED TO SUIT CONDITIONS (SEE APPROVED LIST)

2' MAX.

2' MAX.

2" X 2" WOODEN STAKES OR #4 REBAR

BED/BANK JUNCTION

FLOW

The sock shall be at least 18" in diameter

Stakes should not be placed more than 2 ft. apart

13

Channel Stabilization

Ch

- ▶ Definition
 - Improving, constructing or stabilizing an open channel for water conveyance.
- ▶ Purpose
 - Prevent erosion and sediment deposition
 - Provide adequate capacity for flood water, drainage, or other water management practices
- ▶ This standard only applies to channels conveying intermittent flow, not a continuous, live stream.

14

Channel Stabilization

Ch

- ▶ Design Criteria
 - Category 1 (< 5 ft/sec)
 - Vegetated Lining - temporary erosion control blankets or sod shall be used to aid in the establishment of the vegetated lining.



15

Channel Stabilization

Ch

- ▶ Design Criteria
 - Category 2 (≥ 5 ft/sec but < 10 ft/sec)
 - Turf Reinforcement Matting (TRM) – a permanent geo-synthetic matting that is used to stabilize the soil while permanent vegetation is taking root.
 - Rock Riprap Lining



16

Channel Stabilization

Ch

- ▶ Design Criteria
 - Category 3 (≥ 10 ft/sec)
 - Concrete Lining
 - Grade Stabilization Structure – These structures are used where excessive grades are present or water is to be lowered structurally from one elevation or another.



17

Construction Exit

Co

- ▶ 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 rights-of-way by motor vehicles or by runoff.
- ▶ Required at all points of construction access

18

Construction Exit

Co

Installation Criteria

- Length = 50 ft.
- Width = 20 ft.
- Thickness = 6"
- Aggregate Size = 1.5"– 3.5"
- Geotextile shall be placed between the aggregate and the soil base
- When 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**

It is recommended the Co be excavated to a depth of 3" and be cleared of all vegetation and roots

19

Construction Exit

Co



20

Construction Road Stabilization

Cr

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 travel route for construction traffic and reduce erosion for the subsequent regrading of permanent roadbeds between time of initial grading and final stabilization.

21

Construction Road Stabilization Cr

- ▶ Design Criteria
 - The grades for a temporary road should not exceed 10% for lengths less than 200 ft.
 - Geotextile should be applied to the roadbed for additional stability
 - A 6" layer of coarse aggregate shall be applied immediately after grading
- Road Widths
 - One-way traffic - 14 ft.
 - Two-way traffic - 20 ft.
 - Two-way trailer traffic - 24 ft.

22

Construction Road Stabilization Cr



23

Stream Diversion Channel Dc

- ▶ Definition
 - A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed in the stream channel.
- ▶ Purpose
 - To protect the streambed from erosion and to allow work "in the dry".
- ▶ Shall only be used on flowing streams with a drainage area less than 1 square mile (640 acres)
- ▶ Stream buffer variance from the GA EPD may be required. All other appropriate agencies, including the Army Corps of Engineers, shall be contacted to ensure compliance.

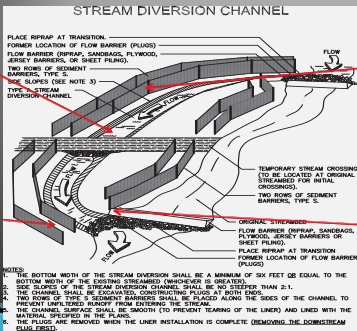
24

Stream Diversion Channel

Dc

Side slopes shall be no steeper than 2:1

The bottom width shall be a minimum of 6 feet or equal to the existing streambed



Diversion

Di

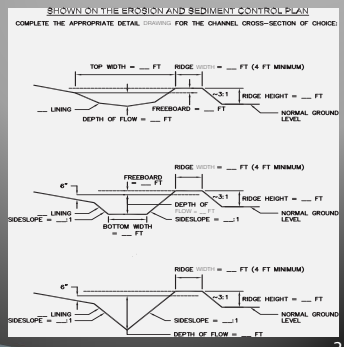
- ▶ Design Criteria
 - Ridge - shall be compacted and designed to have stable side slopes that are no steeper than 2:1.
 - Channel
 - On steeper slopes, narrow and deep channels may be required.
 - On gentle slopes, broad and shallow channels are usually applicable.
 - Outlet - Every diversion should have an adequate outlet.

28

Diversion

Di

- Parabolic
Recommended
- Trapezoidal
- Not Recommended
- Triangular



29

Diversion

Di



30

Temporary Downdrain Structure Dn1

- ▶ Definition
 - A temporary structure used to convey concentrated storm water runoff down the face of cut or fill slopes.
- ▶ Purpose
 - Safely convey storm water runoff from one elevation to another without causing slope erosion in order to allow the establishment of vegetation on the slope.
- ▶ Removed once the permanent storm water disposal system is in installed.

31

Temporary Downdrain Structure Dn1

- ▶ Design Criteria
 - Placement - Shall be located on undisturbed soil or well-compacted fill
 - Diameter - Shall provide sufficient capacity required to convey the maximum expected runoff expected during the life of the drain

Maximum Drainage Area (acre)	Pipe Diameter (Inches)
0.3	10
0.5	12
1.0	18

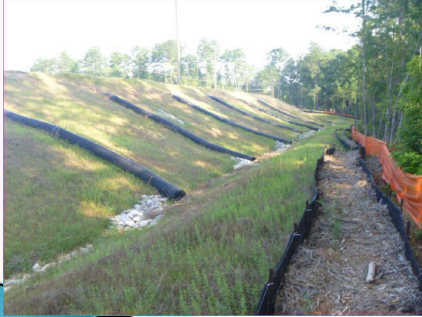
32

Temporary Downdrain Structure Dn1

- ▶ Installation Criteria
 - Install heavy duty, flexible materials such as non-perforated, corrugated plastic pipe or flexible tubing
 - Fill should be compacted around the inlet section to prevent the pipe from being washed out
 - Use grommets or stakes to anchor the pipe at intervals not to exceed 10 ft.
 - Ensure all pipe connections are watertight
 - Install a stabilized outlet with rock riprap

33

Temporary Downdrain Structure Dn1



34

Temporary Downdrain Structure Dn1

- ▶ For slopes steeper than 2:1, down drains should be placed diagonally across the slope, extending the drain beyond the toe of the slope. Curve the outlet uphill.



35

Permanent Downdrain Structure Dn2

- ▶ Definition
 - A permanent structure used to safely convey surface runoff from the top of a slope to the bottom of the slope.
- ▶ Purpose
 - Minimize erosion due to concentrated storm water runoff on cut or fill slopes .

36

Permanent Downdrain Structure Dn2

- ▶ Design Criteria
 - The following types may be used
 - Paved Flume
 - Pipe
 - Sectional
 - These structures should be designed by professionals familiar with these structures.
 - Flumes shall be adequately designed to safely convey the 25-year, 24-hour storm
 - Outlets must be stabilized in accordance with **St - Storm Drain Outlet Protection**

37

Permanent Downdrain Structure Dn2



38

Filter Ring Fr

- ▶ Definition
 - A temporary stone barrier constructed at storm drain inlets and pond outlets.
- ▶ Purpose
 - Reduce flow velocities
 - Prevent failure of other sediment control devices
 - Prevent sediment from leaving the site or enter drainage systems
- ▶ Shall be used in conjunction with other sediment control measures.

39

Filter Ring

Fr

- ▶ Design Criteria
 - Location
 - Shall surround all sides of the structure receiving runoff from the disturbed area and be placed no less than 4 ft. from the structure. When placed in front of a retrofit, it should be no less than 8-10 ft. from the retrofit.
 - Stone size
 - 3-5 inch stone for inlets with diameters <12 in
 - 10-15 inch stone for inlets with diameters >12 in
 - Height
 - No less than 2 ft. from grade
 - Structure is temporary and should be removed when the project is stabilized.

40

Filter Ring

Fr



41

Gabion

Ga

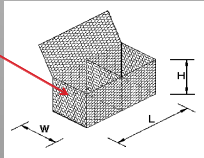

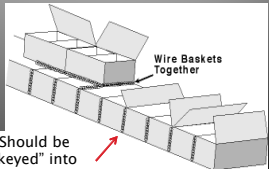
- ▶ Definition
 - Large, multi-celled, welded wire or rectangular wire mesh boxes
- ▶ Purpose
 - Used in the construction of erosion control structures, retaining walls, abutments, check dams, and channel revetments to stabilize steep or highly erosive slopes
- ▶ Should be prepared by a design professional familiar with the use of gabions.

42

Gabion Ga

Gabions are durable because they support plant growth that develops a living coating for the wire mesh and stone

Hand packing allows the complete filling of the basket

Wire Baskets Together

Should be "keyed" into the foundation

43

Grade Stabilization Structure Gr

- ▶ Definition
 - A structure used to stabilize the grade in a natural or artificial channel
- ▶ Purpose
 - Prevent the formation of gullies
 - Reduce erosion and sediment pollution
- ▶ Does not apply to sites where water is to be impounded
- ▶ Shall be placed on compacted earth-fill

44

Grade Stabilization Structure Gr

- ▶ Installation Criteria
 - Construct with concrete, rock, masonry, steel, aluminum or treated wood, or by soil bio-engineering methods
 - Place geotextile under the structure
 - Provide an adequate outlet for discharge
- ▶ 4 Types
 - Box Drop Inlet
 - Chute Spillway
 - Drop Inlet
 - Straight Drop

45

Level Spreader

Lv

- ▶ Definition
 - A storm flow outlet device constructed at zero grade across the slope
- ▶ Purpose
 - Dissipate storm flow energy by converting concentrated storm runoff into sheet flow
 - Discharge at a non-erosive velocity onto undisturbed areas stabilized by existing vegetation
- ▶ Must be constructed on undisturbed stabilized soil (not fill)

49

Level Spreader

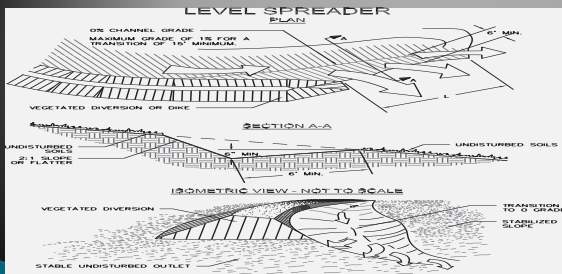
Lv

- ▶ Design Criteria
 - Length - Determined by estimating the peak flow from the 10-year, 24-hour storm
 - Width - Minimum of 6 ft.
 - The depth from the lip of the level spreader shall be a minimum of 6" and uniform across its length
 - The level lip shall transition to 0% grade and discharge onto undisturbed stabilized areas

50

Level Spreader

Lv



51

Level Spreader

Lv



52

Rock Filter Dam

Rd

- ▶ Definition
 - A temporary stone filter dam installed across a drainage-way or in conjunction with a temporary sediment trap
- ▶ Purpose
 - Serve as a sediment filtering device
 - Reduce the velocity of storm water in a channel
- ▶ For use in small channels that drain 50 acres or less
- ▶ Should be located as close to the source of sediment as possible

53

Rock Filter Dam

Rd

- ▶ Installation Criteria
 - Should be located as close to the source of sediment as possible
 - The center of the dam shall be at least 9" lower than the outer edges
 - Side slopes should be 2:1 or flatter
 - Minimum top width of 6'
 - Geotextile should be used as a separator between the stone and soil base
 - Stone size shall be determined by design criteria established in Appendix C

54

Rock Filter Dam

Rd



55

Retaining Wall

Re

- ▶ Definition
 - A wall constructed 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 the stabilization of cut or fill slopes where a stable slope is not attainable without the use of a wall
- ▶ Requires a specific design by a design professional

56

Retaining Wall

Re



57

Retrofit

Rt

- ▶ Definition
 - A device or structure placed in front of a permanent storm water detention pond outlet or roadway drainage structure to serve as a **temporary** filter
- ▶ Purpose
 - Allow a permanent storm water detention basin or roadway drainage structure to function as **temporary** sediment storage for land-disturbing projects
- ▶ Not to be used in basins on live streams
- ▶ Shall be removed when project is permanently stabilized

58

Perforated Half-Round Pipe

Rt-P

- ▶ Only in detention ponds with < 30 acre total drainage area
- ▶ Never to be used on exposed pipe 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
- ▶ Shall be affixed by means (bolts, etc.) to the concrete outlet structure

59

Perforated Half-Round Pipe

Rt-P



60

Slotted Board Dam

Rt-B

- ▶ Used in detention ponds with drainage areas up to 100 acres.
- ▶ Used in roadway drainage structures with drainage areas <30 acres.
- ▶ Should be installed with minimum 4"x4" posts
- ▶ Boards should have ½"-1" space between them
- ▶ Minimum 3"-4" stone filter or approved filter fabric should be installed on the upstream side of the board dam

61

Slotted Board Dam

Rt-B



62

Silt Control Gate

Rt-Sg

- ▶ Shall only be used on roadway drainage structures with the following inlets:
 - Winged Headwalls
 - Tapered Headwalls
 - Straight Headwalls
 - Open End Pipes
 - Flared End Sections
- ▶ An approved silt fence fabric shall be securely fastened to the front of the structure
- ▶ Post shall be 4"x4" treated lumber with no spaces between the boards
- ▶ Drainage area shall not exceed 50 acres

63

Silt Control Gate

Rt-Sg



64

Sediment Barrier

Sd1

- ▶ Definition
 - A temporary structure made of a porous material typically supported by steel or wood posts
- ▶ Types
 - Silt Fence
 - Brush Piles
 - Mulch Berms
 - Compost Filter Sock
- ▶ Purpose
 - Minimize and prevent sediment carried by sheet flow from leaving the site and entering the natural drainage way by slowing storm water runoff and causing deposition and/or filtration at the structure

65

Sediment Barrier

Sd1

- ▶ Design Criteria
 - Shall not be installed across streams, ditches, waterways, or other concentrated flow areas
 - The type of sediment barrier depends on whether the area is sensitive or non-sensitive
 - A splash pad or other outlet protection device should be provided for any point where flow may overtop the sediment barrier
 - When using multiple types of sediment barriers in a single run, the barriers must overlap 18" or as specified

66

Sediment Barrier

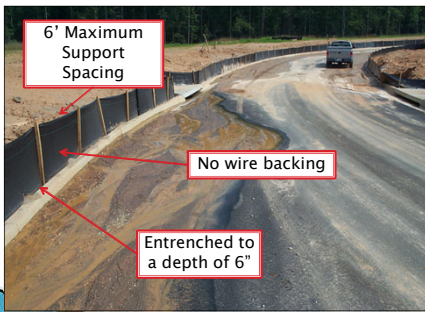
Sd1-NS

- ▶ **Non-sensitive Areas**
 - Should have a support spacing of no greater than 6 ft. on center, with each post being driven into the ground a minimum of 18".
 - Classifications
 - Type A Silt Fence - 36" wide
 - Type B Silt Fence - 22" wide
 - Compost Filter Sock
 - Brush Barrier - Only during Timber Clearing Operations

67

Type A Silt Fence

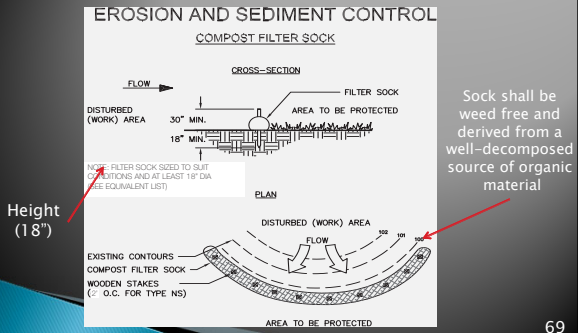
Sd1-NS



68

Compost Filter Sock

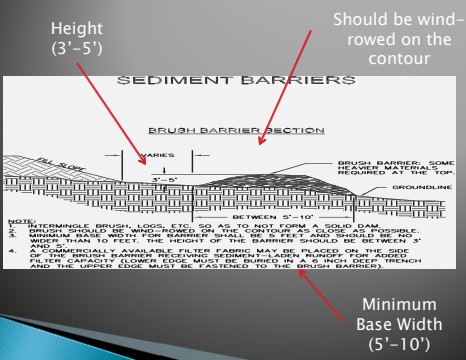
Sd1-NS



69

Brush Barrier

Sd1-NS



70

Mulch Berms

Sd1-NS



71

Sediment Barrier

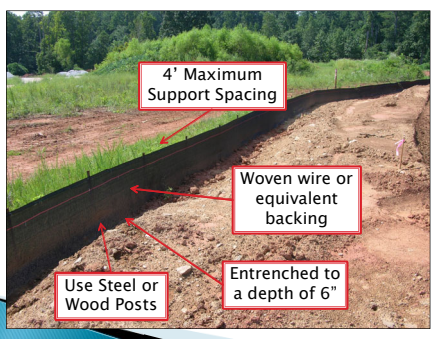
Sd1-S

- ▶ Sensitive Areas
 - Shall have a support spacing of no greater than 4 ft. on center, with each post being driven into the ground a minimum of 18".
 - Classifications
 - Type C Silt Fence
 - 36" wide with wire reinforcement or equivalent backing
 - Almost 3x the flow rate as Type A Silt Fence
 - To be used where runoff velocities are particularly high or where slopes exceed a vertical height of 10 ft.

72

Type C Silt Fence

Sd1-S



73

Type S Sediment Barrier

Sd1-S

- ▶ Along all state waters and other sensitive areas, 2 rows of Type S sediment barrier shall be used. The 2 rows of Type S should be placed a minimum of 36" apart.



74

Inlet Sediment Trap

Sd2

- ▶ 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
- ▶ Should be installed at all storm drain drop inlets that receive runoff from the disturbed area

75

Inlet Sediment Trap

Sd2

- ▶ Design Criteria
 - On paved surfaces or where safety is a concern, a high flow trap should be used to negate the potentially negative effects of ponding
 - On unpaved areas, a high retention trap should be taken into account
 - Traps shall be self-draining unless they are otherwise protected in an approved fashion that will not present a safety hazard

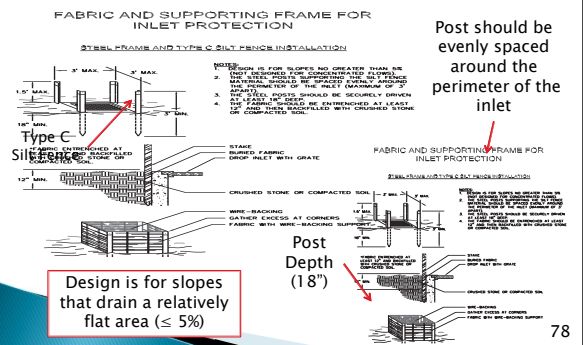
Excavated Inlet Sediment Trap

Sd2

- ▶ An excavation may be created around the inlet sediment trap to provide additional sediment storage
- ▶ Sediment storage shall be calculated at 67 cy/ac **drained**
- ▶ The drainage area entering the trap shall be no greater than 1 acre
- ▶ A minimum depth of 1.5 ft. should be provided and the side slopes should not be steeper than 2:1

Filter Fabric with Supporting Frame

Sd2-F

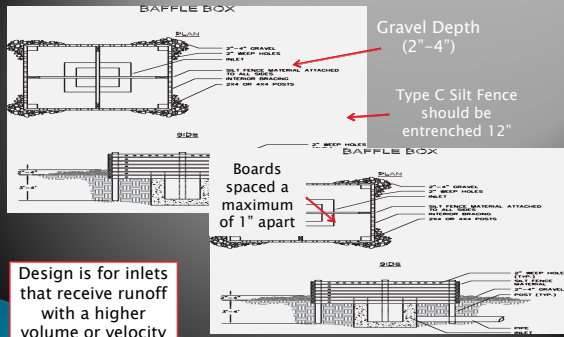


Filter Fabric with Supporting Frame Sd2-F



79

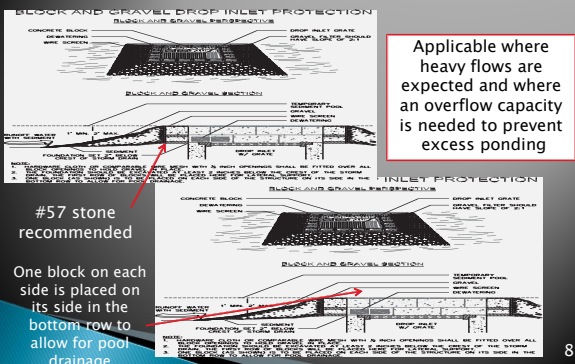
Baffle Box Sd2-B



Design is for inlets that receive runoff with a higher volume or velocity

80

Block and Gravel Inlet Protection Sd2-Bg



Applicable where heavy flows are expected and where an overflow capacity is needed to prevent excess ponding

#57 stone recommended
One block on each side is placed on its side in the bottom row to allow for pool drainage

81

Gravel Drop Inlet Protection

Sd2-G

Applicable where heavy concentrated flow are expected

No steeper than 3:1

Stone size for slope away from the inlet (1" min)

Stone size for slope toward the inlet (3"-6")

82

Sod Inlet Protection

Sd2-S

Applicable only at the time of permanent seeding

See D54 for staking details

83

Curb Inlet Protection

Sd2-P

Applicable once pavement has been installed

84

Curb Inlet Protection

Sd2-P



85

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.
- ▶ Components
 - Dam
 - Pipe Outlet
 - Emergency Spillway
- ▶ Purpose
 - Detain runoff waters and trap sediment from erodible areas
 - Protect properties and drainage ways from excessive sedimentation and debris

86

Temporary Sediment Basin

Sd3

- ▶ Design Criteria
 - Location - Shall never be placed in live streams
 - Volume - The sediment storage volume, as measured to the elevation of the crest of the principal spillway, shall be a minimum of 67 cy/ac **drained**
 - Shape - Length to width ratio, where length is the distance between the inlet and outlet, should be greater than 2:1
 - Spillways - The combined capacities of the principal and emergency spillway shall be sufficient to pass the peak rate of runoff from a 25-year, 24-hour storm

87

Temporary Sediment Basin Sd3



Maximum drainage
not to exceed 150
acres

88

Temporary Sediment Basin Sd3



Clean-out
marker



89

Temporary Sediment Trap Sd4

- ▶ Definition
 - A small temporary pond that drains a disturbed area so that sediment can settle out
- ▶ Purpose
 - Collect and store sediment from uphill sites that have been cleared and/or graded during construction
- ▶ Effective against coarse sediment, not as effective against silt or clay particles that remain suspended
- ▶ Lacks the pipe or riser associated with a Sd3

90

Temporary Sediment Trap Sd4

- ▶ Design Criteria
 - The height of the embankment shall not exceed 5.5 ft.
 - The minimum top width of the embankment is 3 ft.
 - Maximum pond depth is 4 ft. as measured from the bottom to the invert of the emergency spillway
 - The length to width ratio shall be greater than 2:1
 - The minimum volume shall be 67 cy/ac **drained**
- 3 Types
 - Overflow
 - Combination
 - Rock

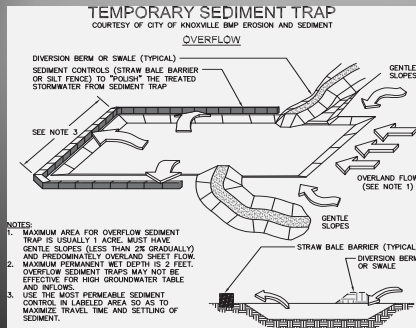
91

Overflow Sd4-A

Sediment controls are used to "polish" the water as it leaves the trap

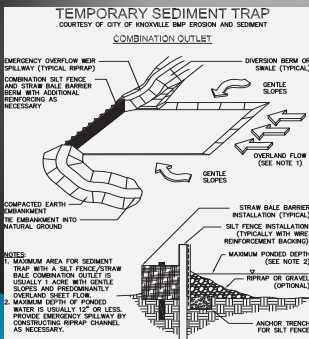
The maximum life span is 6 months

Limited to small areas ≤ 1 acre



92

Combination Outlet Sd4-B



Limited to small areas ≤ 1 acre

Has a life span less than 1 year

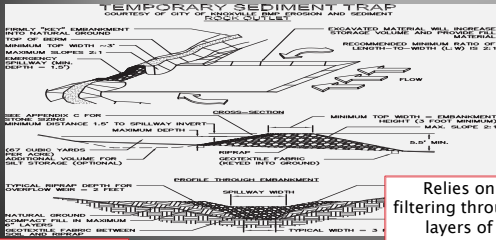
Requires frequent maintenance and adjustments to ensure the released storm water is free of sediment

Proper installation of straw bales and wire backed silt fence are required to resist 1 foot or more of ponded water

93

Rock Outlet

Sd4-C



The sturdiest of the 3 designs and generally requires less maintenance

For drainage areas up to 5 acres with a life span of less than 1 year

Relies on filtering through layers of aggregate, rock or riprap material

Temporary Sediment Trap

Sd4



Floating Surface Skimmer

Sk

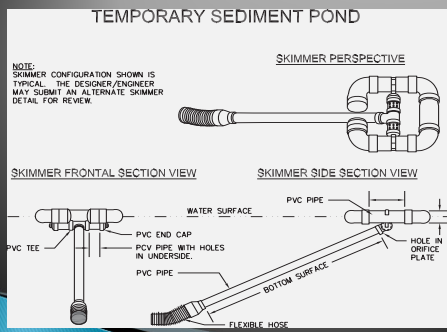
- ▶ Definition
 - A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow
- ▶ Purpose
 - Discharge clearer water from the surface at a relatively uniform rate
 - Reduce the retention time associated with meeting a desired water quality standard for discharge

Floating Surface Skimmer Sk

- ▶ Design Criteria
 - It can replace the riser pipe as the principal spillway but it **does not replace the emergency overflow spillway**
 - Excavate a pit filled with riprap under the device to account for sediment accumulation
 - A portion of the skimmer should be visible at all times
 - Install the device according to the approved plan and manufacturer's instructions

97

Typical Surface Skimmer Design Sk



98

Floating Surface Skimmer Sk

VIDEO



hover cursor over slide to activate control bar at bottom



99

Seep Berm

SpB

- ▶ Definition
 - A linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration of the runoff, while creating multiple sedimentation chambers with the employment of intermediate dikes
- ▶ Purpose
 - Allow the 2-year, 24-hour storm event to seep out while allowing larger flows to be diverted to a sediment storage area

100

Seep Berm

SpB

- ▶ Design Criteria
 - The berm shall have a minimum width of 12" across the top and shall not be taller than 4 ft. in height
 - 2 or more intermediate dikes in a series shall be used for drainage areas greater than 1 acre
 - The 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
 - Proper compaction and stabilization shall be utilized for fill berms

101

Seep Berm

SpB



Can be left in permanently to be utilized as a walking trail, etc.. once construction is complete

102

Temporary Stream Crossing Sr

- ▶ Definition
 - A **temporary** structure installed across a flowing stream or watercourse for use by construction equipment
- ▶ Purpose
 - A means for construction equipment and vehicles to cross streams or watercourses without moving sediment into state waters, damaging the streambed, or causing flooding
 - Should not be used on streams with a drainage area greater than 1 square mile, unless specifically designed to accommodate the additional drainage by a design professional

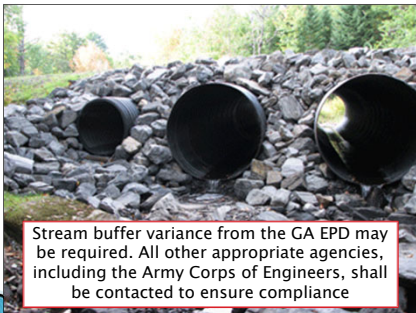
103

Temporary Stream Crossing Sr

- ▶ Design Criteria
 - Structures may include bridges, round pipes, or pipe arches
 - The structure shall be large enough to convey the 2-year, 24-hour storm without appreciably altering the flow characteristics
 - The crossing shall be perpendicular to the stream
 - The structure shall be protected from washout during periods of peak discharge by diverting water around the structure
 - Should not be used by the general public

104

Typical Culvert Crossing Sr-C



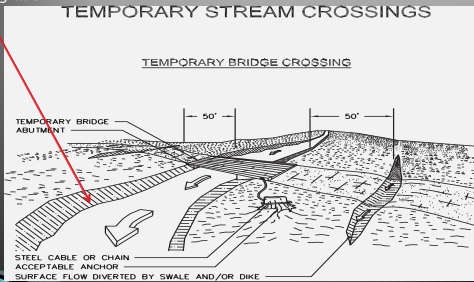
Stream buffer variance from the GA EPD may be required. All other appropriate agencies, including the Army Corps of Engineers, shall be contacted to ensure compliance

105

Temporary Bridge Crossing

Sr-B

Provides the least obstruction to flow and fish migration



106

Storm Drain Outlet Protection

St

- ▶ Definition
 - A paved and/or riprap channel section placed below storm drain outlets
- ▶ Purpose
 - Reduce the velocity of flow before entering receiving channels below storm drain outlets

107

Storm Drain Outlet Protection

St



108

Storm Drain Outlet Protection

St

Place riprap by hand or equipment



Place geotextile between the riprap and soil base

109

Surface Roughening

Su

- ▶ 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
- ▶ If a slope is to be stabilized with erosion control blankets, the soil surface should not be roughened

110

Surface Roughening

Su

- ▶ Methods
 - Stair-step grading
 - Grooving
 - Tracking
- ▶ The selection of the appropriate method depends upon:
 - Slope steepness
 - Mowing requirements
 - Whether the slope was formed by cutting or filling

111

Surface Roughening

Su

Creates irregularities in the soil surface

The step shall slope toward the vertical wall

112

Surface Roughening

Su

113

Surface Roughening

Su

Roughening with tracked machinery is not recommended on clay soils. Runoff can increase due to increased compaction

HILL SLOPE TREATMENT

EACH LIFT OF THE FILL IS COMPACTED, BUT THE OUTER FACE OF THE SLOPE IS ALLOWED TO REMAIN LOOSE, SO THAT THE ROCKS, CLOGS, ETC. REACH THE NATURAL STATE OF REPOSE.

TRACKING

DOZER TRACKS CREATE GROOVES PERPENDICULAR TO THE SLOPE.

