Level II: Introduction to Design

Education and Training Certification Requirements for Persons Involved with Land Disturbing Activities

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GSWCC

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Education and Training Certification Requirements for Persons Involved with Land Disturbing Activity
Level II Introduction to Design

Day 1

7:30 am	Registration
8:00 am	Opening and Program Introduction
8:15 am	Regulations Governing Erosion & Sediment Control in Georgia
	Part I: Erosion and Sediment Control Act of 1975
9:00 am	Part II: NPDES Permit Requirements
10:30 am	Break
10:45 am	Requirements for Stream Buffers and Stream Impacts
11:45 pm	Lunch
12:45 pm	Vegetative Measures for E&S Control
2:30 pm	Break
2:45 pm	Structural Measures
4:30 pm	Adjourn

Day 2

8:00 am	Checklist Procedures
9:30 am	Elements of an Effective Plan Part I: Basic Plan Preparation
10:30 am	Break
10:45 am	Elements of an Effective Plan Part II: Stormwater Management
11:30am	Elements of an Effective Plan Part III: Design Approach and Example Plan
12:00 pm	Lunch
1:00 pm	Elements of an Effective Plan Part III: Design Approach and Example Plan (Continued)
1:30 pm	Sample ES&PC Plan Review
3:15 pm	Q&A
3:30 pm	Break
3:45 pm	Exam Procedures
4:00 pm	Examination
5:00 pm	Adjourn

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Checking My Exam Score

- If you receive a score of 70% or higher you will receive your certification card in the mail within 60 days.

- You may check your score on the Georgia Soil and Water Conservation Commission website: www.gaswcc.org. Please allow time for exams to be scored.

- Scores will be posted according to the ID number you created, your Date of Birth and last 4 digits of your Social Security number. Using MMDDYY#### format.

- If you do not receive communication regarding your certification in 60 days, contact the

Education and Certification Program

Email: certification@gaswcc.org

Phone: 706.542.1840

NOTES

Insert Tab 1 – GESA

Back of Tab

The Georgia Erosion and Sedimentation Act of 1975

As Amended through 2007

OFFICIAL CODE OF GEORGIA ANNOTATED
Volume 10
Title 12
Conservation and Natural Resources

Level II: Introduction to Design
Education and Certification for Persons Involved in Land Disturbing Activities

Issued May 2009

1

Key Points

- Land disturbing activities are governed on the federal, state and local level
- GESA is a state law that may be incorporated in a local ordinance adopted and enforced by a county or municipality.
- May be referred to as “State Law”, the “Act”, the “E&S Act”, or the “Georgia Erosion and Sedimentation Act”

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Key Definitions

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Buffer

- "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

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

4

Best Management Practices (BMPs)

Best management practices (BMPs) 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.

5

Design Professional

"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 Certified Professional in Erosion and Sediment Control Inc.

NPDES General Permit GAR 100001, 02, 03

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Land Disturbing Activity

Activity that may result in soil erosion and movement of sediments into state waters or onto state lands, including but not limited to:

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

GESA 12-7-3(9)

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Local Issuing Authority

"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 [has adopted the appropriate model ordinance and been certified].

GESA 12-7-3(10)

**Please look in the "Resource Information" section of this notebook for a list of cities and counties in Georgia that are Local Issuing Authorities (Ordinance Summary)

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State Waters

Any 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.

- Rivers
- Streams
- Creeks
- Branches
- Wells
- Lakes
- Reservoirs
- Ponds
- Springs
- Drainage features

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Georgia Erosion and Sedimentation Act

Requirements and Responsibilities

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Legislative Changes to GESA

- Passed 1975
- Effective 1977
- Amended 1980
- Amended 1985
- Amended 1989
- Amended 1994
- Amended 1995
- Amended 2000
- Amended 2001
- Amended 2003
- Amended 2004
- Amended 2007

Stay informed!

At the end of each legislative session, interested parties should obtain a copy of any amendments and enactments

www.georgia.gov
www.gaswcc.georgia.gov

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Participating Agencies

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

**List of agencies with descriptions and contact information is available in the "Resource Information" section of this notebook

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Intent of GESA

- Strengthen and extend erosion and sedimentation control activities and programs in Georgia
- Establish and implement a state-wide comprehensive soil erosion and sedimentation control program to conserve and protect the land, water, air and other resources of Georgia.
- Comply with mandates of the Clean Water Act

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Local Ordinances

- A county/city may adopt a local E&S ordinance and become a Local Issuing Authority
  - Must incorporate requirements of the Georgia Erosion and Sedimentation Act
  - Authorizes land disturbance through Land Disturbing Activity (LDA) permit
  - Requires submittal of site ES&PC Plans
  - Certified by GA EPD

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Local Ordinances

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(3))

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Local Ordinances

- Cannot be more stringent for:
  - Monitoring
  - Reporting
  - Inspections
  - Design standards
  - Turbidity standards
  - Education/Training requirements
- May be more stringent for:
  - Buffers
  - Project size*
  - May incorporate other related ordinances

*Project size thresholds with regard to education and training requirements cannot exceed the state general permit. (O.C.G.A. 12-7-8)

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Responsibilities of Certified LIA

- Process LDA applications
- Maintain list of active LDA permits
- Conduct inspections/maintain reports
- Enforce ordinance
  - ❖ LIA is subject to the same requirements of the ordinance
- Handle complaints

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Local Issuing Authority
Memorandum of Agreement (MOA)

- LIA demonstrates ability to review and approve ES&PC Plans
- Enters into an agreement with the Soil and Water Conservation District to do plan reviews in-house
  - Quicker turn around during review process
  - Reviewers may review for additional requirements such as zoning ordinances

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Responsibilities of Certified LIA with Memorandum of Agreement

- Process LDA applications
- Review ES&PC Plans
- Submit quarterly reports to the Districts and GSWCC
- Maintain list of active LDA permits
- Conduct inspections/maintain reports
- Enforce ordinance
- Handle complaints

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Oversight of LIAs

- SWCD and/or GSWCC semi-annually reviews actions of cities and counties that have issuing authority
- GA EPD may periodically review

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LDA Permitting Process

- ALL land disturbing activities covered by the E&S Act must first secure a Land Disturbing Activity (LDA) Permit from the Local Issuing Authority (if applicable).
- It is the responsibility of the property owner/operator to obtain the LDA permit.

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Permitting Process

- LDA application must be accompanied by a properly designed Erosion, Sedimentation & Pollution Control Plan
- Prior to ES&PC Plan development the design professional or duly authorized representative must visit the site:
  - O.C.G.A. 12-7-9(a)
  - DNR Rules 391-3-7.10

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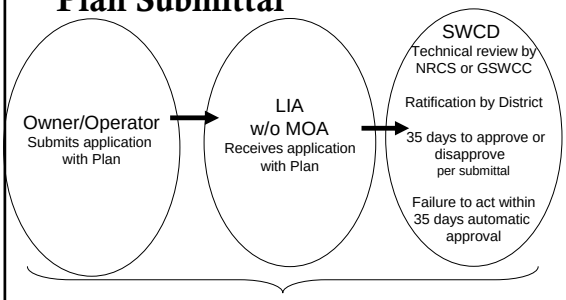
Permitting Process - Plan Submittal



Permit shall be issued or denied as soon as practicable but **no more than 45 days**

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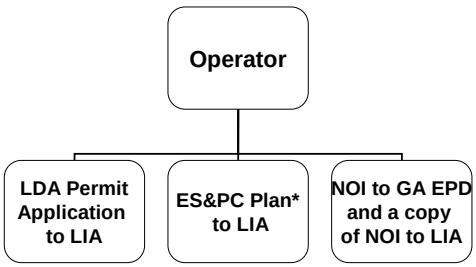
Permitting Process – Permit Application With an LIA



*If the project is disturbing 50 or more acres a copy of ES&PC plan must be sent to the appropriate GA EPD District Office

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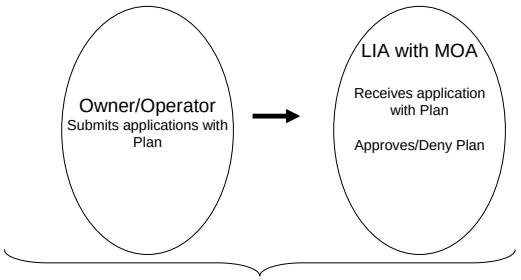
Permitting Process - Plan Submittal



Permit shall be issued or denied as soon as practicable but **no more than 45 days**

25

What if the city or county is not a Local Issuing Authority?

Land disturbances authorized by NPDES General Construction Permit (no LDA permit is issued)

- Requires owner or operator to notify GA EPD through an NOI
- Submittal of a single copy of the Erosion, Sedimentation and Pollution Control Plan to the Watershed Protection Branch of GA EPD and a second copy to the appropriate GA EPD District Office
- GA EPD Watershed Protection Branch will review plans for deficiencies using the applicable checklist.
- Enforced by District Offices of GA EPD

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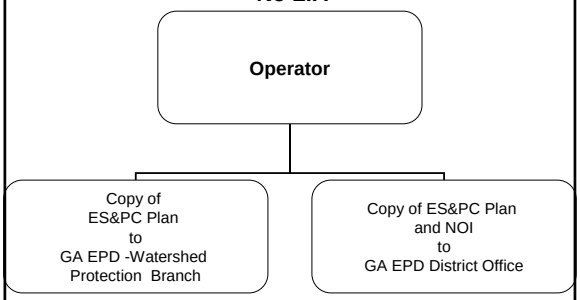
Permitting Process – Permit Application

No LIA



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NPDES General Permit Fees

- Fee based on the number of acres disturbed
- Fees applicable only to primary permittees, not to secondary and tertiary permittees
- Fee of $80 per disturbed acre*
- Half is shared with certified local issuing authority to offset workload

**Does not affect local LDA Permit fees.*
LIAs can charge additional fees per acre.
Check local requirements.

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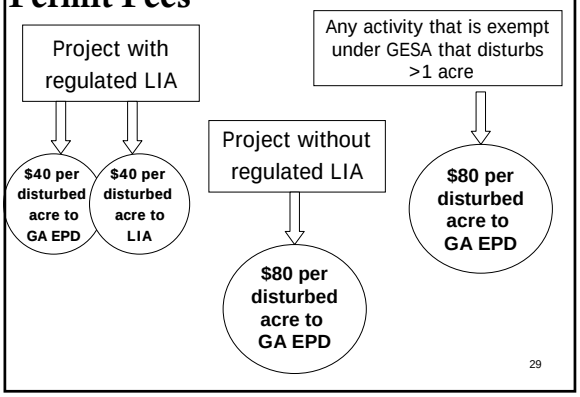
Permit Fees



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Fee Rule 391-3-6-.22(6)

- Primary permittee (utility companies, DOT, public water system reservoirs) to submit fee of $80 per disturbed acre to GA EPD prior to any land disturbance.

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LIA Enforcement
Options

- Notice of Violation (NOV)
- Issuance of a Stop Work Order
- Revocation of business license
- Suspend LDA permit
- Deny future LDA permit applications for 2 or more violations within 3 years
- Imposition of monetary penalties
- Forfeiture of Bonding (bonding is an option provided in the Act up to $3000 per acre)

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LIA Enforcement
Warnings/Notice of Violations

When inspections reveal a violation of any provision of the ordinance:

- First & Second Violation – Written warning
  - Violator has five days to correct the action
  - No corrective action within 5 days = Stop Work Order
- Third Violation – Immediate Stop Work Order

GESA 12-7-12(c)

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LIA Enforcement
Stop Work Orders

- Immediate Stop Work Orders
  - Third Violation
  - Danger to public health or state waters
  - Disturbing land without a permit
  - Stream buffer violation
  - BMPs not properly designed, installed or maintained

GESA 12-7-12(c)

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LIA Enforcement
Stop Work Orders

- Stop Work Orders are effective immediately upon issuance
- In effect until corrective action or mitigation has occurred
- Applies to all land-disturbing activity on the site except for the installation or maintenance of erosion and sediment controls

GESA 12-7-12(d)

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LIA Enforcement
Fines

- Maximum fine of $2500 per violation may be imposed by municipal or magistrate courts
- Each day during which the violation or failure or refusal to comply continues shall be a separate violation

GESA 12-7-15

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LIA Enforcement
Suspension of LDA Permit

Land Disturbing Activity Permits may be suspended, revoked or modified by the local issuing authority if the permit holder or his or her successor is not in compliance with the approved plan or if there is any violation.

OCGA 12-7-11(b)

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LIA Enforcement
Forfeiture of Bonding

- LIA may require permit applicant to post a bond up to $3,000 per acre
- If applicant doesn't comply with the permit, bond may be forfeited
- Proceeds from the forfeited bond may be used to hire a contractor to stabilize site and bring it into compliance

OCGA 12-7-7(f)(2)

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Exemptions

Permitting does not apply to the following activities:

GESA 12-7-17

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Exemptions
Surface Mining

- As defined by O.C.G.A. 12-4-72

'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.

GESA 12-7-17(1)

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Exemptions
Granite Quarrying

Granite quarrying and land clearing for such quarrying GESA 12-7-17(2)

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Exemptions
Minor Land Disturbing Activities

- Home landscaping
- Fences
- Repairs
- Maintenance work
- Other activities which result in minor soil erosion

GESA 12-7-17(3)

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Exemptions
Construction of single family residences

Single-family residences are exempt if:

- Project disturbs less than one acre
- Lot is not part of a common development

GESA 12-7-17(4)

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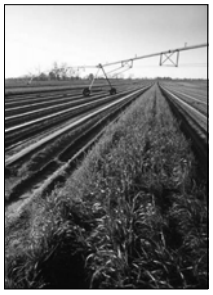
Exemptions
Agricultural Operations



- As defined in O.C.G.A. 1-3-3
  - Includes establishment, cultivation or harvesting of products of the field or orchard
  - Preparation and planting of pasture land
  - Farm Ponds
  - Dairy Operations
  - Livestock and Poultry Management Practices
  - Farm Buildings ***(**Not exempt from NPDES Permitting**)***

GESA 12-7-17(5)

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Exemptions
Forestry Practices

- Forestry land management practices including harvesting

Stream buffer encroachment results in a 3 year moratorium for development.*

*Moratorium stays with the property not the property owner. GESA 12-7-17(6)

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Exemptions
NRCS Projects

Projects carried out under the technical guidance of the NRCS/USDA

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GESA 12-7-17(7)

Exemptions
Projects < 1.0 Acre

Any project disturbing less than 1.0 acre unless land-disturbing activity is:

- occurring within 200 feet of the banks of "State Waters"
- part of a larger common plan of development

GESA 12-7-17(8)

Check local requirements

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Exemptions
Road Construction and Utility Projects

- Projects financed by:
  - Department of Transportation
  - GA Highway Authority
  - State Road and Tollway Authority
  - Any road construction or maintenance project, or both, undertaken by any county or municipality
- Exempt from E&S Act unless located within Common Development
  - Becomes a Secondary Permittee and minimum requirements are enforced by LIA
- E & S complaints go to GA EPD District Offices

GESA 12-7-17(9)

****NOT EXEMPT FROM NPDES PERMITTING****

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Exemptions
Utilities

- Any land disturbing activities conducted by:
  - Electric Membership Corporations (EMCs)
  - Public Utilities under PSC Jurisdiction
  - Municipal Electric Systems
  - Utilities under FERC jurisdiction
  - Cable television systems
- Exempt from E&S Act unless located within Common Development
  - Becomes a Secondary Permittee and minimum requirements are enforced by LIA GESA 12-7-17(10)

****NOT EXEMPT FROM NPDES PERMITTING****

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Exemptions
Public Water System Reservoirs

NOT EXEMPT FROM NPDES PERMITTING

GESA 12-7-17(11) 49

Exemptions

Even exempted activities must conform to the BMP minimum requirements.

(GESA 12-7-6)

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Appropriate E & T Certification Requirements

O.C.G.A. 12-7-19

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Who must be certified?

Persons involved in land development, design, review, permitting, construction, monitoring, 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 GA EPD and the Stakeholder Advisory Board.

O.C.G.A. 12-7-19

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Who must be certified on-site?

"Persons"

The term persons (dependent upon their level of involvement) will be enforced to mean that one person on-site from each entity involved with land disturbing activity shall meet the education and training certification requirements

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Who must be certified on-site?

State law requires:

- At least 1 person who is responsible for erosion and sediment control activities acting on behalf of the primary, secondary or tertiary permittee, as defined by the state general permit, shall be on site whenever land-disturbing activities are being conducted.
- Persons or entities involved in projects not requiring the state general permit but still requiring personnel on site may contract with certified person, who must be on site whenever land disturbing activities are being conducted.

O.C.G.A. 12-7-19

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The Subcontractor Awareness Seminar

Course Length: 2 hours

Course Requirements:

- Must attend course
- Complete a Subcontractor Awareness Application
- No exam

Successful completion of Subcontractor Awareness requirements awards *Certified Subcontractor* status

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Subcontractor Awareness Seminar

Is 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.

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Subcontractor Awareness Seminar

Please note:

Certified Subcontractor status DOES NOT qualify an individual to perform the duties of a "certified" person/personnel.

If an individual is performing "certified" person duties, a Level IA certification is required.

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Subcontractor Awareness Seminar

- If an individual is working in a subcontractor capacity and possess a Level IA 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 IA course but does not possess a Level IA certification, they are **not required** to take the Subcontractor Awareness Seminar. They must:
  - complete a Subcontractor Awareness application and
  - submit a Proof of Attendance form from a Level IA course. (This can be obtained from your Level IA trainer)

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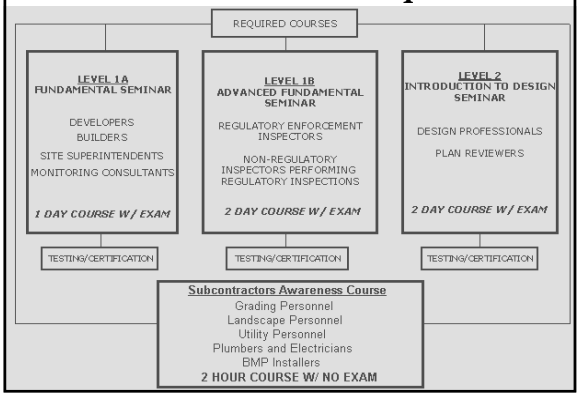
Education/Certification Requirements



What does a regulatory inspector look for on-site?

- Cards color coded by level of certification for quick reference in the field
  - Level IA – Blue
  - Level IB – Red
  - Level IIPR – Gray
  - Level IIDP – Tan
  - Subcontractor Awareness - White
- Cards contain name, certification number, date issued and expiration date

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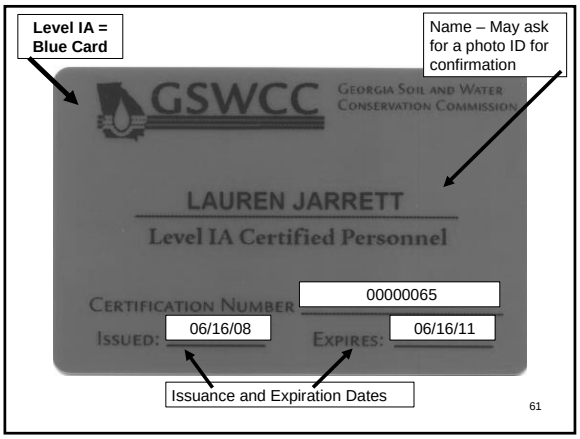

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Education and Certification Fact Sheet

-Guidance document issued by GA EPD, GSWCC and Stakeholder Advisory Board

-Available on www.gaswcc.georgia.gov under Documents

-Latest revision October 2008

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Enforcement Strategy

-Issued by GA EPD

-Guidance document for LIAs

-Available on GSWCC website at www.gaswcc.georgia.gov under Documents

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Re-certification Requirements

According to OCGA 12-17-19(e)(1)(2):

1. A certification provided by achieving the requirements established by the Commission shall expire no later than three years after issuance.

2. A certified individual shall be required to attend and participate in at least four hours of continuing education courses, as established by the Commission, every 3 years.

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Re-certification Requirements

- Individuals wishing to renew their certification must attend 4 hours of continuing education (CE) for every certification they wish to renew.

Example: Joe Smith is a Certified Inspector and Certified Plan Reviewer

Mr. Smith must attend 4 hours of CE approved for Level IB and 4 hours of CE approved for Level II for a total of 8 hours.

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Re-certification Requirements

- There will be no exam for any re-certification courses.
- Individuals can only begin taking re-certification courses 1 year before their initial certification expires. Any hours earned before the 1 year mark will not be accepted.
- For additional information and a complete list of upcoming courses visit www.gaswcc.georgia.gov.

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Questions ?

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Insert Yellow Sheet

Back of Yellow Sheet

O.C.G.A. § 12-7-1
GEORGIA CODE

***** Current through the 2007 Regular Session *****

TITLE 12. CONSERVATION AND NATURAL RESOURCES

CHAPTER 7. CONTROL OF SOIL EROSION AND SEDIMENTATION
O.C.G.A. § 12-7-1 (2007)

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.

(3) "Commission" means the State Soil and Water Conservation Commission.

(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) "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.

(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 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 paragraph (16) 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; or

(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;

provided, however, that 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; 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 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:

(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; 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.

(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.

12-7-8. 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 or 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 therefore 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 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.

[Repealed]

12-7-22. Electronic filing and reporting system

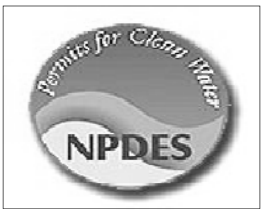
In order to achieve efficiencies and economies for both the division and the regulated community by the use of electronic filing for certain application and reporting requirements of this chapter and National Pollution Discharge Elimination System permits, the division and the

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 2 – NPDES Permits

Back of Tab

NPDES General Permits
Storm Water from Construction Sites



Education and Certification for Persons Involved in Land Disturbing Activities

Issued July 2014

1

What is "NPDES"?

National Pollutant Discharge Elimination System

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

The Georgia Environmental Protection Division (GA EPD) has been "authorized" by the U.S. EPA to issue NPDES General Permits within the State.

Once a state is "authorized," the U.S. EPA oversees the state's administration of the program.

2

The Three NPDES General Permits

- GAR100001 – Stand Alone Construction
- GAR100002 – Infrastructure Construction
- GAR100003 – Common Development Construction

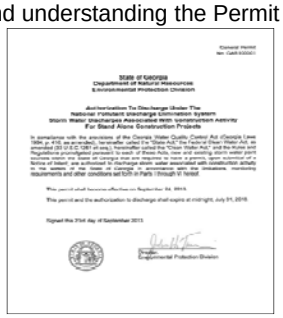
The Permits
were re-issued September 24, 2013,
and will be valid for a term of 5 years.

Permits are available on the GA EPD website:
www. epd.georgia.gov or www.gaswcc.georgia.gov

3

Read the Permit!

Reading and understanding the Permit is essential



to understanding and maintaining compliance

4

Part I. Coverage Under The Permits

Land disturbance equal to or greater than one (1) acre,
or
Tracts of less than one (1) acre that are part of a larger overall development with a combined disturbance of one (1) acre or greater

(i.e., common plan of development)

5

Part I. Coverage Under The Permits

These Permits regulate discharges of storm water to waters of the State from construction activities.

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

Part I. Coverage Under The Permits

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.*

7

Part I. Coverage Under The Permits

Infrastructure Construction *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, et.), water, storm water or sewage.*

8

Part I. Coverage Under The Permits

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

9

Part I. Coverage Under The Permits

Primary Permittee *means the Owner or Operator or both of a tract of land for a construction project subject to the permit.*

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.*

Tertiary Permittee *means either the Owner or Operator of a remaining lot(s) within a common development conducting a construction activity where the primary permittee and all secondary permittees have submitted a NOI or where a primary permittee no longer exists.* (excluding utility companies and contractors working under a Blanket NOI).*

****The Primary Permittee must notify the legal title holders of each remaining lot(s) that these lot Owners or Operators will become Tertiary Permittee(s).***

10

Part I. Coverage Under The Permits

CERTIFIED PERSONNEL *means a person who has successfully completed the appropriate certification course approved by the GSWCC. (O.C.G.A. § 12-7-19)*

- **Subcontractor Awareness** - Subcontractors retained by a Permittee
- **Level IA** – E&SC Inspectors retained by a Permittee
- **Level IB** – Regulatory Enforcement Inspectors
- **Level II** – Design Professionals and Plan Reviewers

If a "Certified Person" is not on-site, all land disturbing activities undertaken by that permittee should stop. 11

Part I. Coverage Under The Permits

Infrastructure Projects:

Infrastructure projects that result in contiguous land disturbance equal to or greater than one (1) acre.

CONTIGUOUS AREAS OF LAND DISTURBANCES for the purposes of this permit, "include those areas of land disturbances solely separated by drilling and boring activities, water 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." 12

Part I. Coverage Under The Permits

Infrastructure Projects:

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."

13

Part I. Coverage Under The Permits

Infrastructure Projects:

In order to be eligible for this exemption, the infrastructure maintenance project must comply with the following conditions:

(1) no mass grading,

(2) stabilized by the end of each day with temporary or permanent stabilization,

(3) project duration < 120 calendar days, and

(4) final stabilization implemented at the end of the maintenance project.

Permit Reference: Part I.C.(1)(c)

14

Part II. Notice Of Intent Requirements

- *New construction sites must submit a **NOI at least 14 days prior to** commencement of construction activities.* (Note: No change from earlier permits)
- For new construction sites, check the box on the NOI for ***"Initial Notification."***
- NOIs must be submitted by ***return receipt certified mail*** or similar service and ***proof of submittal must be readily available*** at the construction site or a designated location.

15

Part II. Notice Of Intent Requirements

- Existing construction sites were required to submit a new NOI no later than 90 days after the effective date of the new permits (September 24, 2013).
- If the Primary Permittee paid the applicable fees when the initial NOI was submitted, the Primary Permittee does not pay any additional fees for a re-issuance notification.

16

Part II. Notice Of Intent Requirements

- Failure to comply with this requirement shall constitute a violation of the Georgia Water Control Act for each day until an "initial" NOI – Version 2013 is submitted.
- In addition to the violation, the permittee must prepare and submit a new ES&PC Plan in accordance with Part IV of the new permits and pay all applicable fees in accordance with Part II.D of the permits.