114

Turbidity Curtain

Tc

- ▶ Definition
 - A floating or staked barrier installed within the water
- ▶ Purpose
 - Minimize the turbidity and silt migration from work occurring within the water
 - Supplement to perimeter control BMPs at the water's edge
- ▶ A turbidity curtain is only allowed as a primary device when required permitting and variances have been obtained

115

Turbidity Curtain

Tc



116

Topsoiling

Tp

- ▶ Definition
 - The stripping off of the more fertile top soil, storing it, then spreading it over the disturbed area after 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
- ▶ A pH range of 5.0 to 7.5 is acceptable

117

Topsoiling

Tp

- ▶ Conditions
 - Recommended for sites with 2:1 or flatter slopes where:
 - The texture of the exposed subsoil or parent material is not suitable to produce adequate growth
 - The soil material is so shallow that the rooting zone is not deep enough to support plants with continuing supplies of moisture and food
 - The soil that is to be vegetated contains material that is toxic to plant growth
 - A 4"-6" stripping depth is common
 - Stockpiles shall be contained by sediment barriers and stabilized in accordance with Ds1 and Ds2

118

Topsoiling

Tp



119

Tree Protection

Tr

- ▶ Definition
 - Protection for desirable trees from injury during construction activity
- ▶ Purpose
 - To 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

120

Tree Protection

Tr

Tree Protection Zone

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



121

Vegetated Waterway

Wt

- ▶ Definition
 - A natural or constructed channel that is shaped and graded to the required dimensions and established in suitable vegetation
- ▶ Purpose
 - Dispose of storm water runoff without causing damage either by erosion or flooding
- ▶ Shall be designed to convey the peak runoff from the 25-year, 24-hour storm event

122

Vegetated Waterway

Wt

- ▶ Installation Criteria
 - Remove all trees, brush, stumps, etc... so as not to interfere with the proper functioning of the waterway
 - Compact all fills to prevent unequal settlement
 - Stabilized in accordance with applicable vegetative standards
 - Refer to the ES&PC Plan for design and channel shape

123

Vegetated Waterway

Wt



124

Maintenance Clean-out Elevations

- ▶ **One-Half Full (1/2)**
 - Silt Fence
 - Check Dam
 - Rock Filter Dam
 - Inlet Sediment Trap
- ▶ **One-Third Full (1/3)**
 - Temporary Sediment Basin
 - Retrofit
 - Temporary Sediment Trap
 - Seep Berm

125

Summary

- ▶ Structural BMPs control sedimentation after erosion has happened
- ▶ Maintenance requirements are important for each BMP to maintain efficient working measures
- ▶ Structural BMPs are typically the last line of defense on site
- ▶ BMPs with a hydraulic component must be designed appropriately by a design professional
- ▶ See the Equivalent BMP List for additional products which may not meet generic specifications in the Manual www.gaswcc.georgia.gov

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Questions?



GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



127

Insert Yellow Sheet

Back of Yellow Sheet

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

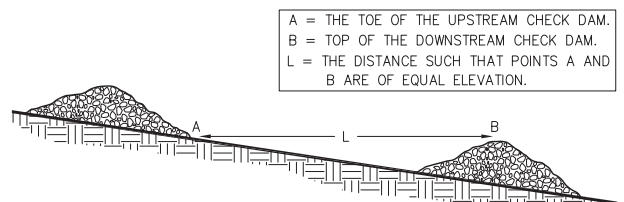


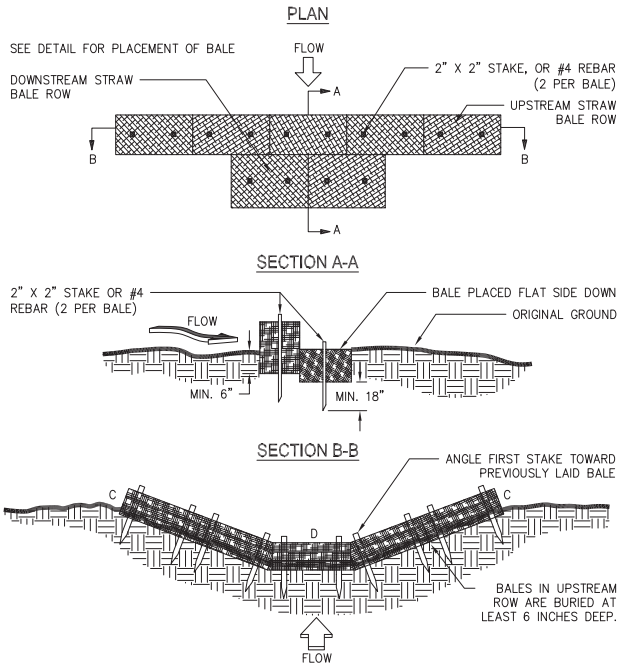
Figure 1. Stone Check Dam Spacing Requirements

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

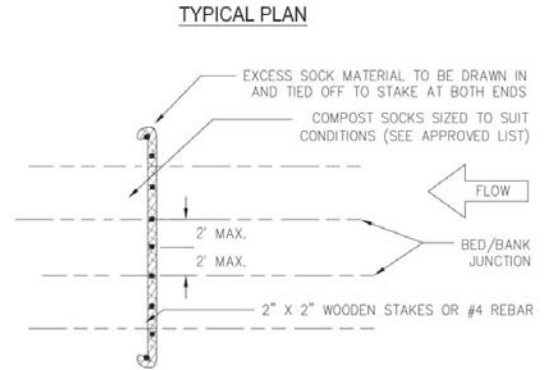


Figure 1. Compost Filter Sock Installation Requirements

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 (≤ 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 (≥ 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 (≥ 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

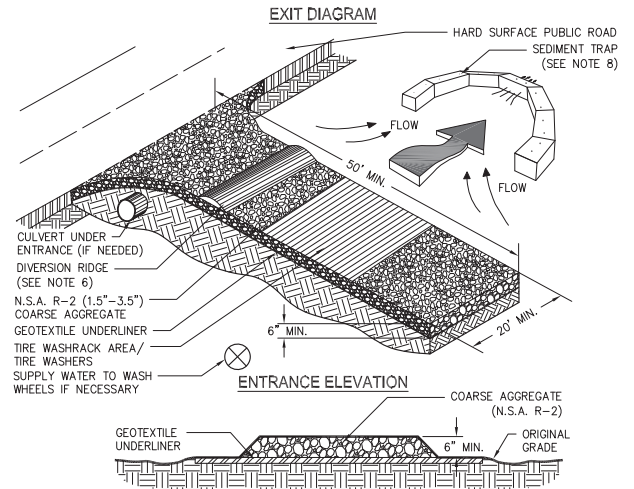


Figure 1. Crushed Stone Construction Exit Installation Requirements



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.

76

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

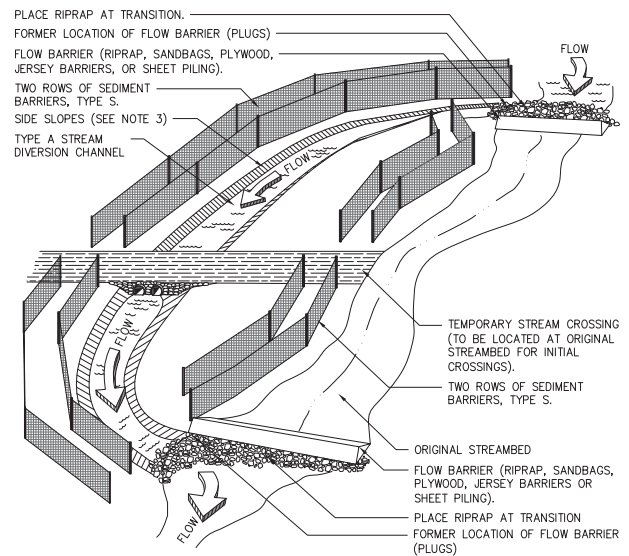


Figure 1. Stream Diversion Channel (Perspective View)

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

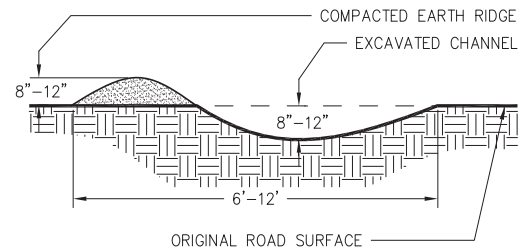


Figure 1. Typical Diversion Across Road

MAINTENANCE

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

REFERENCES

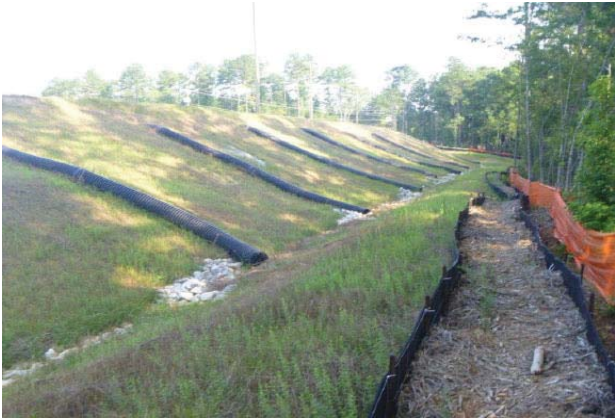
- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)
- Ch** Channel Stabilization

Dn1

TEMPORARY DOWNDRAIN STRUCTURE

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.

Dn1

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

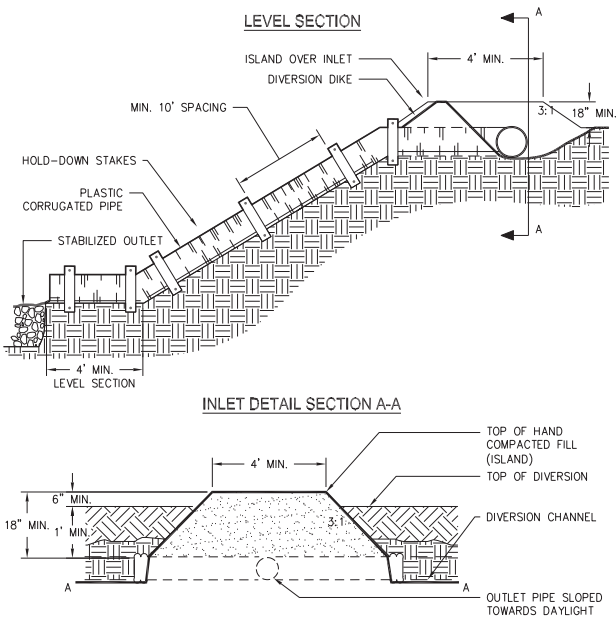
St

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.

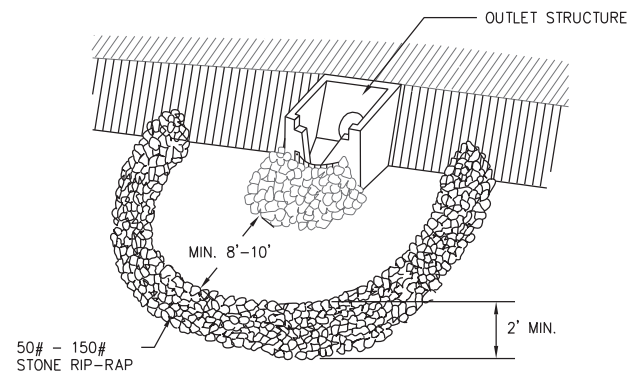


Figure 1. Filter Ring Placement

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.

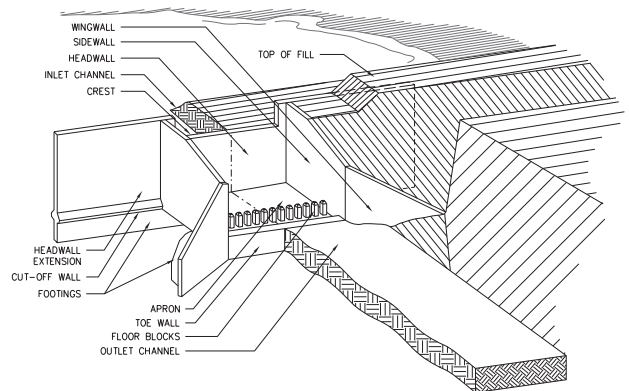


Figure 1. Straight Drop Spillway Structure

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.

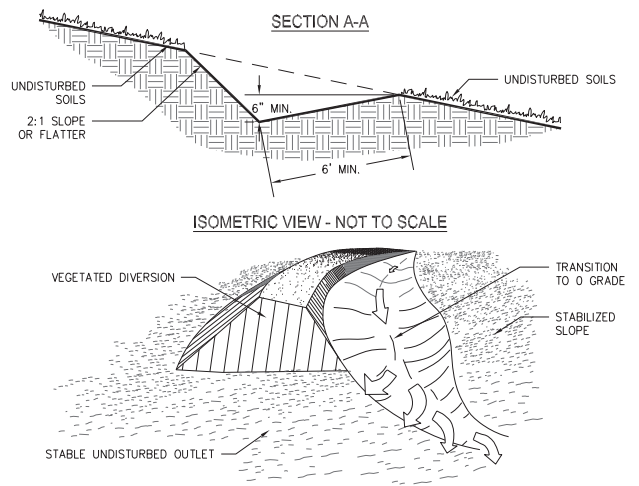


Figure 1. Level Spreader Installation Requirements

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

Rd

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

- 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.

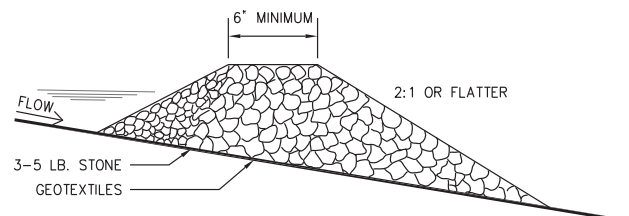
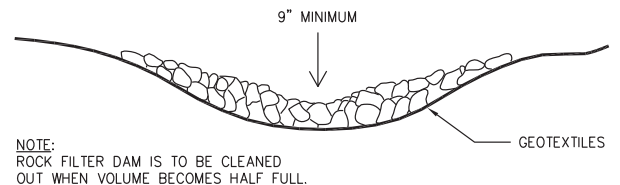


Figure 1. Rock Filter Dam Installation Requirements

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.

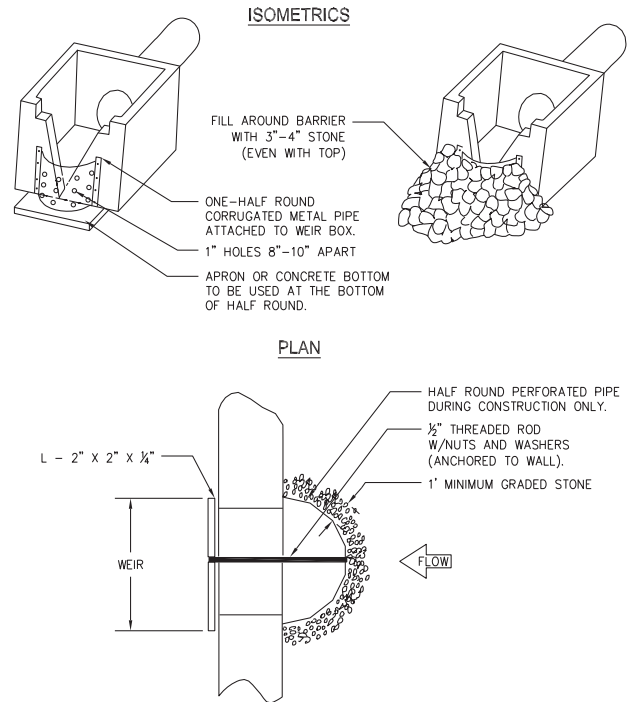


Figure 1. Perforated Half-Round Pipe Retrofit with Stone Filter.



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.

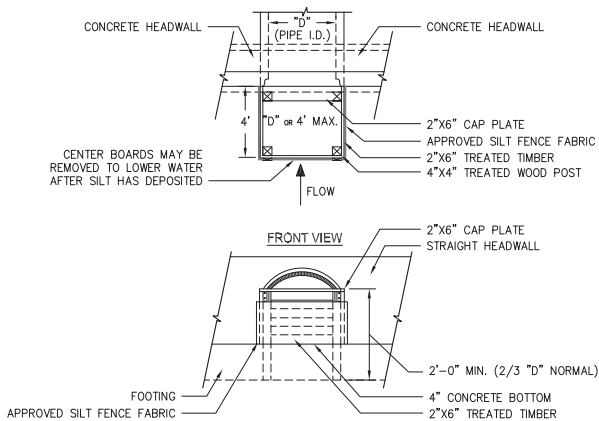


Figure 3. Slotted Board Dam Installation Requirements
104

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.

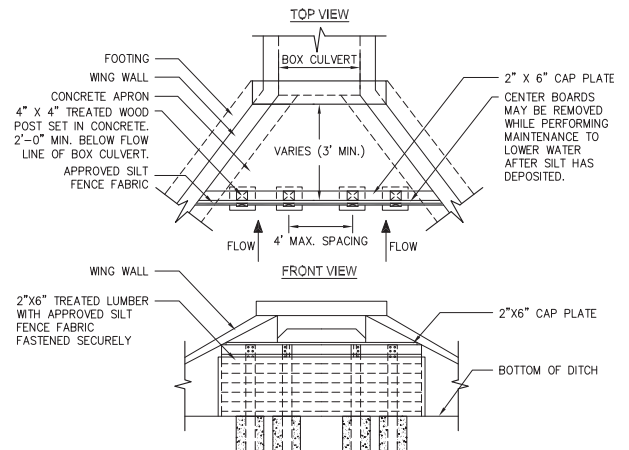


Figure 3. Silt Control Gate Installation Requirements

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 should 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.

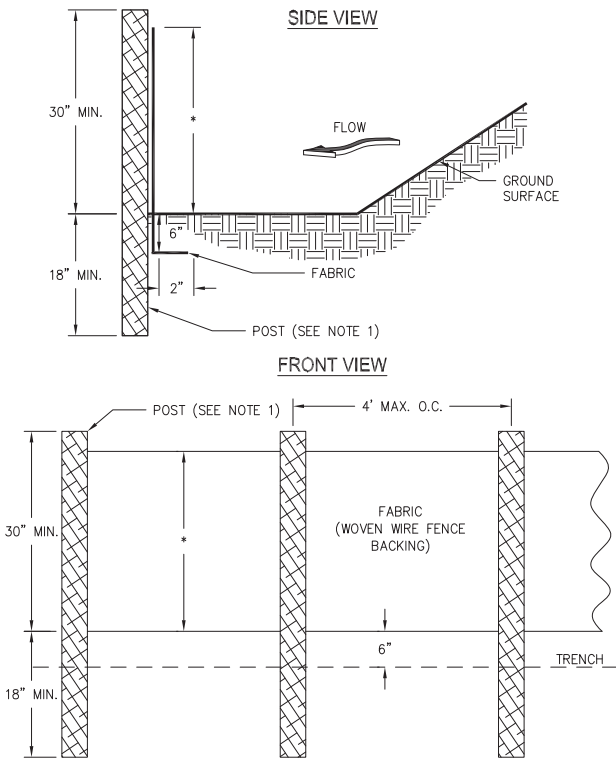


Figure 1. Type "C" Silt Fence

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.

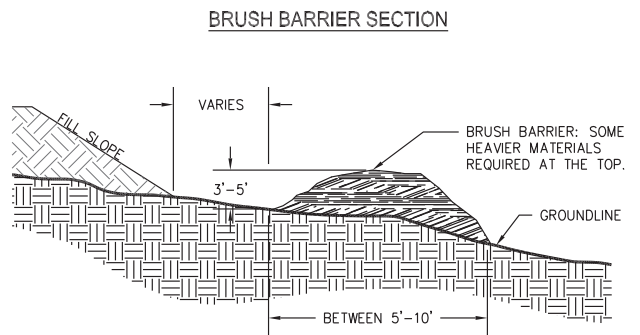


Figure 1. Brush Barrier (Sd1-BB)

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

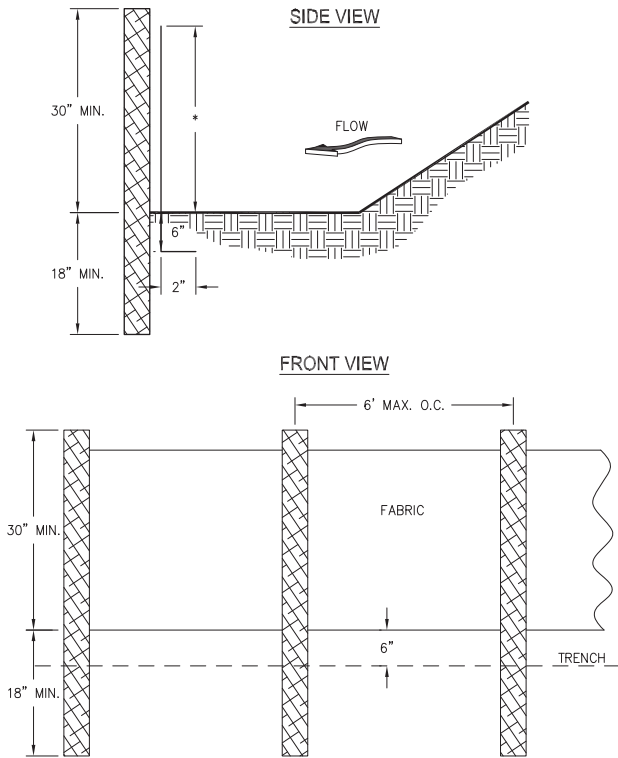


Figure 2. Type "A" & "B" Silt Fence

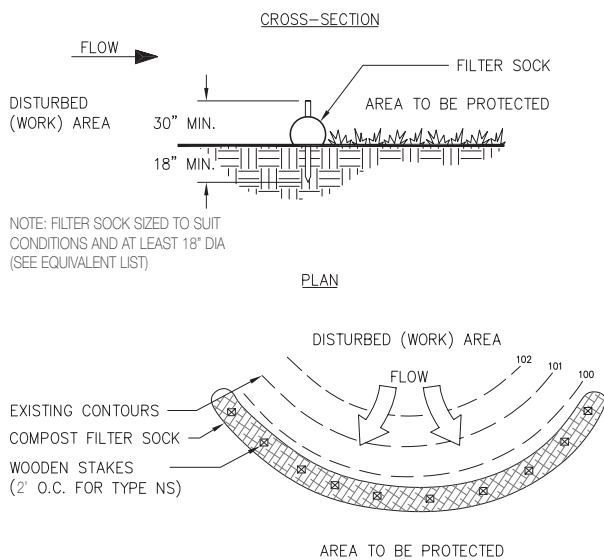


Figure 3. Compost Filter Sock - Type "B"

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.

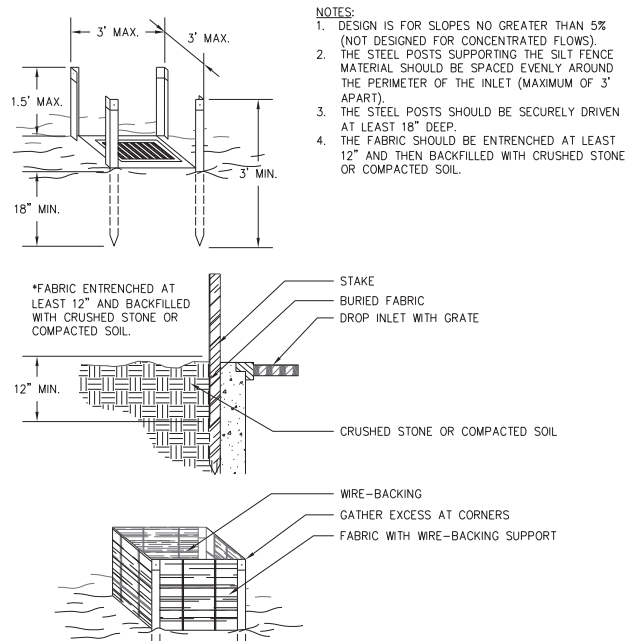


Figure 1. Filter Fabric with Supporting Frame Installation Requirements (Sd2-F)

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.

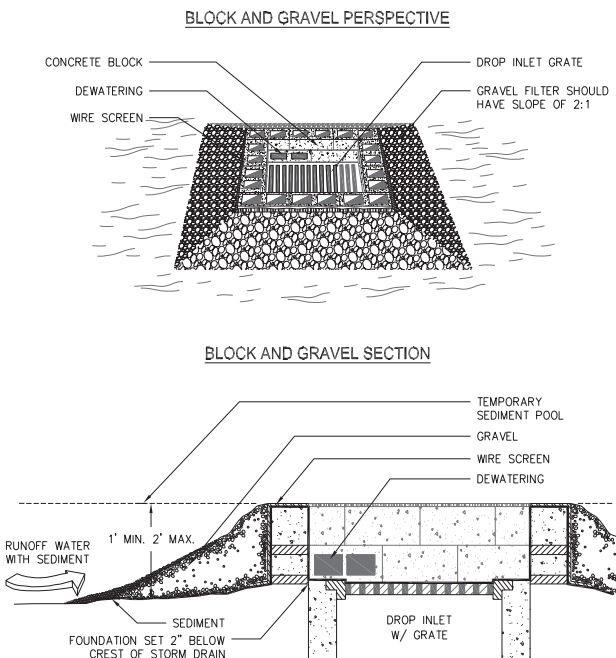


Figure 2. Block and Gravel Drop Inlet Protection Installation Requirements (Sd2-Bg)

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".

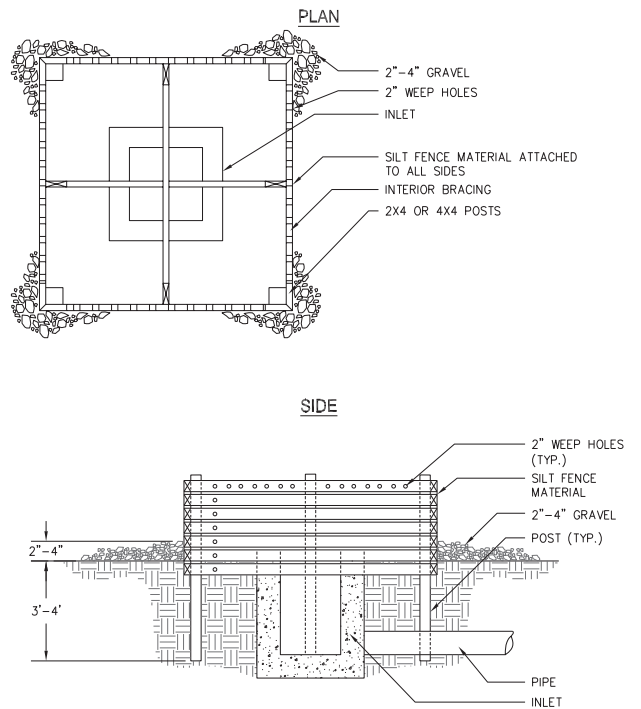


Figure 3. Baffle Box Installation Requirements (Sd2-B)

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)

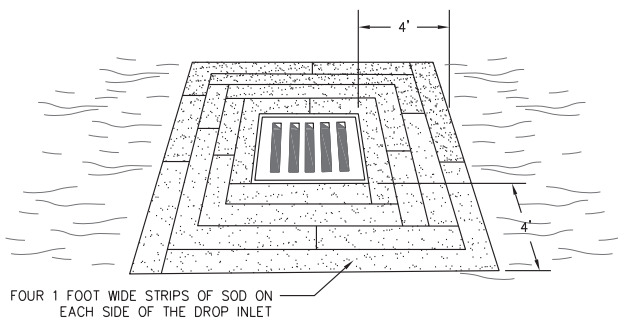


Figure 4. Sod Inlet Protection Installation Requirements (Sd2-S)

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.

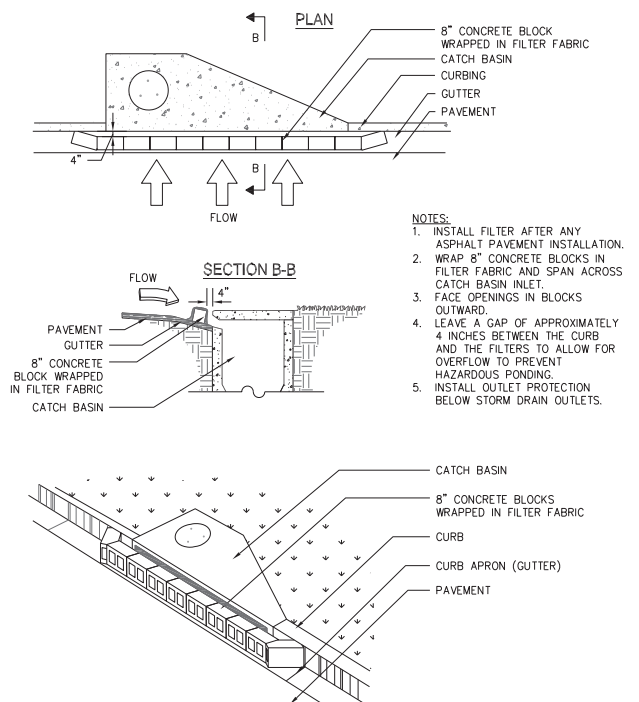


Figure 5. Curb Inlet Protection Installation Requirements (Sd2-P)

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.

120

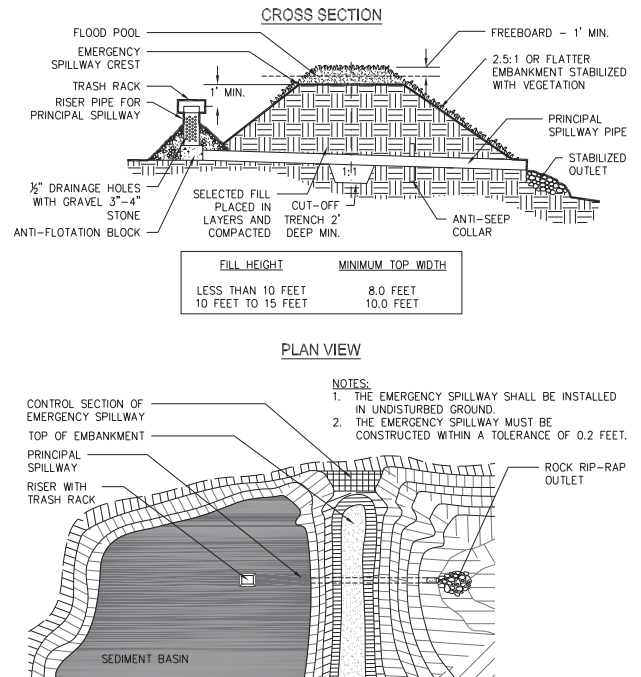


Figure 1. Components of a Typical Temporary Sediment Basin

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".

121

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.

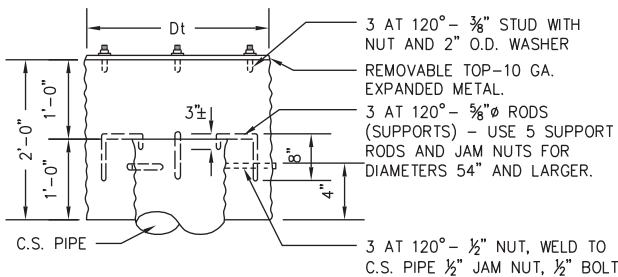


Figure 2. Typical Sediment Basin Trash Rack

Emergency Spillway

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

Sd3

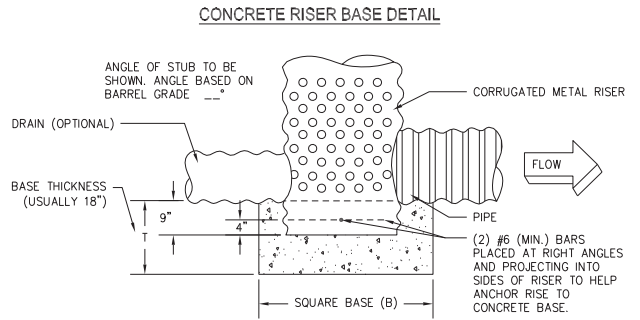
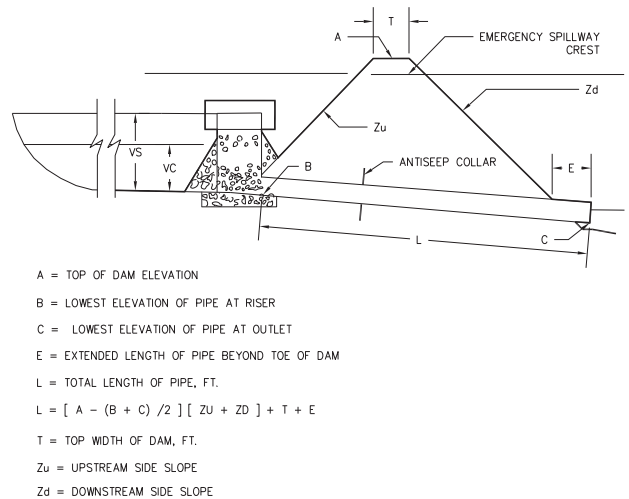


Figure 3. Concrete Riser Base Detail

- 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.



A = TOP OF DAM ELEVATION
 B = LOWEST ELEVATION OF PIPE AT RISER
 C = LOWEST ELEVATION OF PIPE AT OUTLET
 E = EXTENDED LENGTH OF PIPE BEYOND TOE OF DAM
 L = TOTAL LENGTH OF PIPE, FT.
 $L = [A - (B + C) / 2] [Z_u + Z_d] + T + E$
 T = TOP WIDTH OF DAM, FT.
 Z_u = UPSTREAM SIDE SLOPE
 Z_d = DOWNSTREAM SIDE SLOPE

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.

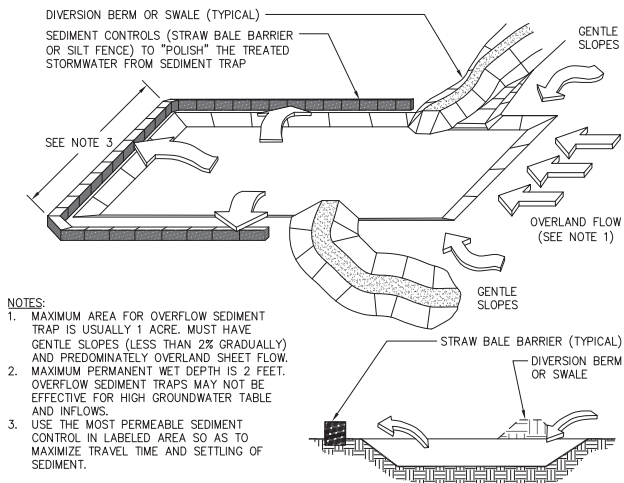


Figure 1. Overflow Outlet

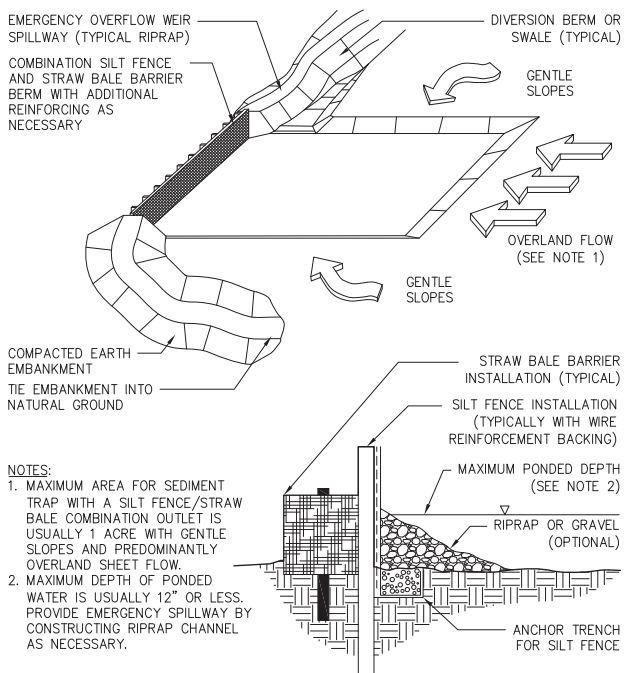


Figure 2. Combination Outlet

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.

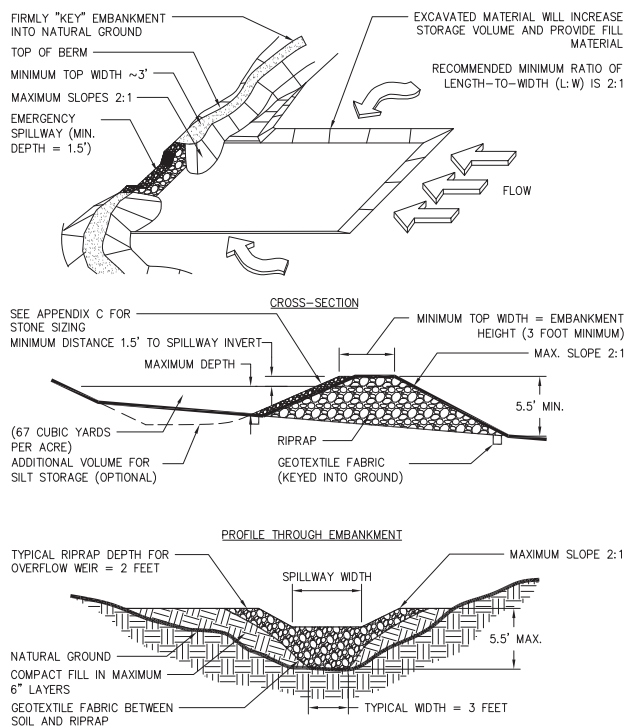


Figure 3. Rock Outlet

MAINTENANCE

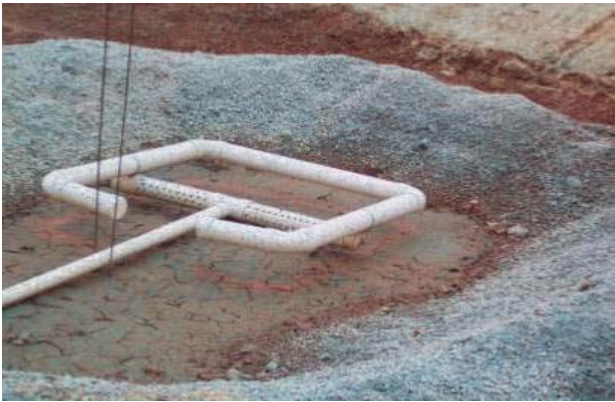
- Repair all damages caused by soil erosion or construction equipment at or before the end of each working day.
- The cleanout volume for a temporary sediment trap is one-third of the total storage volume.

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.

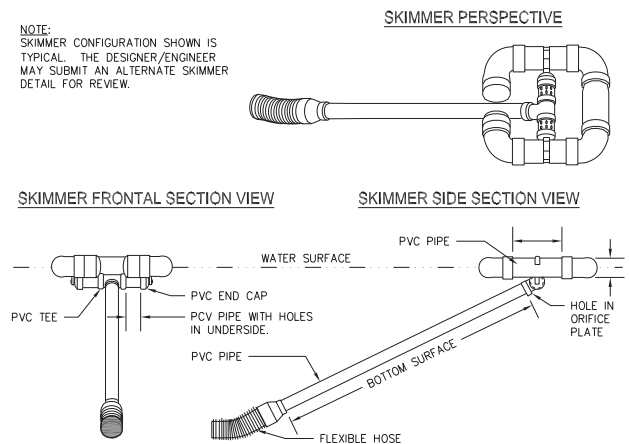


Figure 1. “Typical” Skimmer Design

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.

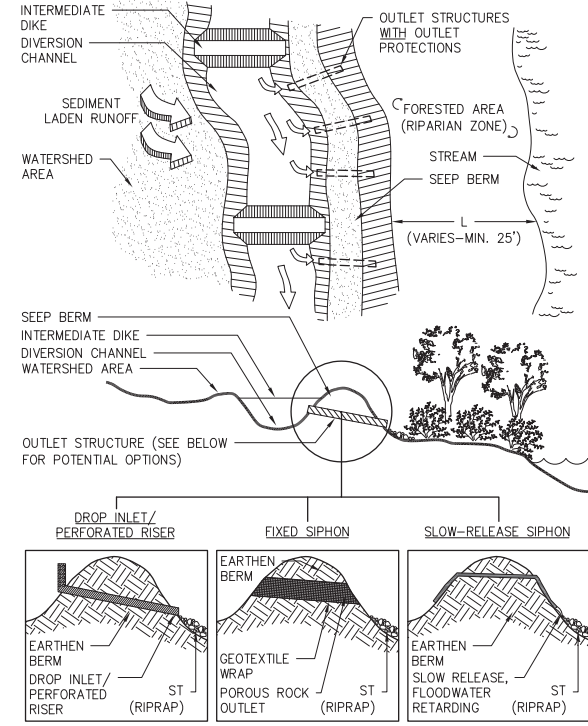


Figure 1. “Typical” Seep Berm System

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

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.

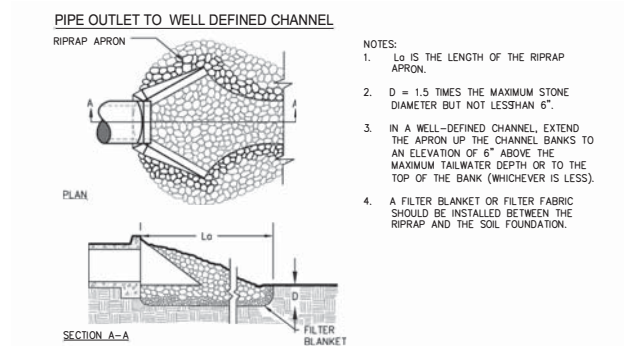


Figure 1. Outlet Protection for a Well-Defined Channel

- 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

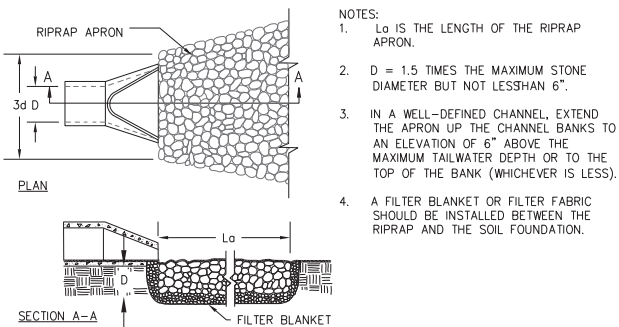


Figure 2. Outlet Protection for a Flat Area

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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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.

- 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.

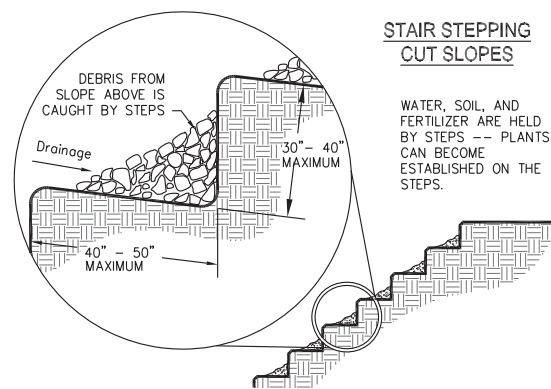


Figure 1. Stair-Stepping Cut Slopes

- 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".

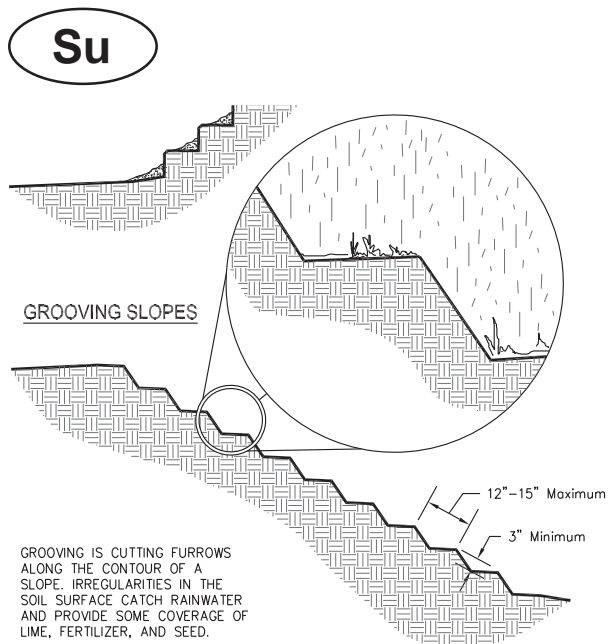


Figure 2. Grooving Slopes

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.

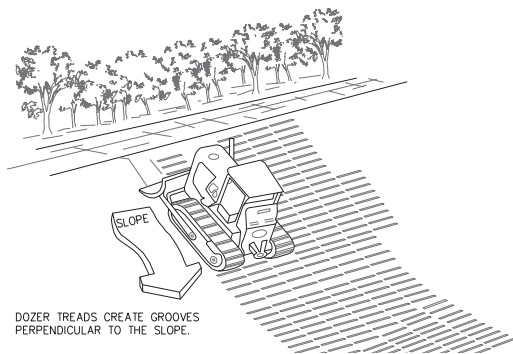


Figure 3. Tracking

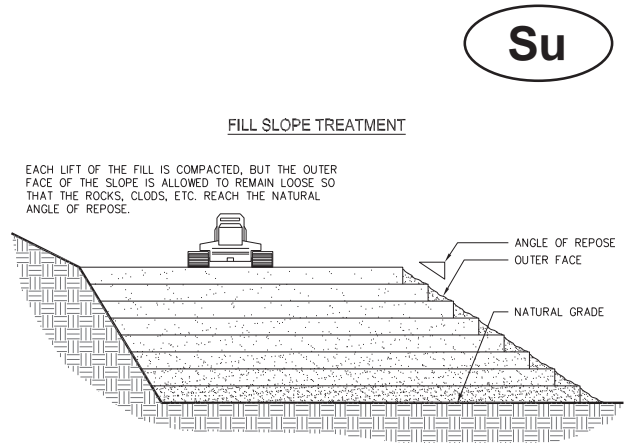


Figure 4. Fill Slope Treatment

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.

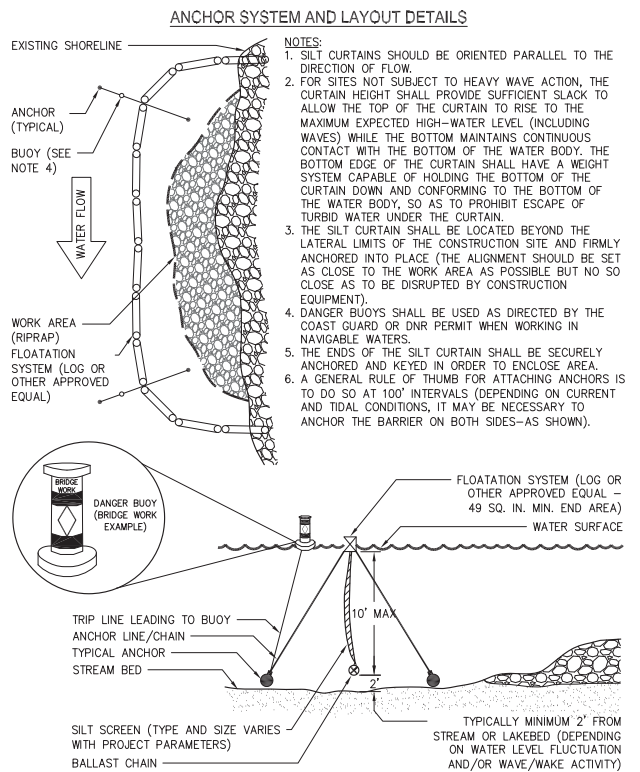


Figure 1. Turbidity Curtain System

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

Tr

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.

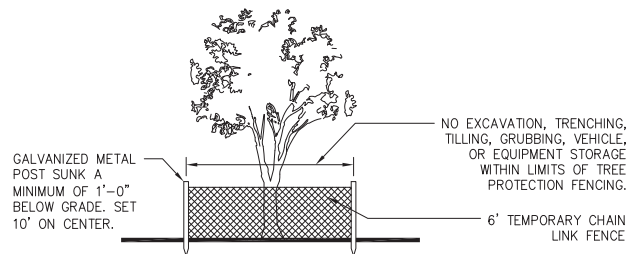


Figure 1. Chain Link Fence Installation

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.

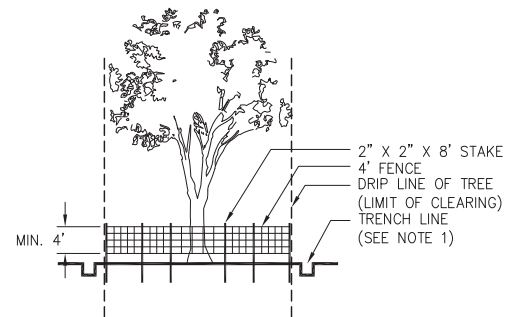


Figure 2. "Snow" Fence Installation

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

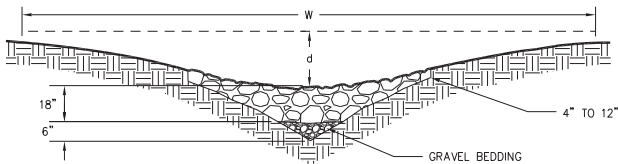
Vegetative Cover	Maximum Permissible Velocity (fps)
Bermuda	5
Bahia	4
Tall Fescue	4
Sericea Lespedeza Weeping Lovegrass	3
Stone Center	Design Required

- 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.

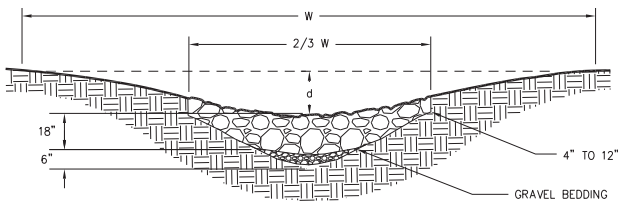
Wt

Wt

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 10

Vegetative Measures

Back of Tab

BEST MANAGEMENT PRACTICES



Vegetative Measures


Level 1B: Advanced Fundamentals
Effective August 2018



1

The Manual for Erosion & Sediment Control in Georgia

- ▶ Also known as the "Manual" or "Green Book"
- ▶ Chapter 6, Section 2 contains standards for vegetative practices and provides instructions for the preparation of erosion and sediment control plans for land-disturbing activities.
- ▶ The current edition of the Manual can be found at: www.gswcc.georgia.gov



2

Equivalent Product List

- ▶ The products and practices presented in this presentation 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.
- ▶ The current Equivalent BMP List can be found at: <http://gswcc.georgia.gov/> under "Documents List"

3

Shall/Will, Should, and May

- ▶ **Shall** or **Will** – A mandatory condition. When certain requirements are described with the “shall” or “will” stipulations, it is mandatory that the requirements be met.
- ▶ **Should** – An advisory condition. Considered to be recommended but not mandatory
- ▶ **May** – A permissive condition. No requirement is intended.

4

Benefits of Vegetation in ES&PC

- ▶ Intercepts raindrops
 - Reduces detachment of soil particles
 - Results in less soil erosion
- ▶ Slows & Cleans runoff
 - Increases water infiltration
 - Increased soil moisture aids plant growth
- ▶ Protects structures, rivers, streams, and ponds
- ▶ Reduces maintenance of structural measures
 - Reduced deposition in sediment basins
- ▶ Improves aesthetics, soil quality, and wildlife habitat



5

Benefits of Vegetation in ES&PC



It's cheaper to prevent erosion

Than to deal with sedimentation



6

Construction Sites Inhibit Plant Growth

- Factors
 - Topsoil is removed
 - Steep slopes
 - Low soil moisture
 - Low soil fertility
 - Acidic soils
 - Concentrated flow
 - Compacted soils



7

Vegetative BMPs

- »

Bf	Bf – Slide 9	Du	Du – Slide 58
Cs	Cs – Slide 14	Fl-Co	Fl – Slide 60
Ds1	Ds1 – Slide 17	Sb	Sb – Slide 64
Ds2	Ds2 – Slide 20	Ss	Ss – Slide 67
Ds3	Ds3 – Slide 28	Tac	Tac – Slide 71
Ds4	Ds4 – Slide 55		

8

Buffer Zone

Bf

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



9

Buffer Zone

Bf

- ▶ Purpose
 - Reduce storm water runoff
 - Act as a screen for "visual pollution"
 - Reduce construction noise
 - Improve aesthetics
 - Filtering and infiltrating runoff
 - Providing shade, food, and cover for wildlife and aquatic organisms
 - Flood protection
 - Protect channel banks from scour and erosion

10

Buffer Zone

Bf

- ▶ Types
 - General Buffer - A strip of undisturbed, original land surrounding the disturbed site
 - Vegetated Stream Buffer - A strip of undisturbed, original land bordering a stream
- ▶ Design Specifications
 - Important factors such as slope, hydrology, width, and structure, and maintenance shall be considered
 - The GA EPD enforces a minimum stream buffer requirement for warm water (25 ft.) and cold water (50 ft.) fisheries

11

Specific Buffer Objectives

Bf

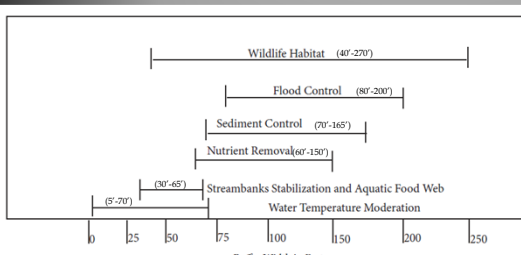


Figure 6-1.1 - Range of Minimum Width for Meeting Specific Buffer Objectives (Palone and Todd, draft)

12

Buffer Zone

Bf



13

Coastal Dune Stabilization

Cs

- ▶ Definition
 - The planting of vegetation on dunes that are denuded, artificially constructed, or re-nourished
- ▶ Purpose
 - Allow the development of dunes in areas where they have been damaged or destroyed
 - Stabilize soil on dunes allowing them to become more resistant to wind and waves
- ▶ Permits must be requested and granted by all appropriate jurisdictions, including all Federal, State, and local agencies, before work is performed

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Coastal Dune Stabilization

Cs

Sand Fence

Black Locust, Red or White Cedar or similarly durable wood

4 12-gauge galvanized wires

19" slat spacing

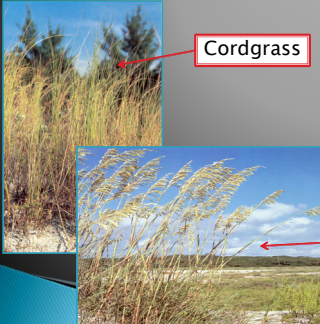
3" minimum post diameter

The distance between the slats should be approximately 1 1/4

Helps build higher dunes by trapping sand

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Coastal Dune Stabilization Cs



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"

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Disturbed Area Stabilization (With Mulching Only) Ds1

- ▶ Definition
 - The application of plant residue or other suitable material, produced on site if possible, to the soil surface
- ▶ Purpose
 - Reduce runoff
 - Conserve moisture
 - Prevent surface compaction or crusting
 - Control undesirable vegetation
 - Modify soil temperature
 - Increase biological activity

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Disturbed Area Stabilization (With Mulching Only) Ds1

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	-

- ▶ Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance
- ▶ Apply at the appropriate depth
- ▶ Maintain at least 90% cover
- ▶ Must be anchored
- ▶ Can be used alone for up to 6 months

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Disturbed Area Stabilization (With Temporary Seeding) Ds2

- ▶ Definition
 - The establishment of temporary vegetative cover with fast growing species for seasonal protection on disturbed or denuded areas
- ▶ Purpose
 - Reduce runoff and sediment damage of downstream resources
 - Protect the soil surface from erosion
 - Improve wildlife habitat
 - Improve aesthetics
 - Improve tilth, infiltration, aeration, and organic matter

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Disturbed Area Stabilization (With Temporary Seeding) Ds2

- ▶ Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance
- ▶ If an area is expected to be undisturbed for longer than 6 months, permanent perennial vegetation shall be used
- ▶ Can be applied to:
 - Rough graded areas
 - Temporary Diversions
 - Temporary Sediment Basins
 - Topsoil stockpile
 - Temporary Dams



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Disturbed Area Stabilization (With Temporary Seeding)

Ds2

- ▶ Components
 - Grading & Shaping
 - Seedbed Preparation
 - Lime & Fertilizer
 - Seeding
 - Mulching
 - Irrigation
 - Seed Quality & Selection
 - Planting Techniques
- ▶ Plant Selection
 - Select a grass or grass-legume mixture suitable to the area and season of the year
 - It should provide adequate cover (90%) and germinate quickly
 - Some species are not appropriate for companion plantings because of their potential to out-compete the desired species

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Disturbed Area Stabilization (With Temporary Seeding)

Ds2

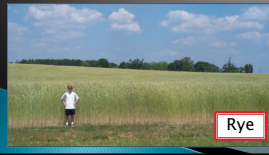


Browntop Millet

Annuals



Ryegrass



Rye

23

Common Species Used for Temporary Cover

Warm Season Annuals

- Browntop Millet
- Pearl Millet
- Sudan Grass

Cool Season Annuals

- Rye
- Ryegrass
- Wheat

Warm Season Perennials

- Common Bermuda
- Weeping Lovegrass

Cool Season Perennials

- Tall Fescue
- Crown Vetch
- Clover

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Disturbed Area Stabilization (With Permanent Vegetation)

Ds3

- ▶ 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 to downstream areas
 - Improve wildlife habitat and visual resources
 - Improve aesthetics

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Disturbed Area Stabilization (With Permanent Vegetation)

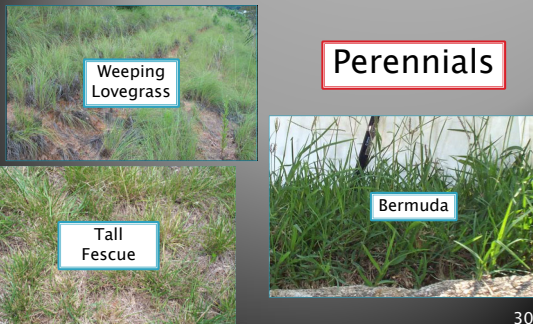
Ds3

- ▶ This practice shall be applied immediately to rough graded areas that will be undisturbed for **longer than 6 months**
- ▶ **Final Stabilization** – All of the 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 ES&PC plan (uniformly covered with landscaping materials in planned landscaped areas)

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Disturbed Area Stabilization (With Permanent Vegetation)

Ds3



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Disturbed Area Stabilization (With Permanent Vegetation)

Ds3



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Example Permanent Species Chart

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. Sod plugs 3' x3'	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
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

2016 ed. Field Guide

A complete listing of all permanent species can be found in the "Resource Information" section

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Planned Components

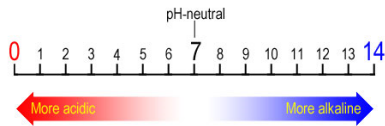
Ds3

- ▶ Grading & Shaping
- ▶ Lime & Fertilizer
 - Rates & Application
- ▶ Inoculants
- ▶ Plant Selection
- ▶ Seed Quality
- ▶ Seedbed Preparation
- ▶ Planting Method
- ▶ Applying Mulch
- ▶ Anchoring Mulch
- ▶ Irrigation
- ▶ Maintenance – top dressing
- ▶ Planned Use
- ▶ Management
- ▶ Bedding Material

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Lime & Fertilizer

- ▶ Soil Acidity (pH)
 - Can affect plant growth
 - Almost all soils in Georgia are acidic
 - Most plants used in erosion control need a soil pH of 6.0-6.5



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Lime

- ▶ Agricultural Lime
 - Required at the rate of 1-2 tons/acre unless soil tests indicate otherwise
 - If lime is applied within 6 months of planting permanent perennial vegetation, additional lime is not required
 - Conventional Planting - apply before seedbed preparation
 - Hydraulic Seeding - apply in a slurry mixed with seed, inoculant, and/or wood pulp fiber mulch

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Lime

- ▶ Can be lost in runoff
- ▶ Does not move rapidly through the soil
- ▶ Encourage a healthier and thicker stand
- ▶ Fast-acting Lime
 - Starts working immediately
 - Raises Soil pH quicker



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Fertilizer



Initial Fertilizer

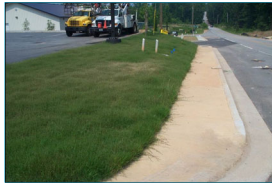
Topdressing

Legumes

40

Plant Selection

- ▶ Plant Selection
 - Species characteristics (Consider native grasses)
 - Site conditions
 - Location, topography, concentrated flow areas
 - Soil conditions
 - Composition, fertility, pH
 - Planned land use – season
 - Time of year
 - Planting method



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Native Grasses



Reed Canary



Big Bluestem

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Companion Plants



Sericea Lespedeza
with Weeping
Lovegrass

Ryegrass
outcompeting the
desired species



Seed Quality

- ▶ Pure Live Seed (PLS) – expressed as a percentage of the seeds that are pure and will germinate
 - % purity & germination can be found on seed tags