17

Part II. Notice Of Intent Requirements

- In the event a lender or other secured creditor acquires legal title to a construction site (e.g., ***FORECLOSURE***), such party, as the new owner, must file a new NOI by the earlier to occur:
  - *7 days before beginning work at the facility/ construction site,*

    or
  - *30 days from acquiring legal title to the facility/ construction site.*

Permit Reference: Part II A.4

18

Part II. Notice Of Intent Requirements

Tertiary Permittees, under the 2013 permit, have three options for submitting an NOI:

OPTION (1) - The permittee may submit a Notice of Intent for each individual lot and a new ES&PC Plan for each individual lot.

OPTION (2) –If the permittee's total land disturbance within the construction site is less than five acres and total land disturbance within the individual lot(s) is less than one acre, the permittee may submit a single NOI and an ES&PC Plan(s) for a typical individual lot(s). Then submit a NOT for each individual lot.

19

Part II. Notice Of Intent Requirements

OPTION (3) - The owner may submit a ***single*** Notice of Intent – Initial Notification for the ***entire construction site***

and

submit a ***new*** ES&PC Plan for the ***entire construction site***.

The owner may submit the NOI – Initial Notification as either a Primary Permittee or Tertiary Permittee and a ***single*** NOT.

20

Part II. Notice Of Intent Requirements

OPTION (3) (continued)

- Primary Permittees must provide copies of the Plan to all Secondary Permittees.
- Primary Permittees are solely responsible for the payment of NPDES General Permit fees for all planned land disturbing activities – including land disturbing activities planned by any Secondary Permittees.

21

Part II. Notice Of Intent Requirements

NOIs must be submitted to ***both*** the appropriate ***GA EPD District Office*** and to the ***Local Issuing Authority*** (LIA) in jurisdictions authorized to issue local Land Disturbance Activity permits. (Note: No change from earlier permits)

Permit Reference: Part II. C

22

Part II. Notice Of Intent Requirements

- Utility Companies 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*** must be provided to the Primary Permittee not more than 7 days prior to commencement of construction activities by the Utility Company at each site.

Permit Reference: Part II. B.2.1

23

Part II. Notice Of Intent Requirements

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 planned by the Secondary Permittees and/or Tertiary Permittees.

Fee Form and Fact Sheet are available on the GA EPD and GSWCC websites:

www.epd.georgia.gov or www.gaswcc.georgia.gov

24

Part III. Special Conditions

Part III C. – Discharges into, or within one mile upstream of and within the same Watershed as, any portion of a Biota Impaired Stream

- If the Impaired Stream Segment has been listed for the criteria violated, "Bio F" (Impaired Fish Community) and/or "Bio M" (Impaired Macroinvertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff), ***the ES&PC Plan must include at least four (4) of the BMPs listed in Part III.C.2. (a) – (u) of the new permits***.

25

Part III. Special Conditions

Part III C. – Discharges into, or within one mile upstream of and within the same Watershed as, any portion of a Biota Impaired Stream

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 storm water 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 storm water 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 on the site on the actual start date of construction visible from a public roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s) until a NOT has been submitted.

e. Use anionic polyacrylamide (PAM) 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.

BMPs listed in Part III.C.2. (a) – (u)

26

Part III. Special Conditions

Part III C. – Discharges into, or within one mile upstream of and within the same Watershed as, any portion of a Biota Impaired Stream

- Georgia's "305(b)/303(d) List Documents (Final)" can be viewed on the GA EPD website, epd.georgia.gov/georgia-305b303d-list-documents.
- GIS Data Sets for biota impaired streams are available on the GA EPD website in ESRI Geodatabase 9.1 format and ESRI Shapefile format.
- Criteria violated: **"Bio F"** *(Impaired Fish Community)* and/or **"Bio M"** *(Impaired Macroinvertebrate Community)*.
- Potential causes: **"NP"** *(nonpoint source)* or **"UR"** *(urban runoff)*.

27

Part III. Special Conditions

Part III – Discharges into, or within one mile upstream of and within the same Watershed as, any portion of a Biota Impaired Stream

Total Maximum Daily Loads (TMDL) Implementation Plans

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 six months prior to submittal of the ***Initial*** Notice of Intent.

Permit Reference: Part III.C.1

28

Part III. Special Conditions

Part III C. – Discharges into, or within one mile upstream of and within the same Watershed as, any portion of a Biota Impaired Stream

Total Maximum Daily Loads (TMDL) Implementation Plans

If no site-specific conditions or requirements have been included in the TMDL Implementation Plan for the applicable impaired 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."

29

Permit Reference: Part III.C.1

Part III. Special Conditions

Part III C. – Discharges into, or within one mile upstream of and within the same Watershed as, any portion of a Biota Impaired Stream

Total Maximum Daily Loads (TMDL) Implementation Plans

List of TMDL Implementation Plans can be viewed on the GA EPD website, www.epd.georgia.gov (Under "Technical Guidance," scroll down to "Watershed Protection Branch," then click "Total Maximum Daily Loading")

30

Part IV. ES&PC Plan

Erosion, Sedimentation and Pollution Control Plan

- The ES&PC Plan is critical
- The Plan must be prepared in accordance with Part IV of the Permit
- The Plan must be implemented
- The Plan must provide for compliance with the Permit.

Permit Reference: Part IV.D.1

31

Part IV. ES&PC Plan

- Erosion, Sedimentation and Pollution Control (ES&PC) Plans must be prepared by a **"certified design professional" (Level II)** licensed by the State of Georgia in the field of engineering, architecture, landscape architecture, forestry, geology or land surveying or a **"certified design professional" (Level II)** that is a Certified Professional in Erosion and Sedimentation Control (CPESC).

Permit Reference: Part I.B.8 (Stand Alone and Infrastructure)
Part I.B.10 (Common Development)

32

Part IV. ES&PC Plan

Stream Buffer Requirement Exemptions

- Public Drinking Water System Reservoirs

Permit Reference: Part IV.(i), (ii)

33

Part IV. ES&PC Plan

Stream Buffer Requirement Exemptions

- Ephemeral Streams (Excluding Trout Streams)
- Bulkheads and Seawalls on Lake Oconee and Lake Sinclair

Permit Reference: Part IV.(i),(ii)

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Part IV. ES&PC Plan

Stream Buffer Requirement Exemptions

- Stream Crossing for Utility Lines for any EMC 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 of or Maintenance of Existing Utility Structures under the regulatory jurisdiction of the PSC and/or FERC or roadway projects undertaken by DOT or any municipality or county.

Permit Reference: Part. IV. A.(i)(3)(7) (Stand Alone)

35

Part IV. ES&PC Plan

Stream Buffer Requirement Exemptions

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

36

Permit Reference: Part. IV. A.(i)(8) (Stand Alone)

Part IV. ES&PC Plan

Plan Submittal

***Situation 1*: The local government (i.e., city or county) is a <u>certified</u> Local Issuing Authority (LIA).**

- NOI and required attachments must be submitted to the appropriate GA EPD District Office.
- Copy of the NOI must be submitted to the LIA.
- Copy of the ES&PC Plan must be submitted to the appropriate GA EPD District Office ***<u>only</u>*** for sites equal to or greater than 50 acres of disturbed area.

Permit Reference: Part IV.A.4

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Part IV. ES&PC Plan

Plan Submittal

***Situation 2*: The local government is a LIA, but the project is <u>exempt</u> from the local ordinance.**

Or

***Situation 3*: The local government is <u>not</u> a certified Local Issuing Authority.**

Permit Reference: Part IV.A.4

38

Part IV. ES&PC Plan

Plan Submittal (continued)

- NOI and required attachments must be submitted to the appropriate GA EPD District Office.
- Single copy of the ES&PC Plan must be submitted to the GA EPD Watershed Protection Branch in Atlanta and second copy must be submitted to the appropriate GA EPD District Office.

Permit Reference: Part IV.A.4

39

Part IV. ES&PC Plan

- For Stand Alone and Common Development construction projects, the *design professional* who prepared the ES&PC Plan must inspect the installation of the *initial sediment storage requirements and perimeter control BMPs within seven (7) days after installation*.
- For non-linear Infrastructure construction projects, the *design professional* who prepared the ES&PC Plan must inspect the installation of the *initial sediment storage requirements and perimeter control BMPs within seven (7) days after installation*.

40

Part IV. ES&PC Plan

Part IV – ES&PC Plan – Design Professional

- Alternatively, for Linear infrastructure construction projects, the *design professional* who prepared the ES&PC Plan must inspect the installation of the *sediment storage requirements and perimeter control BMPs for the INITIAL PHASED SUB-PART OR SEGMENT of the linear infrastructure project and ALL SEDIMENT BASINS within seven (7) days after installation*.
- Disturbed acreage of the initial phased sub-part or segment of the Linear infrastructure project must be equal to or greater than 10% of total disturbed acreage but not less than one(1) acre.

41

Part IV. ES&PC Plan

The ***design professional*** must report the results of the inspection to the permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report.

Permit Reference: Part IV.A.5

42

Part IV. ES&PC Plan

Primary Permittees of Common Developments:

- Must maintain a list of ***all*** Secondary Permittees,
- Ensure that ***all*** *Secondary Permittees* have received a copy of the Primary Permittee's ES&PC Plan and have signed the Primary Permittee's copy, and
- Ensure that ***all*** Secondary Permittees are aware of their responsibilities as permittees under the Permit.

43

Part IV. ES&PC Plan

- Upon request by the permittee, the ***design professional*** will amend ES&PC Plans as necessary whenever there is a change affecting BMPs with a ***hydraulic component***.
- ***BMP with a HYDRAULIC COMPONENT*** – BMP where the design is based upon rainfall intensity, duration and return frequency of storms.

Permit Reference: Part IV.C

44

Part IV. ES&PC Plan

Plan Contents

- Locate ***waste collection*** away from streets, gutters, watercourses and storm drains.
- Waste collection areas, such as dumpsters, are best located near construction site entrances to minimize traffic on disturbed soils.
- The Plan should include secondary containment around ***liquid waste collection areas*** to minimize contaminated discharges.

45

Part IV. ES&PC Plan

Plan Contents

- 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 the BMPs for concrete washouts is available at www.epa.gov/npdes/pubs/concretewashout.pdf

Permit Reference: Part IV.D.3.C

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Part IV. ES&PC Plan

Site Inspections – Primary and Tertiary Permittee

- E&SC Inspectors (certified personnel) – Level IA

Daily Inspections: (1) areas where petroleum products are stored, used or handled;

(2) vehicle entrances and exits; and

(3) measure rainfall for each 24 hour period, except any non-working Saturday, Sunday and Federal holiday until a NOT is submitted. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials.

Permit Reference: Part IV.D 4(a)(c)

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Part IV. ES&PC Plan

Site Inspections – Primary and Tertiary Permittee

- **Weekly Inspections and within 24 Hours of each ½ Inch Rainfall or Greater:** disturbed areas, storage areas, structural BMPs and outfall locations.

- **Monthly Inspections:** stabilized areas.

Permit Reference: Part IV.D.4.a – 4.c

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Part IV. ES&PC Plan

Inspection Results – Primary and Tertiary Permittee

- If BMP deficiencies are indicated during an inspection, the BMP deficiencies should be corrected as soon as practical and **corrective actions documented**.
- If corrective action requires a revision to the ES&PC Plan, the Plan must be revised within ***7 calendar days*** of the inspection.
- ES&PC Plan revisions must be implemented within ***7 calendar days*** of the inspection.

Permit Reference: Part IV.D.4.a (5) – 4.c(5)

49

Part IV. ES&PC Plan

Inspection Reports – Primary and Tertiary Permittee

- Inspection Reports must include the following: name of inspector, date of each inspection, construction phase, observations relating to the implementation of the ES&PC Plan, corrective actions, incidents of non-compliance, and ***signature of certified E&SC inspector (certified person – IA)****(Permit Reference: Part V.G.)*.
- Where reports do not identify any incidents of non-compliance, the report must contain a ***certification statement*** that the site in is compliance with the ES&PC Plan and the Permit.

Permit Reference: Part IV.D.4.a(6) – 4.c(6)

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Part IV. ES&PC Plan

Inspection Reports – Primary and Tertiary Permittee

- All inspection reports must be retained at the site or be readily available at designated alternative location.
- All **permit violations** *(Permit Reference: Part III.D.)* 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***.

Permit Reference: Part V.A.2

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Part IV. ES&PC Plan

Site Inspections – Secondary Permittee

- E&SC Inspectors (certified personnel) – Level IA
- **Daily Inspections:** (1) areas where petroleum products are stored, used or handled and (2) vehicle entrances and exits.
- **Weekly Inspections and within 24 Hours of each ½ inch Rainfall or Greater:** disturbed areas, storage areas, structural BMPs and outfall locations.
- **Monthly Inspections:** stabilized areas.

Permit Reference: Part IV.D.4.b

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Part IV. ES&PC Plan

Site Inspections – Secondary Permittee

Utility Companies and Utility Contractors acting as Secondary Permittees must inspect the following each day any type of construction activity occurs:

- Areas disturbed by the utility company or contractor which have not undergone final stabilization.
- Areas used by the utility company or contractor for storage of materials exposed to precipitation that have not undergone final stabilization.
- Structural control measures identified in the ES&PC Plan.

Permit Reference: Part IV.D.4.b

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Part IV. ES&PC Plan

Inspection Reports – Secondary Permittee

- The Secondary Permittee must notify the Primary Permittee of any BMP design deficiencies within 24 hours and the Primary Permittee must evaluate any suspected BMP design deficiencies within 48 hours of notice.
- If corrective action requires a revision to the ES&PC Plan, the Plan must be revised by the Primary Permittee within ***7 calendar days*** of the notice.
- ES&PC Plan revisions must be implemented by the Secondary Permittee within 48 hours of notice.

Permit Reference: Part IV.D.4.b(5)

54

Part IV. ES&PC Plan

Inspection Reports – Secondary Permittee

- Inspection Reports must include the following: name of inspector, date of each inspection, observations relating to the implementation of the ES&PC Plan, corrective actions, incidents of non-compliance, and ***signature of certified E&SC inspector***
- Where reports do not identify any incidents of non-compliance, the report must contain a ***certification statement*** that the site in is compliance with the ES&PC Plan and the Permit.

Permit Reference: Part IV.D.4.b(6)

55

Part IV. ES&PC Plan

Inspection Reports – Secondary Permittee

- All inspection reports must be retained at the site or be readily available at designated alternative location.
- All **permit violations** *(Permit Reference: Part III.D.)* 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***.

Permit Reference: Part V.A.2

56

Part IV. ES&PC Plan

Sampling Requirements

- WQ Sampling Personnel (certified subcontractor) – Level I
- 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.
- Sampling requirements are ***not*** applicable to Secondary Permittees.

Permit Reference: Part IV.D.6

57

Part IV. ES&PC Plan

Sampling Requirements

- Permits require the monitoring of ***Nephelometric Turbidity*** in receiving waters, storm water discharge outfalls, or combination thereof.
- The ES&PC Plan must delineate a ***precise sampling methodology for each sampling location***.
- The analytical method used to collect and analyze samples must include ***quality control / quality assurance procedures***.

Permit Reference: Part IV.D.6

58

Part IV. ES&PC Plan

Sampling Points

- Sample all receiving waters, or all outfalls, or a combination of all receiving waters and outfalls as specified in the ES&PC Plan.

Permit Reference: Part IV.D.6(c)

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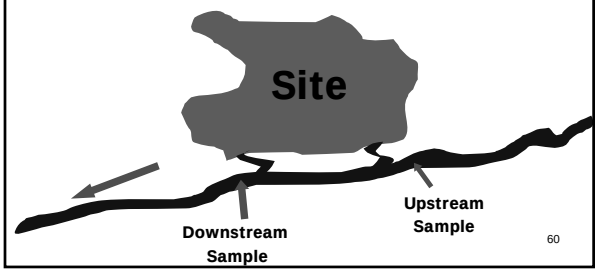
Part IV. ES&PC Plan

Sampling Points

Downstream Sample – Upstream Sample ≤ 10 NTUs (Trout Stream)
Downstream Sample – Upstream Sample ≤ 25 NTUs (Warm Water Stream)



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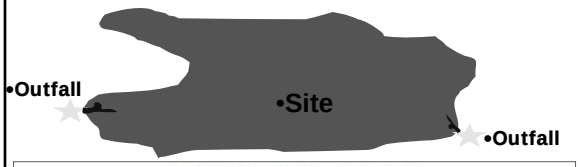
Outfall Sampling Location



Warm Water (Supporting Warm Water Fisheries)

Surface Water Drainage Area, square miles

Site Size, acres	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

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.

Part IV. ES&PC Plan

Sampling Frequency

Samples must be collected for at least two rain events:

- First rain event ≥ 0.5 inches after **clearing and grubbing operations** have been completed, but prior to completion of mass grading operations.
- First rain event ≥ 0.5 inches that occurs either 90 days after the first sampling event ***OR*** after all **mass grading operations** have been completed, but prior to submittal of a NOT, which ever comes first.

Samples must be collected within 12 hours of storm water discharge from the site.

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Permit Reference: Part IV.D.6.d

Part IV. ES&PC Plan

Sampling Frequency

Sampling is to take place when construction activity is being conducted by the primary permittee during normal business hours, which has been defined as Monday thru Friday 8:00 AM to 5:00 PM**,** excluding any nonworking Saturday, non-working Sunday and nonworking Federal holidays.

Permit Reference: Part IV.D.6

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Part IV. ES&PC Plan

Sampling Results

- If the results exceed the applicable NTU values of the Permits and BMP deficiencies exist, corrective action must be defined and implemented within 2 days.
- Additional sampling must be conducted for every rain event ≥ 0.5 inches until the applicable turbidity standard is attained or BMP deficiencies have been corrected.
- If the results exceed the applicable NTU values of the Permits, but the certified inspector determines that the BMPs are ***properly designed, installed and maintained***, no additional sampling is required.

Permit Reference: Part IV.D.6.d

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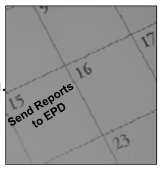
ES&PC Plan

Reporting Sampling Results

- Submit summary of sampling results to the appropriate GA EPD District Office by the 15th day of the month following the sampling event.
- Reports must include: rainfall amount, date, time and location of sampling; date and time of analyses,names of individuals performing the sampling and analyses; and monitoring results.
- Results that exceed 1000 NTU, shall be reported as "Exceeds 1000 NTU."
- Certification the sampling was per the plan.



Permit Reference: Part IV.E

ES&PC Plan

Reporting Sampling Results

- All reports must be signed by the ***certified subcontractors*** that performed the sampling and analyses and must contain the ***certification statement*** delineated in Part V.G.2.c. of the Permits.

Permit Reference: Part IV.E

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Part IV. ES&PC Plan

Retention of Records – Primary and Tertiary Permittee

The following records must be retained at the site or be readily available at designated alternative location:

- Copy of Notice of Intent and Proof of Submittal
- Copy of ES&PC Plan
- Design Professional Inspection Report
- Sampling Information, Results and Reports
- Site Inspection Reports
- Violation Summary Reports
- Rainfall Data

Permit Reference: Part IV.F.1, Part IV.F.3

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Part IV. ES&PC Plan

Retention of Records – Secondary Permittee

The following records must be retained at the site or be readily available at designated alternative location:

- Copy of Notice of Intent and Proof of Submittal
- Copy of ES&PC Plan
- Site Inspection Reports
- Violation Summary Reports

Permit Reference: Part IV.F.2

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Part IV. ES&PC Plan

Retention of Records

Records must be maintained by the permittee for a period of at least 3 years after a valid Notice of Termination has been submitted to the appropriate GA EPD District Office.

Permit Reference: Part IV.F.4

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Part VI. Termination of Coverage

Termination Eligibility

FINAL STABILIZATION **means "…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 regions)*."**

Permit Reference: Part VI.A.1

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Part VI. Termination of Coverage

Termination Eligibility

*The **Permittee** (Primary, Secondary or Tertiary) may submit a **Notice of Termination** (NOT) **immediately** if:*

- All ***planned*** construction activities have been completed and the entire development has undergone final stabilization,
- All storm water discharges associated with construction activities have ceased,
- The site is in compliance with the Permit, and
- All temporary BMPs have been removed.

(Permit Reference: Part VI.A.1)

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Part VI. Termination of Coverage

Termination Eligibility

*The **Permittee** (Primary, Secondary or Tertiary) of the site changes **and** construction activities and storm water discharges will continue after the Permittee changes:*

- Prior to submitting a NOT, the Permittee must notify the subsequent Owner and/or Operator of the Permit requirements.
- The subsequent Owner and/or Operator must submit a new ***Notice of Intent*** at least 7 days prior to construction activities at the site. *(Permit Reference: Part II.A.4.)*

(Permit Reference: Part VI.A.3)

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Part VI. Termination of Coverage

Termination Eligibility

*The **Primary Permittee** of a Common Development may submit a NOT, even if all **planned** construction activities have **not** been completed, if and only if:*

- Construction activities have stopped for at least 90 days,
- Final stabilization has been implemented by the Primary Permittee and all Secondary Permittees,
- All Secondary Permittees have submitted a NOT,
- The site is in compliance with the Permit, ***and***
- All temporary BMPs have been removed.

(Permit Reference: Part VI.A.1)

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Part VI. Termination of Coverage

Termination Eligibility

For Infrastructure Construction Projects

- The permittee may submit a Notice of Termination (NOT) for each phase of the infrastructure 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, *the disturbed acreage for the final phase must be equal to or greater than 10% of the total disturbed acreage*.

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Part VI. Termination of Coverage

Termination Eligibility

For Infrastructure Construction Projects

- Permittees may submit a Notice of Termination (NOT) if coverage under the 2013 NPDES General Permit No. GAR100002 is not required for the Primary Permittee of an existing *infrastructure construction project*.
- Contiguous Areas of Land Disturbances and Routine Maintenance for *infrastructure construction projects* have been redefined in the 2013 NPDES General Permit No. GAR100002.

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Part VI. Termination of Coverage

Notice of Termination Submittal

NOTs must be submitted to ***both*** the appropriate ***GA EPD District Office*** and to the ***Local Issuing Authority*** (LIA) in jurisdictions authorized to issue local Land Disturbance Activity permits. (Note: No change from earlier permits)

Permit Reference: Part VI.C

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Terms of the Permit

Regulatory Enforcement Inspectors (Level IB):

- Local Issuing Authority or GA EPD staff
- Inspectors contracted by a LIA to perform regulatory inspections

(Reference: O.C.G.A. § 12-7-19)

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Regulatory Inspections

Routine Inspections and Complaint Investigations
Recommended Inspection Protocol

- ***Review of Notice of Intent*** – Determine if the NOI was properly filed and if fees were paid. If the site is a Common Development, determine if Secondary Permittees have properly filed NOIs.
- ***Review of Monitoring Results and Inspection Reports.***
- ***Review of Design Professional Inspection Report*** – The Design Professional must inspect the installation of the initial sediment storage requirements and perimeter control BMPs.

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Regulatory Inspections

- Routine Inspections and Complaint Investigations
- Recommended Inspection Protocol
- **Review of ES&PC Plan** – The inspection should determine if the BMPs identified on the ES&PC Plan are properly installed and maintained.
- If the site is ***not*** in compliance with the Permit, appropriate enforcement action should be initiated.

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Enforcement – Stop Work Order

VIOLATIONS:

- Construction activity without a Permit (i.e., failure to submit a NOI, fees and/or an ES&PC Plan).
- Failure to maintain a stream buffer (i.e., 25-ft for non-trout waters or 50-ft for trout streams).
- Significant amounts of sediment discharged into State waters where BMPs have not been properly designed, installed and maintained.

(Reference: O.C.G.A. § 12-7-12(d))

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QUESTIONS?

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Insert Yellow Sheet

Back of Yellow Sheet

General Permit
No. GAR100001

State of 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 storm water 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 storm water 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 September 24, 2013.

This permit and the authorization to discharge shall expire at midnight, July 31, 2018.

Signed this 23rd day of September 2013

Director,
Environmental Protection Division

TABLE OF CONTENTS

Section **Page**

Part I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit regulates point source discharges of storm water 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 State 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 State 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. (www.EnviroCertIntl.org).

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. “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 GAR000000, and which area of land or excavation must be certified by EPD before it can begin waste disposal operations.

19. “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.

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 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.

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

30. "Permittee" means any entity that has submitted a Notice of Intent.

31. "Phase" or "Phased" means sub-parts or segments of construction projects where the sub-part 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 sheetflow 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 storm water runoff.

33. “Primary Permittee” means the Owner or the Operator or both of a tract of land for a construction project 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 State 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 State Soil and Water Conservation Commission 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 storm water 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, storm water 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. “Sheetflow” 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. "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.

42. "Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

43. "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.

44. “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.

45. “Surface Water Drainage Area” means the hydrologic area starting from the lowest downstream point where the storm water 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 storm water entrance point. Boundary lines follow the middle of the highest ground elevation or halfway between contour lines of equal elevation.

46. "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 at www.gaepd.org.

47. "Utility Company or Utility Contractor" means, for purposes of this Permit, an entity or sub-contractor that is responsible, either directly or indirectly, for the construction, installation, and maintenance of conduits, pipes, pipelines, cables, wires, trenches, vaults, manholes, and similar structures or devices for the conveyance of natural gas (or other types of gas), liquid petroleum products, electricity, telecommunications (telephone, data, television, etc.), water, storm water or sewage.

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

49. "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.

50. “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.

51. "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 storm water 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 storm water discharges from construction activities) except for discharges identified under Part I.C.3.;

b. all discharges of storm water 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 storm water discharges from construction activities); and

c. coverage under this permit is not required for discharges of storm water 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 Storm Water Discharges. This permit may only authorize a storm water discharge from a construction site or construction activities mixed with a storm water discharge from an industrial source or activity other than construction where:

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

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

c. storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring are covered by a different NPDES general permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

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

a. storm water 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-storm water 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-storm water discharges) of this permit;

c. storm water 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. storm water 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 NOI forms provided by the EPD (or an exact photocopy thereof), in order for storm water 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 storm water from construction sites under the terms and

conditions of this permit fourteen (14) days after the date that the NOI is postmarked. 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 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 storm water 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 storm water 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 file a change of information 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 file a change of information 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 at www.gaepd.org;

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 (Final)" 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) at www.gaepd.org/Documents/305b.html;

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. For stand alone construction disturbing more than 50 acres, which began after the effective date of this permit, include a single copy of the Erosion, Sedimentation, and Pollution Control Plan;

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 fees; 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 by return receipt certified mail (or similar service) to both the appropriate EPD District Office according to the schedule in Appendix A of this permit and 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. If an electronic submittal service is provided by EPD then the NOI may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service. 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 storm water 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 new 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-Storm Water 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 storm water.

2. The following non-storm water discharges may be authorized by this permit provided the non-storm water 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 storm water 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 storm water 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 (Final)” 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, “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 (Final)” can be viewed on the EPD website, www.gaepd.org/Documents/305b.html.

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, www.gaepd.org.

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 storm water 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 storm water 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 on the site on the actual start date of construction visible from a public roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s) until a NOT has been submitted.

e. Use anionic polyacrylamide (PAM) 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, www.gaepd.org, (e.g., seep berms, sand filters, anionic PAM) to model and manage all construction storm water 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 6 (six) 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 storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.

m. Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1. All graphical illustrations must be included on the Plan.

n. Use appropriate erosion control matting or blankets instead of concrete in all construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.

o. Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within all construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.

p. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever construction storm water (including sheet flow) may be discharged.

q. Conduct soil tests to identify and to implement site-specific fertilizer needs.

r. 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.

s. 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.

t. 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 State Soil and Water Conservation Commission).

u. 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.

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 State 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.3. and Part III.D.4.

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 permittees 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 storm water 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 storm water 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 at www.gaepd.org.

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 State 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 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 100001."

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 State 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 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 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) 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 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 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 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 above, for buffers required pursuant to Part IV.(i). and (ii)., 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.

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

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

A. Deadlines for Plan Preparation and Compliance.

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

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

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

4. Additional Plan Submittals.

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 may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device. The EPD Watershed Protection Branch will review Plans for deficiencies using the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted.

b. For sites that are equal to or greater than 50 acres of disturbed area, regardless of the existence of a certified Local Issuing Authority in the jurisdiction, one of the following submissions is also required:

(i) for all projects which begin after the effective date of this permit a single copy of the NOI and a single copy of the Plan shall be submitted to the appropriate EPD District Office. This copy of the Plan may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device.

(ii) for all projects which began on or before the effective date of this permit single copy of the NOI and a single copy of the Plan, if amended, shall be submitted to the appropriate EPD District Office. This copy of the Plan may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device.

c. 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 a change of information 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 storm water 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 and sediment control plans, grading plans, or storm water management plans; or in the case of a storm water 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 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. Checklist. Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission 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 State Soil and Water Conservation Commission up until the date of the NOI submittal. The applicable checklists are available on the EPD website, www.gaepd.org.

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 storm water 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 (www.epa.gov/npdes/pubs/sw_swppp_guide.pdf), 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). and (b). 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.

(b). Where construction activity will resume on a portion of the site within 21 days from when activities ceased, (e.g., the total time period that construction activity is temporarily ceased is less than 21 days) then stabilization measures do not have to be initiated on that portion of site by the 14th day after construction activity temporarily ceased.

(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 projects. 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 State Soil and Water Conservation Commission).

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

b. Storm water management. A description of measures that will be installed during the construction process to control pollutants in storm water 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 storm water 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 storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have been eliminated from the site.

(1). Such practices may include: storm water detention structures (including wet ponds); storm water 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 storm water where it can be infiltrated, evapotranspirated 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 storm water can be found in the Georgia Stormwater Management Manual (www.georgiastormwater.com) and the Georgia Green Growth Guidelines (www.coastalgadnr.org/cm/green/guide). Additional information on Green Infrastructure can be found at water.epa.gov/infrastructure/greeninfrastructure/index.cfm.

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). 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.

(3). 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.

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

(5). 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 www.epa.gov/npdes/pubs/concretewashout.pdf.

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

(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 received by 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 project 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 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;

(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 storm water 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 storm water discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other storm water 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 storm water discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other storm water 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 storm water outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water 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 sheetflow 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 storm water 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 storm water 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 storm water 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 storm water 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 storm water 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-storm water discharges. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water 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-storm water 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 storm water 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 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. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

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 and sedimentation control plans, grading plans, or storm water management plans; or in the case of a storm water 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 change of information 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 and sediment control plans, grading plans, or storm water 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 storm water 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 storm water 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 storm water 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 t, 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 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. Copy of the permittee's most current Notice of Intent;

7. Any other information specified on the NOT in effect at the time of submittal; and

8. The following certification signed in accordance with Part V.G.1. (signatory requirements):

> "I 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 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 storm water 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 by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate EPD District Office according to the schedule in Appendix A of this permit and 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. If an electronic submittal service is provided by the EPD then the Notice of Termination may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

APPENDIX A

EPD DISTRICT OFFICES

All required correspondence, including but not limited to the Notice of Intents, Notice of Terminations, certifications, Erosion, Sedimentation and Pollution Control Plans and any other reports, shall be sent to the following District Offices of EPD.

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
(912) 430-4144

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

Information shall be submitted to:

Watershed Protection Branch
Environmental Protection Division
2 MLK Jr. Drive, Suite 1152, East Tower
Atlanta, Georgia 30334
(404) 463-1511

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams

Surface Water Drainage Area, square miles

Site Size, acres	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	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

Site Size, acres	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

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

General Permit
No. GAR100002

State of 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 storm water 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 storm water 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 September 24 2013.

This permit and the authorization to discharge shall expire at midnight, July 31, 2018.

Signed this 23rd day of September 2013.

Director,
Environmental Protection Division

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Section **Page**

Part I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit regulates point source discharges of storm water 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 State 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 State 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. (www.EnviroCertIntl.org).

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

18. "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.

19. "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).

20. "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.).

21. "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.

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

23. “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.

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

25. "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.

26. “Other Water Bodies” means ponds, lakes, marshes and swamps which are waters of the State.

27. “Outfall” means 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.

28. "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.

29. "Permittee" means any entity that has submitted a Notice of Intent.

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

31. "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 sheetflow 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 storm water runoff.

32. “Primary Permittee” means the Owner or the Operator or both of a tract of land for a construction project subject to this permit.

33. "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 State 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 State Soil and Water Conservation Commission up until the date of NOI submittal.

34. “Receiving Water(s)” means 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.

35. “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, storm water drainage ditches and structures, guardrails, lighting, signage, cameras and fences and exclude subsequent landscaping and beautification projects.
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36. "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.

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

38. “Sheetflow” means runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel.

39. “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.

40. "Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

41. "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.

42. “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.

43. “Surface Water Drainage Area” means the hydrologic area starting from the lowest downstream point where the storm water 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 storm water entrance point. Boundary lines follow the middle of the highest ground elevation or halfway between contour lines of equal elevation.

44. "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 at www.gaepd.org.

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

46. "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.

47. “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.

48. "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 storm water 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 storm water 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;

b. all discharges of storm water 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 storm water 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 storm water associated with infrastructure construction projects that consist solely of routine maintenance for the original purpose of the facility that is performed to maintain the original line and grade and the hydraulic capacity, as applicable. The permittee shall, as a minimum, implement and maintain best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity is being conducted. In order to be eligible for this exemption the project must comply with the following conditions: (1) no mass grading shall occur on the project, (2) the project shall be stabilized by the end of each day with temporary or permanent stabilization measures, (3) the project shall have a duration of less than 120 calendar days, and (4) final stabilization must be implemented at the end of the maintenance project; and

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

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

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

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

c. storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring are covered by a different NPDES general permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

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

a. storm water 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-storm water 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-storm water discharges) of this permit;

c. storm water 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. storm water 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 NOI forms provided by the EPD (or an exact photocopy thereof), in order for storm water 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 storm water from construction sites under the terms and conditions of this permit fourteen (14) days after the date that the NOI is postmarked. 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 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 storm water 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 storm water 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 file a change of information 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 file a change of information 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 at www.gaepd.org.

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 (Final)" 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) at www.gaepd.org/Documents/305b.html;

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. For infrastructure projects disturbing more than 50 acres, which began after the effective date of this permit, include a single copy of the Erosion, Sedimentation and Pollution Control Plan;

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 fees; 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 by ***return receipt certified mail*** (or similar service) to both the appropriate EPD District Office according to the schedule in Appendix A of this permit and 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. If an electronic submittal service is provided by EPD then the NOI may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service. 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 storm water 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 new 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-Storm Water 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 storm water.

2. The following non-storm water discharges may be authorized by this permit provided the non-storm water 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 storm water 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 storm water 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 (Final)” 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, “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 (Final)” can be viewed on the EPD website, www.gaepd.org/Documents/305b.html.

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 an 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, www.gaepd.org.

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 storm water 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 storm water 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 on the site on the actual start date of construction visible from a public roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s) until a NOT has been submitted.

e. Use anionic polyacrylamide (PAM) 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, www.gaepd.org (e.g., seep berms, sand filters, anionic PAM) to model and manage all construction storm water 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 6 (six) 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 storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.

m. Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1. All graphical illustrations must be included on the Plan.

n. Use appropriate erosion control matting or blankets instead of concrete in all construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.

o. Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within all construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.

p. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever construction storm water (including sheet flow) may be discharged.

q. Conduct soil tests to identify and to implement site-specific fertilizer needs.

r. 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.

s. 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.

t. 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 State Soil and Water Conservation Commission).

u. 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.

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 State 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.3. and Part III.D.4.

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 storm water 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 storm water 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 at www.gaepd.org.

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 State 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 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 100002."

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 State 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 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 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) l native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification; and
(6) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the right-of-way undertaken or financed in whole or in part by the Department of Transportation, the Georgia Highway Authority or the State Road and Tollway Authority or undertaken by any county or municipality, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit; and
(7) right-of-way posts, guy-wires, anchors, survey markers and the replacement or maintenance of existing utility structures within the current right-of-way undertaken by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in Code Section 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission or distribution of power, provided that: (a) the area of land disturbance does not exceed 100 square feet per structure, (b) the area of buffer vegetation to be cut (not grubbed) does not exceed 1,000 square feet per structure, (c) native riparian vegetation is re-established in any bare or disturbed areas within the buffer and (d) the entity is not a secondary permittee for a project located within a common development or sale under this permit.

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

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

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

A. Deadlines for Plan Preparation and Compliance.

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

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

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

4. Additional Plan Submittals.

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 may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device. The EPD Watershed Protection Branch will review Plans for deficiencies using the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted

b. For sites that are equal to or greater than 50 acres of disturbed area, regardless of the existence of a certified Local Issuing Authority in the jurisdiction, one of the following submissions is also required:

(i) for all projects which begin after the effective date of this permit a single copy of the NOI and a single copy of the Plan shall be submitted to the appropriate EPD District Office. This copy of the Plan may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device.

(ii) for all projects which began on or before the effective date of this permit single copy of the NOI and a single copy of the Plan, if amended, shall be submitted to the appropriate EPD District Office. This copy of the Plan may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device.

c. 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 a change of information 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 storm water 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 and sedimentation control plans, grading plans, or storm water management plans; or in the case of a storm water 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 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. Checklist. Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission 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 State Soil and Water Conservation Commission up until the date of the NOI submittal. The applicable checklists are available on the EPD website, www.gaepd.org.

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 storm water 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 (www.epa.gov/npdes/pubs/sw_swppp_guide.pdf), 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). and (b). 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.

(b). Where construction activity will resume on a portion of the site within 21 days from when activities ceased, (e.g., the total time period that construction activity is temporarily

ceased is less than 21 days) then stabilization measures do not have to be initiated on that portion of site by the 14th day after construction activity temporarily ceased.

(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 projects. 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 State Soil and Water Conservation Commission).

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

b. Storm water management. A description of measures that will be installed during the construction process to control pollutants in storm water 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 storm water 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 storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have been eliminated from the site.

(1). Such practices may include: storm water detention structures (including wet ponds); storm water 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 storm water where it can be infiltrated, evapotranspirated 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 storm water can be found in the Georgia Stormwater Management Manual (www.georgiastormwater.com) and the Georgia Green Growth Guidelines (www.coastalgadnr.org/cm/green/guide). Additional information on Green Infrastructure can be found at water.epa.gov/infrastructure/greeninfrastructure/index.cfm .

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). 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.

(3). 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.

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

(5). 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 www.epa.gov/npdes/pubs/concretewashout.pdf.

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

(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 project 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 storm water 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 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;

(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 storm water 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 storm water discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other storm water 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 storm water discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other storm water 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 storm water outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water 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 sheetflow 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 storm water 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 steams 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."

(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 storm water 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 storm water 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 storm water 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 storm water 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-storm water discharges. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water 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-storm water 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 storm water 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 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. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

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 and sedimentation control plans, grading plans, or storm water management plans; or in the case of a storm water 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 change of information 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 storm water 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 storm water 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 storm water 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 storm water 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 accurate 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 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. Copy of the permittee's most current Notice of Intent;

7. Any other information specified on the NOT in effect at the time of submittal; and

8. The following certification signed in accordance with Part V.G.1. (signatory requirements):

"I 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 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 storm water 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 by this permit shall be submitted by ***return receipt certified mail*** (or similar service) to the appropriate EPD District Office according to the schedule in Appendix A of this permit and 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. If an electronic submittal service is provided by the EPD then the Notice of Termination may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

APPENDIX A

EPD DISTRICT OFFICES

All required correspondence, including but not limited to the Notice of Intents, Notice of Terminations, certifications, Erosion, Sedimentation and Pollution Control Plans and any other reports, shall be sent to the following District Offices of EPD.

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
(912) 430-4144

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

Information shall be submitted to:

Watershed Protection Branch
Environmental Protection Division
2 MLK Jr. Drive, Suite 1152, East Tower
Atlanta, Georgia 30334
(404) 463-1511

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams

Surface Water Drainage Area, square miles

Site Size, acres	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	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

Site Size, acres	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

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

General Permit
No. GAR100003

State of 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 Developments

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 storm water 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 storm water 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 September 24, 2013.

This permit and the authorization to discharge shall expire at midnight, July 31, 2018.

Signed this 23rd day of September 2013.

Director,
Environmental Protection Division

TABLE OF CONTENTS

Section **Page**

Part I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit regulates point source discharges of storm water 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 State 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 State 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. (www.EnviroCertIntl.org).

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. “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 GAR000000, 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. "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 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 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.

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

30. "Permittee" means any entity that has submitted a Notice of Intent.

31. "Phase" or "Phased" means sub-parts or segments of construction projects where the sub-part 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 sheetflow 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 storm water runoff.

33. “Primary Permittee” means the Owner or the Operator or both of a tract of land for a construction project 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 State 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 State Soil and Water Conservation Commission 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 storm water from a construction activity will actually discharge, either directly or indirectly.

36. “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.
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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. “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.

40. “Sheetflow” 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. "Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

43. "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.

44. “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.

45. “Surface Water Drainage Area” means the hydrologic area starting from the lowest downstream point where the storm water 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 storm water entrance point. Boundary lines follow the middle of the highest ground elevation or halfway between contour lines of equal elevation.

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

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 at www.gaepd.org.

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

49. "Utility Company or Utility Contractor" means, for purposes of this Permit, an entity or sub-contractor that is responsible, either directly or indirectly, for the construction, installation, and maintenance of conduits, pipes, pipelines, cables, wires, trenches, vaults, manholes, and similar structures or devices for the conveyance of natural gas (or other types of gas), liquid petroleum products, electricity, telecommunications (telephone, data, television, etc.), water, storm water or sewage.

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 storm water 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 storm water discharges from construction activities) except for discharges identified under Part I.C.3. Storm water 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 storm water 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 storm water discharges from construction activities), except for discharges identified under Part I.C.3. Storm water 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 storm water 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 Storm Water Discharges. This permit may only authorize a storm water discharge from a construction site or construction activities mixed with a storm water discharge from an industrial source or activity other than construction where:

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

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

c. storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring are covered by a different NPDES general permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

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

a. storm water 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-storm water 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-storm water discharges) of this permit;

c. storm water 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. storm water 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 NOI forms provided by the EPD (or an exact photocopy thereof), in order for storm water 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 storm water from construction sites under the terms and conditions of this permit fourteen (14) days after the date that the NOI is postmarked. 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 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 storm water 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 storm water 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 file a change of information 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 file a change of information 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 change of information 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 at www.gaepd.org.

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 (Final)" 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) at www.gaepd.org/Documents/305b.html;

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. For construction activities disturbing more than 50 acres, which began after the effective date of this permit, include a single copy of the Erosion, Sedimentation, and Pollution Control Plan;

l. 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

m. 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 at www.gaepd.org.

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 (Final)" 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) at www.gaepd.org/Documents/305b.html;

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, except for calendar year 2013 in which case the Blanket NOI shall be submitted within sixty (60) days of the permit effective date, 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 not more 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 at www.gaepd.org;

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 (Final)" 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) at www.gaepd.org/Documents/305b.html. 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. For construction activities disturbing more than 50 acres, which began after the effective date of this permit, include a single copy of the Erosion, Sedimentation, and Pollution Control Plan;

l. 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

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

C. Notice of Intent Submittal. NOIs are to be submitted by ***return receipt certified mail*** (or similar service) to both the appropriate District office of the EPD according to the schedule in Appendix A of this permit and 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. If an electronic submittal service is provided by EPD then

the NOI may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service. 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 storm water 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 new 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-Storm Water 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 storm water.

2. The following non-storm water discharges may be authorized by this permit provided the non-storm water 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 storm water 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 permittes 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 storm water 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 (Final)" 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, "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 (Final)" can be viewed on the EPD website, www.gaepd.org/Documents/305b.html.

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, www.gaepd.org.

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 storm water 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 storm water 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 on the site on the actual start date of construction visible from a public roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s) until a NOT has been submitted.

e. Use anionic polyacrylamide (PAM) 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, www.gaepd.org (e.g., seep berms, sand filters, anionic PAM) to model and manage construction storm water 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 6 (six) 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 storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.

m. Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1. All graphical illustrations must be included on the Plan.

n. Use appropriate erosion control matting or blankets instead of concrete in all construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.

o. Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within all construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.

p. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever construction storm water (including sheet flow) may be discharged.

q. Conduct soil tests to identify and to implement site-specific fertilizer needs.

r. 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.

s. 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.

t. 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 State Soil and Water Conservation Commission).

u. 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.

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 State 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.3. and Part III.D.4.

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 storm water 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 storm water 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 at www.gaepd.org.

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 State 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 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."

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 State 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 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 are implemented:

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

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

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

Except as provided in Part IV.A.2., a single Erosion, Sedimentation and Pollution Control Plan 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 may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device. The EPD Watershed Protection Branch will review Plans for deficiencies using the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted.

b. For sites that are equal to or greater than 50 acres of disturbed area, regardless of the existence of a certified Local Issuing Authority in the jurisdiction, one of the following submissions is also required:

(i) For all projects which begin after the effective date of this permit a single copy of the NOI and a single copy of the Plan shall be submitted to the appropriate EPD District Office. This copy of the Plan may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device.

(ii) For all projects which began on or before the effective date of this permit single copy of the NOI and a single copy of the Plan, if amended, shall be submitted to the appropriate EPD District Office. This copy of the Plan may be submitted to the appropriate EPD District Office as a Portable Document Format (PDF) file on CD-ROM or other storage device.

c. 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 a change of information 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 permittes 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 storm water 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 and sediment control plans, grading plans, or storm water management plans; or in the case of a storm water 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 and sediment control plans, grading plans, or storm water management plans; or in the case of a storm water 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 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. Checklist. Each plan shall include a completed Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission 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 State Soil and Water Conservation Commission up until the date of the NOI submittal**.** The applicable checklists are available on the EPD website, www.gaepd.org.

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 permittes 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 permittes 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 storm water 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 (www.epa.gov/npdes/pubs/sw_swppp_guide.pdf), 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). and (b). 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.

(b). Where construction activity will resume on a portion of the site within 21 days from when activities ceased, (i.e., the total time period that construction activity is temporarily ceased is less than 21 days) then stabilization measures do not have to be initiated on that portion of site by the 14th day after construction activity temporarily ceased.

(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 projects. 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 State Soil and Water Conservation Commission).

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

b. Storm water management. A description of measures that will be installed during the construction process to control pollutants in storm water 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 storm water 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 storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have been eliminated from the site.

(1). Such practices may include: storm water detention structures (including wet ponds); storm water 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 storm water where it can be infiltrated, evapotranspirated 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 storm water can be found in the Georgia Stormwater Management Manual (www.georgiastormwater.com) and the Georgia Green Growth Guidelines (www.coastalgadnr.org/cm/green/guide). Additional information on Green Infrastructure can be found at water.epa.gov/infrastructure/greeninfrastructure/index.cfm.

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). 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.

(3). 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.

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

(5). 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 www.epa.gov/npdes/pubs/concretewashout.pdf.

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

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

(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 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;

(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 storm water 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 storm water discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other storm water 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 storm water discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other storm water 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 storm water outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water 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 sheetflow 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 storm water 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 storm water 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 storm water 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 storm water 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 storm water 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-storm water discharges. Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water 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-storm water 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 storm water 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 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. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

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 and sedimentation control plans, grading plans, or storm water management plans; or in the case of a storm water 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 change of information 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 an 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 and sediment control plans, grading plans, or storm water 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 storm water 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 storm water 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 storm water 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 storm water 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 storm water 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 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. Copy of the permittee's most current Notice of Intent;

10. Any other information specified on the NOT in effect at the time of submittal; and

11. The following certification signed in accordance with Part V.G.1. (signatory requirements):

"I 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 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 storm water associated with construction activity by the general permit, and that discharging pollutants in storm water 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 by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate EPD District Office according to the schedule in Appendix A of this permit and 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. If an electronic submittal service is provided by the EPD then the Notice of Termination may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

APPENDIX A

EPD DISTRICT OFFICES

All required correspondence, including but not limited to the Notice of Intents, Notice of Terminations, certifications, Erosion, Sedimentation and Pollution Control Plans and any other reports, shall be sent to the following District Offices of EPD.

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
(912) 430-4144

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

Information shall be submitted to:

Watershed Protection Branch
Environmental Protection Division
2 MLK Jr. Drive, Suite 1152, East Tower
Atlanta, Georgia 30334
(404) 463-1511

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams

Surface Water Drainage Area, square miles

Site Size, acres	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	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

Site Size, acres	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

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

NPDES GENERAL PERMITS – FEE FORM

State of Georgia
Department of Natural Resources
Environmental Protection Division

PLEASE PRINT OR TYPE THIS FORM.
SUBMIT ORIGINAL FORM AND PAYMENT TO:

EPD - Construction Land Disturbance Fees
P. O. Box 932858
Atlanta, GA 31193-2858

PLEASE MAKE CHECKS PAYABLE TO: **Department of Natural Resources - EPD**
(DO NOT MAIL CASH)

COMPLETE THE FOLLOWING (do not leave any sections blank - if not applicable, mark "N/A"):

Primary Permittee's Name: _____

Address:_____

City: _____

State: _____ Zip Code: _____

Contact Telephone: _____

Project Construction Site Name:

_____

Construction Site Street Address:

_____
(*please provide sufficient information to accurately locate the construction site)*

Is the construction site located within the city limits ?

☐ YES ☐ NO

City: _____
(applicable if the site is located within the jurisdictional boundaries of the municipality)

County: _____

☐ Acres Disturbed *(to the nearest tenth (1/10th) acre)*
In an area with a certified Local Issuing Authority
(Do not include fees payable to the Local Issuing Authority)
_____ X $40/acre = _____
(acres)

☐ Acres Disturbed *(to the nearest tenth (1/10th) acre)*
In an area with no certified Local Issuing Authority
_____ X $80/acre = _____
(acres)

☐ Acres Disturbed *(to the nearest tenth (1/10th) acre)*
(By an entity exempt from a certified Local Issuing Authority's regulation pursuant to statute)
_____ X $80/acre = _____
(acres)

TOTAL FEE SUBMITTED = _____

CHECK NUMBER: _____

Submitted By *(Printed Name)*: _____ Title: _____

Signature: _____ Date: _____

ATTACH CHECK HERE
VOID IF SUBMITTED WITHOUT PAYMENT

Revised September 2013

For Official Use Only

NOTICE OF INTENT

VERSION 2013

State of Georgia
Department of Natural Resources
Environmental Protection Division

For Coverage Under the 2013 Re-Issuance of the NPDES General Permits To Discharge Storm Water Associated With Construction Activity

THESE PERMITS EXPIRE JULY 31, 2018

PRIMARY PERMITTEE

NOTICE OF INTENT (Check Only One):

☐ Initial Notification - (New Facility/Construction Site)

☐ Re-Issuance Notification – (Existing Facility/Construction Site and Postmarked Before December 24, 2013)

☐ Change of Information - (Existing Facility/Construction Site, if the NOI was submitted after September 24, 2013)

COVERAGE DESIRED (Check Only One):

☐ *GAR100001 - Stand Alone* ☐ *GAR100002 – Infrastructure* ☐ *GAR100003 - Common Development*

I. SITE/OWNER/OPERATOR INFORMATION

Project Construction Site Name: _____

GPS Location of Construction Exit of Stand Alone or Common Development Project *(decimal degrees)*:

Latitude _____ Longitude _____

GPS Locations of the Beginning and End of the Infrastructure Project *(decimal degrees)*:

Latitude _____ Longitude_____

Latitude _____ Longitude _____

Construction Site Location *(e.g., street address)*: _____

_____

City *(applicable if the site is located within the jurisdictional boundaries of the municipality)*: _____

County or Counties:_____

Common Development Name *(applicable only to General NPDES Permit No. GAR100003)*: _____

Owner's Name: _____ Phone: _____

Email Address: _____

Address: _____City:_____State:_____Zip Code: _____

Duly Authorized Representative(s) *(optional)*: _____ Phone: _____

Email Address: _____

Operator's Name *(optional)*: _____ Phone: _____

Email Address: _____

Address : _____City: _____State: _____Zip Code: _____

Facility/Construction Site Contact: _____Phone: _____

Email Address:_____

II. CONSTRUCTION SITE ACTIVITY INFORMATION

Start Date *(month/date/year)*: _____ / _____ / _____ Completion Date *(month/date/year)*: _____ / _____ / _____

Estimated Disturbed Acreage *(acres, to the nearest tenth (1/10th) acre)*: _____
(Disturbed by the Primary Permittee and <u>all</u> Secondary Permittees)

Calculated Fees *(applicable only to new facilities/construction sites):* _____

Number of Secondary Permittees *(applicable only to General NPDES Permit No. GAR100003)*: _____

Does the Erosion, Sedimentation and Pollution Control Plan (Plan) provide for disturbing more than 50 acres at any one time for each individual permittee (i.e., primary, secondary or tertiary permittees), or more than 50 contiguous acres total at any one time ? (Check Only One):

- ☐ YES - _____ / _____ / _____ Date of EPD Written Authorization *(month/date/year)*
- ☐ NO
- ☐ N/A - if the Initial NOI was submitted prior to August 1, 2008 for the General NPDES Permit No. GAR100001 and No. GAR100003 for Stand Alone and Common Development construction activities.
- ☐ N/A – if construction activities are covered under the General NPDES Permit No. GAR100002 for Infrastructure construction projects.