ALBENS SEED CO. WATKINSVILLE, GA 30677			
KIND: TALL FESCUE	LOT # 4-236		
VARIETY: KENTUCKY 31			
PURIF. SEED	95.00%	GERMINATION	80%
INE. MATTER	2.90%	TEST DATE	11/04
CROU. SEED	2.55%	NET WT. 50 LBS.	
WEED SEED	0.45%	ORIGIN: MO	AMS 719
RESTRICTED NOXIOUS WEEDS 72 Hairy Chess/36 Red Sorghum/36 Docks/36 Buckhorn			

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

Hulled vs. Un-hulled

- ▶ Some seed coats prevent water absorption in order to expand the germination period
 - This is nature's way to ensure species survival
- ▶ A "hulled" seed's outer coat is removed mechanically
 - Allows water to enter the seed quicker for faster germination

Example: Common Bermuda

Use hulled seed for
spring/summer plantings

Use un-hulled seed for
fall/winter plantings



Scarification

- ▶ “Hard” seeds are nearly impervious to water and remain dormant for a long time
- ▶ Scarification overcomes the seed coat dormancy period by scratching, splitting, or puncturing the seed coat
 - Enables the seed to absorb water and sprout more quickly

Example: Sericea Lespedeza

Use scarified seed for spring/summer plantings

Use un-scarified seed for fall/winter plantings



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Optimum Planting Dates

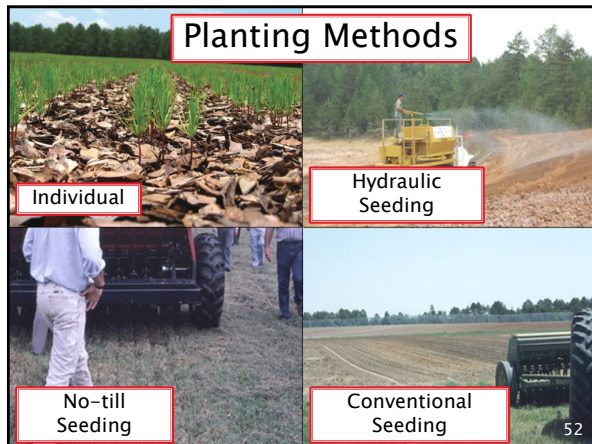
- ▶ Warm Season Plants (i.e. Common Bermuda & Weeping Lovegrass)
 - April 1st – May 15th
- ▶ Cool Season Plants (i.e. Rye, Ryegrass & Tall Fescue)
 - September 1st – October 15th
- ▶ Seeding rates are very important!!!
 - Under-seeding reduces the stand
 - Over-seeding creates excess demand for moisture and nutrients

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Seedbed Preparation

- ▶ Provides a suitable growing medium for roots
- ▶ Not required where hydraulic seeding and fertilizer equipment is to be used, but strongly recommended when possible
- ▶ Tillage shall adequately
 - Loosen soil to a depth of 4”-6”
 - Alleviate compaction
 - Incorporate lime & fertilizer
 - Smooth and firm the soil
 - Allow for the proper placement of seed
 - Allow for the anchoring of straw or hay if a disk is to be used

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Applying & Anchoring Mulch

- ▶ Dry straw
 - 2 tons/acre
- ▶ Dry hay
 - 2 ½ tons/acre
- ▶ Wood pulp fiber or cellulose mulch
 - 500 lbs/acre with hydraulic seeding
- ▶ Pine straw/pine bark
 - Thickness of 3"
- ▶ Hay & Straw shall be immediately pressed into the soil with a packer disk or harrow
- ▶ Synthetic tackifiers, binders, hydraulic mulch shall be applied in conjunction with or immediately after mulch is spread
- ▶ Plastic mesh or netting may be required on unstable soils and concentrated flow areas

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Management

- ▶ Irrigation – Apply at a rate that will not cause runoff
- ▶ Maintain at least 6" of top growth under any use and management

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Disturbed Area Stabilization (With Sodding)

Ds4

- ▶ Definition
 - A permanent vegetative cover using sod on highly erodible or critically eroded lands
- ▶ Purpose
 - Immediate ground cover
 - Reduce runoff and erosion
 - Improve aesthetics
 - Reduce dust
 - Stabilize waterways
 - Filter sediment
 - Reduce downstream complaints
 - Reduce likelihood of stop work order



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Disturbed Area Stabilization (With Sodding)

Ds4

Lay sod in a straight line with tight, staggered joints

On slopes steeper than 3:1, sod should be anchored with pegs or staples

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Disturbed Area Stabilization (With Sodding)

Ds4

Table 6-6.2 Sod Planting Requirements

Grass	Varieties	Resource Area	Growing Season
Bermudagrass	Common Tifway Tifgreen Tifawn	M-L,P 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	M-L,P	cool weather

The sod type should be shown on the plans

Fertilize in accordance with soil tests or Table 6-6.3

Table 6-6.3 Fertilizer Requirements for Sod

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

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Dust Control

Du

- ▶ Definition
 - The control of surface and air movement of dust on construction, roads, and demolition sites
- ▶ Purpose
 - Prevent movement of dust from exposed surfaces
 - Reduce the presence of airborne substances that may be harmful

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Dust Control

Du

- ▶ Temporary Methods
 - Mulches
 - Vegetative Cover
 - Spray-on Adhesives
 - Tillage
 - Irrigation
 - Barriers
 - Calcium Chloride
- ▶ Permanent Methods
 - Permanent Vegetation
 - Topsoiling
 - Stone



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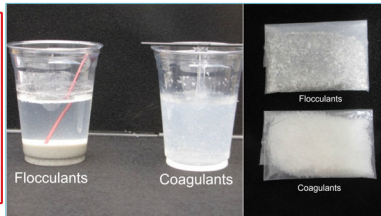
Flocculants & Coagulants

Fl-Co

- ▶ Definition
 - Formulated to assist in the solids/liquids separation of suspended particles in solution. Only **anionic** forms shall be used

This practice is not intended for application to surface waters of the state

It is intended for application within constructed storm water ditches that feed into constructed ponds or basins



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Flocculants & Coagulants

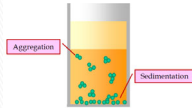
FI-Co

Coagulant

- ▶ Neutralizes the repulsive electrical charge surrounding a particle allowing it to stick together with other particles to form a clump or floc

Flocculants

- ▶ Facilitate the agglomeration or aggregation of the coagulated particles to form larger floccules that slowly drop out of suspension



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Flocculants

FI-Co

VIDEO



hover cursor over slide to activate control bar at bottom

Flocculants

62

Coagulants

FI-Co

VIDEO



hover cursor over slide to activate control bar at bottom

Coagulants

63

Streambank Stabilization

Using Permanent Vegetation

Sb

- ▶ Definition
 - The use of readily available native plant materials to maintain and enhance streambanks
- ▶ Purpose
 - Prevent small streambank erosion problems
 - Form a root mat to stabilize and reinforce the soil on the streambank
 - Enhance the appearance of the stream
 - Enhance water quality and wildlife habitat

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Streambank Stabilization

Sb

- ▶ Preferred Practices
 - Live Staking
 - Live Fascines
 - Branchpacking
 - Vegetated Geo-grid
 - Brushmattress
 - Coconut Fiber Roll
 - Dormant Post Plantings (live posts)
- ▶ Acceptable Practices
 - Joint Planting
 - Live Cribwall
 - Vegetated Gabion Baskets
 - Tree Revetments
 - Log, Rootwad & Boulder Revetments

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Streambank Stabilization

Sb



Stabilization structures and vegetative measures should be planned and designed by a design professional with experience in the field

Please refer to the GSWCC's guidance document, *Streambank & Shoreline Stabilization*



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Slope Stabilization

Ss

- ▶ Definition
 - A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels
- ▶ Purpose
 - Provide a cover layer that stabilizes the soil and act as a rain drop dissipater
 - Provide a microclimate that protects young vegetation and promote its establishment
- ▶ Two general types of Ss products:
 - RECP - Rolled Erosion Control Products
 - HECP - Hydraulic Erosion Control Products

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Rolled Erosion Control Products - RECP

Ss

- ▶ A natural fiber blanket with single or double photodegradable or biodegradable nets
- ▶ Blankets shall be nontoxic to vegetation, seed, or wildlife
- ▶ Installation and stapling shall conform to manufacturer's guidelines for application
- ▶ Short-term (~12 months) RECPs shall be used:
 - In concentrated flow areas less than 5 ft/sec
 - On slopes 3:1 or greater with a height of 10 ft. or greater
- ▶ Extended-term (~ 24 months): 70% straw/30% coconut
- ▶ Long-term (~36 months): 100% coconut

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Hydraulic Erosion Control Products - HECP

Ss

- ▶ HECP utilize straw, cotton, wood, or other natural based fibers held together by a soil binding agent
- ▶ Materials shall be prepackaged from the manufacturer. Field mixing of performance enhancing additives will not be allowed
- ▶ All fibrous components should be natural or biodegradable and nontoxic to vegetation, seed or wildlife
- ▶ Applications rates shall conform to the manufacturer's guidelines

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Slope Stabilization

Ss

Each roll should be placed in a staggered sequence behind the first roll starting at the top of the slope



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Tackifiers

Tac

- ▶ Definition
 - A tie-down for soil, compost, seed, straw, hay or mulch
 - Hydrate in water and readily blend with other slurry materials to form a homogenous slurry
- ▶ Only anionic forms of PAM shall be used
- ▶ Purpose
 - Increase infiltration
 - Increase soil fertility
 - Enhance seed germination
 - Increase soil cohesion
 - Enhanced soil stabilization
 - Reduce stormwater runoff turbidity
 - Reduce loss of topsoil

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Tackifiers

Tac



- 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



Guar is an annual legume and the source of guar gum

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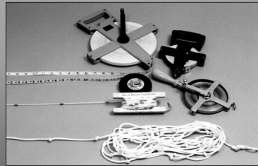
Estimating % Cover

» Line-transect Method

73

Line-Transect Method

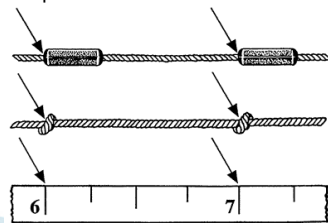
- ▶ Use a tape measure, cable, string, or any other line that has 100 equally spaced beads, knots, or other gradations
- ▶ Select an area that is representative
- ▶ Stretch the line out across the area
- ▶ Anchor both ends & do not move the line
- ▶ Walk along the line, stopping at each mark



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Line-Transect Method

- ▶ Look straight down at a single point on each mark
 - The entire knot or mark is usually too large
 - Look at the same point on each mark

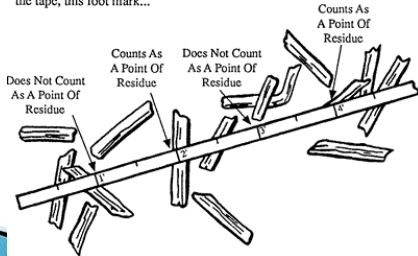


75

Line-Transect Method

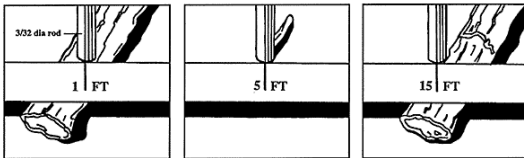
- ▶ Determine if each single point is above cover

When using the top edge of the tape, this foot mark...



Line-Transect Method

- ▶ Count only those points that have a piece of residue or vegetation beneath them
 - To count, the cover must be large enough to intercept a raindrop, or about $3/32''$ (the size of wooden pencil)



Count—raindrop will strike residue only.

Do not count—residue is too small, and raindrop will strike both soil and residue.

Do not count—raindrop will strike soil.

77

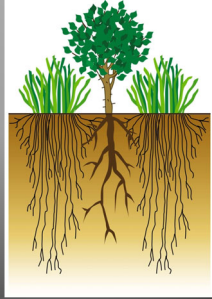
Line-Transect Method

- ▶ Determine % cover
 - When 100 points are observed, the number directly over cover will be the %
 - If cover is under 90 points, there is 90% cover
 - If 50 points are observed, simply multiply the number directly over cover by 2 to get the %
 - If cover is under 40 points, there is 80% cover
- ▶ Make at least 3 measurements
 - For accuracy, use this process in 3 or more representative areas and average the measurements

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Summary

- ▶ Vegetation is the 1st step in reducing erosion
- ▶ A site-specific plan is required to achieve maximum impact
- ▶ The vegetative plan and maintenance requirements should encompass the entire year



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Questions?

- » GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474



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Insert Yellow Sheet

Back of Yellow Sheet

VEGETATIVE BEST MANAGEMENT PRACTICES

Bf	Buffer Zone
Cs	Coastal Dune Stabilization
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)
Du	Dust Control on Disturbed Area
FI-Co	Flocculants and Coagulants
Sb	Streambank Stabilization (With Permanent Vegetation)
Ss	Slope Stabilization
Tac	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.

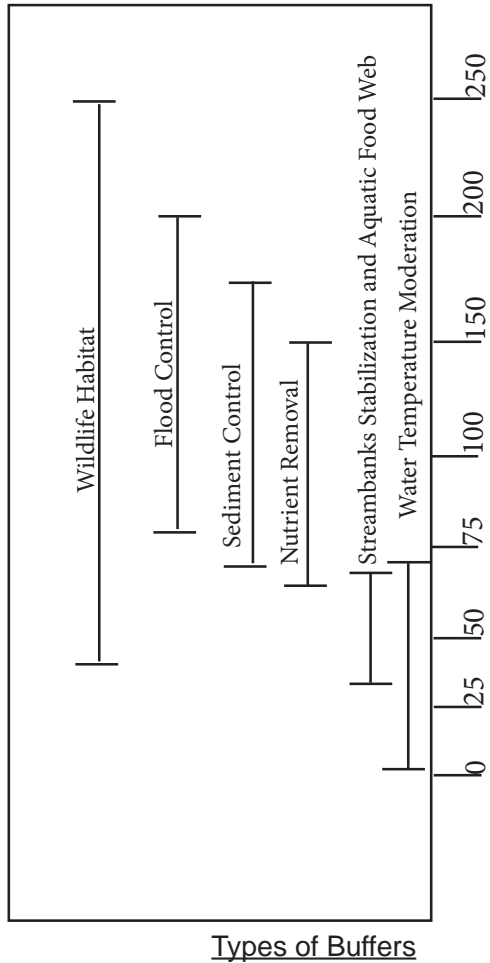


Figure 1. Range of Minimum Width (ft.) for Meeting Specific Buffer Objectives (Palone & Todd, draft)

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.

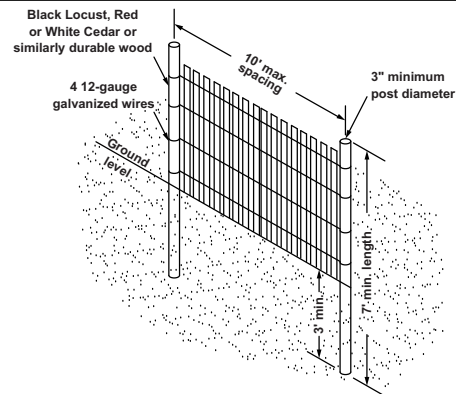


Figure 2. Sand Fence Installation Requirements

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

24

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

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.

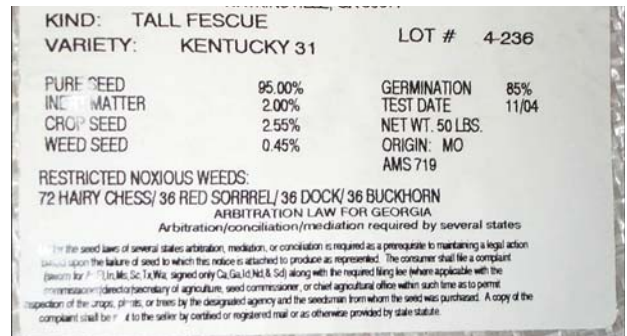


Figure 1. Typical Tag on a Bag of Seed

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. Sod plugs 3' x3'	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
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)

30

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	

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

31

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.

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

32

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.

33

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 grassed	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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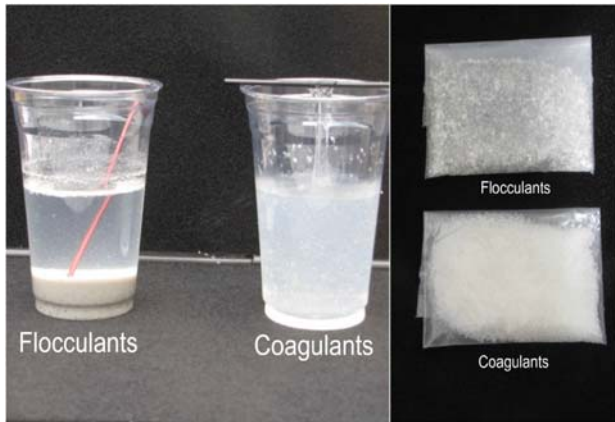
FLOCCULANTS & COAGULANTS

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

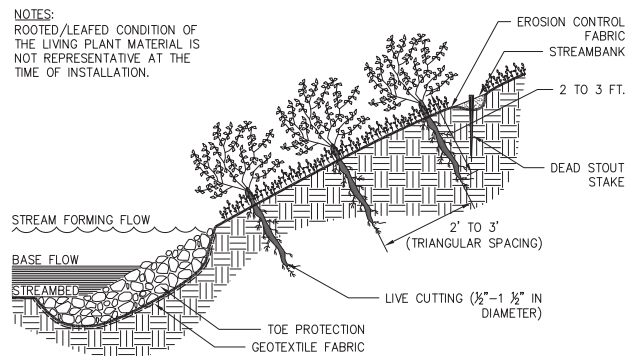


Figure 1. Illustration of a Live Stake

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.

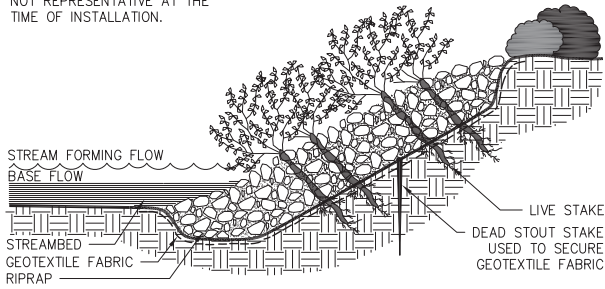
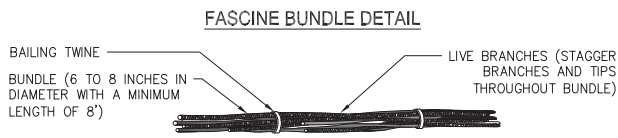


Figure 2. Illustration of Joint Planting

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

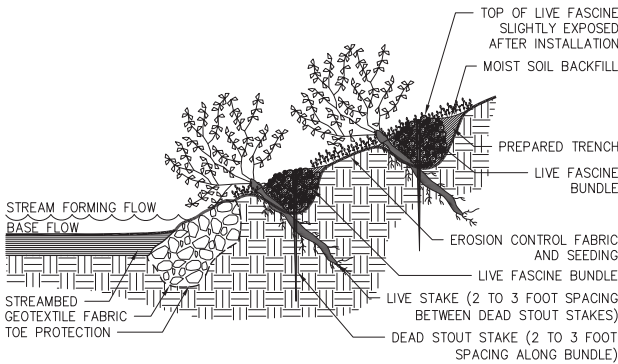


Figure 3. Illustration of a Live Fascine

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.

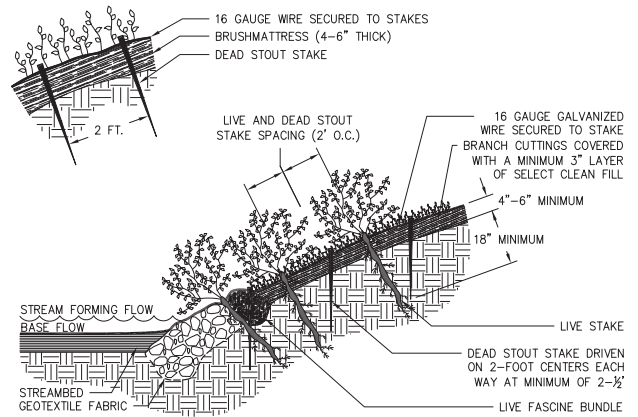


Figure 4. Illustration of a Brushmattress

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.

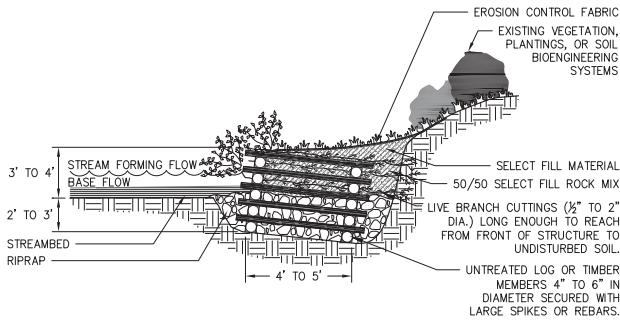


Figure 5. Illustration of a Live Cribwall

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.

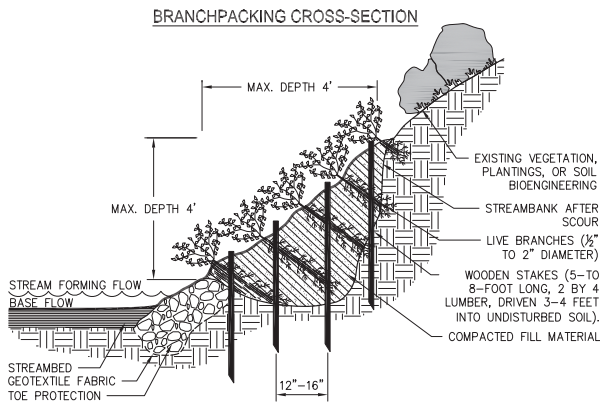


Figure 6. Illustration of Branchpacking

- 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

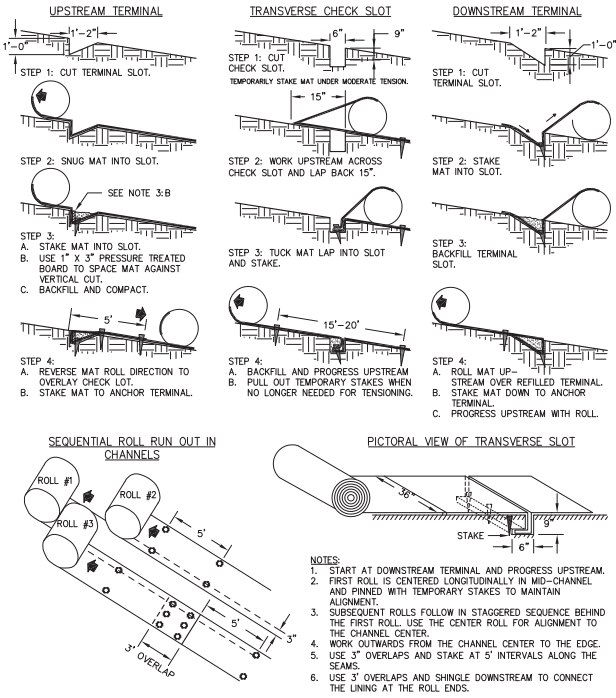
- Inspect all erosion control blankets and matting periodically after installation. Inspect immediately after rainstorms to check for erosion and undermining.
- Repair all dislocations and failures immediately.
- Re-install all materials after washouts or breakage occurs. Repair damage to the slope or 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

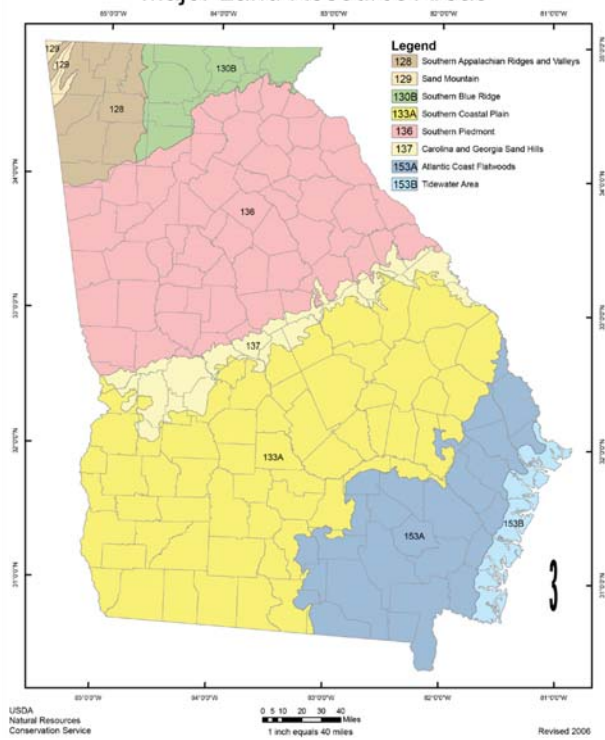
This practice is intended for direct soil surface application to sites where the timely establishment of vegetation may not be feasible or where vegetative cover is absent or inadequate.

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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Insert Tab 11

Resource Information

Back of Tab

Important Links for E&S in Georgia

These documents can be found at <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_Nov2018.pdf

NPDES Permit Fact Sheet

<https://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/Factsheet-NPDES-Construction-General-Permits-May-2018.pdf>

NPDES Permit for Stand Alone Construction Projects (GAR100001)

<https://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/GAR100001-Stand-Alone-May-2018-Final.pdf>

NPDES Permit for Infrastructure Construction Projects (GAR100002)

<http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/GAR100002-Infrastructure-May-2018-Final.pdf>

NPDES Permit for Common Development Construction Projects (GAR100003)

<http://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/GAR100003-Common-Development-May-2018-Final.pdf>

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

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

2019 ES&PC Plan Review Checklists

<https://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/2019-ESPC-Plan-Review-Checklists-final-UPDATE-JULY-2018.xlsx>

<https://gaswcc.georgia.gov/sites/gaswcc.georgia.gov/files/imported/SWCC/Files/2019-ESPC-Plan-Review-Checklists-final%20-UPDATE-JULY-2018.pdf>

Sample Inspection & Record Keeping Forms

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/related_files/document/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

GEOS: Georgia EPD Online System

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

RO: Responsible Official

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

Glossary

Accelerated Erosion – alteration of the land surface that is intensified by human activities

Agricultural Lime – a soil amendment consisting principally of calcium carbonate (CaCO₃)

Base Flow – the discharge that enters the stream channel through the soil

Best Management Practices – schedules of activities, prohibitions of practices, maintenance procedures, and other management 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 & Sediment Control in Georgia” (Manual) published by the State Soil & Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia

Buffer – an area of land immediately adjacent to the banks of State waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat

Certified Personnel – a person who has successfully completed the appropriate certification course approved by GSWCC

Channel Stabilization – improving, constructing or stabilizing an open channel for water conveyance

Check Dam – a temporary grade control structure, or dam constructed across a swale, drainage ditch, or area of concentrated flow

Climate – the statistics of weather. It is measured, usually over a 30-year period, by assessing the patterns of variation in temperature, humidity, atmospheric pressure or precipitation

Coagulant – neutralizes the repulsive electrical charge surrounding a particle allowing it to stick together with other particles to form a clump or floc

Coastal Dune Stabilization – the planting of vegetation on dunes that are denuded, artificially constructed, or re-nourished

Common Development – 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

Conservation – the protection, improvement and use of natural resources according to principles that will assure their highest economic or social benefit

Construction Activity – the disturbance of soils associated with clearing, grading, excavating, filling of land, or other similar activities

Construction Exit – 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

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

Cut-and-Fill – the process of earth moving by excavating part of an area and using the excavated material for adjacent embankments or fill areas

Design Professional – 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 & Sediment Control with a current certification by EnviroCert International Inc.

Direct Runoff – the water entering stream channels promptly after rainfalls or snow melts

Disturbed Area Stabilization (with mulching) – the application of plant residue or other suitable material, produced on site if possible, to the soil surface

Disturbed Area Stabilization (with temporary vegetation) – the establishment of temporary vegetative cover with fast growing species for seasonal protection on disturbed or denuded areas

Disturbed Area Stabilization (with permanent vegetation) – the planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization

Disturbed Area Stabilization (with sodding) – a permanent vegetative cover using sod on highly erodible or critically eroded lands

Diversion – a ridge of compacted soil, constructed above, across, or below a slope

Drainage Structure – 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

Dust Control – the control of surface and air movement of dust on construction, roads, and demolition sites

Ephemeral Stream – a stream that flows only in direct response to precipitation

Erosion – the process by which the land surface is worn away by the action of water, wind, ice and gravity

ES&PC Plan – an Erosion, Sediment & Pollution Control Plan for the control of soil erosion and sediment resulting from a land-disturbing activity

Filling – the placement of any soil or solid material either organic or inorganic on a natural ground surface or an excavation

Filter Ring – a temporary stone barrier constructed at storm drain inlets and pond outlets

Final Stabilization – 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 a seeding of target crop perennials appropriate for the region)

Floating Surface Skimmer – a buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow

Flocculant – facilitates the agglomeration or aggregation of coagulated particles to form larger flocs that slowly drop out of suspension

Gabion – a large, multi-celled, welded wire or rectangular wire mesh box used to stabilize highly erosive slopes

Grade Stabilization Structure – a structure used to stabilize the grade in a natural or artificial channel

Grade – the slope of a road, channel, or natural ground

Gradient – the number of horizontal units per vertical units

GEOS – Georgia EPD Online System; the mandatory electronic submittal system for permit applications

Geologic Erosion – the natural erosion caused by geologic processes acting over long geologic periods

Geotextile – a term used to describe woven or non-woven fabric materials used to reinforce or separate soil and other materials

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

Hydrophytic Vegetation – a plant that grows partially or fully submerged in water

Infrastructure Construction – 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, liquid petroleum products, electricity, telecommunications, water, storm water, or sewage

Inlet Sediment Trap – a temporary protective device formed at or around an inlet to a storm drain to trap sediment

Intermittent Stream – a stream, or portion of a stream, that flows only in direct response to precipitation

Interstate Commerce – as had, presently has, or potential to have interstate commerce

Land-Disturbing Activity – any activity which may result in soil erosion from water or wind and the movement of sediments into state water or onto state lands, including, but not limited to clearing, dredging, grading, excavating, transporting, and filling of land

Level Spreader – a storm flow outlet device constructed at zero grade across the slope

Local Issuing Authority – the governing authority of any county or municipality which is certified pursuant to subsection (a) of Code Section 12-7-8

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

Mass Grading – the movement of earth by mechanical means to alter the gross topographic features (elevations, slopes, etc.) in order to prepare a site for final grading and the construction of facilities (buildings, roads, parking, etc.)

Manual – the Manual for Erosion & Sediment Control in Georgia is the published guidance of the GSWCC governing the design and practices to be utilized in the protection of the state's natural resources from erosion and sedimentation

Navigable Waters – waters subject to the ebb and flow of the tide and has a connection to the transportation of interstate commerce

Nephelometric Turbidity Unit – a numerical unit of measure based upon photometric analytical techniques for measuring the light scattered by fine particles of a substance in suspension.

Normal Business Hours – Monday thru Friday, 8:00 AM to 5:00 PM, excluding any non-working Saturday, non-working Sunday and non-working Federal holiday.

Normal Stream Flow – any stream flow that consists solely of base flow or consists of both base flow and direct runoff during any period of the year

Outfall – the location where storm water, in a discernible, confined and discrete conveyance, leaves a facility or construction site or, if there is a receiving water on site, becomes a point source discharging into that receiving water

Perennial Stream – a stream with base flow that maintains stream flow throughout the year under normal circumstances

Permanent Downdrain – a permanent structure used to safely convey surface runoff from the top of a slope to the bottom of the slope

pH – a numerical measure of the acidity or hydrogen ion activity

Preparer – someone assigned by a Responsible Official to create and prepare applications for their facility

Primary Permittee – the owner or operator or both of a tract of land for a construction project subject to the permit

Primary Trout Waters – any stream supporting a self-sustaining population of Rainbow, Brown, or Brook Trout

Receiving Water(s) – all perennial and intermittent waters of the State into which the runoff of storm water from a construction activity will actually discharge, either directly or indirectly

Responsible Official - a duly authorized representative for a facility who can certify and submit applications in GEOS.

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

Retrofit – a device or structure placed in front of a permanent storm water detention pond outlet or roadway drainage structure to serve as a temporary filter

Rill Erosion – an erosion process in which numerous small channels, only several inches deep, occur mainly on recently disturbed and exposed soils

Riprap – broken rocks, cobbles, or boulders placed

Roadway Drainage Structure – 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

Rock Filter Dam – a temporary stone filter dam installed across a drainage way or in conjunction with a temporary sediment trap

Secondary Permittee – an owner, individual builder, utility company, or utility contractor that conducts a construction activity within a common development with an existing primary permittee

Secondary Trout Waters – streams with no evidence of natural trout reproduction but capable of supporting trout throughout the year

Sediment – 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

Sediment Barrier – a temporary structure made of a porous material typically supported by steel or wood posts

Sedimentation – the process by which eroded material is transported and deposited by water, wind, ice and gravity

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

Sheetflow – runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel

Sheet Erosion – the removal of a fairly uniform layer of soil from the land surface by runoff water

Slope Stabilization – a protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shorelines, or channels

Soil – the unconsolidated mineral and organic material on the immediate surface of the Earth that serves as natural medium for the growth of land plants

Splash Erosion – the spattering of small soil particles caused by the impact of raindrops on wet soils

Stand Alone Construction – construction activities that are not part of a common development where the primary permittee chooses not to use secondary permittees

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

Storm Drain Outlet Protection – a paved and/or riprap channel section placed below storm drain outlets

Storm Water – storm water runoff, snow melt runoff, and surface runoff and drainage

Stream Diversion Channel – a temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed in the stream channel

Streambank Stabilization – the use of readily available native plant materials to maintain and enhance streambanks

Sub-contractor – an entity employed or retained by the permittee to conduct any type of construction activity (as defined in this permit) at a stand alone construction site

Surface Roughening – providing a rough soil surface with horizontal depressions created by operating a tillage or other suitable implement on the contour

Tackifier – a tie-down for soil, compost, seed, straw, hay or mulch

Temporary Downdrain – a temporary structure used to convey concentrated storm water runoff down the face of cut or fill slopes

Temporary Sediment Basin – 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

Temporary Sediment Trap – a small temporary pond that drains a disturbed area so that sediment can settle out

Temporary Stream Crossing – a temporary structure installed across a flowing stream or watercourse for use by construction equipment

Tertiary Permittee – the owner or operator of remaining lot(s) within a common development conducting a construction activity where the primary permittee and all secondary permittees have submitted a Notice of Termination or where a primary permittee no longer exists

Topography – the arrangement of the natural or artificial physical features of an area

Topsoiling – the stripping off of the more fertile top soil, storing it, and then spreading it over the disturbed area after completion of construction activities

Tree Protection – protection for desirable trees from injury during construction activity

Turbidity Curtain – a floating or staked barrier installed within the water column

Turf Reinforcement Matting – a permanent geo-synthetic matting that is used to stabilize the soil while permanent vegetation is taking root

Vegetated Waterway – a natural or constructed channel that is shaped and graded to the required dimensions and established in suitable vegetation

Wetland – 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

Wrested Vegetation – the point where vegetation has been wrested away by normal stream flow or wave action



Georgia Soil and Water Conservation Commission

4310 Lexington Road, Athens, Georgia 30605
Phone (706) 552-4474 Fax (706) 552-4486

Commission Members

Commission Board appointed by the Governor on April 15, 2015

Harold Fallin Chairman <i>Thomaston, Georgia</i>	Bob Martin Vice Chairman <i>Ocilla, Georgia</i>	Jason Winters Member <i>Lyerly, Georgia</i>	Drew Echols Member <i>Alto, Georgia</i>	Kerry Moore Member <i>West Green, Georgia</i>
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Staff

Mitch Attaway – Executive Director: mitch.attaway@gaswcc.ga.gov
Robert Amos – Conservation Manager: robert.amos@gaswcc.ga.gov
Jonathan Rutland – Resource Specialist: jonathan.rutland@gaswcc.ga.gov
Kari Kleist – Administrative Assistant: kari.kleist@gaswcc.ga.gov

Urban Lands Erosion & Sediment Control Program

Ben Ruzowicz – Program Manager: ben.ruzowicz@gaswcc.ga.gov
Jennifer Howell – Technical Specialist: jennifer.howell@gaswcc.ga.gov
Susan Castle – E&SC Specialist: susan.castle@gaswcc.ga.gov
Guerry Thomas – E&SC Specialist: guerry.thomas@gaswcc.ga.gov
Greg Walker – E&SC Specialist: greg.walker@gaswcc.ga.gov
Josh Jackwood – E&SC Specialist: josh.jackwood@gaswcc.ga.gov
Jennifer Standridge – Data Entry Specialist: jennifer.standridge@gaswcc.ga.gov
Melanie Hill – Administrative Assistant: melanie.hill@gaswcc.ga.gov

Rural Water Resources & Watersheds Program

Jessica Mimbs – Program Manager: jessica.mimbs@gaswcc.ga.gov
Ben Hyer – 319 Water Quality Projects: ben.hyer@gaswcc.ga.gov

Financial Personnel

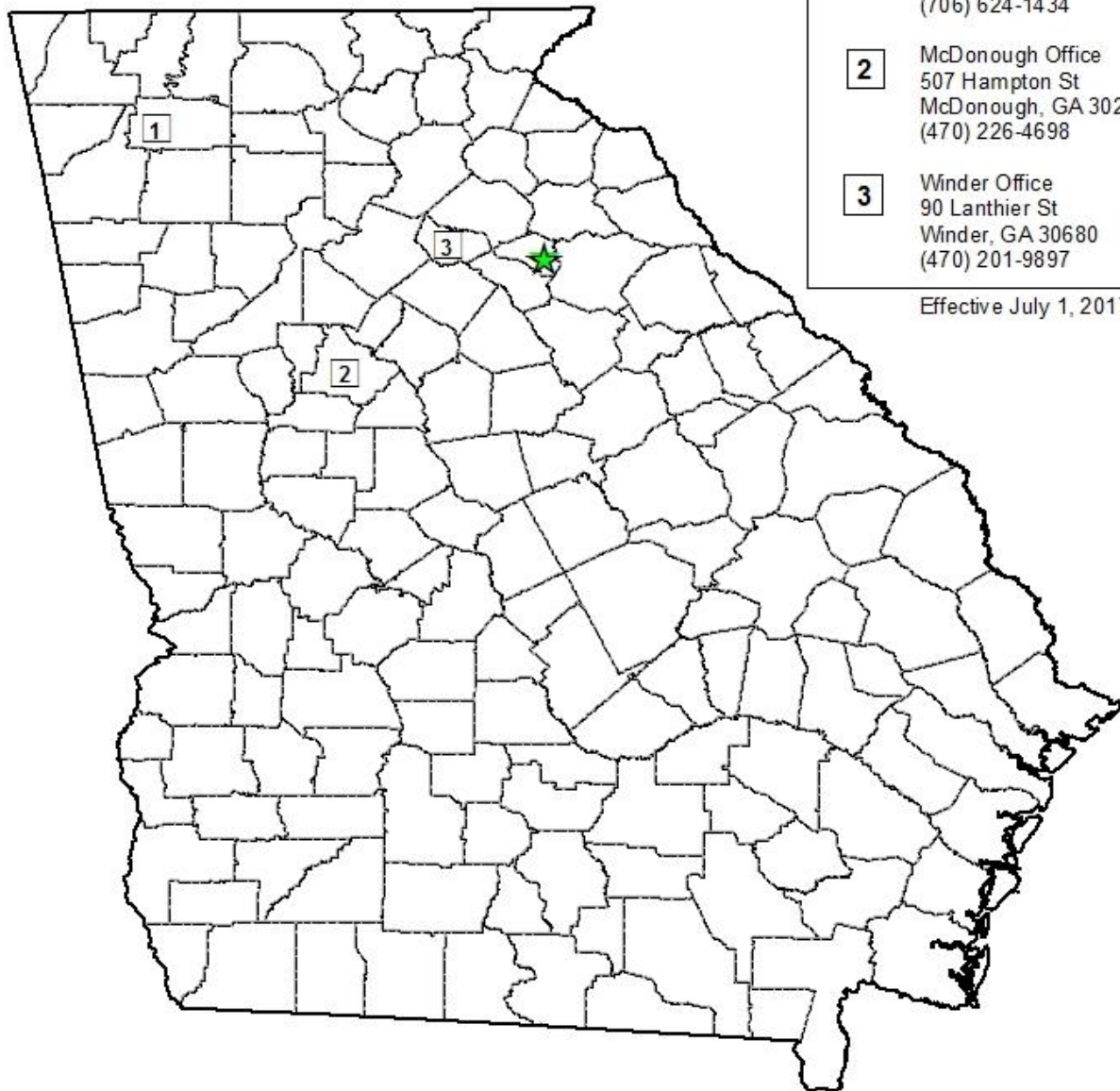
Karen Bruce – Office Manager: karen.bruce@gaswcc.ga.gov
Andy Pope – Personnel Representative: andy.pope@gaswcc.ga.gov

Information Technology

Erik McCutcheon – IT Director: erik.mccutcheon@gaswcc.ga.gov
Ernell Babb – IT Project Specialist: ernie.babb@gaswcc.ga.gov

Georgia Soil and Water Conservation Commission

gaswcc.georgia.gov



Headquarters
4310 Lexington Rd
Athens, GA 30605
(706) 552-4470

1

Calhoun Office
1282 SR 53 Spur SW Ste 300
Calhoun, GA 30701
(706) 624-1434

2

McDonough Office
507 Hampton St
McDonough, GA 30253
(470) 226-4698

3

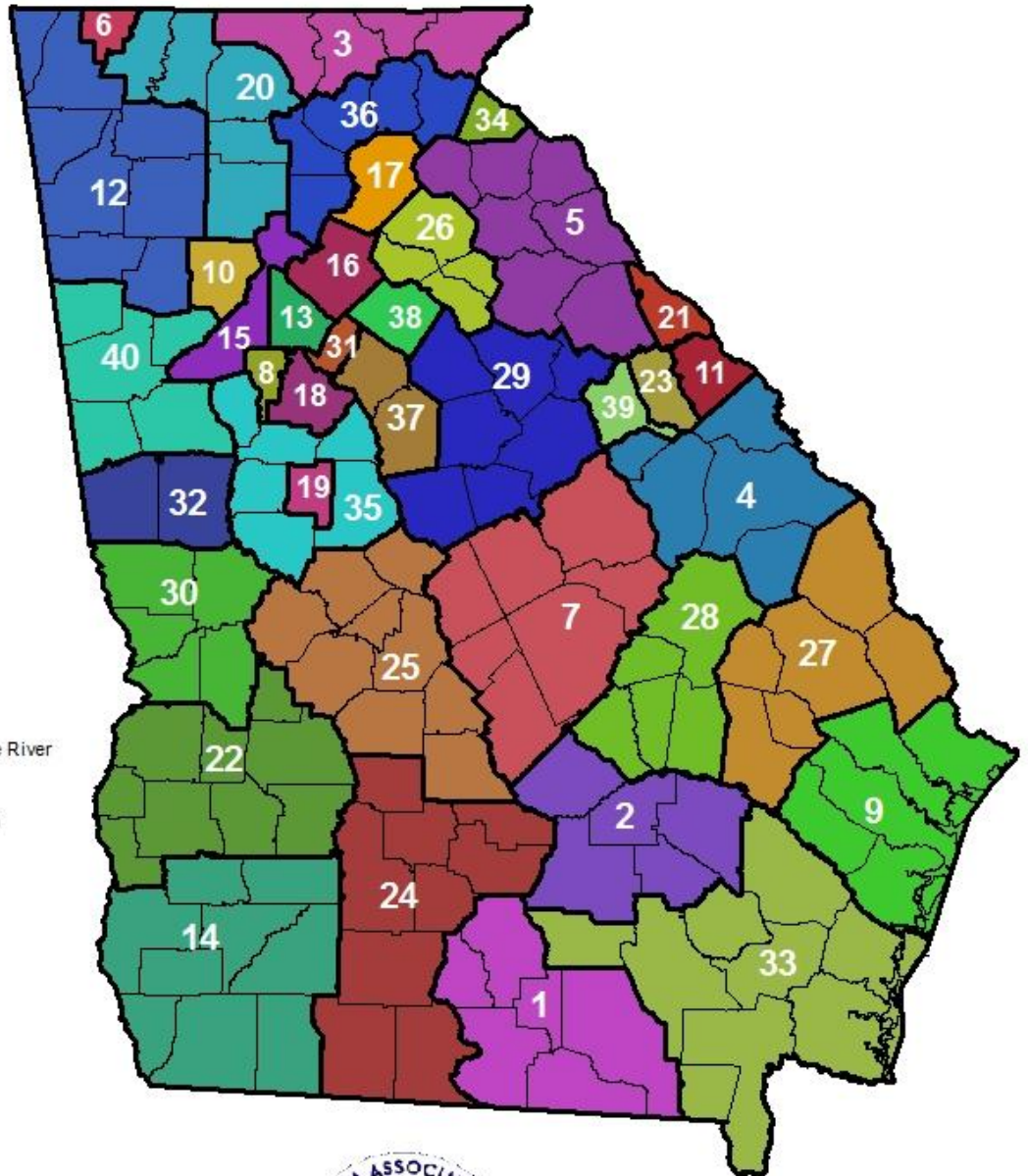
Winder Office
90 Lanthier St
Winder, GA 30680
(470) 201-9897

Effective July 1, 2017

Georgia Soil and Water Conservation Districts

www.gacd.us

- District**
- 1 Alapaha
 - 2 Altamaha
 - 3 Blue Ridge Mountain
 - 4 Brier Creek
 - 5 Broad River
 - 6 Catoosa County
 - 7 Central Georgia
 - 8 Clayton County
 - 9 Coastal Georgia
 - 10 Cobb County
 - 11 Columbia County
 - 12 Coosa River
 - 13 DeKalb County
 - 14 Flint River
 - 15 Fulton County
 - 16 Gwinnett County
 - 17 Hall County
 - 18 Henry County
 - 19 Lamar County
 - 20 Limestone Valley
 - 21 Lincoln County
 - 22 Lower Chattahoochee River
 - 23 McDuffie County
 - 24 Middle South Georgia
 - 25 Ocmulgee River
 - 26 Oconee River
 - 27 Ogeechee River
 - 28 Ohoopsee River
 - 29 Piedmont
 - 30 Pine Mountain
 - 31 Rockdale County
 - 32 Roosevelt
 - 33 Satilla River
 - 34 Stephens County
 - 35 Towaliga
 - 36 Upper Chattahoochee River
 - 37 Upper Ocmulgee River
 - 38 Walton County
 - 39 Warren County
 - 40 West Georgia



GA DNR Environmental Protection Division

epd.georgia.gov



West Central District
2640 Shurling Drive
Macon, GA 31211
(478) 751-6612

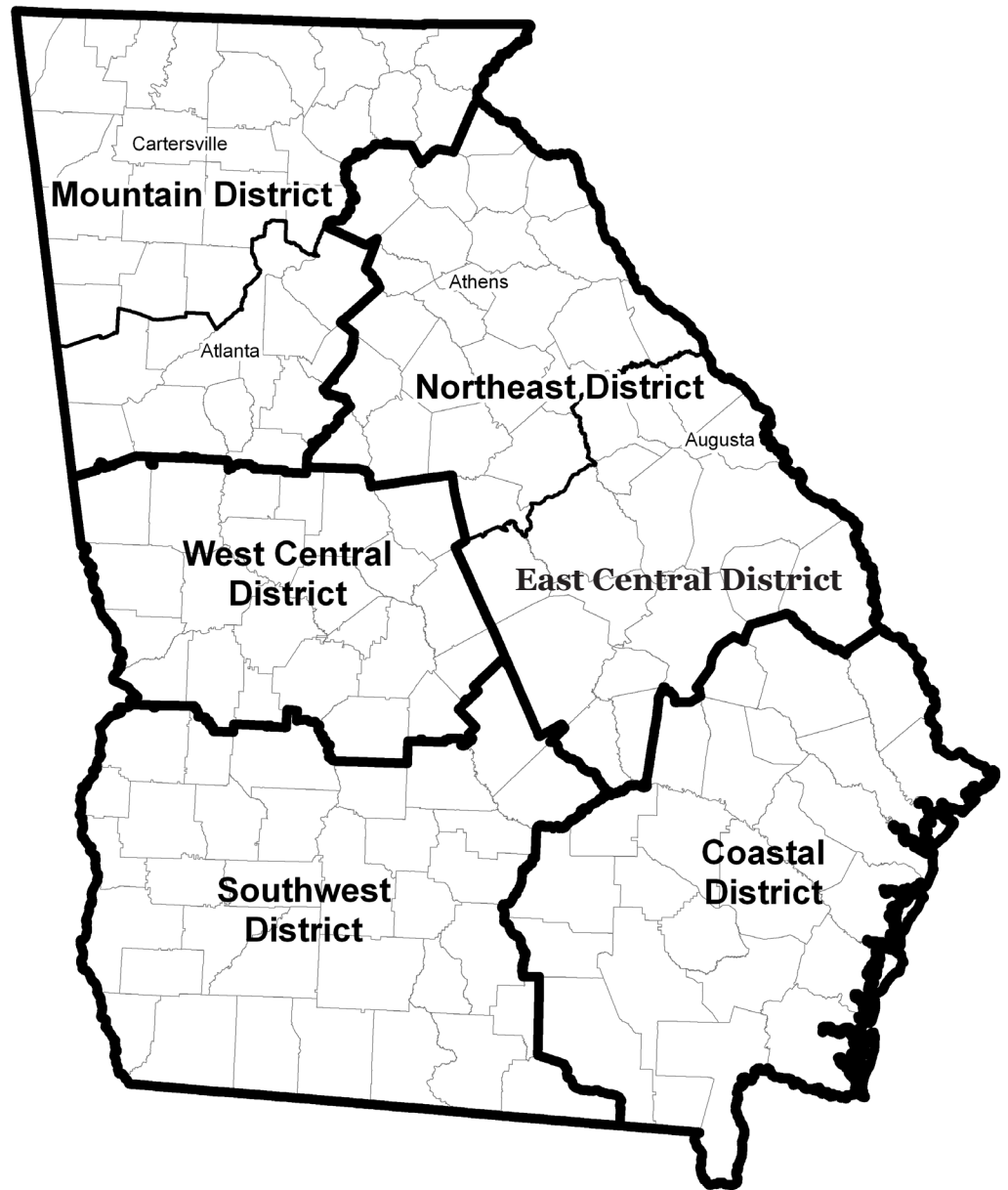
Mountain District
(Atlanta)
4244 International
Parkway
Atlanta, GA 30354
(404) 362-2671

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

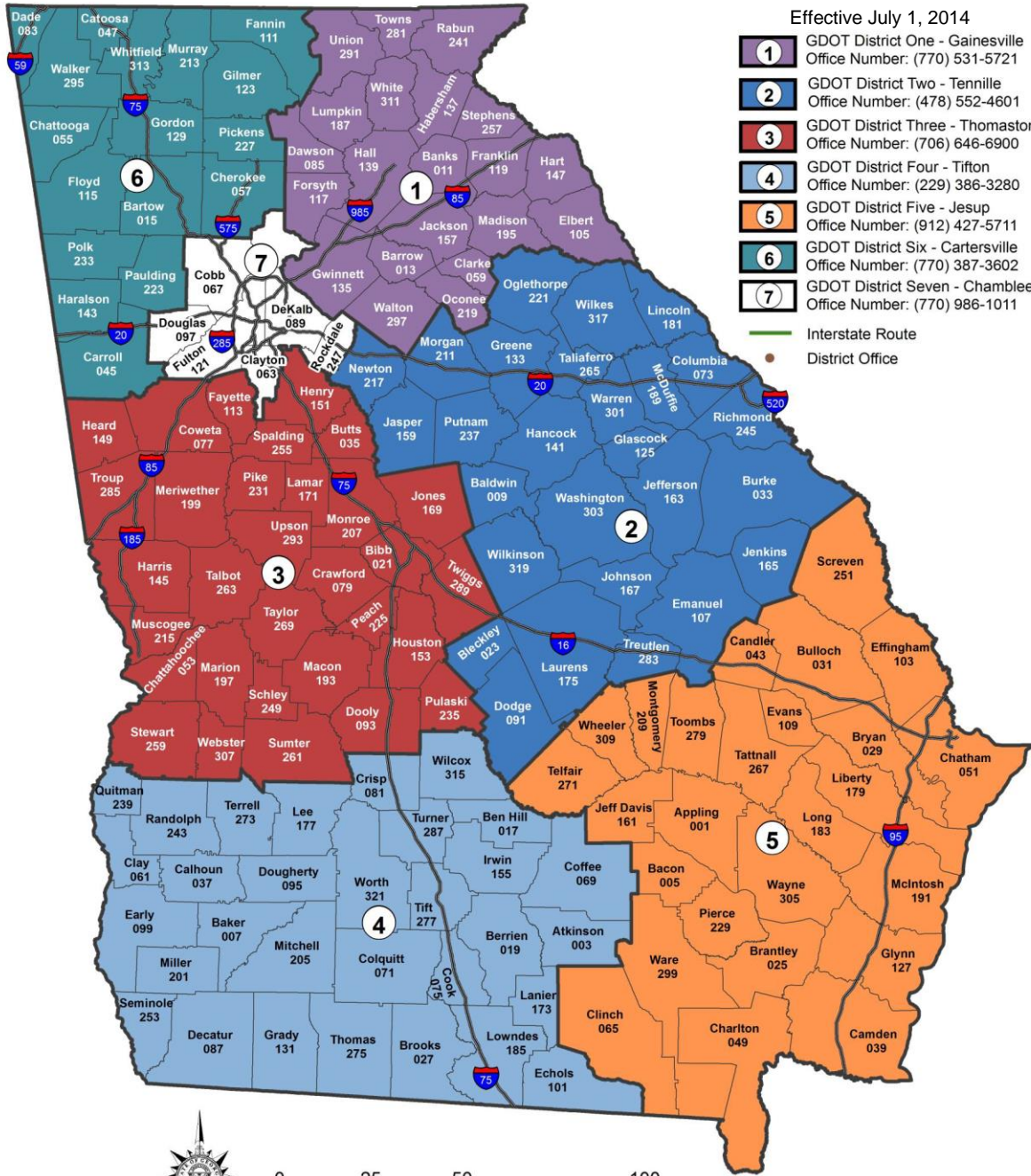
Coastal District
400 Commerce Center Dr.
Brunswick, GA 31523
(912) 264-7284



East Central District
3525 Walton Way Ext.
Augusta, GA 30909
(706) 667-4343

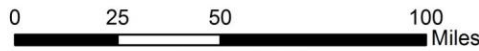
Georgia Department of Transportation

www.dot.ga.gov



Effective July 1, 2014

- 1** GDOT District One - Gainesville
Office Number: (770) 531-5721
 - 2** GDOT District Two - Tennesse
Office Number: (478) 552-4601
 - 3** GDOT District Three - Thomaston
Office Number: (706) 646-6900
 - 4** GDOT District Four - Tifton
Office Number: (229) 386-3280
 - 5** GDOT District Five - Jesup
Office Number: (912) 427-5711
 - 6** GDOT District Six - Cartersville
Office Number: (770) 387-3602
 - 7** GDOT District Seven - Chamblee
Office Number: (770) 986-1011
- Interstate Route
● District Office



NAD 83: Georgia Statewide



Natural Resources Conservations Service

www.nrcs.usda.gov



United States Department of Agriculture
Natural Resources Conservation Service

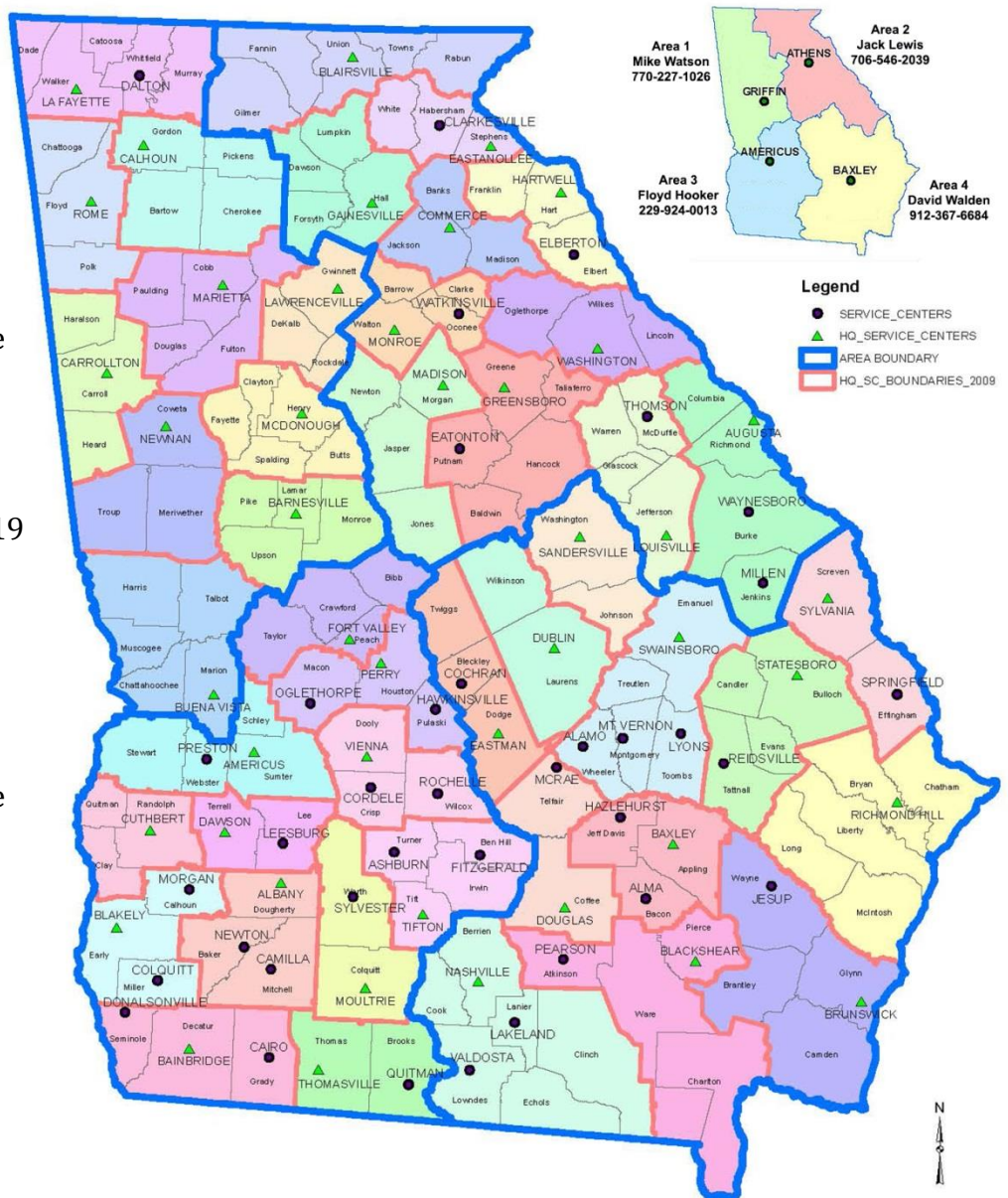
Area 1 Griffin
201 W Solomon St
Griffin, GA 30223