Construction Activity Type:

☐ Commercial ☐ Industrial ☐ Municipal/ Institutional ☐ Mixed Use ☐ Water Quality/Aquatic Habitat Restoration

☐ Linear ☐ Utility ☐ Residential ☐ Agricultural Buildings ☐ Other _____

III. RECEIVING WATER INFORMATION

A. Name of Initial Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

B. Name of MS4 Owner/Operator *(if applicable)*: _____

Name of Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

C. Sampling of Receiving Stream(s): ☐ N/A ☐ Trout Stream Δ 10 NTU ☐ Water Supporting Warm Water Fisheries Δ 25 NTU

D. Sampling of Outfall(s): ☐ N/A ☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

A summary chart (if applicable) delineating the following information for each outfall must be attached:

Number of Sampling Outfalls: _____ Construction Site Size (acres): _____

Appendix B NTU Value: _____ Surface Water Drainage Area (square miles): _____

E. Does the facility/construction site discharge storm water into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as "not supporting" its designated use(s), as shown on Georgia's most current "305(b)/303(d) List Documents (Final)" 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) ? (Check Only One):

☐ YES, Name of Impaired Stream Segment(s): _____

☐ NO

☐ N/A – if the Initial NOI was submitted prior to October 31, 2008 for the General NPDES Permit No. GAR100001 and No. GAR100003 for Stand Alone and Common Development construction activities.

☐ N/A – if the Initial NOI was submitted prior to January 1, 2009 for the General NPDES Permit No. GAR100002 for Infrastructure construction activities.

F. Does the facility/construction site discharge storm water into an Impaired Stream Segment where a Total Maximum Daily Load (TMDL) Implementation Plan for "sediment" was finalized at least six (6) months prior to the submittal of the Initial NOI ? (Check Only One):

☐ YES, Name of Impaired Stream Segment(s): _____

☐ NO

☐ N/A – if the Initial NOI was submitted prior to October 31, 2008 for the General NPDES Permit No. GAR100001 and No. GAR100003 for Stand Alone and Common Development construction activities.

☐ N/A – if the Initial NOI was submitted prior to January 1, 2009 for the General NPDES Permit No. GAR100002 for Infrastructure construction activities.

IV. ATTACHMENTS *(Applicable Only to Initial Notifications for New Facilities/Construction Sites)*

Indicate if the items listed below are attached to this Notice of Intent:

_____ Location map identifying the receiving water(s), outfall(s) or combination thereof to be monitored.

_____ Written description and location map identifying the Impaired Stream Segment(s) when applicable.

_____ Erosion, Sedimentation and Pollution Control Plan (if the project is greater than 50 acres regardless of the existence of a certified Local Issuing Authority in the jurisdiction *OR* if the project is in a jurisdiction where there is no certified Local Issuing Authority regulating that project regardless of acreage).

_____ Written authorization from the appropriate EPD District Office if the Plan disturbs more than 50 acres at any one time for each individual permittee (i.e., primary, secondary or tertiary permittees), or more than 50 contiguous acres total at any one time (applicable only to General NPDES Permits No. GAR100001 and No. GAR100003).

_____ List of known secondary permittees (applicable only to General NPDES Permit No. GAR100003).

_____ Schedule for the timing of the major construction activities.

_____ Copy of the "NPDES General Permits – Fee Form" submitted to EPD – Construction Land Disturbance Fees, P.O. Box 932858, Atlanta, GA 31193-2858. *Do not attach payments to this Notice of Intent.*

ATTACHMENTS *(Applicable Only to Re-Issuance Notifications for Existing Facilities/Construction Sites)*

Indicate if the item listed below is attached to this Notice of Intent:

_____ Copy of NOI previously submitted for coverage under the 2008 re-issuance of the NPDES General Permits to Discharge Storm Water Associated With Construction Activity.

ATTACHMENTS *(Applicable Only to Change of Information Notifications for Existing Facilities/Construction Sites)*

Indicate if the items listed below are attached to this Notice of Intent:

_____ Copy of NOI previously submitted for coverage under the 2013 re-issuance of the NPDES General Permits to Discharge Storm Water Associated With Construction Activity.

_____ Copy of the amended Plan as per Part IV.A.4.c. of the Permit for projects where the construction activity as indicated on the Notice of Intent has changed.

V. Does this project require another type of permit from EPD?

☐ YES – if yes, indicate what type of permit _____

☐ NO

VI. CERTIFICATIONS (Owner or Operator or Both to Initial as Applicable)

_____ 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 applicable requirements of this 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 properly gather and evaluate the information submitted. Based upon 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 fines and imprisonment for knowing violations.

Owner's Printed Name: _____ Title: _____

Signature: _____ Date: _____

Operator's Printed Name: _____ Title: _____

Signature: _____ Date: _____

INSTRUCTIONS

NOTICE OF INTENT - PRIMARY PERMITTEE

For Coverage Under the 2013 Re-Issuance of the NPDES General Permits To Discharge Storm Water Associated With Construction Activity

THESE PERMITS EXPIRE JULY 31, 2018

Please print or type the Notice of Intent (NOI) form. Any NOI that contains illegible or incomplete information will not be accepted, will be returned and the construction site will not be granted Permit coverage. All information requested on the NOI must be submitted in order for the NOI to be valid. Any information requested on the NOI that is not applicable to the primary permittee or to the construction site must be marked "N/A." Please do not leave any sections blank in the NOI.

Who must file a Notice of Intent Form - The Owner and/or Operator of a facility/construction site that has a discharge of storm water where construction activities occur must apply for a National Pollutant Discharge Elimination System (NPDES) Permit. The Georgia Environmental Protection Division (EPD) re-issued the General NPDES Permits for Storm Water Discharges Associated with Construction Activity on September 24, 2013. The Permits are available for review at the EPD District Offices and on the EPD website, www.gaepd.org. It is highly recommended that the permittees read and understand the terms and conditions of the Permits prior to submitting a NOI. Please contact the appropriate EPD District Office as listed on the following pages for assistance in completing the NOI.

Where to file a Notice of Intent Form - The NOI and the attachments, as applicable, must be submitted to the appropriate EPD District Office as listed on the following pages. Please submit only the first five pages of this document with the applicable attachments.

Section I - Site/Owner/Operator Information

The construction site name and location information (i.e., GPS location of construction exit, street address, city, county) must be sufficient to accurately locate the construction site. If the construction site does not have a street address, please provide sufficient information to accurately locate the construction site. If additional space is needed, attach the location information to the NOI.

A duly authorized representative may be either a named individual or any individual occupying a named position that the primary permittee has authorized to sign certification statements, inspection reports, sampling reports or other reports requested by EPD.

The facility/construction site contact is the person who the primary permittee has assigned the responsibility for the daily on-site operational control.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the primary permittee or to the construction site must be mark "N/A."

Section II – Construction Site Activity Information

For construction activities that began prior to the effective date of the Permits, the start date *(month/date/year)* must be the actual start date of construction activities.

Estimated disturbed acreage is the total number of acres, *to the nearest tenth (1/10th) acre*, that will be disturbed by the primary permittee and all secondary permittees.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the primary permittee or to the construction site must be mark "N/A."

Section III - Receiving Water Information

"Trout Streams" are 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 at www.gaepd.org. "Waters Supporting Warm Water Fisheries" are all waters of the State that sustain, or have the potential to sustain, aquatic life but exclude "Trout Streams."

If the facility/construction site discharges storm water directly or indirectly to the receiving water(s), and not through a municipal separate storm sewer system (MS4), enter the name of the receiving water(s) and indicate whether the water(s) is a trout stream or a warm water fisheries stream. Attach a written description and location map identifying the receiving water(s).

If the facility/construction site discharges storm water to a municipal separate storm sewer system (MS4), enter the name of the owner/operator of the MS4 (e.g., city name or county name) and the name of the receiving water(s) at the point of discharge from the MS4. A MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that is owned and/or operated by a city or county which is designed or used for collecting or conveying storm water. It may be necessary to contact the city or county that owns and/or operates the MS4 to determine the name of the receiving water(s). Indicate whether the receiving water(s) is a trout stream or a warm water fisheries stream. Attach a written description and location map identifying the receiving water(s).

Any permittee who intends to obtain coverage under the Permits for storm water 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 (Final)" at the time of NOI submittal, must satisfy the requirements of Part III.C. of the Permits if the Impaired Stream Segment has been listed for 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). 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 2008 and subsequent 305(b)/303(d) List Documents (Final)" can be viewed on the EPD website, www.gaepd.org/Documents/305b.html. Attach a written description and location map identifying the Impaired Stream Segment(s).

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 Initial 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 the 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, www.gaepd.org.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the primary permittee or to the construction site must be mark "N/A."

Section V – Certifications

The owner and/or operator must sign the Notice of Intent and initial the certification statements on the lines provided. Federal and State statutes provide specific requirements as to who is authorized to sign the Notice of Intent forms. A Notice of Intent form signed by an unauthorized person will not be valid. Please be aware that Federal and State statutes provide for severe penalties for submitting false information on this Notice of Intent form. Federal and State regulations require that the Notice of Intent form be signed as follows:

- For a corporation, by a responsible corporate officer;
- For a partnership or sole proprietorship, by a general partner or the proprietor; and
- For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

GEORGIA EPD DISTRICT OFFICES

All required correspondence, including but not limited to Notices of Intent, Notices of Termination, Erosion, Sedimentation and Pollution Control Plans, sampling reports and any other reports shall be sent to the following 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

Insert Yellow Sheet

Back of Yellow Sheet

Revised September 2013

For Official Use Only

NOTICE OF INTENT

VERSION 2013

State of Georgia
Department of Natural Resources
Environmental Protection Division

For Coverage Under the 2013 Re-Issuance of the
NPDES General Permits No. GAR100003 To Discharge Storm Water
Associated With Construction Activity for Common Developments

THIS PERMIT EXPIRES JULY 31, 2018

SECONDARY PERMITTEE
GAR100003 - Common Development

NOTICE OF INTENT (Check Only One):

☐ Initial Notification (New Facility/Construction Site)

☐ Re-Issuance Notification (Existing Facility/Construction Site and Postmarked Before December 24, 2013)

☐ Change of Information (Existing Facility/Construction Site, if the NOI was submitted after September 24, 2013)

I. SITE/SECONDARY PERMITTEE INFORMATION

Project Construction Site Name: _____

Construction Site Location *(information must be sufficient to accurately locate the construction site)*:

_____

_____

Subdivision Name *(if applicable)*: _____

Lot Number(s) *(if applicable)*: _____

Common Development Name: _____

Construction Site Location *(e.g., street address)*: _____

City: _____
(applicable if the site is located within the jurisdictional boundaries of the municipality)

County: _____

Secondary Permittee's Name: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Duly Authorized Representative(s) *(optional)*: _____ Phone: _____

Email Address: _____

Facility/Construction Site Contact: _____ Phone: _____

Email Address: _____

Primary Permittee's Name: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

II. CONSTRUCTION SITE ACTIVITY INFORMATION

Start Date *(month/date/year)*: _____ / _____ / _____ Completion Date *(month/date/year)*: _____ / _____ / _____

Estimated Disturbed Acreage *(acres, to the nearest tenth (1/10th) acre)*: _____

Will the Secondary Permittee disturb more than 50 acres at any one time ? (Check Only One)

☐ YES - _____ / _____ / _____ Date of EPD Written Authorization *(month/date/year)*

☐ NO

☐ N/A – if the Initial NOI was submitted prior to August 1, 2008 for the General NPDES Permit No. GAR100003 for Common Development construction activities.

Construction Activity Type:

☐ Commercial ☐ Industrial ☐ Municipal/ Institutional ☐ Mixed Use ☐ Water Quality/Aquatic Habitat Restoration

☐ Linear ☐ Utility ☐ Residential ☐ Agricultural Buildings ☐ Other _____

III. RECEIVING WATER INFORMATION

A. Name of Initial Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

B. Name of MS4 Owner/Operator *(if applicable)*: _____

Name of Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

C. Does the facility/construction site discharge storm water into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as "not supporting" its designated use(s), as shown on Georgia's most current "305(b)/303(d) List Documents (Final)" 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) ? (Check Only One):

☐ YES, Name of Impaired Stream Segment(s): _____

☐ NO

☐ N/A – if the Initial NOI was submitted prior to October 31, 2008 for the General NPDES Permit No. GAR100003 for Common Development construction activities.

☐ N/A – if the secondary permittees are utility companies and utility contractors and implementing the applicable best management practices detailed in the primary permittee's Plan.

D. Does the facility/construction site discharge storm water into an Impaired Stream Segment where a Total Maximum Daily Load (TMDL) Implementation Plan for "sediment" was finalized at least six (6) months prior to the submittal of the Initial NOI ? (Check Only One):

☐ YES, Name of Impaired Stream Segment(s): _____

☐ NO

☐ N/A – if the Initial NOI was submitted prior to October 31, 2008 for the General NPDES Permit No. GAR100003 for Common Development construction activities.

☐ N/A – if the secondary permittees are utility companies and utility contractors, and implementing the applicable best management practices detailed in the primary permittee's Plan.

IV. ATTACHMENTS *(Applicable Only to Initial Notifications for New Facilities/Construction Sites)*

Indicate if the items listed below are attached to this Notice of Intent:

_____ Copies of the Primary Permittee's most current Notice of Intent.

_____ Written description and location map identifying the Impaired Stream Segment(s) when applicable.

_____ Written authorization from the appropriate EPD District Office if the Secondary Permittee plans to disturb more than 50 acres at any one time.

ATTACHMENTS *(Applicable Only to Re-Issuance Notifications for Existing Facilities/Construction Sites)*

Indicate if the item listed below is attached to this Notice of Intent:

_____ Copy of NOI previously submitted for coverage under the 2008 re-issuance of the NPDES General Permits to Discharge Storm Water Associated With Construction Activity.

ATTACHMENTS *(Applicable Only to Change of Information Notifications for Existing Facilities/Construction Sites)*

Indicate if the items listed below are attached to this Notice of Intent:

_____ Copy of NOI previously submitted for coverage under the 2013 re-issuance of the NPDES General Permits to Discharge Storm Water Associated With Construction Activity.

_____ Copy of the amended Plan as per Part IV.A.4.c. of the Permit for projects where the construction activity as indicated on the Notice of Intent has changed.

V. Does this project require another type of permit from EPD?

☐ YES – if yes, indicate what type of permit _____

☐ NO

VI. CERTIFICATIONS (Secondary Permittee)

_____I certify that I will adhere to the Primary Permittee's Erosion, Sedimentation and Pollution Control Plan (Plan) or the portion of the Plan applicable to my construction activities and comply with all applicable requirements of this 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 properly gather and evaluate the information submitted. Based upon 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 fines and imprisonment for knowing violations.

Owner's Printed Name: _____ Title: _____

Signature: _____ Date: _____

Operator's Printed Name: _____ Title: _____

Signature: _____ Date: _____

INSTRUCTIONS

NOTICE OF INTENT - SECONDARY PERMITTEE

For Coverage Under the 2013 Re-Issuance of the NPDES General Permits No. GAR100003 To Discharge Storm Water Associated With Construction Activity for Common Developments

THIS PERMIT EXPIRES JULY 31, 2018

Please print or type the Notice of Intent (NOI) form. Any NOI that contains illegible or incomplete information will not be accepted, will be returned and the construction site will not be granted Permit coverage. All information requested on the NOI must be submitted in order for the NOI to be valid. Any information requested on the NOI that is not applicable to the secondary permittee or to the construction site must be marked "N/A." Please do not leave any sections blank in the NOI.

Who must file a Notice of Intent Form - The owner of a facility/construction site within a common development that has a discharge of storm water where construction activities occur must apply for a National Pollutant Discharge Elimination System (NPDES) Permit. The Georgia Environmental Protection Division (EPD) re-issued the General NPDES Permits for Storm Water Discharges Associated with Construction Activity for Common Developments on September 24, 2013. The NPDES General Permit No. GAR100003 is available for review at the EPD District Offices and on the EPD website, www.gaepd.org. It is highly recommended that the permittees read and understand the terms and conditions of this Permit prior to submitting a NOI. Please contact the appropriate EPD District Office as listed on the following pages for assistance in completing the NOI.

Where to file a Notice of Intent Form - The NOI and the attachments, as applicable, must be submitted to the appropriate EPD District Office as listed on the following pages. Please submit only the first four pages of this document with the applicable attachments.

Section I - Site/Secondary Permittee Information

The construction site name and location information (i.e., GPS location of construction exit, subdivision name, lot number(s), common development name, street address, city, county) must be sufficient to accurately locate the construction site. If the construction site does not have a street address, please provide sufficient information to accurately locate the construction site. If additional space is needed, attach the location information to the NOI.

A duly authorized representative may be either a named individual or any individual occupying a named position that the secondary permittee has authorized to sign certification statements, inspection reports, sampling reports or other reports requested by EPD.

The facility/construction site contact is the person who the secondary permittee has assigned the responsibility for the daily on-site operational control.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the secondary permittee or to the construction site must be mark "N/A."

Section II – Construction Site Activity Information

For construction activities that began prior to the effective date of the Permits, the start date *(month/date/year)* must be the actual start date of construction activities.

Estimated disturbed acreage is the total number of acres, *to the nearest tenth (1/10th) acre*, that will be disturbed by the secondary permittee.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the secondary permittee or to the construction site must be mark "N/A."

Section III - Receiving Water Information

"Trout Streams" are 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 at www.gaepd.org. "Waters Supporting Warm Water Fisheries" are all waters of the State that sustain, or have the potential to sustain, aquatic life but exclude "Trout Streams."

If the facility/construction site discharges storm water directly or indirectly to the receiving water(s), and not through a municipal separate storm sewer system (MS4), enter the name of the receiving water(s) and indicate whether the water(s) is a trout stream or a warm water fisheries stream. Attach a written description and location map identifying the receiving water(s).

If the facility/construction site discharges storm water to a municipal separate storm sewer system (MS4), enter the name of the owner/operator of the MS4 (e.g., city name or county name) and the name of the receiving water(s) at the point of discharge from the MS4. A MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that is owned and/or operated by a city or county which is designed or used for collecting or conveying storm water. It may be necessary to contact the city or county that owns and/or operates the MS4 to determine the name of the receiving water(s). Indicate whether the receiving water(s) is a trout stream or a warm water fisheries stream. Attach a written description and location map identifying the receiving water(s).

Any permittee who intends to obtain coverage under the Permits for storm water 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 (Final)" at the time of NOI submittal, must satisfy the requirements of Part III.C. of the Permits if the Impaired Stream Segment has been listed for 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). 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 2008 and subsequent 305(b)/303(d) List Documents (Final)" can be viewed on the EPD website, www.gaepd.org/Documents/305b.html. Attach a written description and location map identifying the Impaired Stream Segment(s).

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 an 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, www.gaepd.org.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the secondary permittee or to the construction site must be mark "N/A."

Section V – Certifications

The secondary permittee must sign the Notice of Intent and initial the certification statements on the lines provided. Federal and State statutes provide specific requirements as to who is authorized to sign the Notice of Intent forms. A Notice of Intent form signed by an unauthorized person will not be valid. Please be aware that Federal and State statutes provide for severe penalties for submitting false information on this Notice of Intent form. Federal and State regulations require that the Notice of Intent form be signed as follows:

- For a corporation, by a responsible corporate officer;
- For a partnership or sole proprietorship, by a general partner or the proprietor; and
- For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

GEORGIA EPD DISTRICT OFFICES

All required correspondence, including but not limited to Notices of Intent, Notices of Termination, Erosion, Sedimentation and Pollution Control Plans, sampling reports and any other reports shall be sent to the following 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

Insert Yellow Sheet

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Revised September 2013

For Official Use Only

NOTICE OF INTENT

VERSION 2013

State of Georgia
Department of Natural Resources
Environmental Protection Division

For Coverage Under the 2013 Re-Issuance of the
NPDES General Permits No. GAR100003 To Discharge Storm Water
Associated With Construction Activity for Common Developments

THIS PERMIT EXPIRES JULY 31, 2018

BLANKET SECONDARY PERMITTEE
GAR100003 - Common Development

NOTICE OF INTENT (Check Only One):

☐ Annual Notification (New Facility/Construction Site)

☐ Re-Issuance Notification (Existing Facility/Construction Site and Postmarked Before December 24, 2013)

☐ Change of Information (Existing Facility/Construction Site)

I. BLANKET SECONDARY PERMITTEE INFORMATION

Blanket Secondary Permittee's Name:_____ Phone:_____

Email Address: _____

Address:_____City:_____State:_____Zip Code: _____

Duly Authorized Representative(s) *(optional)*: _____Phone: _____

Email Address:_____

Facility/Construction Site Contact:_____ Phone:_____

Email Address: _____

Utility Sub-Contractor's Name *(optional)*: _____Phone: _____

Email Address: _____

Address: _____City: _____State: _____Zip Code:_____

II. CONSTRUCTION SITE ACTIVITY INFORMATION

Construction Activity Type:

☐ Commercial ☐ Industrial ☐ Municipal/ Institutional ☐ Mixed Use ☐ Water Quality/Aquatic Habitat Restoration

☐ Linear ☐ Utility ☐ Residential ☐ Agricultural Buildings ☐ Other _____

III. CERTIFICATIONS (Blanket Secondary Permittee)

_____I certify that I will adhere to the Primary Permittee's Erosion, Sedimentation and Pollution Control Plan (Plan) or the portion of the Plan applicable to my construction activities and comply with all applicable requirements of this 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 properly gather and evaluate the information submitted. Based upon 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 fines and imprisonment for knowing violations.

Blanket Secondary Permittee's Printed Name: _____ Title:_____

Signature: _____ Date:_____

INSTRUCTIONS

NOTICE OF INTENT - BLANKET SECONDARY PERMITTEE

For Coverage Under the 2013 Re-Issuance of the NPDES General Permits No. GAR100003 To Discharge Storm Water Associated With Construction Activity for Common Developments

THIS PERMIT EXPIRES JULY 31, 2018

Please print or type the Notice of Intent (NOI) form. Any NOI that contains illegible or incomplete information will not be accepted, will be returned and the construction site will not be granted Permit coverage. All information requested on the NOI must be submitted in order for the NOI to be valid. Any information requested on the NOI that is not applicable to the secondary permittee or to the construction site must be marked "N/A." Please do not leave any sections blank in the NOI.

Who must file a Notice of Intent Form – A utility company may submit an annual Blanket Notice of Intent covering all construction activities statewide within common developments on or before January 15 of the year in which coverage is desired, except for calendar year 2013 in which case the Blanket NOI shall be submitted ninety (90) days of the permit effective date. A copy of the Blanket NOI or equivalent written contact information must be provided to the primary permittee not more than seven (7) days prior to the commencement of construction activities by the blanket secondary permittee at each facility/construction site.

The Georgia Environmental Protection Division (EPD) re-issued the General NPDES Permits for Storm Water Discharges Associated with Construction Activity for Common Developments on September 24, 2013. The NPDES General Permit No. GAR100003 is available for review at the EPD District Offices and on the EPD website, www.gaepd.org. It is highly recommended that the permittees read and understand the terms and conditions of this Permit prior to submitting a NOI. Please contact the appropriate EPD District Office as listed on the following pages for assistance in completing the NOI.

Where to file a Notice of Intent Form - The NOI must be submitted to the appropriate EPD District Office as listed on the following pages. Please submit only the first two pages of this document with the applicable attachments.

Section I – Blanket Secondary Permittee Information

A duly authorized representative may be either a named individual or any individual occupying a named position that the secondary permittee has authorized to sign certification statements, inspection reports, sampling reports or other reports requested by EPD.

The facility/construction site contact is the person who the blanket secondary permittee has assigned the responsibility for the daily on-site operational control.