Area 2 Athens
355 E Hancock Ave
Athens, GA 30601

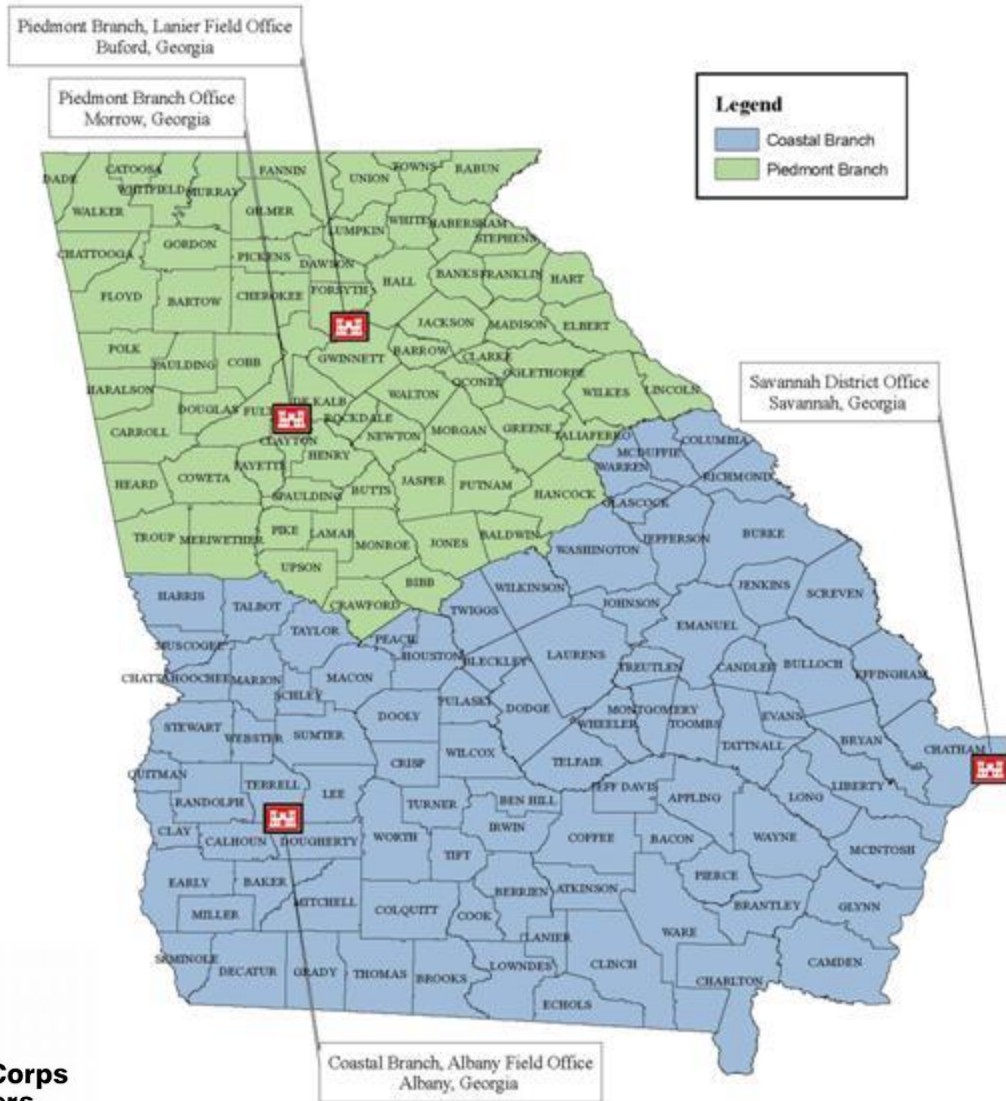
Area 3 Americus
295 Morris Dr
Americus, GA 31719

Area 4 Baxley
239 NE Park Ave
Baxley, GA 31513

State Office
355 E Hancock Ave
Athens, GA 30601



US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT, REGULATORY DIVISION OFFICE LOCATION MAP



US Army Corps of Engineers
Savannah District

Savannah District
Regulatory Division
U.S. Army Corps of Engineers
ATTN: CESAS-RD
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3604

Piedmont Branch
U.S. Army Corps of Engineers
1590 Adamson Parkway
The Plaza, Suite 200
Morrow, GA 30260-1777

Coastal Branch
U.S. Army Corps of Engineers
ATTN: CESAS-RD-C
100 West Oglethorpe Avenue
Savannah, Georgia 31401-3604

Georgia Forestry Commission

www.gfc.state.ga.us



5645 Riggins Mill Road
Dry Branch, GA 31020
1-800-GA-TREES (428-7337)
GaTrees.org

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)

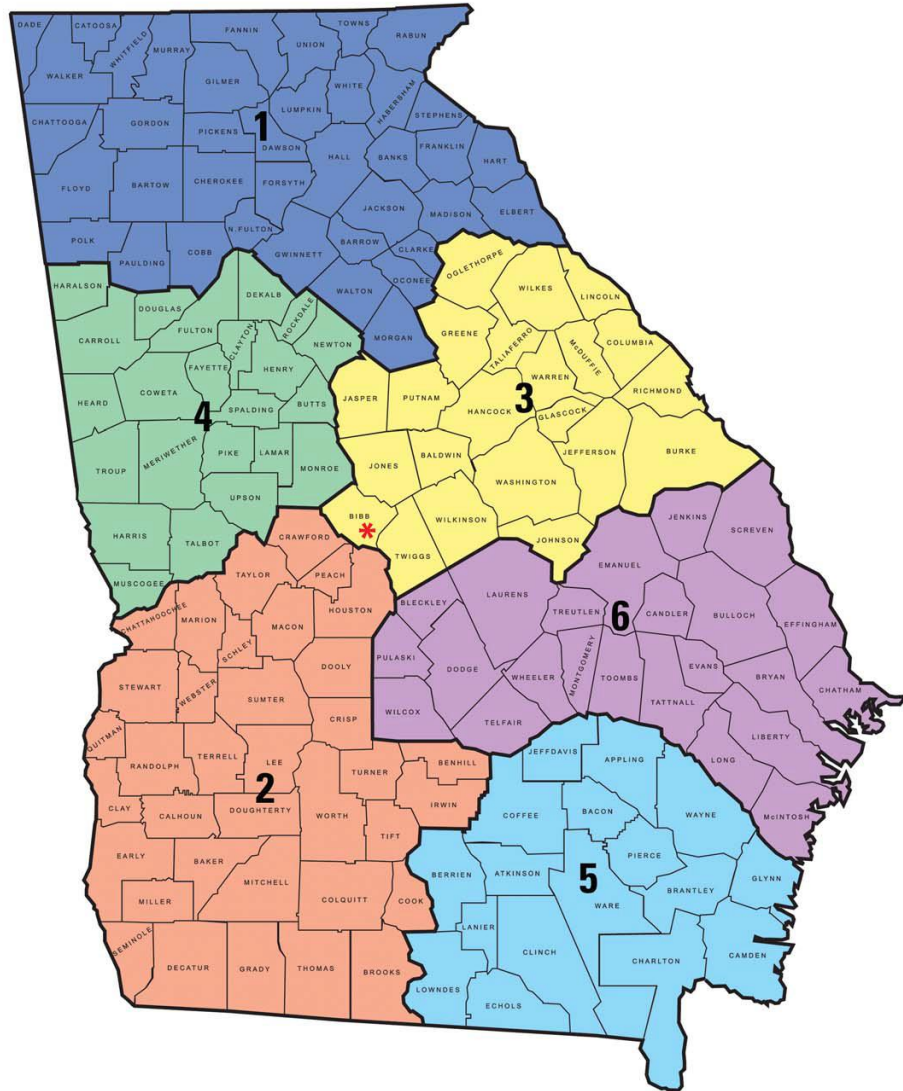
Waycross Office

5003 Jacksonville Hwy
Waycross, GA 31503
(912) 287-4915

Ogeechee District (6)

McRae Office

Route 1 Box 67
Helena, GA 31037
(229) 868-3385



Local Issuing Authority Information

Effective December 2018

County	LIA Name	Active LIA	SWCD
Appling	Baxley	Yes	Altamaha
Atkinson	Pearson	Yes	Satilla River
Baldwin	Baldwin County	Yes	Piedmont
Baldwin	Milledgeville	Yes	Piedmont
Banks	Banks County	Yes	Broad River
Banks	Homer	Yes	Broad River
Banks	Maysville	Yes	Broad River
Barrow	Auburn	Yes	Oconee River
Barrow	Barrow County	Yes	Oconee River
Bartow	Adairsville	Yes	Coosa River
Bartow	Emerson	Yes	Coosa River
Bartow	Euharlee	Yes	Coosa River
Bartow	White	Yes	Coosa River
Ben Hill	Ben Hill County	Yes	Middle South Georgia
Ben Hill	Fitzgerald	Yes	Middle South Georgia
Berrien	Berrien County	Yes	Alapaha
Berrien	Nashville	Yes	Alapaha
Bryan	Bryan County	Yes	Coastal
Bryan	Pembroke	Yes	Coastal
Bryan	Richmond Hill	Yes	Coastal
Bulloch	Bulloch County	Yes	Ogeechee River
Bulloch	Statesboro	Yes	Ogeechee River
Butts	Butts County	Yes	Towaliga
Butts	Jackson	Yes	Towaliga
Camden	Camden County	Yes	Satilla River
Camden	Kingsland	Yes	Satilla River
Camden	St. Marys	Yes	Satilla River
Candler	Candler County	Yes	Ogeechee River
Candler	Metter	Yes	Ogeechee River
Carroll	Mt. Zion	Yes	West Georgia
Carroll	Villa Rica	Yes	West Georgia
Catoosa	Catoosa County	Yes	Catoosa
Catoosa	Ft. Oglethorpe	Yes	Catoosa
Catoosa	Ringgold	Yes	Catoosa

Local Issuing Authority Information

Effective December 2018

Charlton	Charlton County	Yes	Satilla River
Charlton	Folkston	Yes	Satilla River
Charlton	Homeland	Yes	Satilla River
Chatham	Bloomingtondale	Yes	Coastal
Chatham	Chatham County	Yes	Coastal
Chatham	Garden City	Yes	Coastal
Chatham	Pooler	Yes	Coastal
Chatham	Savannah	Yes	Coastal
Chatham	Tybee Island	Yes	Coastal
Chattooga	Chattooga County	Yes	Coosa River
Cherokee	Canton	Yes	Limestone Valley
Cherokee	Cherokee County	Yes	Limestone Valley
Clayton	Clayton County	Yes	Clayton County
Clayton	Lovejoy	Yes	Clayton County
Clayton	Morrow	Yes	Clayton County
Clinch	Homerville	Yes	Alapaha
Cobb	Austell	Yes	Cobb County
Cobb	Marietta	Yes	Cobb County
Cobb	Powder Springs	Yes	Cobb County
Coffee	Coffee County	Yes	Altamaha
Coffee	Douglas	Yes	Altamaha
Colquitt	Colquitt County	Yes	Middle South Georgia
Colquitt	Doerun	Yes	Middle South Georgia
Colquitt	Moultrie	Yes	Middle South Georgia
Colquitt	Norman Park	Yes	Middle South Georgia
Columbia	Grovetown	Yes	Columbia County
Columbia	Harlem	Yes	Columbia County
Cook	Adel	Yes	Alapaha
Cook	Cook County	Yes	Alapaha
Cook	Sparks	Yes	Alapaha
Coweta	Sharpsburg	Yes	West Georgia
Crisp	Cordele	Yes	Middle South Georgia
Crisp	Crisp County	Yes	Middle South Georgia
Dade	Dade County	Yes	Coosa River

Local Issuing Authority Information

Effective December 2018

Dawson	Dawson County	Yes	Upper Chatthoochee River
Dawson	Dawsonville	Yes	Upper Chatthoochee River
Decatur	Bainbridge	Yes	Flint River
DeKalb	Avondale Estates	Yes	Dekalb County
DeKalb	Brookhaven	Yes	Dekalb County
DeKalb	City of Brookhaven	Yes	Dekalb County
DeKalb	Clarkston	Yes	Dekalb County
DeKalb	Decatur	Yes	Dekalb County
DeKalb	Doraville	Yes	Dekalb County
DeKalb	Dunwoody	Yes	Dekalb County
DeKalb	Stone Mountain	Yes	Dekalb County
DeKalb	Stonecrest	Yes	Dekalb County
DeKalb	Tucker	Yes	Dekalb County
Dodge	Eastman	Yes	Central Georgia
Dooly	Dooly County	Yes	Ocmulgee River
Dooly	Unadilla	Yes	Ocmulgee River
Early	Blakely	Yes	Flint River
Effingham	Effingham County	Yes	Ogeechee River
Effingham	Rincon	Yes	Ogeechee River
Elbert	Elbert County	Yes	Broad River
Elbert	Elberton	Yes	Broad River
Evans	Claxton	Yes	Ogeechee River
Fannin	Blue Ridge	Yes	Blue Ridge Mountain
Fannin	Fannin County	Yes	Blue Ridge Mountain
Fayette	Brooks	Yes	Towaliga
Fayette	Woosley	Yes	Towaliga
Forsyth	Cumming	Yes	Upper Chatthoochee River
Forsyth	Forsyth County	Yes	Upper Chatthoochee River
Fulton	College Park	Yes	Fulton County
Fulton	East Point	Yes	Fulton County
Fulton	Fulton County	Yes	Fulton County
Fulton	Hapeville	Yes	Fulton County
Fulton	Mountain Park	Yes	Fulton County
Fulton	Palmetto	Yes	Fulton County
Fulton	Union City	Yes	Fulton County

Local Issuing Authority Information

Effective December 2018

Gilmer	East Ellijay	Yes	Limestone Valley
Gilmer	Ellijay	Yes	Limestone Valley
Gilmer	Gilmer County	Yes	Limestone Valley
Glascok	Glascok County	Yes	Brier Creek
Glynn	Glynn County	Yes	Satilla River
Gordon	Calhoun	Yes	Coosa River
Gordon	Fairmount	Yes	Coosa River
Gordon	Gordon County	Yes	Coosa River
Grady	Cairo	Yes	Flint River
Grady	Grady County	Yes	Flint River
Greene	Greensboro	Yes	Piedmont
Greene	Union Point	Yes	Piedmont
Gwinnett	Berkeley Lake	Yes	Gwinnett County
Gwinnett	Dacula	Yes	Gwinnett County
Gwinnett	Grayson	Yes	Gwinnett County
Gwinnett	Lawrenceville	Yes	Gwinnett County
Gwinnett	Loganville Gwinnett	Yes	Gwinnett County
Gwinnett	Norcross	Yes	Gwinnett County
Gwinnett	Suwanee	Yes	Gwinnett County
Habersham	Alto	Yes	Upper Chatthoochee River
Habersham	Cornelia	Yes	Upper Chatthoochee River
Habersham	Habersham County	Yes	Upper Chatthoochee River
Hall	Flowery Branch	Yes	Hall County
Hall	Gainesville	Yes	Hall County
Hall	Hall County	Yes	Hall County
Hall	Lula	Yes	Hall County
Hall	Oakwood	Yes	Hall County
Hancock	Hancock County	Yes	Piedmont
Haralson	Bremen	Yes	West Georgia
Haralson	Haralson County	Yes	West Georgia
Harris	Hamilton	Yes	Pine Mountain
Harris	Harris County	Yes	Pine Mountain
Harris	Pine Mountain	Yes	Pine Mountain
Henry	Hampton	Yes	Henry County
Henry	Stockbridge	Yes	Henry County

Local Issuing Authority Information

Effective December 2018

Houston	Centerville	Yes	Ocmulgee River
Houston	Perry	Yes	Ocmulgee River
Irwin	Irwin County	Yes	Middle South Georgia
Irwin	Ocilla	Yes	Middle South Georgia
Jackson	Arcade	Yes	Oconee River
Jackson	Braselton	Yes	Oconee River
Jackson	Commerce	Yes	Oconee River
Jackson	Jackson County	Yes	Oconee River
Jackson	Jefferson	Yes	Oconee River
Jackson	Pendergrass	Yes	Oconee River
Jackson	Talmo	Yes	Oconee River
Jasper	Jasper County	Yes	Upper Ocmulgee River
Jasper	Monticello	Yes	Upper Ocmulgee River
Jefferson	Jefferson County	Yes	Brier Creek
Jefferson	Louisville	Yes	Brier Creek
Jefferson	Wrens	Yes	Brier Creek
Jones	Gray	Yes	Piedmont
Jones	Jones County	Yes	Piedmont
Lamar	Barnesville	Yes	Lamar County
Lamar	Lamar County	Yes	Lamar County
Lanier	Lakeland	Yes	Alapaha
Lanier	Lanier County	Yes	Alapaha
Laurens	Dublin	Yes	Central Georgia
Laurens	Laurens County	Yes	Central Georgia
Lee	Lee County	Yes	Lower Chattahoochee River
Lee	Leesburg	Yes	Lower Chattahoochee River
Liberty	Allenhurst	Yes	Coastal
Liberty	Flemington	Yes	Coastal
Liberty	Gum Branch	Yes	Coastal
Liberty	Hinesville	Yes	Coastal
Liberty	Liberty County	Yes	Coastal
Liberty	Midway	Yes	Coastal
Liberty	Riceboro	Yes	Coastal
Liberty	Walthourville	Yes	Coastal
Lincoln	Lincoln County	Yes	Lincoln County
Lincoln	Lincolnton	Yes	Lincoln County
Long	Long County	Yes	Coastal

Local Issuing Authority Information

Effective December 2018

Lowndes	Hahira	Yes	Alapaha
Lowndes	Lake Park	Yes	Alapaha
Lumpkin	Dahlonega	Yes	Upper Chatthoochee River
Lumpkin	Lumpkin County	Yes	Upper Chatthoochee River
Madison	Ila	Yes	Broad River
McDuffie	McDuffie County	Yes	McDuffie County
McDuffie	Thomson	Yes	McDuffie County
Meriwether	Manchester	Yes	Roosevelt
Meriwether	Meriweather County	Yes	Roosevelt
Mitchell	Camilla	Yes	Flint River
Monroe	Forsyth	Yes	Towaliga
Monroe	Monroe County	Yes	Towaliga
Morgan	Madison	Yes	Piedmont
Morgan	Morgan County	Yes	Piedmont
Murray	Chatsworth	Yes	Limestone Valley
Murray	Eton	Yes	Limestone Valley
Murray	Murray County	Yes	Limestone Valley
Newton	Newton County	Yes	Upper Ocmulgee River
Oconee	Oconee County	Yes	Oconee River
Oconee	Watkinsville	Yes	Oconee River
Peach	Byron	Yes	Ocmulgee River
Peach	Peach County	Yes	Ocmulgee River
Pickens	Jasper	Yes	Limestone Valley
Pickens	Nelson	Yes	Limestone Valley
Pickens	Pickens County	Yes	Limestone Valley
Pierce	Blackshear	Yes	Satilla River
Pierce	Patterson	Yes	Satilla River
Pierce	Pierce County	Yes	Satilla River
Pike	Pike County	Yes	Towaliga
Polk	Cedartown	Yes	Coosa River
Polk	Rockmart	Yes	Coosa River
Pulaski	Hawkinsville	Yes	Ocmulgee River

Local Issuing Authority Information

Effective December 2018

Putnam	Eatonton	Yes	Piedmont
Putnam	Putnam County	Yes	Piedmont
Rabun	Clayton	Yes	Blue Ridge Mountain
Rabun	Rabun County	Yes	Blue Ridge Mountain
Rabun	Sky Valley	Yes	Blue Ridge Mountain
Screven	Screven County	Yes	Ogeechee River
Screven	Sylvania	Yes	Ogeechee River
Seminole	Seminole County	Yes	Flint River
Spalding	Griffin	Yes	Towaliga
Spalding	Spalding County	Yes	Towaliga
Stephens	Toccoa	Yes	Stephens County
Stewart	Stewart County	Yes	Lower Chattahoochee River
Sumter	Americus	Yes	Lower Chattahoochee River
Sumter	Plains	Yes	Lower Chattahoochee River
Sumter	Sumter County	Yes	Lower Chattahoochee River
Tattnall	Glennville	Yes	Ogeechee River
Telfair	McRae	Yes	Altamaha
Telfair	Telfair County	Yes	Altamaha
Thomas	Thomasville	Yes	Middle South Georgia
Tift	Omega	Yes	Middle South Georgia
Tift	Tift County	Yes	Middle South Georgia
Tift	Tifton	Yes	Middle South Georgia
Toombs	Toombs County	Yes	Ohooppee River
Toombs	Vidalia	Yes	Ohooppee River
Towns	Young Harris	Yes	Blue Ridge Mountain
Troup	Hogansville	Yes	Roosevelt
Troup	West Point	Yes	Roosevelt
Union	Blairsville	Yes	Blue Ridge Mountain
Union	Union County	Yes	Blue Ridge Mountain
Upson	Thomaston	Yes	Towaliga
Upson	Upson County	Yes	Towaliga

Local Issuing Authority Information

Effective December 2018

Walker	Chickamauga	Yes	Coosa River
Walker	Rossville	Yes	Coosa River
Walker	Walker County	Yes	Coosa River
Walton	Between	Yes	Walton County
Walton	Good Hope	Yes	Walton County
Walton	Loganville Walton County	Yes	Walton County
Walton	Monroe	Yes	Walton County
Walton	Walnut Grove	Yes	Walton County
Walton	Walton County	Yes	Walton County
Ware	Ware County	Yes	Satilla River
Warren	Warren County	Yes	Warren County
Warren	Warrenton	Yes	Warren County
Washington	Sandersville	Yes	Central Georgia
Washington	Tennille	Yes	Central Georgia
White	Cleveland	Yes	Upper Chatahoochee River
White	White County	Yes	Upper Chatahoochee River
Wilkes	Washington	Yes	Broad River
Wilkes	Wilkes County	Yes	Broad River
Worth	Sylvester	Yes	Middle South Georgia

Local Issuing Authorities with a Memorandum of Agreement (MOA)

Effective December 2018

County	LIA Name	Active MOA	SWCD
Bartow	Bartow County	Yes	Coosa River
Bartow	Cartersville	Yes	Coosa River
Bibb	Macon-Bibb County	Yes	Ocmulgee River
Carroll	Carroll County	Yes	West Georgia
Carroll	Carrollton	Yes	West Georgia
Cherokee	Holly Springs	Yes	Limestone Valley
Cherokee	Woodstock	Yes	Limestone Valley
Clarke	Athens-Clarke County	Yes	Oconee River
Clayton	Forest Park	Yes	Clayton County
Clayton	Jonesboro	Yes	Clayton County
Cobb	Acworth	Yes	Cobb County
Cobb	Cobb County	Yes	Cobb County
Cobb	Kennesaw	Yes	Cobb County
Cobb	Smyrna	Yes	Cobb County
Columbia	Columbia County	Yes	Columbia County
Coweta	Coweta County	Yes	West Georgia
Coweta	Newnan	Yes	West Georgia
DeKalb	Chamblee	Yes	Dekalb County
DeKalb	Dekalb County	Yes	Dekalb County
DeKalb	Pine Lake	Yes	Dekalb County
Dougherty	Albany	Yes	Flint River
Dougherty	Dougherty County	Yes	Flint River
Douglas	Douglas County	Yes	West Georgia
Douglas	Douglasville	Yes	West Georgia
Fayette	Fayette County	Yes	Towaliga
Fayette	Fayetteville	Yes	Towaliga
Fayette	Peachtree City	Yes	Towaliga
Fayette	Tyrone	Yes	Towaliga
Floyd	Floyd County	Yes	Coosa River
Floyd	Rome	Yes	Coosa River

Local Issuing Authorities with a Memorandum of Agreement (MOA)

Effective December 2018

County	LIA Name	Active MOA	SWCD
Fulton	Alpharetta	Yes	Fulton County
Fulton	Atlanta	Yes	Fulton County
Fulton	Fairburn	Yes	Fulton County
Fulton	Johns Creek	Yes	Fulton County
Fulton	Milton	Yes	Fulton County
Fulton	Roswell	Yes	Fulton County
Fulton	Sandy Springs	Yes	Fulton County
Greene	Greene County	Yes	Piedmont
Gwinnett	Buford	Yes	Gwinnett County
Gwinnett	Duluth	Yes	Gwinnett County
Gwinnett	Gwinnett County	Yes	Gwinnett County
Gwinnett	Lilburn	Yes	Gwinnett County
Gwinnett	Peachtree Corners	Yes	Gwinnett County
Gwinnett	Snellville	Yes	Gwinnett County
Gwinnett	Sugar Hill	Yes	Gwinnett County
Henry	Henry County	Yes	Henry County
Henry	McDonough	Yes	Henry County
Houston	Houston County	Yes	Ocmulgee River
Houston	Warner Robins	Yes	Ocmulgee River
Lowndes	Lowndes County	Yes	Alapaha
Lowndes	Valdosta	Yes	Alapaha
Muscogee	Columbus-Muscogee County	Yes	Pine Mountain
Newton	Covington	Yes	Upper Ocmulgee River
Paulding	Paulding County	Yes	Coosa River
Richmond	Augusta-Richmond County	Yes	Brier Creek
Rockdale	Rockdale County	Yes	Rockdale County
Troup	LaGrange	Yes	Roosevelt
Troup	Troup County	Yes	Roosevelt
Ware	Waycross	Yes	Satilla River
Whitfield	Dalton	Yes	Limestone Valley
Whitfield	Tunnell Hill	Yes	Limestone Valley
Whitfield	Varnell	Yes	Limestone Valley
Whitfield	Whitfield County	Yes	Limestone Valley

Insert Yellow Sheet

Back of Yellow Sheet

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS**

SWCD: _____

Project Name: _____ Address: _____

City/County: _____ Date on Plans: _____

Name & email of person filling out checklist: _____

Plan Page #	Included Y/N
<input type="checkbox"/>	<input type="checkbox"/>

TO BE SHOWN ON ES&PC PLAN

1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.

(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed) **Permit IV.D.1 pg 26**

<input type="checkbox"/>	<input type="checkbox"/>
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2 Level II certification number issued by the Commission, signature and seal of the certified design professional.

(Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)

The Level II certification must be issued to the Design Professional whose signature and seal are on the Plan.

<input type="checkbox"/>	<input type="checkbox"/>
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3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist. *

(A copy of the written approval by EPD must be attached to the plan for the Plan to be reviewed.) **Permit IV.D.3 pg 27**

<input type="checkbox"/>	<input type="checkbox"/>
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4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.

May be shown on ES&PC Plan sheets and/or ES&PC notes. **Permit II.B.1.c pg 12**

<input type="checkbox"/>	<input type="checkbox"/>
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5 Provide the name, address, email address, and phone number of primary permittee.

May be shown on cover sheet, ES&PC Plan or under ES&PC notes. **Permit II.B.1.b pg 12**

<input type="checkbox"/>	<input type="checkbox"/>
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6 Note total and disturbed acreage of the project or phase under construction.

Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.c pg 27**

<input type="checkbox"/>	<input type="checkbox"/>
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7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.

GPS location of the construction exit must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes. It must match the NOI. **Permit II.B.1.a pg 12**

<input type="checkbox"/>	<input type="checkbox"/>
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8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.

The initial Plan date should be shown on all pages. With each resubmittal, the revision date and entity requesting revisions should be shown on cover sheet and each sheet that has been revised.

<input type="checkbox"/>	<input type="checkbox"/>
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9 Description of the nature of construction activity.

Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.2.a pg 27**

<input type="checkbox"/>	<input type="checkbox"/>
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10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.

Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled. This information is important for Plan Reviewers if a site visit is needed, or if the site needs to be located on another map. **Permit IV.D.2.e pg 27**

<input type="checkbox"/>	<input type="checkbox"/>
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11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.

The name of the initial receiving water(s) or if unnamed, the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream. Describe any neighboring area which could be affected by the post-developed runoff from the site. **Permit IV.D.2.f pg 27**

12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on [Part IV page 19](#) of the permit.

The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on [Part IV page 19](#) of the permit. *

The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the [Georgia](#) Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of Best Management Practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001."

14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." *

The Plan must include a statement indicating that the primary permittee must retain the design professional who prepared the Plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required. [Permit IV.A.5 pg 25](#)

15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wretched vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."

See [Part IV.\(i\) - \(iv\) on pages 19-24](#) of the permit and show under ES&PC notes.

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.

When the project requires an approved buffer variance from the GA EPD, an indication shall be shown on the ES&PC Plan. A description of the encroachment activity must be shown on the ES&PC Plan or under ES&PC notes.

17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *

See [Part IV.C. on page 26](#) of the permit. This can be clarified in a narrative and shown under ES&PC notes. Revisions or amendments should be submitted to the Local Issuing Authority for review.

18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *

The Plan must include a description of how waste materials, including waste building materials, construction and demolition debris, concrete washout, excavated sediment, etc., will be properly disposed of. Any disposal of solid waste to waters of the State is prohibited unless authorized by a Section 404 permit. [Permit IV.D.3.c.\(1\) pg 30](#)

19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."

Must be shown on ES&PC Plan or under ES&PC notes.

20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."

Must be shown on ES&PC Plan or under ES&PC notes.

21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

Must be shown on ES&PC Plan or under ES&PC notes. Permit IV.D.3.a.(1) pg 28

22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III.C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *

If any storm water associated with construction activities discharges into an Impaired Stream Segment that 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), the ES&PC Plan must include at least four (4) of the BMPs listed in Part III.C.2.a. - v. of the permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's most current and subsequent "305(b)/303(d) List Documents (Approved) can be viewed on the GAEPD website (www.gaepd.org/Documents/305b.html) Permit III.C.2.a. - v. pg 15-17

23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *

List of TMDL Implementation Plans can be viewed on the GAEPD website, www.gaepd.org. The TMDL Implementation Plan for sediment should be delineated on the ES&PC Plan. Permit III.C.1 pg 15

24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *

When the project allows the concrete washdown of tools, concrete mixer chutes, hoppers and rear of the vehicles on the project site delineate the location of the area provided for washing and provide detail of BMPs that will be used. If the project does not allow the concrete washdown on the project site, note that on the Plan. Permit IV.D.3.c.(6) pg 31

25 Provide BMPs for the remediation of all petroleum spills and leaks.

The Plan must provide BMPs and guidance for the prevention of spills and leaks of petroleum products from any areas where such products are stored or used as well as guidance for the proper remediation of any spills and leaks that do occur. This information can be in the form of a separate Spill Prevention/Spill Response document so long as that information accompanies the Plan. Permit IV.D.3.c.(5) pg 31

26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *

The Plan must contain a description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. These may include storm water detention and retention structures, use of vegetated swales and natural depressions for flow attenuation or a combination of these practices (sequential systems). The Plan must also include a technical explanation of the basis used to select these practices where flows will exceed pre-development levels. The Plan must indicate that velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act.

Note: The permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed. Permit IV.D.3.b pg 29

27 Description of practices to provide cover for building materials and building products on site. *

The Plan must contain a description of measures, such as plastic sheeting or temporary roofs, to cover building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials in order to minimize exposure to precipitation and to stormwater. Permit IV.D.3.c.(2) pg 30

28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *

The Plan must identify all potential sources of storm water pollution expected to be present on the site and provide a narrative explaining how the pollutants will be minimized in the storm water discharges. Permit IV pg 24

29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

Activity schedule must be site specific. The narrative description and timeline for each phase of construction may be shown on ES&PC Plan sheet or under ES&PC notes. **Permit IV.D.2.b pg 27**

30 Provide complete requirements of Inspections and record keeping by the primary permittee. *

The Plan must include all of the Inspections and record keeping requirements of the primary permittee as stated in **Part IV.D.4.a. on pages 31-33** of the permit. The complete Inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *

See **Part IV.D.6.d pages 35-37 Sampling Frequency** and **Part IV.E page 37 Reporting** in the permit. Complete Sampling Frequency and Reporting requirements are to be shown on the Plan under ES&PC notes.

32 Provide complete details for Retention of Records as per Part IV.F. of the permit.*

See **Part IV.F page 38 Retention of Records** in the permit. Complete details of Retention of Records are to be shown on the Plan under ES&PC notes.

33 Description of analytical methods to be used to collect and analyze the samples from each location. *

This narrative must be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location. **Permit IV.D.6.a. - c. pg 33-35**

34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *

When the permittee has determined that some or all outfalls will be monitored, a rationale must be shown on the Plan under ES&PC notes which includes the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries). **Permit IV.D.6.a.(3) pg 33**

35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *

The Plan shall include a USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the locations of the site or the common development. The map must include (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during the mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map. **Permit IV.D.6.a.(1) pg 33**



36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the sediment storage requirements and initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *

The Plan must be shown in a minimum of three phases with each phase shown on a separate sheet. Initial phase of the Plan must include the required 67 cy per acre sediment storage, construction exit, tree-save fence if applicable and any other BMPs necessary to prevent sediment from leaving the site such as silt fence, inlet protection on existing storm drain structures, diversions, check dams, temporary ground cover, etc. Limits of disturbance for the initial phase are to be only the areas needed to install initial BMPs. The intermediate phase should show rough grading and utility construction. BMPs should include initial inlet protection, additional silt fence as needed, any revised sediment storage needed as drainage basins are altered, outlet protection, retrofit if applicable, matting with temporary or permanent vegetation as needed, temporary down drains, filter rings, etc. Final phase of Plan should show finished grade, curbing and paving if applicable, building construction if applicable, etc. BMPs should include permanent vegetation, appropriate inlet protection, etc. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and the final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. **Permit IV.D.3 pg 27**



37 Graphic scale and North arrow.

The graphic scale and North arrow must be clearly shown on all phases of the ES&PC Plan sheets.



38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

The initial, intermediate, and final phase sheets of the Plan must show the proposed grade in bold contour lines with the above intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.



39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.

Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov **Permit IV.D.3.a (4) pg 29**



40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *

Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.



41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.

The State Law of Georgia mandates these minimum undisturbed buffers, but the Local Issuing Authorities are allowed to require more stringent buffers of State waters. The minimum undisturbed buffers required by the State and all other buffers of State waters required by the issuing authority must be delineated. Any undisturbed buffer area that is impacted by the project site must be noted on the Plan. **Permit IV.D.2.e pg 27**



42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.

ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE MUST BE DELINEATED ON ALL PHASES OF THE PLAN. When a project is located in a jurisdiction with a certified Local Issuing Authority and the LIA must make a determination of State waters that are not delineated on the Plan, the Plan review could be delayed for beyond the full forty-five day review time allowed to the LIA, or the full thirty-five day review time allowed to the District if the District is reviewing the Plan. For all projects in a jurisdiction where there is no certified Local Issuing Authority regulating that project, EPD is responsible for State waters determinations and there are no time limits for reviewing the Plan.

ALL WETLANDS LOCATED WITHIN THE PROJECT SITE ONLY MUST BE DELINEATED.

If the Local Issuing Authority requires an undisturbed buffer of wetlands, delineate required buffer.

43 Delineation and acreage of contributing drainage basins on the project site.

All existing drainage basins on the project site and their acreage must be delineated on the existing conditions and/or on the initial phase of the Plan. As the basins are altered or new ones created during intermediate and final phases, the new basins and their acreage must be delineated throughout each phase of the Plan. [Permit IV.D.2.e pg 27](#)

44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *

Hydrology study and drainage maps should be separate from the Plan. Maps should include each individual basin draining to, through, and from, the project site, with each one delineated, labeled and showing its total acreage.

45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.

The Plan must provide both pre- and post-construction estimates of the runoff coefficient or peak discharge flow for the site. This can be in the form of a hydrologic study so long as that study is made a part of the Plan and accompanies the Plan. A complete hydrologic study is not a required element of the Plan, only the pre and post-construction estimates of the run-off coefficient or peak discharge flow for the site. [Permit IV.D.2.d pg 27](#)

46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion.

Identify/Delineate all storm water discharge points.

The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tailwater conditions. This information should be shown in a chart on the storm-drain profile sheet, ES&PC intermediate phase sheet, or on the ES&PC detail sheet that shows outlet protection.

The dimensions of the apron must include length (La), width at the headwall (W1), down-stream width (W2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-34.1 and 6-34.2 in the Manual. These should be shown in a chart on ES&PC intermediate and/or final phase sheet or ES&PC detail sheet with outlet protection. Velocity dissipation devices shall be placed at all discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological functions and characteristics are maintained and protected.

47 Soil series for the project site and their delineation.

Soil series delineations are required for the Plan review and can be found on the NRCS web site. The highest level of soil survey required for the project site, such as a level three or level four survey for projects that will be using septic systems, must be delineated on the Plan. The soil series delineation should be shown on the existing site Plan or the initial phase Plan. A chart listing the soils located on the project should be shown on the sheet with their delineation.

48 The limits of disturbance for each phase of construction.

The limits of disturbance for the initial phase should delineate only the area required to be disturbed for the installation of perimeter control and initial sediment storage. The intermediate phase should delineate the entire area to be disturbed for that phase, such as grading, drainage, utilities installed, etc. The final phase should delineate any additional areas to be disturbed such as individual lots, etc.

49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, 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.

For each common drainage location, a temporary (or Permanent) sediment basin (Sd3, Sd4, Rt, or excavated Sd2) providing at least 67 cubic yards of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 67 cubic yards of storage per acre does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. Sediment basins may not be appropriate for some common drainage locations and a written justification explaining the decision not to use sediment basins must be included in the Plan. Worksheets from the Manual must be completed and shown on the Plan or attached to the Plan for each temporary sediment basin designed for the project. All cross sections and details required per the Manual for Sd3's must be shown on the ES&PC detail section of the Plan. Completed worksheets from the Manual must be shown on the Plan for each retrofit and excavated inlet sediment trap. When the design professional chooses to use equivalent controls the calculations used to obtain the required 67 cubic yards per acre drained must be included on the Plan. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. **Permit IV.D.3.a.(3) pg 28**

50 Location of Best Management Practices that are consistent with, and no less stringent than, the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.

BMPs for all phases of the Plan must be consistent with and no less stringent than the Manual and shown using uniform coding symbols from the Manual. The uniform coding symbols legend from the Manual must be included and may be shown on detail sheet or any of the ES&PC Plan sheets.

51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.

The erosion and sediment control detail sheet must show a detailed drawing for each structural BMP shown on the Plan. All BMPs and details shown must, at a minimum, meet the guidelines given in the Manual. Note that a worksheet is provided in the Manual for most structural BMPs that must be included on the ES&PC Plan or detail sheet.

52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

Must be shown on ES&PC Plan, on the ES&PC detail sheet or under ES&PC notes.

* If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Effective January 1, 2019

Insert Yellow Sheet

Back of Yellow Sheet

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE CONSTRUCTION PROJECTS**

SWCD: _____

Project Name: _____ Address: _____

City/County: _____ Date on Plans: _____

Name & email of person filling out checklist: _____

Plan Page #	Included Y/N
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TO BE SHOWN ON ES&PC PLAN

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
<i>(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed) Permit IV.D.1 pg 28</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 2 Level II certification number issued by the Commission, signature and seal of the certified design professional.
<i>(Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)
The Level II certification must be issued to the Design Professional whose signature and seal are on the Plan.</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 3 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
<i>May be shown on ES&PC Plan sheets and/or ES&PC notes. Permit II.B.1.c pg 13</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 4 Provide the name, address, email address , and phone number of primary permittee.
<i>May be shown on cover sheet, ES&PC Plan or under ES&PC notes. Permit II.B.1.b pg 13</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 5 Note total and disturbed acreage of the project or phase under construction.
<i>Must be shown on ES&PC Plan or under ES&PC notes. Permit IV.D.2.c pg 28</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 6 Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.
<i>GPS locations of the beginning and end of the infrastructure project must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes. It must match the NOI. Permit II.B.1.a pg 13</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 7 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
<i>The initial Plan date should be shown on all pages. With each resubmittal, the revision date, and the entity requesting revisions should be shown on cover sheet and each sheet that has been revised.</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 8 Description of the nature of construction activity.
<i>Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes. Permit IV.D.2.a pg 28</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 9 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
<i>Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled. This information is important for Plan Reviewers if a site visit is needed, or if the site needs to be located on another map. Permit IV.D.2.e pg 28</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 10 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
<i>The name of the initial receiving water(s) or if unnamed the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream. Describe any neighboring area which could be affected by the Permit IV.D.2.f pg 28</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 11 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 21 of the permit.
<i>The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."</i> |

12 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on **Part IV page 20** of the permit. *
 The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the **Georgia** Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of Best Management Practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100002."

13 Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on **Part IV.D.6.c.(3) page 37** of the permit as applicable. *
 The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No. GAR 100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."

14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins within 7 days after installation." *
 The Plan must include a statement indicating that the primary permittee must retain the design professional who prepared the Plan, or an alternative professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within (7) days after installation. Alternatively, for linear infrastructure projects, the primary permittee must retain the design professional who prepared the Plan, or alternative design professional approved by EPD in writing to inspect (a) the installation of sediment storage requirements and perimeter control BMPs for the "initial segment" of the linear infrastructure project and (b) all sediment basins within the entire linear infrastructure project within (7) days after the installation. For the purposes of the specific requirements in Part IV.A.5., the disturbed acreage of the "initial segment" of a linear infrastructure project 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. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within (7) days and the permittee must correct all deficiencies within (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required. **Part IV.A.5 pg 26**

15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wretched vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
 See **Part IV.(i) - (iv) on pages 21-25** of the permit and show under ES&PC notes.

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
 When the project requires an approved buffer variance from the GA EPD, an indication shall be shown on the ES&PC Plan. A description of the encroachment activity must be shown on the ES&PC Plan or under ES&PC notes.

17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
 See **Part IV.C. on page 27** of the permit. This can be clarified in a narrative and shown under ES&PC notes. Revisions or amendments should be submitted to the Local Issuing Authority for review.

- 18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
- The Plan must include a description of how waste materials, including waste building materials, construction and demolition debris, concrete washout, excavated sediment, etc., will be properly disposed of. Any disposal of solid waste to waters of the State is prohibited unless authorized by a Section 404 permit. **Permit IV.D.3.c.(1) pg 31**
- 19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
- Must be shown on ES&PC Plan or under ES&PC notes.
- 20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
- Must be shown on ES&PC Plan or under ES&PC notes.
- 21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
- Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.3.a.(1) pg 29**
- 22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III.C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
- If any storm water associated with construction activities discharges into an Impaired Stream Segment that 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), the ES&PC Plan must include at least four (4) of the BMPs listed in **Part III.C.2.a. - v.** of the permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's most current and subsequent "305(b)/303(d) List Documents (Approved)" can be viewed on the GAEPD website (www.gaepd.org/Documents/305b.html) **Permit III.C.2.a. - v. pg 17-19**
- 23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
- List of TMDL Implementation Plans can be viewed on the GAEPD website, www.gaepd.org. The TMDL Implementation Plan for sediment should be delineated on the ES&PC Plan. **Permit III.C.1 pg 16**
- 24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
- When the project allows the concrete washdown of tools, concrete mixer chutes, hoppers and rear of the vehicles on the project site, delineate the location of the area provided for washing and provide detail of BMPs that will be used. If the project does not allow the concrete washdown on the project site, note that on the Plan. **Permit IV.D.3.c.(6) pg 32**
- 25 Provide BMPs for the remediation of all petroleum spills and leaks.
- The Plan must provide BMPs and guidance for the prevention of spills and leaks of petroleum products from any areas where such products are stored or used as well as guidance for the proper remediation of any spills and leaks that do occur. This information can be in the form of a separate Spill Prevention/Spill Response document so long as that information accompanies the Plan. **Permit IV.D.3.c.(5) pg 32**

- 26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
- The Plan must contain a description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. These may include storm water detention and retention structures, use of vegetated swales and natural depressions for flow attenuation or a combination of these practices (sequential systems). The Plan must also include a technical explanation of the basis used to select these practices where flows will exceed pre-development levels. The Plan must indicate that velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act.
- Note: The permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed. [Permit IV.D.3.b pg 30](#)
- 27 Description of practices to provide cover for building materials and building products on site. *
- The Plan must contain a description of measures, such as plastic sheeting or temporary roofs, to cover building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials in order to minimize exposure to precipitation and to stormwater. [Permit IV.D.3.c.\(2\) pg 31](#)
- 28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *
- The Plan must identify all potential sources of storm water pollution expected to be present on the site and provide a narrative explaining how the pollutants will be minimized in the storm water discharges. [Permit IV pg 25](#)
- 29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
- Activity schedule must be site specific. The narrative description and timeline for each phase of construction may be shown on ES&PC Plan sheet or under ES&PC notes. [Permit IV.D.2.b pg 28](#)
- 30 Provide complete requirements of Inspections and record keeping by the primary permittee. *
- The Plan must include all of the Inspections and record keeping requirements of the primary permittee as stated in [Part IV.D.4.a on pages 32-34](#) of the permit. The complete Inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.
- 31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
- See [Part IV.D.6.d pages 38-39](#) *Sampling Frequency* and [Part IV.E page 40](#) *Reporting* in the permit. Complete Sampling Frequency and Reporting requirements are to be shown on the Plan under ES&PC notes.
- 32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *
- See [Part IV.F pages 40-41](#) *Retention of Records* in the permit. Complete details of Retention of Records are to be shown on the Plan under ES&PC notes.
- 33 Description of analytical methods to be used to collect and analyze the samples from each location. *
- This narrative must be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location. [Permit IV.D.6.a. - c. pg 34-38](#)
- 34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
- When the permittee has determined that some or all outfalls will be monitored, a rationale must be shown on the Plan under ES&PC notes which includes the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries). [Permit IV.D.6.a.\(3\) pg 34](#)



35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *

The Plan shall include a USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the locations of the site or the common development. The map must include (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during the mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map. **Permit IV.D.6.a.(1) pg 34**



36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage requirements and perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *

The Plan must be shown in a minimum of three phases with each phase shown on a separate sheet. Initial phase of the Plan must include the required 67 cy per acre sediment storage, construction exit, tree-save fence if applicable and any other BMPs necessary to prevent sediment from leaving the site such as silt fence, inlet protection on existing storm drain structures, diversions, check dams, temporary ground cover, etc. Limits of disturbance for the initial phase are to be only the areas needed to install initial BMPs. The intermediate phase should show rough grading and utility construction. BMPs should include initial inlet protection, additional silt fence as needed, any revised sediment storage needed as drainage basins are altered, outlet protection, retrofit if applicable, matting with temporary or permanent vegetation as needed, temporary down drains, filter rings, etc. Final phase of Plan should show finished grade, curbing and paving if applicable, building construction if applicable, etc. BMPs should include permanent vegetation, appropriate inlet protection, etc. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and the final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. **Permit IV.D.3 pg 28**



37 Graphic scale and North arrow.

The graphic scale and North arrow must be clearly shown on all phases of the ES&PC Plan sheets.



38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Existing Contours	USGS 1": 2000' Topographical Sheets
Proposed Contours	1" : 400' Centerline Profile

The initial, intermediate, and final phase sheets of the Plan must show the proposed grade in bold contour lines with the above intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.

- 39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov **Permit IV.D.3.a.(4) pg 49**
- 40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.
- 41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
The State Law of Georgia mandates these minimum undisturbed buffers, but the Local Issuing Authorities are allowed to require more stringent buffers of State waters. The minimum undisturbed buffers required by the State and all other buffers of State waters required by the issuing authority must be delineated. Any undisturbed buffer area that is impacted by the project site must be noted on the Plan. **Permit IV.D.2.e pg 28**
- 42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE MUST BE DELINEATED ON ALL PHASES OF THE PLAN. When a project is located in a jurisdiction with a certified Local Issuing Authority and the LIA must make a determination of State waters that are not delineated on the Plan, the Plan review could be delayed for beyond the full forty-five day review time allowed to the LIA, or the full thirty-five day review time allowed to the District if the District is reviewing the Plan. For all projects in a jurisdiction where there is no certified Local Issuing Authority regulating that project, EPD is responsible for State waters determinations and there is no time limits for reviewing the Plan.
ALL WETLANDS LOCATED WITHIN THE PROJECT SITE ONLY MUST BE DELINEATED.
If the Local Issuing Authority requires an undisturbed buffer of wetlands, delineate required buffer.
- 43 Delineation and acreage of contributing drainage basins on the project site.
All existing drainage basins on the project site and their acreage must be delineated on the existing conditions and/or on the initial phase of the Plan. As the basins are altered or new ones created during intermediate and final phases, the new basins and their acreage must be delineated throughout each phase of the Plan. **Permit IV.D.2.e pg 28**
- 44 Delineate on-site drainage and off-site watersheds using USGS 1" :2000' topographical sheets.
Hydrology study and drainage maps should be separate from the Plan. Maps should include each individual basin draining to, through and from the project site, with each one delineated, labeled and showing its total acreage.
- 45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
The Plan must provide both pre- and post-construction estimates of the runoff coefficient or peak discharge flow for the site. This can be in the form of a hydrologic study so long as that study is made a part of the Plan and accompanies the Plan. A complete hydrologic study is not a required element of the Plan, only the pre and post-construction estimates of the run-off coefficient or peak discharge flow for the site. **Permit IV.D.2.d pg 28**
- 46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow, including pipe diameter, flow rate (cfs), velocity (fps), and tailwater conditions. This information should be shown in a chart shown on storm-drain profile sheet, ES&PC intermediate phase sheet or on the ES&PC detail sheet that shows outlet protection.
The dimensions of the apron must include length (La), width at the headwall (W1), down-stream width (W2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-34.1 and 6-34.2 in the Manual. These should be shown in a chart on ES&PC intermediate and/or final phase sheet or ES&PC detail sheet with outlet protection. Velocity dissipation devices shall be placed at all discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological functions and characteristics are maintained and protected.

47 Soil series for the project site and their delineation.

Soil series delineations are required for the Plan review and can be found on the NRCS web site. The highest level of soil survey required for the project site, such as a level three or level four survey for projects that will be using septic systems, must be delineated on the Plan. The soil series delineation should be shown on the existing site Plan or the initial phase Plan. A chart listing the soils located on the project should be shown on the sheet with their delineation.

48 The limits of disturbance for each phase of construction.

The limits of disturbance for the initial phase should delineate only the area required to be disturbed for the installation of perimeter control and initial sediment storage. The intermediate phase should delineate the entire area to be disturbed for that phase, such as grading, drainage, utilities installed, etc. The final phase should delineate any additional areas to be disturbed such as individual lots, etc.

49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, 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.

For each common drainage location, a temporary (or permanent) sediment basin (Sd3, Sd4, Rt, or excavated Sd2) providing at least 67 cubic yards of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 67 cubic yards of storage per acre does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. Sediment basins may not be appropriate for some common drainage locations and a written justification explaining the decision not to use sediment basins must be included in the Plan. Worksheets from the Manual must be completed and shown on the Plan or attached to the Plan for each temporary sediment basin designed for the project. All cross sections and details required per the Manual for Sd3's must be shown on the ES&PC detail section of the Plan. Completed worksheets from the Manual must be shown on the Plan for each retrofit and excavated inlet sediment trap. When the design professional chooses to use equivalent controls the calculations used to obtain the required 67 cubic yards per acre drained must be included on the Plan. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. **Permit IV.D.3.a.(3) pg 29**

50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.

BMPs for all phases of the Plan must be consistent with and no less stringent than the Manual and shown using uniform coding symbols from the Manual. The uniform coding symbols legend from the Manual must be included and may be shown on detail sheet or any of the ES&PC Plan sheets.

51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.

The erosion and sediment control detail sheet must show a detailed drawing for each structural BMP shown on the Plan. All BMPs and details shown must, at a minimum, meet the guidelines given in the Manual. Note that a worksheet is provided in the Manual for most structural BMPs that must be included on the ES&PC Plan or detail sheet.

52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

Must be shown on ES&PC Plan, on the ES&PC detail sheet or under ES&PC notes.

* If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Insert Yellow Sheet

Back of Yellow Sheet

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
COMMON DEVELOPMENT CONSTRUCTION PROJECTS (Primary and Tertiary Permittees)**

SWCD: _____

Project Name: _____ Address: _____

City/County: _____ Date on Plans: _____

Name & email of person filling out checklist: _____

Plan Page #	Included Y/N
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TO BE SHOWN ON ES&PC PLAN

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
<i>(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed) Permit IV.D.1 pg 29</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 2 Level II certification number issued by the Commission, signature and seal of the certified design professional.
<i>(Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)
The Level II certification must be issued to the Design Professional whose signature and seal are on the Plan.</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 3 Limit of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist. *
<i>(A copy of the written approval by EPD must be attached to the Plan for the Plan to be reviewed.) Permit IV.D.3 pg 30</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
<i>May be shown on ES&PC Plan sheets and/or ES&PC notes. Permit II.B.1.c pg 12, II.B.2.e pg 14, II.B.3.d pg 15</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 5 Provide the name, address, email address , and phone number of the primary permittee or tertiary permittee.
<i>May be shown on cover sheet, ES&PC Plan or under ES&PC notes. Permit II.B.1.b pg 12, II.B.2.c pg 14, II.B.3.b pg 15</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 6 Note total and disturbed acreage of the project or phase under construction.
<i>Must be shown on ES&PC Plan or under ES&PC notes. Permit IV.D.2.c pg 30</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
<i>GPS location of the construction exit must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes. It must match the NOI. Permit II.B.1.a pg 12, II.B.3.a pg 15</i> |
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<i>The initial Plan date should be shown on all pages. With each resubmittal the revision date and entity requesting revisions should be shown on cover sheet and each sheet that has been revised.</i> |
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<i>Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes. Permit IV.D.2.a pg 29</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
<i>Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled. This information is important for Plan reviewers if a site visit is needed, or if the site needs to be located on another map. Permit IV.D.2.e pg 30</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | 11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
<i>The name of the initial receiving water(s) or if unnamed the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream. Describe any neighboring area which could be affected by the post-developed runoff from the site. Permit IV.D.2.f pg 30</i> |

12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 23** of the permit.

The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on **Part IV page 22** of the permit.

The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of Best Management Practices required by the **Georgia** Water Quality Control Act and the document "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 was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100003."

14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." *

The Plan must include a statement indicating that the primary permittee must retain the design professional who prepared the Plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required. **Permit IV.A.5 pg 27**

15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wretched vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."

See **Part IV.(i) - (iv) on pages 23-26** of the permit and show under ES&PC notes.

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.

When the project requires an approved buffer variance from the GA EPD, an indication shall be shown on the ES&PC Plan. A description of the encroachment activity must be shown on the ES&PC Plan or under ES&PC notes.

17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."

See **Part IV.C on page 29** of the permit. This can be clarified in a narrative and shown under ES&PC notes.

Revisions or amendments should be submitted to the Local Issuing Authority for review.

18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit."

The Plan must include a description of how waste materials, including waste building materials, construction and demolition debris, concrete washout, excavated sediment, etc., will be properly disposed of. Any disposal of solid waste to waters of the State is prohibited unless authorized by a Section 404 permit. **Permit IV.D.3.c.(1) pg 33**

19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."

Must be shown on ES&PC Plan or under ES&PC notes.

20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."

Must be shown on ES&PC Plan or under ES&PC notes.

- 21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
 Must be shown on ES&PC Plan or under ES&PC notes. **Permit IV.D.3.a.(1) pg 31**
- 22 Indication that the applicable portion of the primary permittees ES&PC Plan is to be provided to each secondary permittee prior to the secondary conducting any construction activity and that each secondary shall sign the Plan or portion of the Plan applicable to their site. List the names and addresses of all secondary permittees. *
 The Plan must contain a list of and contact information for all secondary permittees and a statement that the primary permittee shall provide a copy of the Plan (and any subsequent revisions to the Plan) to each secondary permittee. The Plan must include a section for each secondary to sign indicating that they have made a written acknowledgement of receipt of the Plan and a copy of the acknowledgement must be kept in the primary's records. **Permit IV.D.2.g pg 30**
- 23 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III.C of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
 If any storm water associated with construction activities discharges into an Impaired Stream Segment that 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), the ES&PC Plan must include at least four (4) of the BMPs listed in **Part III.C.2.a. - v.** of the permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's most current and subsequent "305(b)/303(d) List Documents (Approved)" can be viewed on the GAEPD website (www.gaepd.org/Documents/305b.html) **Part III.C.2.a. - v. pg 19-21**
- 24 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 23 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
 List of TMDL Implementation Plans can be viewed on the GAEPD website, www.gaepd.org. The TMDL Implementation Plan for sediment should be delineated on the ES&PC Plan. **Permit III.C.1 pg 19**
- 25 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited.
 When the project allows the concrete washdown of tools, concrete mixer chutes, hoppers and rear of the vehicles on the project site delineate the location of the area provided for washing and provide detail of BMPs that will be used. If the project does not allow the concrete washdown on the project site, note that on the Plan. **Permit IV.D.3.c.(6) pg 34**
- 26 Provide BMPs for the remediation of all petroleum spills and leaks.
 The Plan must provide BMPs and guidance for the prevention of spills and leaks of petroleum products from any areas where such products are stored or used as well as guidance for the proper remediation of any spills and leaks that do occur. This information can be in the form of a separate Spill Prevention/Spill Response document so long as that information accompanies the Plan. **Permit IV.D.3.c.(5) pg 34**
- 27 Description of practices to provide cover for building materials and building products on site. *
 The Plan must contain a description of measures, such as plastic sheeting or temporary roofs, to cover building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials in order to minimize exposure to precipitation and to stormwater. **Permit IV.D.3.c.(2) pg 33**

28 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.

The Plan must contain a description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. These may include storm water detention and retention structures, use of vegetated swales and natural depressions for flow attenuation or a combination of these practices (sequential systems). The Plan must also include a technical explanation of the basis used to select these practices where flows will exceed pre-development levels. The Plan must indicate that velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act.

Note: The permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed. **Permit IV.D.3.b pg 32**

29 Description of the practices that will be used to reduce the pollutants in storm water discharges.

The Plan must identify all potential sources of storm water pollution expected to be present on the site and provide a narrative explaining how the pollutants will be minimized in the storm water discharges. **Permit IV pg 26**

30 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

Activity schedule must be site specific. The narrative description and timeline for each phase of construction may be shown on ES&PC Plan sheet or under ES&PC notes. **Permit IV.D.2.b pg 30**

31 Provide complete requirements of Inspections and record keeping by the primary permittee or tertiary permittee.

The Plan must include all of the Inspections and record keeping requirements of the primary permittee or tertiary permittee as stated in **Part IV.D.4.a. - c. on pages 34-40** of the permit. The complete Inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

32 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *

See **Part IV.D.6.d pages 43-44 Sampling Frequency** and **Part IV.E pages 44-45 Reporting** in the permit. Complete Sampling Frequency and Reporting requirements are to be shown on the Plan under ES&PC notes.

33 Provide complete details for Retention of Records as per Part IV.F. of the permit.

See **Part IV.F page 45 Retention of Records** in the permit. Complete details of Retention of Records are to be shown on the Plan under ES&PC notes.

34 Description of analytical methods to be used to collect and analyze the samples from each location. *

This narrative must be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location. **Permit IV.D.6.a. - c. pg 40-42**

35 Appendix B rationale for NTU values at all outfall sampling points where applicable. *

When the permittee has determined that some or all outfalls will be monitored, a rationale must be shown on the Plan under ES&PC notes which includes the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries). **Permit IV.D.6.a.(3) pg 40**

36 Delineate all sampling locations if applicable, perennial and intermittent streams and other water bodies into which storm water is discharged. *

The Plan shall include a USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the locations of the site or the common development. The map must include (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during the mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map. **Permit IV.D.6.a.(1) pg 40**

37 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase.

The Plan must be shown in a minimum of three phases with each phase shown on a separate sheet. Initial phase of the Plan must include the required 67 cy per acre sediment storage, construction exit, tree-save fence if applicable and any other BMPs necessary to prevent sediment from leaving the site such as silt fence, inlet protection on existing storm drain structures, diversions, check dams, temporary ground cover, etc. Limits of disturbance for the initial phase are to be only the areas needed to install initial BMPs. The intermediate phase should show rough grading and utility construction. BMPs should include initial inlet protection, additional silt fence as needed, any revised sediment storage needed as drainage basins are altered, outlet protection, retrofit if applicable, matting with temporary or permanent vegetation as needed, temporary down drains, filter rings, etc. Final phase of Plan should show finished grade, curbing and paving if applicable, building construction if applicable, etc. BMPs should include permanent vegetation, appropriate inlet protection, etc. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and the final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. **Permit IV.D.3 pg 30**

38 Plan addresses BMPs for all phases of common development including individual building lots and out-parcels, etc regardless of who owns or operates the individual sites. Include a typical and any situational lots applicable.

The Erosion, Sedimentation & Pollution Control plans for a common development is designed for the life of the project and must include practices to be implemented by all secondary permittees involved, whether the primary permittee relinquishes ownership of the land rights or not. This includes providing an ES&PC Plan for typical and situational lots for each secondary permittee (builder) who purchases a lot from the primary permittee (developer). Situational lots may include, but are not limited to, lots adjacent to State waters buffers (in which a double row of Type S sediment barriers must be shown adjacent to wetlands, lots with an extreme grade, etc.

39 Graphic scale and North arrow.

The graphic scale and North arrow must be clearly shown on all phases of the ES&PC Plan sheets.

40 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2,5 or 10

The initial, intermediate and final phase sheets of the Plan must show the proposed grade in bold contour lines with the above intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.