Section III – Certifications

The blanket secondary permittee must sign the Notice of Intent and initial the certification statements on the lines provided. Federal and State statutes provide specific requirements as to who is authorized to sign the Notice of Intent forms. A Notice of Intent form signed by an unauthorized person will not be valid. Please be aware that Federal and State statutes provide for severe penalties for submitting false information on this Notice of Intent form. Federal and State regulations require that the Notice of Intent form be signed as follows:

- For a corporation, by a responsible corporate officer;
- For a partnership or sole proprietorship, by a general partner or the proprietor; and
- For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

GEORGIA EPD DISTRICT OFFICES

All required correspondence, including but not limited to Notices of Intent, Notices of Termination, Erosion, Sedimentation and Pollution Control Plans, sampling reports and any other reports shall be sent to the following 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

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For Official Use Only

NOTICE OF INTENT

VERSION 2013

State of Georgia
Department of Natural Resources
Environmental Protection Division

For Coverage Under the 2013 Re-Issuance of the
NPDES General Permits No. GAR100003 To Discharge Storm Water
Associated With Construction Activity for Common Developments

THIS PERMIT EXPIRES JULY 31, 2018

TERTIARY PERMITTEE
GAR100003 – Common Development

NOTICE OF INTENT (Check Only One):

☐ Initial Notification (New Facility/Construction Site)

☐ Re-Issuance Notification (Existing Facility/Construction Site and Postmarked Before December 24, 2013)

☐ Change of Information (Existing Facility/Construction Site, if the NOI was submitted after September 24, 2013)

I. SITE/OWNER/OPERATOR INFORMATION

Project Construction Site Name: _____

GPS Location of Construction Exit *(decimal degrees)*:

Latitude _____ Longitude_____

Subdivision Name *(if applicable)*: _____

Lot Number(s) *(if applicable)*: _____

Common Development Name: _____

Construction Site Location *(e.g., street address)*: _____

City:_____
(applicable if the site is located within the jurisdictional boundaries of the municipality)

County: _____

Owner's Name: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Duly Authorized Representative *(optional)*: _____ Phone: _____

Email Address: _____

Operator's Name *(optional)*: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Facility/Construction Site Contact: _____ Phone: _____

Email Address: _____

II. CONSTRUCTION SITE ACTIVITY INFORMATION

Start Date *(month/date/year)*: _____ / _____ / _____ Completion Date *(month/date/year)*: _____ / _____ / _____

Estimated Disturbed Acreage *(acres, to the nearest tenth (1/10th) acre)*: _____

Does the Erosion, Sedimentation and Pollution Control Plan (Plan) provide for disturbing more than 50 acres at any one time by the Tertiary Permittee ? (Check Only One):

☐ YES - _____ / _____ / _____ Date of EPD Written Authorization *(month/date/year)*

☐ NO

☐ N/A – if the Initial NOI was submitted prior to August 1, 2008 the General NPDES Permit No. GAR100003 for the Tertiary Permittee's construction activities.

Construction Activity Type:

☐ Commercial ☐ Industrial ☐ Municipal/ Institutional ☐ Mixed Use ☐ Water Quality/Aquatic Habitat Restoration

☐ Linear ☐ Utility ☐ Residential ☐ Agricultural Buildings ☐ Other _____

Primary Permittee's Name *(if available)*: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

III. RECEIVING WATER INFORMATION

A. Name of Initial Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

B. Name of (MS4) Owner/Operator *(if applicable)*: _____

Name of Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

C. Sampling of Receiving Stream(s), applicable only if the total planned disturbance is equal to or greater than five (5) acres:

☐ Trout Stream Δ 10 NTU ☐ Warm Water Fisheries Stream Δ 25 NTU ☐ N/A

D. Sampling of Outfall(s), applicable only if the total planned disturbance is equal to or greater than five (5) acres:

☐ Trout Stream ☐ Warm Water Fisheries Stream ☐ N/A

A summary chart (if applicable) delineating the following information for each outfall must be attached:

Number of Sampling Outfalls: _____ Construction Site Size (acres): _____

Appendix B NTU Value: _____ Surface Water Drainage Area (square miles): _____

E. Does the facility/construction site discharge storm water into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as "not supporting" its designated use(s), as shown on Georgia's most current "305(b)/303(d) List Documents (Final)" 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) ? (Check Only One):

☐ YES, Name of Impaired Stream Segment(s): _____

☐ NO

☐ N/A - if the Initial NOI was submitted prior to October 31, 2008 for the General NPDES Permit No. GAR100003 for the Tertiary Permittee's construction activities.

F. Does the facility/construction site discharge storm water into an Impaired Stream Segment where a Total Maximum Daily Load (TMDL) Implementation Plan for "sediment" was finalized at least six (6) months prior to the submittal of the Initial NOI ? (Check Only One):

☐ YES, Name of Impaired Stream Segment(s): _____

☐ NO

☐ N/A - if the Initial NOI was submitted prior to October 31, 2008 for the General NPDES Permit No. GAR100003 for the Tertiary Permittee's construction activities.

IV. ATTACHMENTS *(Applicable Only to Initial Notifications for New Facilities/Construction Sites)*

Indicate if the items listed below are attached to this Notice of Intent:

_____ Location map identifying the receiving stream(s), outfall(s) or combination thereof to be monitored (applicable if the total planned disturbance is equal to or greater than five (5) acres).

_____ Written description and location map identifying the Impaired Stream Segment(s) when applicable.

_____ Erosion, Sedimentation and Pollution Control Plan (if the project is greater than 50 acres regardless of the existence of a certified Local Issuing Authority in the jurisdiction *OR* if the project is in a jurisdiction where there is no certified Local Issuing Authority regulating that project regardless of acreage).

_____ Written authorization from the appropriate EPD District Office if the Plan disturbs more than 50 acres at any one time.

_____ Schedule for the timing of the major construction activities.

ATTACHMENTS (*Applicable Only to Re-Issuance Notifications for Existing Facilities/Construction Sites)*

Indicate if the item listed below is attached to this Notice of Intent:

_____ Copy of NOI previously submitted for coverage under the 2008 re-issuance of the NPDES General Permits to Discharge Storm Water Associated With Construction Activity.

ATTACHMENTS (*Applicable Only to Change of Information Notifications for Existing Facilities/Construction Sites)*

Indicate if the items listed below are attached to this Notice of Intent:

_____ Copy of NOI previously submitted for coverage under the 2013 re-issuance of the NPDES General Permits to Discharge Storm Water Associated With Construction Activity.

_____ Copy of the amended Plan as per Part IV.A.4.c. of the Permit for projects where the construction activity as indicated on the Notice of Intent has changed.

V. Does this project require another type of permit from EPD?

☐ YES – if yes, indicate what type of permit _____

☐ NO

VI. CERTIFICATIONS (Owner or Operator or Both to Initial as Applicable)

_____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 applicable requirements of this 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 properly gather and evaluate the information submitted. Based upon 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 fines and imprisonment for knowing violations.

Owner's Printed Name: _____ Title: _____

Signature: _____ Date: _____

Operator's Printed Name: _____ Title: _____

Signature: _____ Date: _____

INSTRUCTIONS

NOTICE OF INTENT - TERTIARY PERMITTEE

For Coverage Under the 2013 Re-Issuance of the NPDES General Permits No. GAR100003 To Discharge Storm Water Associated With Construction Activity for Common Developments

THIS PERMIT EXPIRES JULY 31, 2018

Please print or type the Notice of Intent (NOI) form. Any NOI that contains illegible or incomplete information will not be accepted, will be returned and the construction site will not be granted Permit coverage. All information requested on the NOI must be submitted in order for the NOI to be valid. Any information requested on the NOI that is not applicable to the tertiary permittee or to the construction site must be marked "N/A." Please do not leave any sections blank in the NOI.

Who must file a Notice of Intent Form - The Owner and/or Operator of a facility/construction site that has a discharge of storm water where construction activities occur must apply for a National Pollutant Discharge Elimination System (NPDES) Permit. The Georgia Environmental Protection Division (EPD) re-issued the General NPDES Permits for Storm Water Discharges Associated with Construction Activity for Common Developments on September 24, 2013. The NPDES General Permit No. GAR100003 is available for review at the EPD District Offices and on the EPD website, www.gaepd.org.

After filing a Notice of Termination, the primary permittee of a common development is required to 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 and/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.

It is highly recommended that the permittees read and understand the terms and conditions of this Permit prior to submitting a NOI. Please contact the appropriate EPD District Office as listed on the following pages for assistance in completing the NOI.

Where to file a Notice of Intent Form - The NOI and the attachments, as applicable, must be submitted to the appropriate EPD District Office as listed on the following pages. Please submit only the first four pages of this document with the applicable attachments.

Section I - Site/Owner/Operator Information

The construction site name and location information (i.e., GPS location of construction exit, subdivision name, lot number(s), street address, city, county) must be sufficient to accurately locate the construction site. If the construction site does not have a street address, please provide sufficient information to accurately locate the construction site. If additional space is needed, attach the location information to the NOI.

A duly authorized representative may be either a named individual or any individual occupying a named position that the tertiary permittee has authorized to sign certification statements, inspection reports, sampling reports or other reports requested by EPD.

The facility/construction site contact is the person who the tertiary permittee has assigned the responsibility for the daily on-site operational control.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the tertiary permittee or to the construction site must be mark "N/A."

Section II – Construction Site Activity Information

For construction activities that began prior to the effective date of the Permits, the start date *(month/date/year)* must be the actual start date of construction activities.

Estimated disturbed acreage is the total number of acres, *to the nearest tenth (1/10th) acre*, that will be disturbed by the tertiary permittee.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the tertiary permittee or to the construction site must be mark "N/A."

Section III - Receiving Water Information

"Trout Streams" are 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 at www.gaepd.org. "Waters Supporting Warm Water Fisheries" are all waters of the State that sustain, or have the potential to sustain, aquatic life but exclude "Trout Streams."

If the facility/construction site discharges storm water directly or indirectly to the receiving water(s), and not through a municipal separate storm sewer system (MS4), enter the name of the receiving water(s) and indicate whether the water(s) is a trout stream or a warm water fisheries stream. Attach a written description and location map identifying the receiving water(s).

If the facility/construction site discharges storm water to a municipal separate storm sewer system (MS4), enter the name of the owner/operator of the MS4 (e.g., city name or county name) and the name of the receiving water(s) at the point of discharge from the MS4. A MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that is owned and/or operated by a city or county which is designed or used for collecting or conveying storm water. It may be necessary to contact the city or county that owns and/or operates the MS4 to determine the name of the receiving water(s). Indicate whether the receiving water(s) is a trout stream or a warm water fisheries stream. Attach a written description and location map identifying the receiving water(s).

Any permittee who intends to obtain coverage under the Permits for storm water 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 (Final)" at the time of NOI submittal, must satisfy the requirements of Part III.C. of the Permits if the Impaired Stream Segment has been listed for 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). 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 2008 and subsequent 305(b)/303(d) List Documents (Final)" can be viewed on the EPD website, www.gaepd.org/Documents/305b.html. Attach a written description and location map identifying the Impaired Stream Segment(s).

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 an 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, www.gaepd.org.

Please do not leave any blanks in this section. Any information requested on the NOI that is not applicable to the tertiary permittee or to the construction site must be mark "N/A."

Section V – Certifications

The owner and/or operator must sign the Notice of Intent and initial the certification statements on the lines provided. Federal and State statutes provide specific requirements as to who is authorized to sign the Notice of Intent forms. A Notice of Intent form signed by an unauthorized person will not be valid. Please be aware that Federal and State statutes provide for severe penalties for submitting false information on this Notice of Intent form. Federal and State regulations require that the Notice of Intent form be signed as follows:

- For a corporation, by a responsible corporate officer;
- For a partnership or sole proprietorship, by a general partner or the proprietor; and
- For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

GEORGIA EPD DISTRICT OFFICES

All required correspondence, including but not limited to Notices of Intent, Notices of Termination, Erosion, Sedimentation and Pollution Control Plans, sampling reports and any other reports shall be sent to the following 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:

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Georgia Environmental Protection Division
3525 Walton Way Extension
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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
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(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

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Revised September 2013

For Official Use Only

NOTICE OF TERMINATION

VERSION 2013

State of Georgia
Department of Natural Resources
Environmental Protection Division

To Cease Coverage Under the NPDES General Permits
To Discharge Storm Water Associated With Construction Activity

THESE PERMITS EXPIRE JULY 31, 2018

I.

PERMIT TYPE *(Check Only One)*:

☐ GAR100001 - *Stand Alone*
☐ GAR100002 – *Infrastructure*
☐ GAR100003 - *Common Development*

PERMITTEE TYPE *(Check Only One and Complete)*:

☐ ***Primary Permittee***

Number of Secondary Permittees *(applicable only to General NPDES Permit No. GAR100003)*: _____

☐ ***Secondary Permittee*** *(applicable only to General NPDES Permit No. GAR100003)*

Primary Permittee's Name:_____Phone:_____

Email Address:_____

Address: _____City:_____State:___Zip Code:_____

☐ ***Tertiary Permittee*** *(applicable only to General NPDES Permit No. GAR100003)*

Primary Permittee's Name *(if available)*:_____Phone:_____

Email Address:_____

Address: _____City:_____State:___Zip Code:_____

II. SITE / OWNER / OPERATOR INFORMATION

Project Construction Site Name: _____

GPS Location of Construction Exit of Stand Alone or Common Development Project *(decimal degrees)*:

Latitude _____ Longitude _____

GPS Locations of Beginning and End of Infrastructure Project or Phase of Infrastructure Project *(decimal degrees)*:

Latitude _____ Longitude _____

Latitude _____ Longitude _____

Construction Site Location *(e.g., street address)*: _____

_____

City *(applicable if the site is located within the jurisdictional boundaries of the municipality)*: _____

County or Counties: _____

Common Development Name *(applicable only to General NPDES Permit No. GAR100003)*: _____

Subdivision Name (if applicable): _____

Lot Number(s) (if applicable): _____

Owner's Name: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Duly Authorized Representative(s) *(optional)*: _____ Phone: _____

Email Address: _____

Operator's Name *(optional)*: _____ Phone: _____

Email Address: _____

Address : _____ City: _____ State: _____ Zip Code: _____

Facility/Construction Site Contact: _____ Phone: _____

Email Address: _____

III. SITE ACTIVITY INFORMATION

Start Date *(month/date/year)*: _____ / _____ / _____ Completion Date *(month/date/year)*: _____ / _____ / _____

Disturbed Acreage of Project or Phase of Infrastructure Project *(acres, to the nearest tenth (1/10th) acre)*: _____

Construction Activity Type:

☐ Commercial ☐ Industrial ☐ Municipal/ Institutional ☐ Mixed Use ☐ Water Quality/Aquatic Habitat Restoration

☐ Linear ☐ Utility ☐ Residential ☐ Agricultural Buildings ☐ Other _____

Name of Initial Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

Name of MS4 Owner/Operator *(if applicable)*: _____

Name of Receiving Water(s): _____

☐ Trout Stream ☐ Water Supporting Warm Water Fisheries

IV. NOTICE OF TERMINATION ELIGIBILITY *(Check Only One and Complete)*:

☐ ***Construction Activities Ceased and Final Stabilization Completed***

_____ *Attached to this Notice of Termination – if Primary Permittee, listing of the legal name, email address, address and telephone number for each Secondary Permittee at this site for which this NOT is submitted (applicable only to NPDES General Permit No. GAR100003).*

_____ *Attached to this Notice of Termination – if Primary Permittee, listing of the legal name, email address, address and telephone number for the legal title holders for each remaining undeveloped lot(s) at this site for which this NOT is submitted (applicable only to NPDES General Permit No. GAR100003).*

☐ ***No Longer Owner and/or Operator of Facility/Construction Site***

New Owner's Name: _____ *Phone:* _____

Email Address: _____

Address: _____ *City:* _____ *State:* _____ *Zip Code:* _____

New Operator's Name (if available): _____ *Phone:* _____

Email Address: _____

Address: _____ *City:* _____ *State:* _____ *Zip Code:* _____

☐ ***Primary Permittee of a Common Development Construction Project No Longer Exists (applicable only to Secondary Permittees under NPDES General Permit No. GAR100003)***

Primary Permittee's Name: _____ *Phone:* _____

Email Address: _____

Address: _____ *City:* _____ *State:* _____ *Zip Code:* _____

☐ ***Coverage under the 2013 NPDES General Permit No. GAR100002 is not required for the Primary Permittee of an existing Infrastructure Construction Project.***

V. Did this project require another type of permit from EPD?

☐ YES – if yes, indicate what type of permit _____

☐ NO

VI. ATTACHMENTS

Indicate if the items listed below are attached to this Notice of Termination:

_____ Copy of most recent NOI previously submitted for coverage under the 2013 NPDES General Permits to Discharge Storm Water Associated With Construction Activity.

_____ Copies of sampling reports and/or written justifications why sampling was not conducted (when sampling is required by the permit). Copies of all sampling reports may be submitted as a PDF file on CD-ROM or other storage device.

_____ Listing of the legal name, email address, address and telephone number for each Secondary Permittee at this site for which this NOT is submitted (*applicable only to Primary Permittees under General NPDES Permit No. GAR100003).*

_____ Listing of the legal name, email address, address and telephone number for the legal title holders for each remaining undeveloped lot(s) at this site for which this NOT is submitted *(applicable only to Primary Permitees under General NPDES Permit No. GAR100003).*

_____ GPS locations (decimal degrees) of the beginning and end of each phase of an infrastructure construction project, and if applicable, a map identifying significant landmarks *(applicable only to General NPDES Permit No. GAR100002).*

_____ Documentation that the existing infrastructure construction project will not result in contiguous land disturbances equal or greater than one (1) acre on or before, and continuing after the effective date of the permit *(applicable only to General NPDES Permit No. GAR100002).*

_____ Documentation that the existing infrastructure construction project consists solely of routine maintenance for the original purpose of the facility performed to maintain the original line and grade and/or the hydraulic capacity *(applicable only to General NPDES Permit No. GAR100002).*

VII. CERTIFICATIONS (Owner or Operator or Both to Initial as Applicable)

_____ ***(Applicable only to NPDES General Permit No. GAR100001)*** "I 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 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 storm water 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."

_____ ***(Applicable only to NPDES General Permit No. GAR100002)*** "I 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 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 or (c) coverage under the permit for an existing infrastructure construction project is not required under Part I.C.1. of NPDES General Permit No. GAR100002; and that discharging pollutants in storm water 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."

_____ ***(Applicable only to NPDES General Permit No. GAR100003)*** "I 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 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 or (c) If I am secondary permittee, the primary permittee of the common development no longer exists. If I am a primary permittee filing this Notice of Termination under Part VI.A.2. of NPDES General Permit NO, GAR100003, 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 NPDES General Permit NO, GAR100003 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 storm water associated with construction activity by the general permit, and that discharging pollutants in storm water 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."

_____ 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 properly gather and evaluate the information submitted. Based upon 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 fines and imprisonment for knowing violations.

Owner's Printed Name: _____ Title: _____

Signature: _____ Date: _____

Operator's Printed Name: _____ Title: _____

Signature: _____ Date: _____

INSTRUCTIONS

NOTICE OF TERMINATION

NPDES General Permits for Storm Water Discharges Associated With Construction Activity

These Permits Expire July 31, 2018

Please print or type the Notice of Termination (NOT) form. Any NOT that contains illegible or incomplete information will not be accepted and will be returned. All information requested on the NOT must be submitted in order for the NOT to be valid. Any information requested on the NOT that is not applicable to the owner and/or operator or the construction site must be marked "N/A." Please do not leave any sections blank in the NOT.

Who must file a Notice of Termination (NOT) Form – The permittee of the facility/construction site must submit a Notice of Termination when (1) the facility/construction site has undergone final stabilization and all storm water discharges from construction activities that are authorized by the NPDES General Permits have ceased, (2) when the Owner and/or Operator of the site changes, (3) Primary Permittee of a Common Development construction project no longer exist, or (4) coverage under the 2013 NPDES General Permit No. GAR100002 is not required.

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 in 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).

Where to file NOT Forms - The NOT and attachments, as applicable, must be submitted to the appropriate EPD District Office as listed on the following pages. Please submit only the first five pages of this document with the applicable attachments.

Section I - Permit and Permittee Type

Indicate the NPDES General Permit number (i.e., No. GAR100001, No. GAR100002, or No. GAR100003) and permittee (i.e., primary, secondary or tertiary permittee) for which this NOT is being submitted.

Section II - Site / Permittee Information

The construction site name and location information (i.e., GPS location of construction exit, street address, city, county) must be sufficient to accurately locate the construction site. If the construction site does not have a street address, please provide sufficient information to accurately locate the construction site. If additional space is needed, attach the location information to the NOT.

A duly authorized representative may be either a named individual or any individual occupying a named position that the permittee has authorized to sign all reports, certification statements, or other information requested by EPD.

The facility/construction site contact is the person who the permittee has assigned the responsibility for the daily on-site operational control.

Please do not leave any blanks in this section. Any information requested on the NOT that is not applicable to the permittee or to the construction site must be marked "N/A."

Section III - Site Activity Information

Mark the appropriate boxes to indicate the types of construction activities that were conducted at the facility/construction site.

Please do not leave any blanks in this section. Any information requested on the NOT that is not applicable to the permittee or to the construction site must be marked "N/A."

Section IV – Notice of Termination Eligibility

Indicate by marking the appropriate box why this NOT has been submitted: (1) the facility/construction site has undergone final stabilization and all storm water discharges from construction activities that are authorized by the NPDES General Permits have ceased, (2) when the Owner and/or Operator of the site changes, (3) Primary Permittee of a Common Development construction project no longer exist, or (4) coverage under the 2013 NPDES General Permit No. GAR100002 is not required.

For Stand Alone construction projects, the primary permittee may submit a NOT where the entire stand alone development has undergone final stabilization, all storm water 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.

For Infrastructure construction projects, the primary permittee may submit a NOT where the entire project has undergone final stabilization, all storm water 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 storm water 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.

In addition, the primary permittee of an existing Infrastructure construction project may submit a NOT when the existing infrastructure construction project will not result in "contiguous" land disturbances equal or greater than one (1) acre on or before, and continuing after the effective date of the permit or when the existing infrastructure construction project consists solely of "routine maintenance" for the original purpose of the facility performed to maintain the original line and grade and/or the hydraulic capacity. As defined in the 2013 NPDES General Permit No. GAR100002 (Part IC.1.a.), "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. In order to be eligible for the "routine maintenance" 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;

For Common Development construction projects, the primary permittee may submit a NOT where the entire common development has undergone final stabilization, all storm water 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 of a Common Development 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 .

Secondary permittees should submit a Notice of Termination when the primary permittee of the Common Development no longer exist.

Tertiary permittees may submit a Notice of Termination when their sites within a Common Development have undergone final stabilization, all storm water 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 NOT 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.

Permitees may submit a NOT when the Owner or Operator of the site changes. Where storm water 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.

Section VII - Certifications

The owner and/or operator must sign the Notice of Termination and initial the certification statements on the lines provided. Federal and State statutes provide specific requirements as to who is authorized to sign the Notice of Termination forms. A Notice of Termination form signed by an unauthorized person will not be valid. Please be aware that Federal and State statutes provide for severe penalties for submitting false information on this Notice of Termination form. Federal and State regulations require that the Notice of Termination form be signed as follows:

- For a corporation, by a responsible corporate officer;
- For a partnership or sole proprietorship, by a general partner or the proprietor; and
- For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

GEORGIA EPD DISTRICT OFFICES

All required correspondence, including but not limited to Notices of Intent, Notices of Termination, Erosion, Sedimentation and Pollution Control Plans, sampling reports and any other reports shall be sent to the following 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

Revised September 2013

For Official Use Only

NOTICE OF TERMINATION

VERSION 2013

State of Georgia
Department of Natural Resources
Environmental Protection Division

To Cease Coverage Under the NPDES General Permit No. GAR100003
To Discharge Storm Water Associated
With Construction Activity for Common Developments

THESE PERMITS EXPIRE JULY 31, 2018

BLANKET SECONDARY PERMITEEE
GAR100003 – COMMON DEVELOPMENT

I. SITE / PERMITTEE INFORMATION

Blanket Secondary Permittee's Name: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Duly Authorized Representative(s) *(optional)*: _____ Phone: _____

Email Address: _____

Utility Sub-Contractor Name *(optional)*: _____ Phone: _____

Email Address: _____

Address : _____ City: _____ State: _____ Zip Code: _____

Facility/Construction Site Contact: _____ Phone: _____

Email Address: _____

_____ ***Attach to this Notice of Termination – Listing of the facilities/construction sites with coverage under the annual Notice of Intent submitted by the Blanket Secondary Permittee including the following information for each facility/construction site:***

Project Construction Site Name: _____

Construction Site Location *(e.g., street address)*: _____

_____

Common Development Name: _____

Subdivision Name (if applicable): _____

Lot Number(s) (if applicable): _____

City *(applicable if the site is located within the jurisdictional boundaries of the municipality)*: _____

County or Counties: _____

Primary Permittee's Name: _____ Phone: _____

Email Address: _____

Address: _____ City: _____ State: _____ Zip Code: _____

II. SITE ACTIVITY INFORMATION

Start Date *(month/date/year)*: _____ / _____ / _____ Completion Date *(month/date/year)*: _____ / _____ / _____

Disturbed Acreage *(acres, to the nearest tenth (1/10th) acre)*: _____

Construction Activity Type:

☐ Commercial ☐ Industrial ☐ Municipal/ Institutional ☐ Mixed Use ☐ Water Quality/Aquatic Habitat Restoration

☐ Linear ☐ Utility ☐ Residential ☐ Agricultural Buildings ☐ Other _____

NOTICE OF TERMINATION ELIGIBILITY *(Check Only One and Complete)*:

☐ ***Construction Activities Ceased and Final Stabilization Completed***

☐ ***No Longer Owner and/or Operator of Facility/Construction Site***

New Blanket Secondary Permittee's Name: _____ *Phone:* _____

Email Address: _____

Address: _____ *City:* _____ *State:* _____ *Zip Code:* _____

New Utility Sub-Contractor's Name (if available): _____ *Phone:* _____

Email Address: _____

Address: _____ *City:* _____ *State:* _____ *Zip Code:* _____

☐ ***Annual Notice of Termination (postmarked no later than January 15th of the subsequent year in which the NOI for the Blanket Secondary was filed)***

III. Did this project require another type of permit from EPD?

☐ YES – if yes, indicate what type of permit _____

☐ NO

IV. CERTIFICATIONS (Blanket Secondary Permittee)

_____ I certify under penalty of law that either: (a) all storm water discharges associated with construction activities from the portions of the common developments where I was blanket secondary have ceased or have been eliminated; (b) I am no longer a blanket secondary permittee at the construction sites and a new blanket secondary permittee has assumed operational control for those portions of the construction sites where I previously had operational control; and/or (c) I am a blanket secondary permittee filing an annual Notice of Termination under Part VI.A.5. of General NPDES Permit No. GAR100003. I understand that by submitting this Notice of Termination, that I am no longer authorized to discharge storm water associated with construction activity by the general permit, and that discharging pollutants in storm water 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

_____ 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 properly gather and evaluate the information submitted. Based upon 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 fines and imprisonment for knowing violations.

Blanket Secondary Permittee's Name:_____Title:_____
(please print or type)

Signature: _____Date:_____

INSTRUCTIONS

NOTICE OF TERMINATION – BLANKET SECONDARY PERMITTEE

NPDES General Permits for Storm Water Discharges Associated With Construction Activity for Common Developments

These Permits Expire July 31, 2018

Please print or type the Notice of Termination (NOT) form. Any NOT that contains illegible or incomplete information will not be accepted and will be returned. All information requested on the NOT must be submitted in order for the NOT to be a valid. Any information requested on the NOT that is not applicable to the blanket secondary permittee or the construction site(s) must be marked "N/A." Please do not leave any sections blank in the NOT.

Who must file a Notice of Termination (NOT) Form - When all construction sites have undergone final stabilization and all storm water discharges associated with construction activities that are authorized by the secondary blanket permittee's Notice of Intent (NOI) have ceased or when the blanket secondary permittee of the site(s) changes, the blanket secondary permittee of the construction sites must submit a Notice of Termination.

A blanket secondary permittee must submit an annual Notice of Termination no later than January 15 of the subsequent year in which the annual NOI was filed by a blanket secondary permittee. A utility company may submit an annual Blanket Notice of Intent covering all construction activities statewide within common developments on or of before January 15 of the year in which coverage is desired.

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 in 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).

Where to file NOT Forms - The NOT and attachments, as applicable, must be submitted to the appropriate EPD District Office as listed on the following pages. Please submit only the first three pages of this document with the applicable attachments.

Section I - Site / Permittee Information

A duly authorized representative may be either a named individual or any individual occupying a named position that the permittee has authorized to sign all reports, certification statements, or other information requested by EPD.

The facility/construction site contact is the person who the permittee has assigned the responsibility for the daily on-site operational control.

The construction site name and location information must be sufficient to accurately locate the construction sites with coverage under the annual Notice of Intent submitted by the blanket secondary permittees. If the construction site does not have a street address, please provide sufficient information to accurately locate the construction site.

Please do not leave any blanks in this section. Any information requested on the NOT that is not applicable to the blanket secondary permittee or to the construction sites must be marked "N/A."

Section II - Site Activity Information

Indicate by marking the appropriate box why this NOT has been submitted: (1) all construction sites have undergone final stabilization and all storm water discharges associated with construction activities that are authorized by the secondary blanket permittee's Notice of Intent have ceased, (2) the blanket secondary permittee of the site(s) has changed, or (3) the blanket secondary permittee has submitted an annual Notice of Termination under Part VI.A.5. of General NPDES Permit No. GAR100003.

Mark the appropriate boxes to indicate the types of construction activities that were conducted at the facility/construction site.

Please do not leave any blanks in this section. Any information requested on the NOT that is not applicable to the blanket secondary permittee or to the construction sites must be marked "N/A."

Section IV - Certifications

The blanket secondary permittee must sign the Notice of Termination and initial the certification statements on the lines provided. Federal and State statutes provide specific requirements as to who is authorized to sign the Notice of Termination forms. A Notice of Termination form signed by an unauthorized person will not be valid. Please be aware that Federal and State statutes provide for severe penalties for submitting false information on this Notice of Termination form. Federal and State regulations require that the Notice of Termination form be signed as follows:

- For a corporation, by a responsible corporate officer;
- For a partnership or sole proprietorship, by a general partner or the proprietor; and
- For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

GEORGIA EPD DISTRICT OFFICES

All required correspondence, including but not limited to Notices of Intent, Notices of Termination, Erosion, Sedimentation and Pollution Control Plans, sampling reports and any other reports shall be sent to the following 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

Insert Tab 3 – Stream Buffers

Back of Tab

Requirements for Stream Buffers and Stream Impacts

Level II: Introduction to Design
Education and Certification for Persons Involved in Land Disturbing Activities

Issued May 2009

1

Overview

- What is a State Water?
- Who determines State Waters?
- How to determine State Waters
- Functions of State Water buffers
- What are the rules for State Waters?
  - GA EPD variance procedures and exemptions

2

What is a State Water???

- According to the GA E&S Act of 1975, “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.

3

State Waters

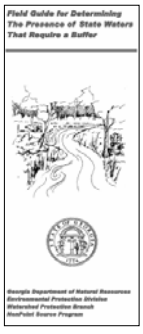
4

Who determines State Waters?

- In areas where there is a certified local issuing authority (LIA), State Waters determinations are made by the LIA.
- In areas where there is not a certified issuing authority, GA EPD will confirm State Waters and buffer delineations as shown on ES&PC plans.

5

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



- Issued September 2006 by GA EPD
- Available at www.gaepd.org and

www.gaswcc.georgia.gov

6

Steps for Determining the Presence of State Waters and Buffer Requirements

1. Review the topography of the ES&PC Plan for natural or artificial features that may indicate the presence of State Waters.
2. Walk the site in order to identify State Waters as defined.
3. Begin the inspection at one end of the potential State Waters and walk the entire length of the State Waters until it exits the property.

Steps for Determining the Presence of State Waters and Buffer Requirements

4. Examine the drainage feature using the field guide to determine whether the feature is perennial, intermittent, or ephemeral. If the drainage feature is determined to be perennial or intermittent, then a State-mandated buffer exists. If the drainage feature appears to be ephemeral then go to Step 5 to make a final determination.

Steps for Determining the Presence of State Waters and Buffer Requirements

5. 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 during a dry phase and base flows are not evident, the drainage may be ephemeral or intermittent. The ephemeral stream guidance from the field guide should be used to make the final determination as to whether the stream is ephemeral.

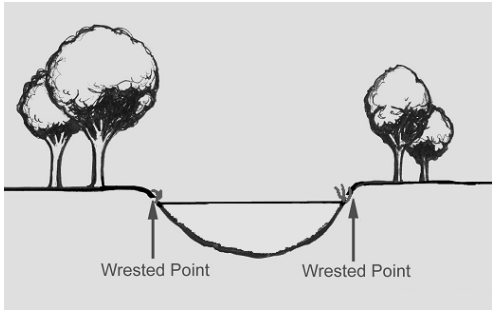
Steps for Determining the Presence of State Waters and Buffer Requirements

6. If there is still a question about base flow after Step 5 is completed, then the "North Carolina Division of Water Quality Stream Identification Method, Version 3.1" (or most current version) should be used to verify whether or not base flow is present.
7. The determination should be documented in writing.

Wrested Vegetation

- Look for a <u>well defined channel and places or patterns of "wrested" vegetation</u>
  - vegetation wrested from channel by "normal stream flow" or "wave action"
- Walking the site to determine State Waters is a must!

Wrested Vegetation



Normal Stream Flow Definition

- Intermittent headwater streams with base flow during any period of the year will retain the state mandated buffer protection
  - Base Flow: the discharge that enters a stream channel mainly from groundwater through the soil. Base flow also includes spring flow into stream.
- ES&PC design professionals determine existence of base flow, based upon site topography, soils, and vegetation

Normal Stream Flow Definition

- "**Normal Stream Flow**," *for non-trout waters only*, means any stream flow that consists solely of base flow or both base flow and direct runoff during any period to the year.
- "Stream Bank" definition, Rule 391-3-7.01(w).
- Applies to State Waters **not** classified as trout waters.
- Waives stream buffer requirements for true storm water drainage features, *with no base flow component*.

Considerations

- ***Ephemeral trout streams*** are not exempt from the State-mandated buffer requirements.
- Trout (cold water) streams are delineated in the Georgia Water Quality Control Rules (391-3-6-.03).
- Buffer requirements are in the NPDES State General Permits for Construction Activities.
- DNR Coastal Resources Division should be contacted for ***marsh delineations***.
- State Waters may also be Waters of the U.S.

Other "Clues" for State Waters

- Soils
  - Hydric soils
- Topography
  - Drainage Area
- Substrate in Channel
  - Sandy substrate
- Vegetation types
  - "Water-loving" species

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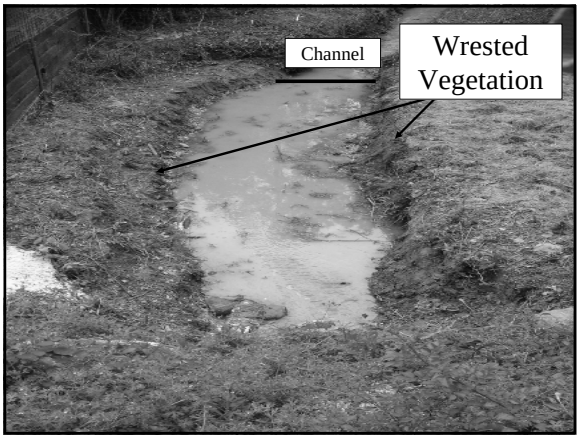

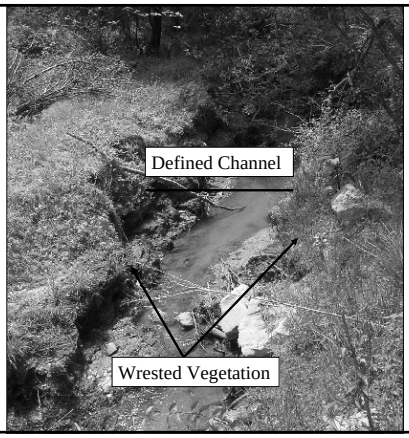

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Misconceptions in State Waters Determinations

- These factors are not to be considered:
  - Whether a stream appears on a topographical 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 water flow in the stream

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Misconceptions in State Waters Determinations

- These factors are not to be considered:
  - The absence of observable aquatic life
  - Whether or not you “Get your boots wet”

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Functions of Buffers

- Reduces storm runoff velocities
- Acts as a screen for “visual pollution”
- Reduces construction noise
- Improves aesthetics on the disturbed land
- Filters and increases infiltration of runoff
- Cools rivers and streams by providing shade

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Functions of Buffers

- Provides food and cover for wildlife and aquatic organisms
- Aids in flood protection
- Protects channel banks from scour and erosion

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What happens if it is State Waters?

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Review of Stream Buffer Rules

- Measured horizontally from point where vegetation has been ***wrested*** by normal stream flow or wave action
- **25 Feet** - Warm Water streams*
- **50 Feet** - Trout (cold) streams*

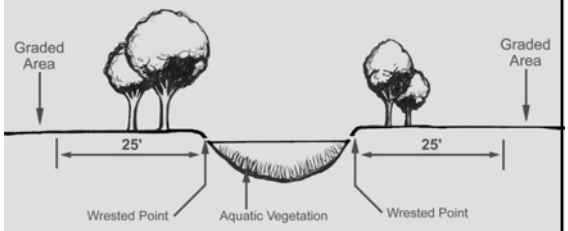
*Local issuing authorities may require additional buffers in local ordinance!

Trout Stream

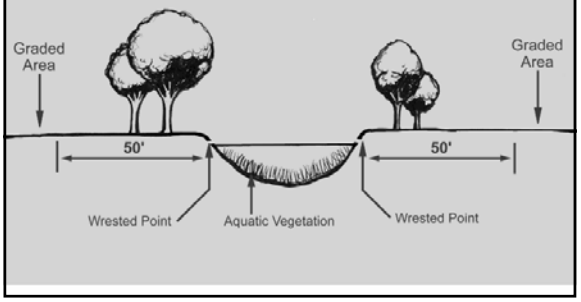
- Primary Trout Waters – streams supporting a self-sustaining population of rainbow, brown, or brook trout as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.
- Secondary Trout Waters- streams with no evidence of natural trout reproduction but capable of supporting trout throughout the year as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6.
- All streams or portions of streams within the Watershed as designated by GA EPD under the provisions of the Georgia Water Control Act (O.C.G.A 12-5-20)

NPDES Permits under Definitions

MINIMUM REQUIREMENT #15 "STATE WATERS"



MINIMUM REQUIREMENT #16 "STATE WATERS" CLASSIFIED AS TROUT WATERS



Coastal Areas

- Buffers for saltwater marshes and tidally influenced streams are measured from the marsh jurisdictional line, which is determined by the Coastal Resources Division of the GA DNR, pursuant to the Coastal Marshland Protection Act.

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What if it is necessary to work in the buffer?

- The minimum 25' or 50' (Trout Streams) undisturbed State Waters buffer shall be maintained, except where the Director of GA EPD determines to allow a variance that is at least as protective of natural resources and the environment.
- Variances for the State minimum buffer may only be issued by GA EPD, not by local issuing authorities.
- Check with Federal regulators to ensure compliance with Federal regulations (U.S. Army Corps of Engineers)

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Activities exempt from stream buffer variance requirements:

- Drainage structures on warm water streams only
- Roadway drainage structures on warm water and trout streams.
- Water line, sewer line crossings (within 25 degrees or perpendicular to the stream)

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Drainage Structures

- 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.

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

Roadway Drainage Structures

- 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.

O.C.G.A 12-7-3 (13)

General Variance for Trout Streams

- Average annual flow less than 25 gpm.
- Two methods for determination:
  - (1) USGS unit area runoff map to determine watershed acreage (Open-File Report 82-557).
  - (2) Hydrologic analysis by a registered engineer or geologist.

General Variance for Trout Streams

- Total length on property cannot exceed 200 feet.
- Downstream end of the pipe must terminate 25 feet before the property boundary.
- Information must be provided to the LIA or GA EPD, as appropriate.

Buffer Variances

Buffer variances will only be considered for the following ten criteria (a – j)

Buffer Variance Criteria – (a)

- The project involves the construction or repair of a structure which, by its nature, must be located within the buffer:
  - dams
  - public water supply intake structures
  - waste water discharges
  - docks and boat launches
  - stabilization areas of public access to water

Buffer Variance Criteria – (b)

- The project will result in the restoration or enhancement to improve water quality and/or aquatic habitat quality.

Buffer Variance Criteria – (c)

- Buffer intrusion is necessary to provide reasonable access to a property or properties.

Buffer Variance Criteria – (d)

- The intrusion is for gravity-flow sewer lines that cannot reasonably be placed outside the buffer, and stream crossing and vegetative disturbance are minimized.

Buffer Variance Criteria – (e)

- Crossing for utility lines, including but not limited to:
  - gas
  - liquid
  - power
  - telephone or other pipelines

(provided that the number of crossings and the amount of vegetative disturbances are minimized)

Buffer Variance Criteria – (f)

- Recreational foot trails and viewing areas, providing that impacts to the buffer are minimal.

Buffer Variance Criteria – (g)

The project involves construction of:

- one single family home for residential use by the owner of the property and there is no opportunity to develop under any reasonable design configuration.

Buffer Variance Criteria – (h*)*

Project will

- require a permit from the U.S. Army Corps of Engineers (COE) for impacts to jurisdictional waters of the U.S.
- the COE has approved a mitigation plan
- implementation of the plan is a 404 permit condition

- Applicable to non-trout waters only -

Buffer Variance Criteria - (i)

Project includes a plan that shows that the completed project will maintain or improve water quality downstream of the project. ***This criteria requires a water quality model acceptable to GA EPD***.

- Applicable to non-trout waters only -

Buffer Variance Criteria - (j)

Project with a buffer disturbance located:

- in, or upstream and within 10 linear miles of an **impaired stream segment** as shown on the Georgia's Section 303(d) list, and
- includes a plan that shows that the completed project will maintain or improve water quality in the listed segment. ***This criteria requires a water quality model acceptable to GA EPD.***

- Applicable to non-trout waters only -

Variance Application Review

- Applications are reviewed for completeness within 10 calendar days of receipt.
- Complete applications are reviewed within 60 calendar days of receipt.
- During this timeframe, review comments are forwarded to the applicant or GA EPD issues a ***30-day public advisory*** and advises the applicant to publish a 30-day public advisory.

Application Processing Delays

- Not addressing all of the checklist items which results in an incomplete plan
- Delayed response to GA EPD comments during the 60-day review period
- Not submitting the original tear sheet or affidavit for the applicant's public notice

New Guidance

- Mitigation guidelines for buffer variance criteria (h), (i) and (j).
- Guidelines for stream bank and shore line stabilization projects.
- New guidelines are currently available on the GA EPD website, **www.gaepd.org**.

Stream buffer variance and LDA Permits

- The LIA may not issue a land disturbing permit for a project proposing to encroach into the State stream buffer until a GA EPD variance has been granted
  - Do not assume that since the stream buffer variance has been submitted that it will be approved
- If a variance is approved, it is the local issuing authority's responsibility to inspect and enforce for compliance
- If the stream buffer variance is not acceptable to the LIA, the LIA may issue an LDA without allowing encroachment into the buffer

Summary

- Buffers on state waters are valuable in protecting and conserving land and water resources.
- Walk sites and gather all necessary information to determine State Waters
- Some activities are exempt from stream buffer requirements
  - i.e. drainage structures, sewer crossings, etc.
- All non-exempt activities within a state water buffer require a GA EPD stream buffer variance

For More Information…

- Stream buffer variance application and checklist of required information can be found at www.gaepd.org click on Documents→ Publications and Forms → Watershed Protection Branch→ Erosion and Sedimentation
- Recommend consulting design professional for assistance with the variance process
- Contact Peggy Chambers, Michael Berry or Jean Shepherd at (404) 675-6240 with stream buffer questions
- DNR Coastal Resources Division at (912) 264-7218

QUESTIONS?

Insert Yellow Sheet

Back of Yellow Sheet

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East Tower, Atlanta, Georgia 30334-9000
Lonice C. Barrett, Commissioner
Carol A. Couch, Ph.D., Director
Environmental Protection Division
404/656-4713

June 14, 2004

MEMORANDUM

TO: Erosion and Sedimentation Control Local Issuing Authorities
Other Interested Parties

FROM: Carol A. Couch, Ph.D., Director
Environmental Protection Division

RE: Georgia Erosion and Sedimentation Act
State Waters Issues

This memo is to clarify certain issues concerning state waters, including the identification of state waters that require stream buffers and the installation of storm water detention ponds in state waters. Please be advised that it is the responsibility of local Issuing Authorities to make these determinations.

State Waters that Require Stream Buffers

The term "state waters" is defined in Section 12-7-3(16) of the Georgia Erosion and Sedimentation Act (Act) 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."

Section 12-7-6(b)(15) of the Act states that "Except as provided in paragraph (16) 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 Code section 12-2-8, 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..." The term "wrested" is defined in Webster's Dictionary as "to pull, force, or move by violent wringing or twisting movements." Similar language is provided in Section 12-7-6(b)(16) for 50-foot trout stream buffers, with the exception that drainage structures are not excluded.

The determination of whether a buffer is required for state water is based solely on whether there is sufficient water flow to "wrest" the vegetation from the banks of the stream, thereby forming a defined channel. The defined channel may have occurred over a long period of time or by soil erosion; however, as observed presently it is a defined channel and is protected by the 25-foot buffer requirement.

The following factors **are not** to be considered in state waters determinations for stream buffer protection:

- **Whether a stream appears on a topographical map as a solid or dashed blue line (the presence of a blue line is an indication of state waters, but not all streams are mapped as blue lines);**
- **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 amount of water in the stream at any given time, i.e., under normal conditions;**
- **The duration of water flow in the stream;**
- **The watershed area, unless a scientific correlation between wrested vegetation and watershed area has been made by the Issuing Authority; or**
- **The absence of observable aquatic life.**

Analyzing the topography on an erosion and sedimentation control plan is the first step in determining whether a site contains a state water that requires a buffer variance. Further information can be obtained from a soils or topographical map of the area. An onsite inspection is essential in making the final determination if a review of the topography and soils on the site indicate a possible drainage feature. The final determination should then be made using the criteria in the preceding paragraphs.

Storm Water Detention Ponds in State Waters

The term "drainage structure" is defined in Section 12-7-3(7) of the Act as a "device composed of a virtually nonerodible material such as concrete, steel, plastic, or 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." This definition only allows the components of a stormwater management pond that meet this definition as drainage structures to be exempt from stream buffer variance requirements. Other components, including excavated ponds, earthen dams, etc., require a buffer variance that may be applied for under 391-3-7.05(2)(C) in DNR's Erosion and Sedimentation Rules. This states, "The project involves the construction or repair of a structure which, by its nature, must be located within the buffer. Such structures include dams, public water supply intake structures, wastewater discharges, docks, boat launches,

and stabilization of areas of public access to water." Please note that drainage structures are only exempt on warm water streams and are not exempt on trout streams.

Section 12-7-6(b)(14) of the Act states that "Land-disturbing activity plans for erosion and sedimentation control shall include provisions for control or treatment 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". These levels are 25 NTU for warm water streams and 10 NTU for trout streams. The use of in-stream ponds to intentionally trap sediment during land disturbing activity is in violation of this section of the Act and is not allowed.

EPD appreciates the local Issuing Authorities' efforts in implementation of their local erosion and sedimentation ordinances. We hope the above guidance helps in those efforts. If you should have any questions about this memo, please contact Ms. Jan Sammons in the Water Protection Branch, NonPoint Source Program, at (404) 675-6240.

CAC:jss

U.S ENVIRONMENTAL PROTECTION AGENCY
REGION 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, Georgia 30303 - 8960

Chairman

Dear Chairman:

The U. S. Environmental Protection Agency Region 4 (EPA) and Savannah District Corps of Engineers (USACE) are requesting your assistance in addressing a significant issue facing our agencies. EPA and USACE have documented an increasing number of unpermitted discharges of fill material into streams and other waters that are resulting in Clean Water Act Section 404 enforcement actions being taken against developers and, in some cases, local governments. Since you have a critical role in the implementation of the Georgia Erosion and Sedimentation (E&S) Act and the storm water provisions of the Clean Water Act, we believe that by working together we can prevent many of these violations and promote the conservation of aquatic resources in Georgia. It is also in the best interests of local governments to ensure compliance with Section 404 of the CWA so as to maintain their economic growth and avoid potential litigation or enforcement actions.

Many of our enforcement actions result from instances where local government approval is also interpreted as applying to Federal Section 404 regulations. This local authorization can be in the form of land clearing permits, erosion control plans or construction of storm water management facilities. In some instances the local governments have indicated that no waters of the State are involved in the project and the developers mistakenly believe this also means that no jurisdictional waters under the Clean Water Act are located within the project. Also, there are certain exempt activities in State and local government regulations that do not apply at the Federal level. This confusion has even included some local government projects such as utility line and road construction. While we strongly support local government implementation of erosion control and storm water management regulations, we see a need to more closely coordinate those programs with the Federal Section 404 permit program.

So, how can you help resolve this situation? First, it is important to ensure that all jurisdictional waters, for all applicable State and Federal programs, are clearly identified on a project site. Within Georgia, a determination of waters of the State and water of the U. S. (continued on page 2)

should be the same for all Clean Water Act programs such as storm water and wastewater permit under the NPDES program that have been delegated to the Georgia Environmental Protection Division (EPD). These are the same waters regulated under Section 404. Differences may come under State only programs such as the E&S Act. We recommend that if your government is verifying the extent of jurisdictional waters on a site, you also require that the applicant have a formal delineation of waters of the U.S. performed by a qualified and experienced professional, have the delineation verified in writing by the USACE, and have the developer include this information with their application for any local permits. We understand that the EPD stream buffer requirements and the E&S Act limits of jurisdiction may be different from those of the Clean Water Act. In a memorandum dated June 14, 2004, EPD issued guidance regarding factors used in determinations of State waters. Call Coach's

The second point is to ensure that all impacts are clearly identified and permitted before the impacts occur. While there may be some activities which are exempt from State regulation, the USACE recommends a developer contact them if any amount of fill material may be placed in a water of the U.S. This includes mechanical land clearing and temporary stream rerouting or diversion. This also includes temporary or permanent basins constructed in intermittent or perennial streams for erosion control or storm water management purposes. If the project involves a discharge of fill material into water of the US, the developer will be required to apply for a Department of the Army permit. For very small impacts, the project could possibly be authorized under one the USACE's Nationwide Permits or Regional Permits(with verification by the USACE). However, projects impacting more than 0.5 acres of wetlands or 300 feet of stream will likely require an Individual Department of the Army Permit. The USACE will work with the developer to assess and minimize the impacts and determine possible mitigation requirements.

One of the most common problems has been the unpermitted construction of in-stream storm water management facilities. These facilities require a Section 404 permit or authorization. EPA Region 4 has worked with the eight states in our Region to develop guidance to be used in the determination of when in-stream treatment systems can be used to address storm water problems. These guidelines establish a process used in Section 404 to evaluate an individual project to make sure that the project meets the requirements of the Clean Water Act. We have enclosed a copy of this guidance for your use and distribution.

Another typical violation that occurs is when local governments proceed with road widening projects without proper USACE permitting under Section 404 of the Clean Water Act. These violations generally result when old dirt roads are widened and paved. In order to avoid such situations, a delineation of all waters of the US should be conducted in the construction right-of-way and then verified by the USACE prior to the work proceeding. If the work would result in any waters of the US being impacted, the project should be coordinated with the USACE to determine the type of permit required prior to any work being conducted at the site.

EPA and USACE are willing to meet with your staff to review and provide training on the permitting requirements under Section 402 and 404 and the requirements for a determination

of the extent of waters of the U.S. We are aware that some counties require the applicant/developer to provide proof of a USACE permit application or coordination before approval of E&S control plans and land disturbance permits. This is a prudent approach that protects both the developer and the local government. Once a Section 404 permit is issued, the permittee must comply with all conditions, which include compliance with E&S controls. Nearly all Section 404 permits require compensatory mitigation. If the mitigation is done within the jurisdiction of the local government, it provides a direct benefit to the community and can add valuable greenspace.

What EPA and the USACE would like to avoid are Section 404 enforcement actions. These actions invariably are complex to resolve and very costly to the developer. They involve work stoppages, site plan revision, restoration actions, and increased compensatory mitigation costs. If any fill remains in place, the violator must still go through the permit process. Developers may seek to transfer the blame to the local government or may initiate litigation against the local government to recover costs. Local governments that inadequately inform developers of the need for Section 404 permits may be at significant litigation risk and we have recently seen an increase in citizen suits under the Clean Water Act involving this issue. Also, it should be noted that EPA has had Section 404 enforcement actions with more than half of the Metro Atlanta counties themselves, which resulted in increased project costs and considerable adverse media coverage.