- 41 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov **Permit IV.D.3.a.(4) pg 32**
- 42 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.
Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition.
- 43 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
The State Law of Georgia mandates these minimum undisturbed buffers, but the Local Issuing Authorities are allowed to require more stringent buffers of State waters. The minimum undisturbed buffers required by the State and all other buffers of State waters required by the issuing authority must be delineated. Any undisturbed buffer area that is impacted by the project site must be noted on the Plan. **Permit IV.D.2.e pg 30**
- 44 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE MUST BE DELINEATED ON ALL PHASES OF THE PLAN. When a project is located in a jurisdiction with a certified Local Issuing Authority and the LIA must make a determination of State waters that are not delineated on the Plan, the Plan review could be delayed for beyond the full forty-five day review time allowed to the LIA, or the full thirty-five day review time allowed to the District if the District is reviewing the Plan. For all projects in a jurisdiction where there is no certified Local Issuing Authority regulating that project, EPD is responsible for State waters determinations and there is no time limits for reviewing the Plan.
ALL WETLANDS LOCATED WITHIN THE PROJECT SITE ONLY MUST BE DELINEATED.
If the Local Issuing Authority requires an undisturbed buffer of wetlands, delineate required buffer.
- 45 Delineation and acreage of contributing drainage basins on the project site.
All existing drainage basins on the project site and their acreage must be delineated on the existing conditions and/or on the initial phase of the Plan. As the basins are altered or new ones created during intermediate and final phases, the new basins and their acreage must be delineated throughout each phase of the Plan. **Permit IV.D.2.e pg 30**
- 46 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
Hydrology study and drainage maps should be separate from the Plan. Maps should include each individual basin draining to, through and from the project site, with each one delineated, labeled and showing its total acreage.
- 47 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. *
The Plan must provide both pre- and post-construction estimates of the runoff coefficient or peak discharge flow for the site. This can be in the form of a hydrologic study so long as that study is made a part of the Plan and accompanies the Plan. A complete hydrologic study is not a required element of the Plan, only the pre and post-construction estimates of the runoff coefficient or peak discharge flow for the site. **Permit IV.D.2.d pg 30**
- 48 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tailwater conditions. This information should be shown in a chart shown on storm-drain profile sheet, ES&PC intermediate phase sheet or on the ES&PC detail sheet that shows outlet protection.
The dimensions of the apron must include length (La), width at the headwall (W1), down-stream width (W2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-34.1 and 6-34.2 in the Manual. These should be shown in a chart on ES&PC intermediate and/or final phase sheet or ES&PC detail sheet with outlet protection. Velocity dissipation devices shall be placed at all discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological functions and characteristics are maintained and protected.

49 Soil series for the project site and their delineation.

Soil series delineations are required for the Plan review and can be found on the NRCS web site. The highest level of soil survey required for the project site, such as a level three or level four survey for projects that will be using septic systems, must be delineated on the Plan. The soil series delineation should be shown on the existing site Plan or the initial phase Plan. A chart listing the soils located on the project should be shown on the sheet with their delineation.

50 The limits of disturbance for each phase of construction.

The limits of disturbance for the initial phase should delineate only the area required to be disturbed for the installation of perimeter control and initial sediment storage. The intermediate phase should delineate the entire area to be disturbed for that phase, such as grading, drainage, utilities installed, etc. The final phase should delineate any additional areas to be disturbed such as individual lots, etc.

51 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, 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.

For each common drainage location, a temporary (or Permanent) sediment basin (Sd3, Sd4, Rt, or excavated Sd2) providing at least 67 cubic yards of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 67 cubic yards of storage per acre does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. Sediment basins may not be appropriate for some common drainage locations and a written justification explaining the decision not to use sediment basins must be included in the Plan. Worksheets from the Manual must be completed and shown on the Plan or attached to the Plan for each temporary sediment basin designed for the project. All cross sections and details required per the Manual for Sd3's must be shown on the ES&PC detail section of the Plan. Completed worksheets from the Manual must be shown on the Plan for each retrofit and excavated inlet sediment trap. When the design professional chooses to use equivalent controls the calculations used to obtain the required 67 cubic yards per acre drained must be included on the Plan. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan. **Permit IV.D.3.a.(3) pg 31**

52 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.

BMPs for all phases of the Plan must be consistent with and no less stringent than the Manual and shown using uniform coding symbols from the Manual. The uniform coding symbols legend from the Manual must be included and may be shown on detail sheet or any of the ES&PC Plan sheets.

53 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.

The erosion and sediment control detail sheet must show a detailed drawing for each structural BMP shown on the Plan. All BMPs and details shown must, at a minimum, meet the guidelines given in the Manual. Note that a worksheet is provided in the Manual for most structural BMPs that must be included on the ES&PC Plan or detail sheet.

54 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

Must be shown on ES&PC Plan, on the ES&PC detail sheet or under ES&PC notes.

* This requirement of the Common Development permit 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. If applicable, the * checklist item would be N/A.

Insert Tab 12

Sample Forms

Back of Tab

EROSION AND SEDIMENT CONTROL
NOTICE TO COMPLY

DATE: _____
INSPECTOR'S NAME: _____
PROJECT NAME: _____

AN INSPECTION OF THE ABOVE REFERENCED PROJECT ON _____
(DATE)

REVEALED THE FOLLOWING VIOLATIONS:

1. _____
2. _____
3. _____
4. _____
5. _____

IN ORDER TO BRING THIS PROJECT INTO COMPLIANCE, THE
FOLLOWING ACTIONS NEED TO BE TAKEN WITHIN _____ DAYS:

1. _____
2. _____
3. _____
4. _____
5. _____

FAILURE TO COMPLY WITH THIS NOTICE WITHIN THE ALLOTTED TIME
FRAME SPECIFIED ABOVE COULD RESULT IN A CITATION AND/OR STOP
WORK ORDER. IMPLEMENTATION OF THE APPROVED SOIL EROSION PLAN
IS REQUIRED ON ALL CONSTRUCTION SITES IN THE CITY OF ACWORTH.

RESPONSIBLE PARTY: _____

STOP ALL INSPECTIONS
PARA TODAS LAS INSPECCIONES

VIOLATION

(VIOLACION)

ADDRESS _____

LOT # _____ PERMIT # _____

SUBDIVISION _____

DO NOT REMOVE, ALTER OR TAMPER

VIOLATION(S)

1996 SOIL EROSION ORDINANCE, SECTION 26-39; SUBSECTION A, B, & C

SILT CONTROLS CONSTR. EXIT TEMPORARY VEGETATION

OTHER _____

INSTALL / REPAIR ALL EROSION CONTROLS!!!

REINSPECTION DATE: _____

**CONTACT DEPT. OF ENVIRONMENT
AS SOON AS POSSIBLE**

SIGNED _____ DATE _____

TELEPHONE# _____

ADDITIONAL VIOLATIONS CAN OCCUR DURING ENFORCEMENT PERIODS AND/OR MAY NOT BE INITIALLY INCLUDED IN THE CONDITIONS OF VIOLATIONS. THE IDENTIFIED VIOLATOR WILL BE HELD RESPONSIBLE FOR ANY ADDITIONAL VIOLATIONS SUBSEQUENTLY IDENTIFIED OR UNIDENTIFIED DURING OUR FIELD INSPECTIONS.

THIS POSTING SERVES AS OFFICIAL NOTICE

STOP WORK

(PARA DE TRABAJAR)

**WORK IS ONLY PERMITTED ON EROSION CONTROL CORRECTIONS
(SOLO SE PERMITE TRABAJAR PARA CORREGIR VIOLACIONES DE
EROSION)**

DO NOT REMOVE, ALTER OR TAMPER

ADDRESS _____

LOT # _____ PERMIT # _____

SUBDIVISION _____

NON-COMPLIANCE ITEM(S)

**NONCOMPLIANCE WITH 2001 SOIL EROSION ORDINANCE, SECTIONS 26-39 THROUGH
26-47**

*Note – The issuance of a “Stop Work” order is accompanied by penalties and a citation to appear before the Magistrate of the Environmental Court of Fulton County.

ADDITIONAL VIOLATIONS CAN OCCUR DURING ENFORCEMENT PERIODS AND/OR MAY NOT BE INITIALLY INCLUDED IN THE CONDITIONS OF VIOLATIONS. THE IDENTIFIED VIOLATOR WILL BE HELD RESPONSIBLE FOR ANY ADDITIONAL VIOLATIONS SUBSEQUENTLY IDENTIFIED OR UNIDENTIFIED DURING OUR FIELD INSPECTIONS.

INSPECTOR _____ DATE _____

TELEPHONE# _____

Site Inspection Report

Erosion and Sedimentation Inspection Report

Maintain Reports on-site

Site:	Date:	Time:
Inspector:	Accompanied By:	
Stage of Construction:		
Site:		
Observation:		
Recommendations:		
Contractors's Corrective Action (and Date):		
Site:		
Observation:		
Recommendations:		
Contractors's Corrective Action (and Date): _____		

B.M.P Inspection Report

Project: _____ Inspection Date: _____ Time: _____

Type of Inspection: Routine _____ Re-Inspection _____

Stage of Construction: BMP Installation/Clearing Grading Curb/Gutter Building Other _____

Weather/Soil Condition: Raining/Wet Light Rain/Medium Clear/Dry

Erosion Device Inspected	Status		
Bf: Buffer Zone	Passed	Failed	Comment
Ds1: Soil Stabilization: mulch only 6" to 10"	Passed	Failed	Comment
Ds2: Soil Stabilization: (temp. seeding)	Passed	Failed	Comment
Ds3: Soil Stabilization: (permanent vegetation)	Passed	Failed	Comment
Ds4: Soil Stabilization: (sodging)	Passed	Failed	Comment
Ga: Gablon	Passed	Failed	Comment
Du: Dust Control	Passed	Failed	Comment
Cd: Check Dams: rock/other	Passed	Failed	Comment
Cb: Channel Stabilization: (rip rap or vegetation)	Passed	Failed	Comment
Co: Construction Exit Pad	Passed	Failed	Comment
Mb: Geotextiles	Passed	Failed	Comment
Rd: Rock Filter Dam	Passed	Failed	Comment
Rt: Retrofit: Detention/Sediment Pond	Passed	Failed	Comment
Sd1: Sediment Barrier	Passed	Failed	Comment
Sd2: Inlet Sediment Trap	Passed	Failed	Comment
Sd3: Temporary Sediment Basin	Passed	Failed	Comment
Sr: Temporary Stream Crossing	Passed	Failed	Comment
St: Storm Drain Outlet Protection	Passed	Failed	Comment
Dn1: Temporary Down Drain Structure	Passed	Failed	Comment
Sb: Stream Bank Stabilization	Passed	Failed	Comment
Wt: Veg. Waterway or St/Water Conv. Channel	Passed	Failed	Comment
Tree Preservation Fencing	Passed	Failed	Comment
Trash	Passed	Failed	Comment

1. What action(s) was taken for any failed activities listed above? Verbal Notification: _____
 Written Notification: _____ Stop Work Order: _____ Citation #: _____
2. What time frame was given to comply with the above violation: Days: _____ Other: _____
3. Have any complaints or violations been issued on this project previously? Yes: _____ No: _____
4. If yes, explain violations/fines: _____

5. Are there state waters present? Yes: _____ No: _____
6. Were all permits posted? Yes: _____ No: _____
7. Is an approved E&S plan on site? Yes: _____ No: _____

Comments:

Inspected By: _____

Daily Inspection Report

Inspection performed by certified personnel each day construction activity occurs on-site

Project Information	
Date:	Project Name:
Project Location:	
Inspection Observations	
Rainfall within past 24 hours (inches):	Is rainfall greater than 0.5"? Inspection Required <input type="checkbox"/>
Inspection Observations	
Petroleum Product Storage Areas: Are all of the temporary and permanent controls contained in Plan in place? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, describe the location(s) of deficiencies and corrective actions that must be taken.	
Vehicle Entrances and Exits: Is there tracking of sediment from locations where vehicles enter and leave the project? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe the location(s) and the corrective actions that must be taken.	
Other Observations	
Is an Erosion, Sedimentation and Pollution Control Plan revision required? <input type="checkbox"/> Yes <input type="checkbox"/> No Date of revision:	
Corrective Actions and Date:	

Signature of Certified Personnel

Printed Name of Certified Personnel

Weekly Inspection Report

Inspection performed by certified personnel at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater

Project Information

Date:	Project Name:
Project Location:	
Name of Inspector:	

Inspection Event

Regular weekly inspection: <input type="checkbox"/>	Inspection within 24 hours of 0.5" storm event <input type="checkbox"/>
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Inspection Observations

Disturbed areas that have not undergone final stabilization:
Are all of the temporary and permanent controls contained in Plan in place and properly maintained? Yes No
If no, describe the location(s) of deficiencies and corrective actions that must be taken.

Corrective Action Taken and Date:

Material storage areas exposed to precipitation:
Are all of the temporary and permanent controls contained in Plan in place and properly maintained? Yes No
If no, describe the location(s) of deficiencies and corrective actions that must be taken.

Corrective Action Taken and Date:

Discharge locations or points.
Are erosion control measures preventing impacts to receiving waters? Yes No
If no, describe observations:

Monthly Inspection Report

Inspection performed by certified personnel at least once per month

Project Information	
Date:	Project Name:
Project Location:	
Inspection Observations	
Rainfall within past 24 hours (inches):	Is rainfall greater than 0.5"? Inspection Required <input type="checkbox"/>
Inspection Observations	
Areas that have undergone final stabilization: Are all permanent stabilization controls contained in Plan in place? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, describe the location(s) of deficiencies and corrective actions that must be taken.	
Other observations: Are pollutants entering the drainage system or receiving waters? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe the location(s) and the corrective actions that must be taken. Are all erosion and sediment control measures operating properly? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, describe the location(s) and the corrective actions that must be taken.	
Other Observations	
Is an Erosion, Sedimentation and Pollution Control Plan revision required? <input type="checkbox"/> Yes <input type="checkbox"/> No Date of revision:	
Corrective Actions and Date:	

Signature of Certified Personnel

Printed Name of Certified Personnel

Construction Checklist of BMPs And Minimum Requirements

Project Name & File No. _____

Inspection Date: _____

Time: _____

Inspected by: _____

Stage of Construction

Pre-Construction Phase

Construction Phase

Building Phase

Final Stabilization

CHECK DAM (Cd)		
Minimum Requirement	Passed	Failed
Center: 9" lower than outer edges.		
Side Slopes: 2:1 or flatter		
Spacing: Toe of upstream dam is at the same elevation as the top of the downstream dam.		
Geotextile: Placed between the rock and its soil foundation.		
Maintenance: Sediment removed when depth reaches 1/2 the original dam height. Dam removed and area stabilized when useful life has expired.		

CHANNEL STABILIZATION (Ch)		
Minimum Requirement	Passed	Failed
Installation: Channel lining installed immediately after grading and vegetate all bare areas.		
Riprap Lining: Graded to 1.5:1 or less. A filter blanket, at least 6" thick, of sand, gravel, and/or geotextile material should be between soil and riprap.		
Outlet: Adequate outlet for free flow of water from flood plains into channel.		
Clearing: Objectionable materials removed from the channel. As many trees preserved, as possible.		
Buffers: Preserved by clearing for soil placement on one side of channel only. Buffers re-established with appropriate vegetation.		
Maintenance: Inspected periodically and necessary repairs made immediately.		

CONSTRUCTION EXIT (Co)		
Minimum Requirement	Passed	Failed
Aggregate Size: 1.5"-3.5"		
Pad Thickness: 6" minimum		
Pad Width: 20 ft minimum		
Pad Length: 50 ft minimum		
Location: At all exit points.		
Geotextile: Placed the full length and width of the exit.		
Maintenance: Peiodic top dressing with 1.5"-3.5" stone as conditions demand.		

CONSTRUCTION ROAD STABILIZATION (Cr)		
Minimum Requirement	Passed	Failed
Aggregate Size: 1.5"-3.5"		
Pad Thickness: 8"-10"		
Pad Width: 14 ft minimum.		
Maintenance: Peiodic top dressing with 1.5"-3.5" stone as conditions demand.		

STREAM DIVERSION CHANNEL (Dc)		
Minimum Requirement	Passed	Failed
Size: Channel width should be a minimum of 6 ft with side slopes flatter than 2:1.		
Lining: The liner should consist of geotextile or class I riprap.		
Maintenance: Inspected daily for construction material positioning.		

DIVERSION (Di)		
Minimum Requirement	Passed	Failed
Site Preparation: Trees, brush, stumps, and other objectionable material have been removed.		
Fills: All fills have been compacted. All un-needed excavated material has been disposed of and stabilized. Ridge should be at least 10 ft wide. Add 10% height for settlement.		
Stabilization: Channel outlets have adequate vegetation, riprap, and/or concrete.		
Maintenance: Inspected frequently and after each rainfall. Necessary repairs made immediately.		

(Dn1) DOWNDRAIN STRUCTURE (Dn2)		
Minimum Requirement	Passed	Failed
Location: On un-disturbed soil or well-compacted fill.		
Outlet: Stabilized with rock riprap.		
Pipe: Heavy duty, flexible tubing staked at 10 ft intervals for temporary structure. Joints are well-connected and watertight.		
Maintenance: Check after every rainfall. Necessary repairs made promptly. Temporary structure removed after useful life. Exposed areas stabilized		

FILTER RING (Fr)		
Minimum Requirement	Passed	Failed
Size: At inlets with a diameter less than 12", the stone size should be 3"-5"		
Size: At inlets with a diameter greater than 12", the stone size should be 10"-15"		
Height: The filter ring should have a minimum height of 2 ft from grade.		
Maintenance: The ring should be kept clear of trash and debris, and the sediment should be removed at 1/2 full		

GABION (Ga)		
Minimum Requirement	Passed	Failed
Design: Designed and installed by a professional familiar with the use of gabions		
Maintenance: Periodically inspected for signs of undercutting or excessive erosion		

GRADE STABILIZATION STRUCTURE (Gr)		
Minimum Requirement	Passed	Failed
Materials: Constructed of concrete, rock, masonry, steel, aluminum, or treated wood.		
Outlet: Adequate, stable outlet for discharge.		
Vegetation: On all disturbed areas.		
Maintenance: Periodically inspected for signs of undercutting or periodic erosion.		

LEVEL SPREADER (Lv)		
Minimum Requirement	Passed	Failed
Grade: No greater than 1% for the last 15 ft of the dike or diversion.		
Length: Determined by the design professional from estimated storm flow.		
Outlet: Discharges onto an undisturbed stabilized area to create uniform sheet flow.		
Maintenance: No blockages at point of discharge.		

ROCK FILTER DAM (Rd)		
Minimum Requirement	Passed	Failed
Height: The dam center shall be 9" lower than the outer edge and not higher than the channel banks.		
Side Slopes: 2:1 or flatter		
Location: Located so that it will not cause flooding of upstream property.		
Rock Size: Determined by the design criteria set forth in Appendix C of the Manual		
Top Width: 6 ft or greater		
Maintenance: Sediment removed when it reaches a depth of 1/2 the original height of the dam. Remove dam at the end of its useful life.		

RETAINING WALL (Re)		
Minimum Requirement	Passed	Failed
Design: Designed and installed by a professional familiar with the use of retaining walls.		
Maintenance: Periodically inspected for signs of undercutting or excessive erosion.		

RETROFIT (Rt)		
Minimum Requirement	Passed	Failed
Height: 1/2 the height of the outlet control structure		
Half-Round Pipe: Diameter should be 1.5x the principal pipe outlet diameter.		
Slotted Board Dam: Minimum posts size of 4"x4". The spacing between shall be 0.5"-1.0"		
Stone Size: 3-4" stone		
Pond Inlet: Sediment entry point should be at opposite end of basin from outlet. If not, baffles shall be installed		
Maintenance: Trash and debris hindering drainage shall be removed. Sediment removed when structure is 1/3 full. Structure removed when final stabilization achieved.		

SEDIMENT BARRIER (Sd1)		
Minimum Requirement	Passed	Failed
Location: Intended for areas where sheet flow occurs. Installed along the contour. Where state waters are present, 2 rows of Type "S" is installed.		
Brush Barrier: Wind-rowed on the contour. Width should be between 5-10 ft and height should be between 3-5 ft.		
Silt Fence: Verify fabric type and support spacing for each application. Entrenched to a depth of 6". Verify post size.		
Maintenance: Sediment removed at 1/2 the original height of the barrier. Product replaced when it cannot maintain 80% of properly installed height. Removed once final stabilization has occurred		

INLET SEDIMENT TRAP (Sd2)		
Minimum Requirement	Passed	Failed
Excavated: A minimum depth of 1.5 ft is provided. Side slopes should be 2:1 or flatter.		
Fabric & Frame: Steel posts are used. Fabric is entrenched at least 12" and fabric is securely fastened to the posts.		
Curb Inlet: 8" concrete blocks wrapped in filter fabric or gravel bags consisting of #57 stone wrapped in filter fabric or equivalent material.		
Gravel: 3" in diameter or larger stone placed on slope toward the inlet. 1/2"-3/4" gravel placed on slope away from inlet.		
Maintenance: Sediment removed when accumulation has reached 1/2 the height of the trap. Remove once contributing drainage basin has been stabilized		

TEMPORARY SEDIMENT BASIN (Sd3)		
Minimum Requirement	Passed	Failed
Location: Not placed in a live stream		
Principal Spillway: Vertical pipe should extend through the embankment and exit beyond the downstream toe of the fill. All pipe and riser connections should be watertight. Pipe should be a minimum of 8" in diameter		
Riser: 1/2" perforations spaced 3" apart covered with 2 ft of 3"-4" stone. Embedded 9" into an 18" thick concrete base.		
Emergency Spillway: Constructed on undisturbed ground. Minimum bottom width of 8 ft. Stabilized with vegetation, riprap, or concrete.		
Maintenance: All damages caused by erosion or equipment repaired before the end of each day. Sediment removed when 1/3 of the storage volume has been lost.		

TEMPORARY SEDIMENT TRAP (Sd4)		
Minimum Requirement	Passed	Failed
Depth: Maximum depth is 4 ft		
Overflow: The maximum permanent wet depth is 2 ft. Slopes are less than 2%.		
Combination: The maximum depth of ponded water is 12".		
Rock: Height of the embankment is not greater than 5.5 ft. The top width is at least 3 ft. Slopes do not exceed 2:1.		
Maintenance: All damages caused by erosion or equipment repaired before the end of each day. Sediment removed when 1/3 of the storage volume has been lost.		

FLOATING SURFACE SKIMMER (Sk)		
Minimum Requirement	Passed	Failed
Excavation Pit: 4 x 4 x 2 ft pit filled with riprap under the skimmer. Must be lower than the invert of the outlet barrel of the riser.		
Apparatus: Schedule 40 or greater PVC or other appropriate materials		
Maintenance: Use a floatable rope to remove trash and debris that accumulates on the outside of guard. Free skimmer from being stuck in the mud.		

SEEP BERM (SpB)		
Minimum Requirement	Passed	Failed
Location: Not located above fill slopes that have not achieved permanent stabilization. Not located across streams, ditches, or waterways.		
Berm: Minimum width of 12" and height of 4 ft. Compacted by mechanical equipment.		
Vegetation: Planted with seed that has 70% or better germination		
Spacing: The toe of the upstream dike is at the same elevation as the top of downstream dike.		
Maintenance: Inspect after every 1/2" rainfall or greater. Remove sediment when accumulation is 1/3 the height of the intermediate dike		

TEMPORARY STREAM CROSSING (Sr)		
Minimum Requirement	Passed	Failed
Size: Large enough to convey full bank flow without appreciably altering the stream flow characteristics.		
Location: Installed perpendicular to the stream.		
Overflow Protection: Elevated crossings, crown fills over pipes, or diversions and dikes.		
Maintenance: Inspect after every rainfall and at least once a week.		

STORM DRAIN OUTLET PROTECTION (St)		
Minimum Requirement	Passed	Failed
Alignment: The apron is properly aligned and preferably straight throughout its length		
Grade: Constructed at 0% grade with no overfall at the end. The top of the riprap at the downstream end is level with the receiving channel. Compacted any required fill.		
Filter Fabric: Gravel filter or Geotextile installed between the riprap and subgrade. Fabric is free of any punching or tears. Gravel filter is properly graded and installed according to the manufacturer's recommendation		
Riprap Thickness - 1.5x the maximum stone diameter Upstream Width - 3x the diameter of the outlet pipe Length of Apron - Refer to Plan		
Maintenance: Inspect riprap outlet structures after heavy rain events. Make repairs immediately.		

SURFACE ROUGHENING (Su)		
Minimum Requirement	Passed	Failed
Steeper than 3:1: Roughened by either Stair-Step Grading, Grooving, or Tracking		
Flatter than 3:1: Soils loosened to a depth of 2"-4"		
Stair-Step Grading: Maximum depth of 30"-40" Maximum width of 40"-50"		
Grooving: Un-Mowed slopes with a minimum depth of 3" and maximum spacing of 15". Mowed slopes with a minimum depth of 1" and maximum spacing of 12"		
Tracking: Not recommended on clay soils. Sandy soils may be tracked.		
Vegetation: Roughened areas are seeded and mulched immediately after roughening		

TURBIDITY CURTAIN (Tc)		
Minimum Requirement	Passed	Failed
Location: Barrier placed 25 ft outside of the construction area where possible. Curtain placed parallel to flow.		
Water Body: Not altered by the installation of the curtain.		
Filling: Required permits and variances have been obtained and allowable limits have not been exceeded.		
Maintenance: Removed when no longer needed. Excess sediment carefully removed.		

VEGETATED WATERWAY (Wt)		
Minimum Requirement	Passed	Failed
Channel: Free of all trees, bank projections, and other objectionable material that will impeded normal flow. Shaped to desired cross section and stabilized in accordance vegetative standards.		
Fill: Compacted as needed. Excess fill disposed of in an appropriate manner		

TOPSOILING (Tp)		
Minimum Requirement	Passed	Failed
Stripping: Confined to the immediate construction area with a typical depth of 4"-6." Topsoil is friable, loamy, and free of debris and objectionable rock.		
Stockpile: Located where natural drainage is not obstructed and contained by a sediment barrier. Stabilized with temporary vegetative measures		
Spreading: Applied at a uniform depth of 5". Subsoil has been loosened and agricultural lime added as required		

TREE PROTECTION (Tr)		
Minimum Requirement	Passed	Failed
Fence: Orange plastic fabric stapled to 2x4 treated wood stakes. Treated wood fencing with orange fabric attached used for single family homes		
Protection Zone: Local government contacted regarding tree ordinances and critical rooting distance		

BUFFER ZONE Bf		
Minimum Requirement	Passed	Failed
Width: For warm water fisheries, a minimum of 25 ft from the point of wretched vegetation shall be protected. For cold water fisheries, a minimum of 50 ft from the point of wretched vegetation shall be protected.		
Maintenance: Area closet to the stream is maintained at all times with minimal impact from equipment.		
Variance: A variance is required for any work inside State mandated buffers		

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY) Ds1		
Minimum Requirement	Passed	Failed
Preparation: Soil loosened to a minimum depth of 3"		
Application: Applied by hand or mechanical equipment.		
Anchoring: Anchored with a disk harrow or tackifier. Polyethylene film entrenched at the top		
Materials & Related Depths Straw or Hay - 2" to 4" Wood waste/chips - 2" to 3"		

COASTAL DUNE STABILIZATION Cs		
Minimum Requirement	Passed	Failed
Location: 100-140 ft depending on wind conditions from the mean high tide line.		
Posts: Minimum length of 7 ft with a minimum diameter of 3". Spacing should be 10 ft apart and entrenched to a depth of 3 ft.		
Snow Fence: Standard commercial 4 ft high snow fence with a slat spacing of 1-1/4". Fencing should be spaced 30-40 ft apart.		
Placement: Placed perpendicular to the prevailing winds. When winds are parallel to water, an additional 30 ft section should be placed perpendicular to the original fence.		
Vegetation: Established immediately following dune development. Irrigate is necessary.		
Preservation: Dunes protected from human and vehicular traffic. Crosswalks provided for beach access.		

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING) Ds2		
Minimum Requirement	Passed	Failed
Preparation: Soil should be loose and friable. Soil should be scarified when sealed by rainfall.		
Lime & Fertilizer: Applied at a rate determined by the soil pH.		
Seeding: Plant species selected based on site and soil conditions, area, and time of year.		
Irrigation: Applied at a rate that will not cause runoff and erosion.		
Mulch: Placed after seeding to retain moisture.		

DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING) Ds3		
Minimum Requirement	Passed	Failed
Preparation: Soil should be loose and friable. Soil should be scarified when sealed by rainfall.		
Lime & Fertilizer: Applied at a rate of 1-2 tons/acre unless soil tests indicate otherwise. Refer to Manual for 2nd & 3rd year fertilizer rates.		
Seeding: Plant species selected based on site and soil conditions, area, and time of year.		
Mulch: Applied in accordance with Ds1 specifications		
Irrigation: Applied at a rate that will not cause runoff and erosion.		
Mowing: 6" of top growth maintained at all times		

DISTURBED AREA STABILIZATION (WITH SODDING) Ds4		
Minimum Requirement	Passed	Failed
Surface: Soil surface is brought to final grade and clear of any trash, debris, and clods larger than 1".		
Installation: Sod applied to soil surface only (not to frozen or gravel type soils). Cut and installed within 36 hours of digging.		
Lime & Fertilizer: Applied based on soil tests or at a rate of 1-2 tons/acre.		
Anchoring: Sod should be anchored with pins on slopes steeper than 3:1.		
Irrigation: Used as a supplement to rainfall for a minimum of 2-3 weeks.		
Mowing: Grass height should not be cut less than 2"-3".		

DUST CONTROL Du		
Minimum Requirement	Passed	Failed
Methods: Mulch, vegetation, tackifiers, or irrigation used to prevent surface and air movement of dust.		

FLOCCULANTS & COAGULANTS FI-Co		
Minimum Requirement	Passed	Failed
Application: Conforms to manufacturer's guidelines.		
Type: Only anionic forms shall be used.		
Location: Intended for use in construction storm water ditches that feed ponds or basins. Not intended for use to surface waters of the state.		

STREAMBANK STABILIZATION (WITH PERMANENT VEGETATION) Sb		
Minimum Requirement	Passed	Failed
Design: Designed and installed by a professional familiar with the process.		
Materials: None used that could be poisonous to fish or aquatic life.		
Runoff: Diverted away from the area being treated.		
Side Slope: Should be 2:1 or flatter.		
Work Sequence: Work started at an upstream stable point along the bank.		
Stake Health: Cut with a saw. Planted the same day as prepared. Buds upward. Split, stripped, and mushroomed cuttings replaced.		
Stake Installation: Begins at water's edge and works up the bank.		
Vegetation: Native trees and shrubs.		
Inspection: Checked regularly for wash-outs, undercutting, unhealthy vegetation, especially after heavy rains. Make necessary repairs immediately.		
Maintenance: All failures fixed with structural materials, new plants, and mulch immediately.		