In closing, we recognize that the local governments have an overwhelming job of administering their own ordinances as well as implementing delegated State and Federal programs. Coordinating these programs is a major challenge often made more difficult by complex regulations and limited or inexperienced staff. The bottom line is that developers need to document all waters of the U.S. on a site and secure the appropriate Section 404 permit from the USACE before there are any impacts to these waters. Since the local government is normally the first stop for a developer, you can have considerable influence in keeping the developer in compliance with all State and Federal regulations.

Please contact us to arrange a time to discuss any questions that you or your staff may have on Clean Water Act requirements or to schedule a training session for your staff. For additional information or guidance on these very important matters, please contact our staffs: Bob Lord at 404-562-9408/ Maryann Gerber at 404-562-9462 for EPA or Ed Johnson 678-422-2722 for USACE.

Sincerely,

James D. Giattina
Director,
Water Management Division
US EPA Region 4

Mirian J. Magwood
Chief, Regulatory Branch
Savannah District
US Army Corps of Engineers

Enclosure (1)

RULES
OF
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

CHAPTER 391 -3-7.
EROSION AND SEDIMENTATION CONTROL

TABLE OF CONTENTS

391-3-7.01 Definitions.

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 publication of 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) "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.

(d) "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.

(e) "Department" means the Department of Natural Resources of the State of Georgia.

(f) "Director" means the Director of the Environmental Protection Division.

(g) "District" means the appropriate local Soil and Water Conservation District.

(h) "Division" means the Environmental Protection Division of the Department of Natural Resources.

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

(j) "Erosion and Sedimentation Control Plan" or "Plan" means a plan for the control of soil erosion and sediment resulting from a land disturbing activity.

(k) "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. 12-7-1 7.

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

(m) "Permanent Buffer Impact" means any impact which does not meet the definition of "Temporary Buffer Impact."

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

(o) "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.

(p) "Project" means the entire area of the proposed development site, regardless of the size of the area to be disturbed.

(q) "Qualified personnel" means any person who meets or exceeds the education and training requirements of Code Section 12-7-1 9.

(r) '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.

'

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

(t) 'Soil and Water Conservation District Approved Plan" means an erosion and sedimentation control plan approved in writing by the Soil and Water Conservation District in which the proposed land disturbing activity will take place.

(u) "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.

(v) '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).

(w) '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 non-trout 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.

(x) "Temporary Buffer Impact" means an impact which, upon completion of the impact, yields no above ground, man-made materials or structure within the buffer, no change in grade, does not impair any buffer functions, and is completed in a timeframe determined by the Director.

(y) 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.

(z) "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.

(aa) "Water Quality" means the chemical, physical, and biological characteristics of the State's water resources.

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History. Original rule, entitled "Definitions", was filed on April 6, 1977; effective April 26, 1977. Amended: Filed July 16, 1981: effective August 5, 1981. Amended: F. December 12, 1989, eff. January 1, 1990. Amended: F. October 31,2000, eff. November 22,2000. Amended: F November 5,2003, Eff. November 25,2003. Amended. F Dec. 9,2003, Eff. Dec. 29,2003. Amended: F December 20,2004, Eff. January 10,2005.

391 -3-7.02 Repealed.

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History Original rule, entitled "Scope and Exclusions", was filed on April 6, 1977; effective April 26, 1977. Amended: Filed July 16, 1981 : effective August 5, 1981. Amended: F. December 12, 1989, eff. January 1, 1990. Amended: F. October 31, 2000, eff. November 22, 2000. Repealed: F November 5,2003, Eff. November 25, 2003. Authority: O.C.G.A. 12-2-24, 12-7-5 et seq.

391-3-7.03 Repealed

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History. Original rule, entitled "Land Disturbing Activity Permitsn, was filed on April 6, 1977; effective April 26, 1977.. Amended: Filed July 16, 1981: effective August 5, 1981. Amended: F. December 12, 1989, eff. January 1, 1990. Amended: F. October 31, 2000, eff. November 22, 2000. Repealed: F. November 5, 2003, Eff. November 25,2003.

391-3-7.04 Repealed

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History. Original rule, entitled "Erosion and Sediment Control Plans Required", was filed on April 6, 1977; effective April 26, 1977. Amended: Filed July 16, 1981 : effective August 5, 1981. Amended: Rule entitled "Erosion and Sedimentation Control Plan Requirements". F. December 12, 1989, eff. January 1, 1990. Amended: F. October 31,2000, eff. November 22,2000. Repealed: F November 5,2003, Eff. November 25,2003.

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 streamflow, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. The following activities do not require application to or approval from the Division:

   (a) the piping of trout waters with an average annual flow of 25 gpm or less; or

   (b) 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

   (c) 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

   (d) where roadway drainage structures must be constructed within the twentyfive (25) foot buffer area of any state waters or the fifty (50) foot buffer of any trout stream.

(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 a structure which, by its nature, must be located within the buffer. Such structures include dams, public water supply intake structures, detentioniretention 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 gravity-flow sewer lines that cannot reasonably be placed outside the buffer, and stream crossings and vegetative disturbance are minimized; or

(d) 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 the effective date of this rule; 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.

(3) If the buffer impact will be temporary, the buffer variance request shall include the following information at a minimum:

(a) A site map that includes locations of all state waters, wetlands, floodplain boundaries and other natural features, as determined by field survey.

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

(c) A 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) A 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) A calculation of the total area and length of buffer disturbance.

(f) A letter from the issuing authority (if other than the Division and as applicable) stating that it is aware of the project.

(g) An erosion, sedimentation and pollution control plan, where applicable.

(h) Proposed mitigation, if any, for the buffer disturbance and a restoration and revegetation plan, if applicable.

(i) Any other reasonable information related to the project that the Division may deem necessary to effectively evaluate the variance request. Division shall determine if this information is needed within 20 business days of receipt.

(j) Application shall be on forms provided by the Division by 1-1-05.

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

(a) For non-trout waters, a copy of the permit application, supporting documentation, and proposed mitigation plan, if applicable, as submitted to 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, if applicable.

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

(c) A plan for stormwater control once site stabilization is achieved, where applicable.

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

(1) For variance requests under Section (2)(i), the application must include documentation that post-development conditions of the project will meet the four primary (water quality, downstream channel protection, overbank flood protection, and extreme flood protection) performance requirements in the Georgia Stormwater Management Manual or the equivalent.

(2) If the proposed variance is in, or within 10 linear miles of and upstream 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), the application must include predicted pollutant loading under pre- and post-development conditions as estimated by models accepted by the Division. In addition, the applicant must document how the proposed project is in compliance with the TMDL implementation plan, if available, as required in Subsection 391 -3-7-.05(5)(i).

(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) The shape, size, topography, slope, soils, vegetation and other physical characteristics of the property; and

(b) The locations of all state waters on the property as determined from field inspection; and

(c) The location and extent of buffer intrusion; and

(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; and

(e) Where the buffer impact is temporary, the buffer restoration plan is low or no maintenance, and the plan provides net gain in buffer valuelfunction (i.e. water quality, floodplain, watershed, ecological perspectives), the application will be approved unless the Director declines the application based on the exceptional existing buffer valuelfunction; and

(f) Whether issuance of the variance is at least as protective of natural resources and the environment, and including wildlife habitat; and

(g) 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;

3. Stream characteristics such as bank vegetative cover, bank stability, prior channel alteration, or sediment deposition; and

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

(i) 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: and

(j) The long-term water quality impacts of the proposed variance, as well as the construction impacts. For applications made under Subsections 391-3-7.05(2)(i) or 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 andlor 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.

3. Projects 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 send out a public advisory to all citizens and groups who request to receive the advisories. The applicant will then publish a notice in the legal organ of the local jurisdiction. The public advisory and public notice shall describe the proposed buffer modification, the location of the variance, where the public can go to review site plans, and where comments should be sent. The public shall have 30 days from the date of publication of the notice in the legal organ to comment on a variance proposal.

(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) Required mitigation 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;

2. Bioengineering of channels to reduce bank erosion and improve habitat;

3. Creation or restoration of wetlands;

4. Stormwater management 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 protects or improves water quality and/or aquatic wildlife habitat;

7. An increase in buffer width elsewhere on the property;

8. Mitigation required under a Clean Water Act Section 404 or Nationwide permit issued by the U.S. Army Corps of Engineers;

9. Those described in the most recent publication of the Georgia Stormwater Management Manual.

(e) Forms of mitigation which are not acceptable include:

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

2. Activities, which are already required by other federal, state and local laws, except as described in 391-3-7.05(7)(d) above. 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 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 demonstrating that the average annual flow in the stream is 25 gpm or less. There are two acceptable methods for making this determination.

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

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

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

(a) The total length of stream that is piped in any one property shall not exceed 200 feet.

(b) Any project that involves more than 200 ft of piping will require an individual variance for the entire project. The general variance may not be applied to a portion of a project; e.g., it is not permissible to pipe 200 ft of a stream under the general variance and seek an individual variance for an additional length of pipe.

(c) The downstream end of the pipe shall terminate at least 25 ft before the property boundary.

(d) The applicant for a Land Disturbing Activity Permit shall notify the appropriate issuing authority of the precise location and extent of all streams piping as part of the land disturbing activity permit application. The issuing authority (if other than the Division) shall compile this information and convey it to the Division annually.

(e) Where piping of a stream increases the velocity of stream flow at the downstream end of the pipe, appropriate controls shall be employed to reduce flow velocity to the predevelopment level. Plans for such controls must be submitted as part of the land disturbing activity permit.

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History. Original rule, entitled "Minimum Requirements", was filed on April 6, 1977; effective April 26, 1977.. Repealed: New Rule entitled "Land Disturbing Activities Within the 100 Year Flood Plain" adopted. F. December 12, 1989, eff. January 1, 1990. Repealed: New Rule entitled "Buffer Variance Procedures and Criteria" adopted F. October 31, 2000, eff. November 22, 2000. Amended: Filed December 12, 2000, eff. January 1, 2001. Amended: F. November 5, 2003, Eff. November 25, 2003. Amended: F December 20, 2004, Eff. January 10,2005.

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.

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History. Original rule, entitled "Inspection and Enforcement", was filed on April 6, 1977; effective April 26, 1977.. Amended: Filed July 16, 1981: effective August 5, 1981. Repealed: New Rule retitled "Retention of Undisturbed Vegetative Buffer" adopted. F. December 12, 1989, eff. January 1, 1990. Repealed: Rule retitled "Turbidity Limits for Stormwater Runoff Discharges " F. October 31, 2000, eff. November 22, 2000. Amended: F. November 5,2003, Eff. November 25,2003.

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 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 assigned official duties.

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History. Original rule, entitled "Enforcement", was filed on April 6, 1977; effective April 26, 1977.. Amended: Rule repealed and a new Rule of the same title adopted. Filed July 16, 1981: effective August 5, 1981. Repealed: New Rule entitled "Land Disturbing Activities within 100 feet (Horizontal) of Trout Streams" adopted. F. December 12, 1989, eff. January 1, 1990. Amended: Rule retitled "Inspection and Compliance" F. October 31, 2000, eff. November 22,2000. Amended: F. November 5,2003; Eff. November 25, 2003.

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.

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. AdministrativeHistory. Original rule, entitled "Permit Revocation", was filed on April 6, 1977; effective April 26, 1977. Amended: Rule repealed and a new rule entitled "Effective Daten adopted. Filed July 16, 1981 : effective August 5, 1981. Repealed: New Rule entitled "Turbidity Limits for Stormwater runoff Discharges" adopted. F. December 12, 1989, eff. January 1, 1990. F. October 31, 2000, eff. November 21, 2000. Amended: Rule re-titled "Enforcement" F. October 31, 2000, eff. November 22, 2000. Amended: F. November 5, 2003; Eff. November 25, 2003. Amended: F December 20,2004, Eff. January 10,2005.

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 provide 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.

(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 hislher 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.

Authority Ga. L. 1975, p. 994 et seq.; O.C.G.A. 12-2-24, 12-7-5. Administrative History. Original rule, entitled "Permit Revocation", was filed on April 6, 1977; effective April 26, 1977. Amended: Rule repealed and a new rule entitled "Inspection and Compliance" was renumbered from 391-3-7-.09 F Dec. 12, 1989; Eff. Jan 1, 1990. Repealed: F. Nov. 2, 2000, Eff. Nov. 22, 2000. Amended: new rule entitled "Local Issuintg Authorities" F. November 5, 2003, Eff. November 25, 2003

391-3-7.10 Site Visit Required.

(1) All applications shall contain a certification stating that the plan preparer or his o r 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."

Authority: O.C.G.A. Secs 12-2-24, 12-7-5, et seq. History: Original Rule entitled "Enforcement" was renumbered from 391-3-7.07 to 391-3-7-.lo. F: Dec. 12, 1989; Eff. Jan. 1, 1990. Repealed: F. Nov 2, 2000, Eff. Nov. 22, 2000. Amended: new rule entitled" Site Visit Required" F. November 5, 2003; Eff. November 25,2003.

NOTES

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

Georgia Department of Natural Resources
Environmental Protection Division
Watershed Protection Branch
NonPoint Source Program

This guidance is based on the Georgia Erosion and Sedimentation Control Rules (Rules), 391-3-7, promulgated under the Georgia Erosion and Sedimentation Act (Act), 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."

This guidance only addresses the identification of rivers, streams, creeks and branches that require a buffer. The State-mandated buffer requirements apply to all State Waters that require a buffer (i.e., have wrested vegetation by normal stream flow).

The definition of Normal Stream Flow that is used in this document 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.

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 site in order to identify State Waters as defined.

Step 3 Begin the inspection at one end of the potential State Waters and walk the entire length of the State Waters until it exits the property.

Step 4 Examine the drainage feature using this field guide to determine whether the feature is perennial, intermittent or ephemeral. If the drainage feature is determined to be perennial or intermittent, then a State-mandated buffer exists. If the drainage feature appears to be ephemeral then go to Step 5 to make a final determination. If the identified feature is a salt marsh, then Georgia Department of Natural Resources (DNR), Coastal Resources Division should be contacted for the delineation of the DNR jurisdictional line (point from which the buffer is measured).

Step 5 If base flows are present during the site inspection, the stream is either perennial or intermittent and will require a buffer. If the site is visited during a dry phase and base flows are not evident, the drainage may be ephemeral or intermittent. If there is no flowing water within 24 hours of a rain event, then the drainage feature is probably ephemeral. 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. In such conditions inspections must be accomplished by professionals trained or otherwise familiar with methods used to determine whether the stream is in a season when base flows may not be observable, or if the stream is ephemeral and simply flows in direct response to precipitation. The ephemeral stream guidance should be used to make the final determination as to whether the stream is ephemeral.

Step 6 If there is still a question about base flow after Step 5 is completed, then the "North Carolina Division of Water Quality Stream Identification Method, Version 3.0" (or most current version) should be used to verify whether or not base flow is present.

Step 7 The determination should be documented in writing.

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.

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, excavating, 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 ground water that enters the stream channel through the soil. This includes spring flows into streams. Direct runoff is the water entering stream channels promptly after rain falls or snow melts (Rule 391-3-7-.01(w)).

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" include 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(w)).

j. "Typical/Average Year" means a year in which the observed base flow and rainfall quantity is approximately equal to the long-term average.

k. "Wrested Vegetation" means movement of water that removes soil, debris and vegetation, creating a clear demarcation between water flow and vegetative growth.

Please note the following:

- The definition of Normal Stream Flow that appears in this 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 Erosion and Sedimentation Control Rules.** Refer to the Georgia Water Quality Control Rules (391-3-6-.03) for a listing of trout streams.

- Buffer requirements are included in the General NPDES Permit for Storm Water Discharges from Construction Activities.

- Contact DNR, Coastal Resources Division for guidance involving any land disturbing activity in marshland areas.

- 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.

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. Evidence of fluctuating high water marks (flood prone width) and/or sediment stained leaves, bare ground, and/or drift lines.

5. Evidence of soil and debris movement (scouring) in the stream channel. Leaf litter is usually transient or temporary in the flow channel.

6. Wetland or hydrophytic vegetation is 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 colors 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.

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 morpholgy is evident.

2. Evidence of fluctuating high water marks (flood prone width) and/or sediment deposits, sediment stained leaves, bare ground and/or drift lines.

3. Evidence of soil and debris movement (scouring) in the stream channel. Leaf litter is usually transient or temporary in the flow channel.

4. Wetland or hydrophytic vegetation is 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. In the coastal plain, the soils may be sandy with veins of black.

7. Presence of crayfish burrows or chimneys.

8. The presence of aquatic insects (in any life phase) or fish. (For help identifying insects as aquatic, use the GA Adopt-A-Stream Aquatic Macroinvertebrate Field Guide, www.georgiaadoptastream.com)

9. Presence of buttressed trees.

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. Fluctuating high water marks (flood prone width) and/or sediment transport are usually absent.
5. Evidence of leaf litter and/or small debris jams in the flow areas.
6. Usually sparse or no wetland (hydrophytic) vegetation present.
7. 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.

BRAIDED CHANNELS

Buffers for braided channels such as those pictured above are measured from the point where vegetation is wrested from the outside channel of the braided system.

CONCRETE CHANNEL

Concrete channels are examples of drainage features that usually do not require a buffer due to lack of "wrested vegetation."

NOTES

- This 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.
- Copies of the Georgia Erosion and Sedimentation Act (O.C.G.A. 12-7), the Erosion and Sedimentation Control Rules (391-3-7) and the Water Quality Control Rules (391-3-6) can be found at www.gaepd.org.

Contact Information:
Georgia Department of Natural Resources
Environmental Protection Division
Watershed Protection Branch
NonPoint Source Program
4220 International Parkway, Suite 101
Atlanta, GA 30354

Telephone: (404) 675-6240
FAX: (404) 675-6245
www.gaepd.org

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Insert Tab 4 – Vegetative BMPs

Back of Tab

Level II: Introduction to Design

Vegetative Practices for Erosion and Sedimentation Control

Level II: Introduction to Design

Education and Training Certification Requirements for Persons Involved with Land Disturbing Activities

Issued May 2009

1

Objectives

- Review the vegetative measures
- Understand the importance of:
  - Developing effective ES&PC plans
  - Site inventories
  - Preserving existing vegetation
  - Selecting proper vegetative measures
  - The sequence of components
  - Planning for the entire year
  - Maintenance of installed practices

2

Key Points

- Excess soil erosion is not inevitable
- Vegetation can reduce soil erosion
- ES&PC plans are important
- Proper planning is required for success
- All ES&PC plans should be different
- ES&PC plans should not be an afterthought
- ES&PC is a system (vegetative/structural/management)
- Adequate maintenance is required

3

Benefits of Vegetation

in Erosion and Sedimentation Control

- Intercepts raindrops
- Reduces detachment
- Slows runoff
- Cleans runoff
- Reduces runoff
- Increases infiltration
- Protects structures, rivers, streams, and ponds
- Reduces maintenance of structural practices
- Improves aesthetics, soil quality, and wildlife habitat

4

Construction Sites are inhospitable for vegetative growth

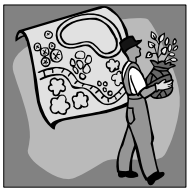
- Topsoil is removed
- Steep slopes
- Low soil moisture
- Low soil fertility
- Acidic soils
- Concentrated flow
- Compacted soils

Intensive treatment is needed.
Pasture planting methods are not effective.

5

Vegetative Practices

"Manual for Erosion and Sediment Control in Georgia"



- Bf Buffer Zone
- Cs Coastal Dune Stabilization
- Ds1 Mulching Only
- Ds2 Temporary Seeding
- Ds3 Permanent Seeding
- Ds4 Sodding
- Du Dust Control
- Mb Matting and Blankets
- Pm Polyacrylamide
- Sb Streambank Stabilization
- Tb Tackifiers and Binders

6

Bf Buffer Zone

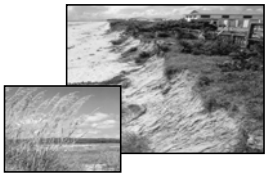
Undisturbed or planted vegetative strip

•General Buffer – surround sites
•Vegetated Stream Buffer – border streams

- Filter sediment & other pollutants
- Reduce runoff velocities
- Stabilize stream banks
- Provide flood protection
- Improve fish/wildlife habitat
- Reduce construction noise
- Improve aesthetics

Cs Coastal Dune Stabilization (with Vegetation)

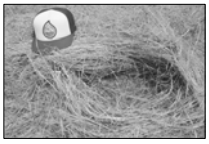
Planting vegetation on denuded, constructed, or re-nourished dunes



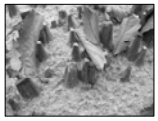
- **Permits (local/state/federal)**
- **Fertilization**
- **Planting**
- **Irrigation**
- **Sand fences**
- **Protection from traffic**
- **Maintenance**

Ds1 Disturbed Area Stabilization (With Mulching Only)

Applying plant residues or other suitable materials to protect **disturbed soil**



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



Ds1 - Mulching Only

- On exposed areas **left idle for 14 days**
- Apply at the **appropriate depth**
- Must be **anchored**
- Maintain cover on **90% or more** of the soil surface
- Can be used alone for **up to 6 months**

10

Ds2 Disturbed Area Stabilization (With Temporary Seeding)

Establishing fast growing vegetation for seasonal soil protection

- Reduce soil erosion
- Reduce runoff
- Increase infiltration
- Improve aesthetics
- Improve soil quality
- Improve wildlife habitat

Browntop millet

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Required Temporary Seeding

- Rough graded areas
- Diversions
- Sides of temporary basins
- Stockpiled soil
- Temporary dams

12

Ds2 - Temporary Seeding

- On all exposed areas **left idle for 14 days**
- Maintain **90% or more** cover
- Can use alone for **up to 6 months**
- Use **permanent vegetation** if protection is needed **>6 months**

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Common Plants used for Temporary Cover

Warm season annuals	Cool season annuals
-brown top millet	-rye
-pearl millet	-ryegrass
-sudan grass	-wheat

- Some perennials, such as tall fescue and common bermuda, may also provide quick cover if planted properly

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Ds3 Disturbed Area Stabilization (with Permanent Vegetation)

Planting perennial vegetation (grasses, legumes, vines, shrubs, and trees) on exposed areas

1. Final permanent stabilization
2. Seasonal protection >6 months

15

Ds3 Permanent Vegetation

Vegetative plans are based on site conditions.

- Site location
- Soil characteristics
- Topography
- Concentrated water flow
- Planned land use
- Soil fertility
- Soil pH

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Ds3 Components

Grading and shaping
Lime
Fertilizer
Seedbed preparation
Species selection
Seeding rates
Seeding dates

Inoculants
Planting method
Seeding depth
Mulch
Anchoring mulch
Irrigation
Maintenance

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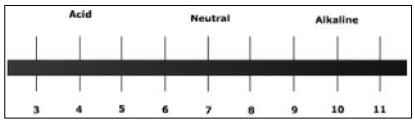
Soil Acidity (pH)



- Affects plant growth
- Almost all soils in Georgia are acidic
- Most plants used need a soil pH of 6.0 - 6.5
- 1 – 2 T/A of agricultural lime initially
- Maintenance lime applications are needed

18

Agricultural Lime

- Does <u>not</u> move rapidly in the soil
- Can be lost in runoff

<u>Conventional planting</u> – apply immediately before seedbed preparation

<u>Hydro-seeding</u> - apply (1) after straw/hay mulch, (2) with topdressing, or (3) with 2nd year fertilizer

19

Fertilization

1. **Initial** – immediately before or at planting
2. **Topdressing** – 6 to 8 weeks after planting
3. **2nd year** – the year after planting
4. **Maintenance** – each year

- **Don't "plant it and forget it"**
- **Fertilize based on target species**
- **Recommendations are in the *"Manual"***

20

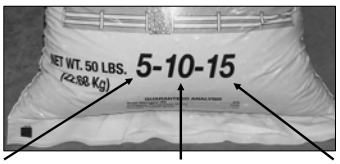
Fertilizer

Q. What do the numbers mean?

A. The fertilizer analysis

21

Fertilizer Analysis



% Nitrogen **% Phosphorous** **% Potassium**

This 50 LB bag contains 30% plant food (15 LB) and 70% filler.

22

Fertilizer

Selection is based on needs of the target species

Initial fertilizer

Ammonium nitrate
(N topdressing for grasses)

For legumes

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Fertilizer for <u>Grasses</u>

	<u>Analysis</u>
Initial	**N - P - K**
Topdressing	**N**
Second Yr.	**N - P - K**
Maintenance	**N - P - K**

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Fertilizer for Grass/Legume Mixtures

	Analysis
Initial	**N - P - K**
Topdressing	**N**
Second Yr.	*** - P - K**
Maintenance	*** - P - K**

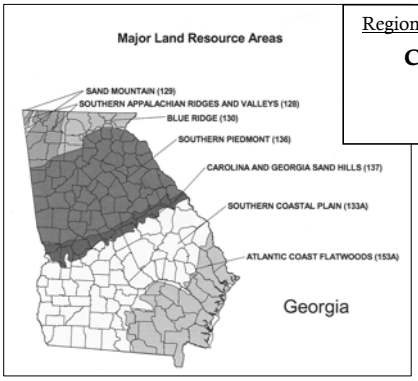
***The desired species are legumes**
***Legumes get ample N from bacteria if the seed are inoculated properly**

25

Seedbed Preparation

- A depth of 4 to 6 inches
  - Incorporate lime and fertilizer
  - Provides seed-to-soil contact
- Critical for good plant growth
  - Provides better root growth
  - Good plant cover requires a good root system
- Not normally needed for hydro-seeding

26



Regional variations:
Climate
&
Soils

27

Seeding Rates for a Quality Stand

- Under-seeding **reduces** the stand
- Over-seeding creates excessive demand for moisture, nutrients, light, and space

More is not always better

More seed will not overcome poor planting techniques

28

Species	PLS [1/] Seeding Rate[2/] LB/AC	Seed/LB	Seed/Sq. Ft.
Common bermuda	**10**	**1,800,000**	**410**
Weeping lovegrass	**4**	**1,500,000**	**140**
Tall fescue	**50**	**227,000**	**260**
Bahia	**60**	**166,000**	**230**
Sericea lespedeza	**60**	**350,000**	**480**

[1/] PLS = Pure Live Seed [2/] Seeding rate when seeded alone 29

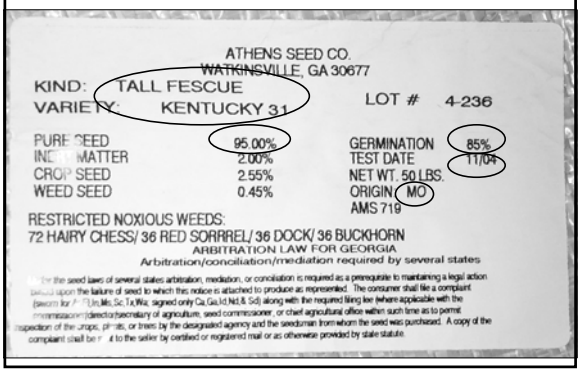
All seed are not equal.

Q. How do we determine how much of a particular seed to plant?

A. Use pure live seed (PLS) rates.
The rates are easy to calculate.

30

Seed Label



ATHENS SEED CO.
WATKINSVILLE, GA 30677

KIND: TALL FESCUE
VARIETY: KENTUCKY 31

LOT # 4-236

PURE SEED	95.00%	GERMINATION	85%
INERT MATTER	2.00%	TEST DATE	11/04
CROP SEED	2.55%	NET WT. 50 LBS.	
WEED SEED	0.45%	ORIGIN	MO
		AMS 719	

RESTRICTED NOXIOUS WEEDS:
72 HAIRY CHESS/ 36 RED SORRREL/ 36 DOCK/ 36 BUCKHORN
ARBITRATION LAW FOR GEORGIA
Arbitration/conciliation/mediation required by several states

For the seed laws of several states arbitration, mediation, or conciliation is required as a prerequisite to maintaining a legal action based upon the failure of seed to which this notice is attached to produce as represented. The consumer shall file a complaint (sworn for [illegible]) along with the required filing fee (where applicable with the commissioner/director/secretary of agriculture, seed commissioner, or chief agricultural office within such time as to permit inspection of the crops, plants, or trees by the designated agency and the seedsman from whom the seed was purchased. A copy of the complaint shall be [illegible] to the seller by certified or registered mail or as otherwise provided by state statute.

Pure Live Seed (PLS) Calculations

Step 1: Get information from seed label:

-tall fescue seed
-95% purity
-85% germination

Step 2: Calculate the PLS value of the seed:

PLS = 0.95 x 0.85 = 0.81 or 81%

Step3: Calculate the seeding rate:

50 #/AC = 62 #/AC are needed
0.81

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Optimum planting dates for Warm Season Plants

Plant common bermuda and weeping lovegrass in the early spring:

April 1 - May 15

This permits germination, root growth, and plant development prior to the hot and dry summer.

33

Optimum planting dates for Cool Season Plants

Plant rye, ryegrass, and tall fescue in <u>early fall</u>:

September 1 - October 15

This permits germination, root growth, and plant development prior to the winter cold and spring drought.

34

Plan for the Entire Year

- Construction completion dates are unpredictable
  - Schedules not always met
  - Weather and breakdowns cause delays
- Time of year affects plant selection and performance
  - For both temporary and permanent vegetation
  - Seeding plans should vary throughout the year
- Be prepared for all seasons

35

For each plan, develop a year-round seeding plan

- Here is one example of a year-round seeding plan:

<u>January 1 – March 1</u>

-Common Bermuda grass

5 LB/AC unhulled <u>and</u>
5 LB/AC hulled

&

-Rye

½ BU/AC (28 LB)

36

March 2 – June 1

-Common Bermuda grass

10 LB/AC hulled

June 2 – September 1

-Common Bermuda grass

5 LB/AC hulled and

5 LB/AC unhulled

&

-Browntop millet

10 LB/AC

37

September 2 – December 31

-Common Bermuda grass

10 LB/AC unhulled

and

-Rye

½ BU/AC (28 LB)

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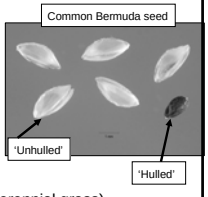
Some seed germinate (sprout) slowly.

- Some seed coats prevent water absorption
  - Expands the germination period
  - Nature's way to ensure species survival
- 'Hulled' seed
  - Outer seed coat is removed mechanically
  - Allows water to enter the seed quicker
  - Faster seed germination



Example: **Common Bermuda** (a warm season perennial grass)

- Use hulled seed for spring/summer plantings for quick cover
- Use unhulled seed in fall and winter plantings
  (The seed coat will be altered by Nature during the winter.)
- Another option: Use a 50-50 mixture of hulled and unhulled seed to better ensure successful establishment

39

Some seed germinate slowly, even when hulled.


Sericea lespedeza seed

- 'Hard' seed are nearly impervious to water
- 'Hard' seed may remain dormant a long time
- **Scarification** overcomes seed coat dormancy
  - Scratches, softens, punctures, or splits the seed coat w/o embryo damage
  - Enables seed to absorb more water
  - Scarified seed will sprout faster and provide quicker cover

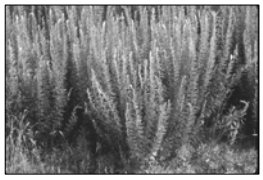
Example: **Sericea lespedeza** (a warm season perennial legume)

- Use scarified seed for spring/summer plantings
- Use unscarified seed for fall and winter plantings
  (The seed coat will be altered by Nature during the winter.)

40

For plants that develop slowly, companion plants are needed.


Sericea lespedeza emerging in weeping lovegrass


Sericea lespedeza 2-3 years later

Other examples are bahia grass and crown vetch.

41

Limit Seeding Rates of Companion Plants

- Annuals are more vigorous and grow faster
- Compete for nutrients, moisture and space

42

Cool Season Companion Plants

Rye is the best winter annual.
It grows best in cold, acidic soils.
Use ½ BU/AC (28 LB).

Do not use ryegrass in seeding mixtures. It is sod forming and too competitive.

Mulch is very important!

Dry straw - 2 T/A

or

Dry hay - 2 ½ T/A

This will cover about 75% of the soil surface

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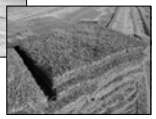
Ds4 Disturbed Area Stabilization (with Sodding)

- Establish immediate ground cover with permanent sod
- Effective on steep slopes and in concentrated flow areas

Cimarron Valley Sod



Sod Solutions

Components:
-soil preparation
-topsoil
-lime
-fertilizer
-anchoring (>3:1 slope)
-irrigation
-maintenance

45

Du Dust Control

Controlling surface and air movement of dust

- Temporary
  - Temporary plantings
  - Tackifiers/binders
  - Mulch
  - Rough tillage
  - Irrigation
  - Barriers
  - Calcium chloride
- Permanent
  - Permanent vegetation and stone

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Mb Erosion Control Matting and Blankets

Protective coverings used to establish permanent vegetation

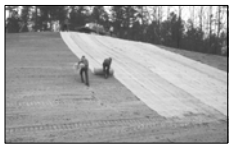
- Protects young plants
- Promotes plant establishment
- Helps reduce erosion

-Temporary and permanent blankets
-All must be approved by GDOT

47

Mats and Blankets

- Slopes steeper than 2.5:1 and 10’ high or higher
- Concentrated flow areas
- Cuts and fills within stream buffers
- Streambanks
- Tidal shorelines
- Other areas



48

Blankets must be anchored.
Start at top of slope and work down.

49

Pm Polyacrylamide (PAM)

Land application of *anionic* polyacrylamide as temporary soil binding agent

- To reduce erosion from wind and water
- When establishment of vegetation not feasible
- Site specific material
- Repeat application if area is disturbed
- Do not apply to surface water

50

Sb Streambank Stabilization (using Permanent Vegetation)

Using native plant material to maintain or enhance streambanks

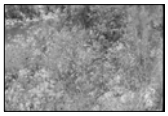
Before

After

51

Sb Streambank stabilization (using Permanent Vegetation)

- Intensive planning
- Native plant materials
- With structural measures
- Labor intensive
- Local, State and Federal permits
- Specialists may be needed



Tb Tackifiers and Binders

Used to anchor straw or hay mulch

- Holds mulch in place
- Options in "*Manual*"

53

Tp Topsoiling

Stripping, storing, and using topsoil as topdressing prior to seeding and sodding

- **Reduces lime and fertilizer needs**
- **Greatly improves plant growth**

Purposes of an ES&PC Plan

1. Describe potential problems on a site
2. Explain and schedule measures

Good planning is required to prevent excess soil erosion and sedimentation

The prevention process starts with a good plan!

55

How long should an ES&PC plan be?

- Depends on:
  - Site conditions
  - Size of the project
  - Potential for on-site and off-site damages

56

Specialists may be needed

- Assistance with ES&PC plans
  - Severe problems
  - Streambanks
  - Coastal dunes
  - Other concerns

57

Site Inventory

- Visit and inventory the entire site
- Consider
  - Soils
  - Topography
  - Existing cover
  - Drainage patterns
  - All adjacent areas - streams, homes, and roads - especially those down hill from the site

58

Once familiar with the site

- You can identify the areas with the highest erosion potential

- You can develop an effective ES&PC plan

59

Vegetative Cover - Most important tool to reduce soil erosion and runoff

- Consider the existing cover
- Some vegetation is more effective, but all cover helps reduce soil erosion

- Good planning reduces vegetation costs

60

Trees - Protect those to be left

- Limit equipment and vehicular traffic under tree canopies
- Limit fill around trees
  - If fill covers a tree's swollen base, it will probably die within 1-2 years

61

Easier to reduce erosion than trap sediment

- Reduce the erosion hazard
  - Limit the time the soil is bare
  - Do not clear entire site at one time, if possible
  - Do land clearing in stages
  - Use temporary cover and mulching to stabilize disturbed areas before clearing more

62

Plant Selection

- Land use
- Suitability to site
- Time of year planted
- Planting methods
- Maintenance requirements
- Aesthetics

63

Plant Selection

- **Sericea lespedeza** - not good for lawn
- **Weeping lovegrass** - not good for lawn
- **Tall fescue** - not good for athletic field
- **Ryegrass** - not good choice for nurse crop
- **Choose plants that:**
  -provide quick and dependable soil protection
  -will not be a pest later
  -require the least maintenance
  -are native to the area, if possible

64

Management Measures

- Zero cost
- Plan work in logical sequence
- Keep materials on hand to limit delays
- Prepare for thunderstorms, especially in summer

65

"Manuals"

- Minimum criteria for planning, installation, and maintenance
- Treating severe problems requires much more

66

Components of Measures

- Each measure has many components
- Follow a logical sequence

67

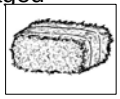
Temporary Cover - **Conventional Seeding Methods**

1. Select plants
   - location/site/land use/time of year/maintenance
2. Apply agricultural lime
3. Apply initial fertilizer
4. Prepare seedbed to depth of 4 – 6 inches
5. Determine accurate seeding rates
6. Evenly distribute seed with drill or other method

68

Temporary Cover - **Conventional Seeding Methods**

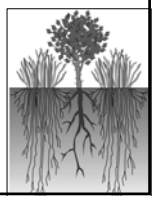
7. Apply mulch or blankets within 24 hours
8. Anchor all mulch materials immediately
9. Apply topdressing fertilizer 6 – 8 weeks later
10. Repair, reseed, and mulch damaged areas
11. Maintain cover for desired time



69

Permanent Cover - **Conventional Seeding Methods**

1. Select target plant
   - location, land use, site, time of year, maintenance, etc.
2. Determine if seeding mixtures are needed
3. Apply agricultural lime
4. Apply initial fertilizer
5. Prepare seedbed to depth of 4 – 6”



Permanent Cover - **Conventional Seeding Methods**

6. Determine accurate seeding rates
7. Inoculate all legume seed
8. Evenly distribute seed with drill or other method
9. Apply mulch or blankets within 24 hrs.
10. Anchor all mulch materials immediately
11. Apply topdressing fertilizer 6 – 8 weeks later
12. Apply second year fertilizer year after seeding
13. Apply maintenance fertilizer each year

71

Permanent Cover - **Conventional Seeding Methods**

14. Apply maintenance lime every few years
15. Protect from vehicular traffic
16. Mow properly as needed
17. Maintain cover for desired time
18. Repair/reseed/mulch damaged areas

72

Temporary Cover - **Hydro-seeding Methods**

1. Select target plant
   - site, land use, location, time of year, maintenance, etc.
2. Determine accurate seeding rates
3. Mix seed, initial fertilizer, and wood cellulose or paper mulch in a slurry
4. Evenly distribute the slurry within 1 hour
5. Apply straw/hay mulch/blankets within 24 hours
6. Anchor all mulch materials immediately

73

Temporary Cover - **Hydro-seeding Methods**

7. Apply agricultural lime
   -after mulching or with topdressing fertilizer
8. Apply topdressing fertilizer 6 – 8 weeks later
9. Maintain cover for desired time
10. Repair, reseed, and mulch damaged areas

74

Permanent Cover - **Hydro-seeding Methods**

1. Select plant
   - location, site, land use, time of year, and maintenance
2. Decide if seeding mixtures will be used
3. Determine accurate seeding rates
4. Inoculate all legume seed with proper bacteria
5. Mix seed, initial fertilizer, and wood cellulose or paper mulch in a slurry
6. Evenly distribute the seed within 1 hour

75

Permanent Cover - **Hydro-seeding Methods**

7. Apply straw/hay mulch/blankets within 24 hrs.
8. Anchor all mulch materials immediately
9. Apply agricultural lime
   (a) after mulching
   (b) with topdressing fertilizer, or
   (c) with 2nd year fertilizer
10. Apply topdressing fertilizer 6 – 8 weeks later

76

Permanent Cover - **Hydro-seeding Methods**

11. Apply second year fertilizer year after seeding
12. Apply maintenance fertilizer each year
13. Apply maintenance lime every few years
14. Protect from vehicular traffic
15. Mow properly and as needed
16. Maintain cover for desired time
17. Repair/reseed/mulch damaged areas as soon as possible

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Plan for Maintenance

Very important!
Begins when first measure is installed

- Schedule maintenance for each practice
- Specify each maintenance component
- Inspections also identify maintenance needs
- Complete repairs immediately
- Apply additional practices if needed

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Planning is Dynamic

- Site Inventory
- Make Decisions
- Application
- Maintenance
- Monitoring
- Revise plan and add practices if needed

79

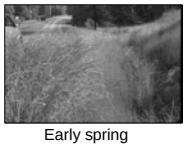
Visual observations are valuable

80

81

Plant identification is important!

Rye



← **Ryegrass** →

Early spring

Late spring-summer

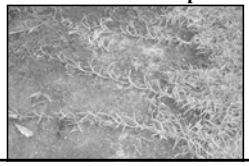
83

Bahia

Bermuda

Browntop millet

Centipede



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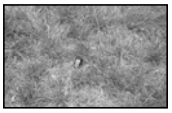
Tall fescue



Weeping lovegrass

Reed Canary Grass

Big Bluestem

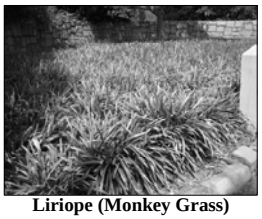
86

Indiangrass

Switchgrass

87

Daylilies



Liriope (Monkey Grass)

Junipers

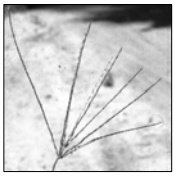
88

Crown vetch

Maximilian sunflower

89

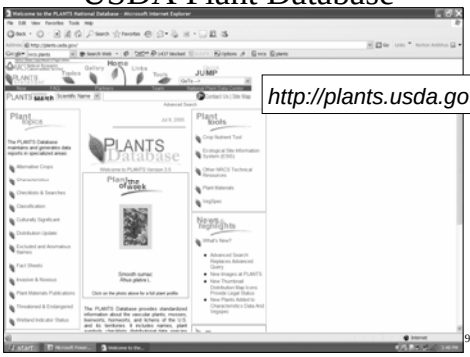
Crabgrass



- A weed – <u>not</u> an approved plant species

90

USDA Plant Database



http://plants.usda.gov/

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Cover is needed

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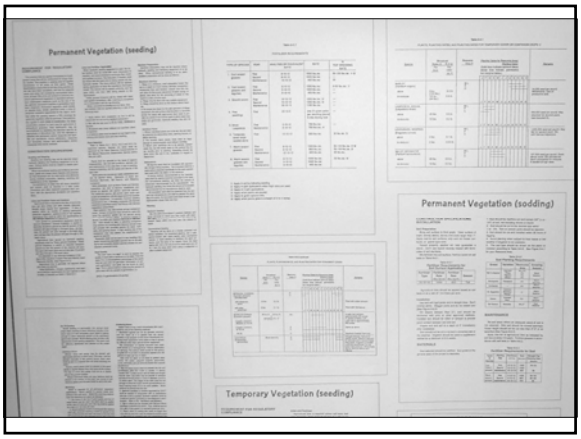

ES&PC Plan for south of Atlanta

Ds1 Ds2 Ds3 PLANTS, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER (4)

SPECIES *	BROADCAST APPLICATION RATES (2) PER ACRE	PLS (3) PER 1000 SQ. FT.	RESOURCE AREA (4)	PLANTING DATES BY RESOURCE AREA (SOLID LINES INDICATE OPTIMUM DATES, DOTTED LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.) J F M A M J J A S O N D	REMARKS
MILLET, PEARL (PENNISETUM GLAUCUM) ALONE	50 LBS.	1.1 LB.	M - L		80,000 SEED PER POUND. QUICK DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.
RYE (SECALE CEREALE) ALONE	3 BU. (168 LBS.)	3.9 LB.	M - L		18,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT AND WINTERHARDY.
IN MIXTURES	1/2 BU. (28 LBS.)	0.6 LB.			
RYEGRASS, ANNUAL (LOLIUM TEMULENTUM) ALONE	40 LBS.	0.9 LB.	M - L		227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.
SUDANGRASS (SORGHUM SUDANESE) ALONE	60 LBS.	1.4 LB.	M - L		55,000 SEED PER POUND. GOOD ON DROUGHTY SITES. NOT RECOMMENDED FOR MIXTURES.

(1) TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF SEEDED TOO HEAVILY.
(2) REDUCE SEEDING RATES BY SAFE WHEN DRILLED.
(3) PLS = PURE LIVE SEED
(4) M-L REPRESENTS THE MOUNTAIN BLUE RIDGE; AND, RIDGES AND VALLEYS MLRA.

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SUBSOIL AND SUBSTRATA. FERTILITY IS LOW AND THE PHYSICAL CHARACTERISTICS OF THE EXPOSED MATERIAL ARE UNFAVORABLE TO ALL BUT THE MOST HARDY PLANTS.

TREATMENT SPECIFICATIONS

CONVENTIONAL SEEDING EQUIPMENT:
GRADE, SHAPE AND SMOOTH WHERE NEEDED TO PROVIDE FOR SAFE EQUIPMENT OPERATION AT SEEDING TIME AND FOR MAINTENANCE PURPOSES. THE LIME AND FERTILIZER IN DRY FORM WILL BE SPREAD UNIFORMLY OVER THE AREA IMMEDIATELY BEFORE SEEDBED PREPARATION. A SEEDBED WILL BE PREPARED BY SCARIEYING TO A DEPTH OF 1 TO 4 INCHES AS DETERMINED ON SITE. THE SEEDBED MUST BE WELL PULVERIZED, SMOOTHED AND FIRMED. SEEDING WILL BE DONE WITH CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER OR OTHER MECHANICAL OR HAND SEEDER. SEED WILL BE DISTRIBUTED UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. MULCH WILL BE SPREAD WITH BLOWER-TYPE MULCH EQUIPMENT OR BY HAD AND ANCHORED IMMEDIATELY AFTER IT IS SPREAD. A DISK HARROW WITH THE DISK SET STRAIGHT OR A SPECIAL PACKER DISK MAY BE USED TO PRESS THE MULCH INTO THE SOIL. THE PER ACRE APPLICATION RATES ARE AS FOLLOWS:

A. SEEDING WITH MULCH: (CONVENTIONAL SEEDING EQUIPMENT ON SLOPES LESS THAN 3:1).

AGRICULTURAL LIMESTONE	4000 LBS/ACRE
FERTILIZER (5-10-15)	1500 LBS/ACRE

Ds1 TEMPORARY STABILIZATION (MULCHING)

WHEN SEEDING WILL NOT HAVE A SUITABLE GROWING SEASON TEMPORARY STABILIZATION MAY BE ACCOMPLISHED WITH:

STRAW OR HAY-2.5 TONS/ACRE
WOOD WASTE, BARK, SAWDUST-2-3" DEEP
(APPROX. 6-9 TONS/ACRE)

Ds2 TEMPORARY SEEDING

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
WINTER RYE	1.5 - 2 LBS.	8/1-11/1, 3/1-6/1	1 TON/ACRE
*WEEPING LOVEGRASS	2-3 LBS.	3/1 - 8/1	1 TON/ACRE

*HYDROSEED ON ALL 2:1 (H:V) SLOPES.

FERTILIZER (LBS./ACRE)			
SPECIES	N	P2O5	K2O
WINTER RYE	60 - 90	120 - 180	120 - 180
*WEEPING LOVEGRASS	60 - 90	120 - 180	120 - 180

Ds3 PERMANENT SEEDING

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
HULLED BERMUDA	2 LBS.	10/1 - 3/1	1 TON/ACRE
UNHULLED BERMUDA	2 LBS.	2/15 - 6/15	1 TON/ACRE
FESCUE	5 - 10 LBS.	9/1 - 11/1	1 TON/ACRE

FERTILIZER (LBS./ACRE)			
SPECIES	N	P2O5	K2O
HULLED BERMUDA	60 - 90	120 - 180	120 - 180
UNHULLED BERMUDA	60 - 90	120 - 180	120 - 180
FESCUE	60 - 90	120 - 180	120 - 180

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Ds1 TEMPORARY STABILIZATION (MULCHING)

WHEN SEEDING WILL NOT HAVE A SUITABLE GROWING SEASON TEMPORARY STABILIZATION MAY BE ACCOMPLISHED WITH:

STRAW OR HAY–2.5 TONS/ACRE
WOOD WASTE, BARK, SAWDUST–2–3" DEEP
(APPROX. 6–9 TONS/ACRE)

97

Ds1 TEMPORARY STABILIZATION (MULCHING)

WHEN SEEDING WILL NOT HAVE A SUITABLE GROWING SEASON TEMPORARY STABILIZATION MAY BE ACCOMPLISHED WITH:

STRAW OR HAY–2.5 TONS/ACRE
WOOD WASTE, BARK, SAWDUST–2–3" DEEP
(APPROX. 6–9 TONS/ACRE)

98

Ds2 TEMPORARY SEEDING

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
WINTER RYE	1.5 – 2 LBS.	9/1–11/1, 3/1–8/1	1 TON/ACRE
*WEEPING LOVEGRASS	2–3 LBS	3/1 – 8/1	1 TON/ACRE

*HYDROSEED ON ALL 2:1 (H:V) SLOPES.

FERTILIZER (LBS./ACRE)			
SPECIES	N_2	P_2O_2	K_2O_2
WINTER RYE	60 – 90	120 – 180	120 – 180
*WEEPING LOVEGRASS	60 – 90	120 – 180	120 – 180

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Ds2 TEMPORARY SEEDING

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
WINTER RYE	1.5 – 2 LBS.	9/1–11/1, 3/1–8/1	1 TON/ACRE
*WEEPING LOVEGRASS	2–3 LBS	3/1 – 8/1	1 TON/ACRE

*HYDROSEED ON ALL 2:1 (H:V) SLOPES.

FERTILIZER (LBS./ACRE)			
SPECIES	N_2	P_2O_2	K_2O_2
WINTER RYE	60 – 90	120 – 180	120 – 180
*WEEPING LOVEGRASS	60 – 90	120 – 180	120 – 180

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Ds2 TEMPORARY SEEDING

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
WINTER RYE	1.5 – 2 LBS.	9/1–11/1, 3/1–8/1	1 TON/ACRE
*WEEPING LOVEGRASS	2–3 LBS	3/1 – 8/1	1 TON/ACRE

*HYDROSEED ON ALL 2:1 (H:V) SLOPES.

FERTILIZER (LBS./ACRE)			
SPECIES	N_2	P_2O_2	K_2O_2
WINTER RYE	60 – 90	120 – 180	120 – 180
*WEEPING LOVEGRASS	60 – 90	120 – 180	120 – 180

1 acre = 43,560 sq. ft.

or 43.56 (1,000 sq. ft.)

2# x 43.56 = 87 #/ac

3# x 43.56 = 131 #/ac

101

Ds2 TEMPORARY SEEDING

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
WINTER RYE	1.5 – 2 LBS.	9/1–11/1, 3/1–8/1	1 TON/ACRE
*WEEPING LOVEGRASS	2–3 LBS	3/1 – 8/1	1 TON/ACRE

*HYDROSEED ON ALL 2:1 (H:V) SLOPES.

FERTILIZER (LBS./ACRE)			
SPECIES	N_2	P_2O_2	K_2O_2
WINTER RYE	60 – 90	120 – 180	120 – 180
*WEEPING LOVEGRASS	60 – 90	120 – 180	120 – 180

Fertilizer rates for temporary cover are much less than for permanent cover

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Ds3 PERMANENT SEEDING

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
HULLED BERMUDA	2 LBS.	10/1 – 3/1	1 TON/ACRE
UNHULLED BERMUDA	2 LBS.	2/15 – 6/15	1 TON/ACRE
FESCUE	5 – 10 LBS.	9/1 – 11/1	1 TON/ACRE

FERTILIZER (LBS./ACRE)			
SPECIES	N_2	P_2O_2	K_2O_2
HULLED BERMUDA	60 – 90	120 – 180	120 – 180
UNHULLED BERMUDA	60 – 90	120 – 180	120 – 180
FESCUE	60 – 90	120 – 180	120 – 180

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Ds3 PERMANENT SEEDING

4 oz.

SEEDING SCHEDULE			
SPECIES	RATE/1000 S.F.	DATES	LIME
HULLED BERMUDA	2 LBS.	10/1 – 3/1	1 TON/ACRE
UNHULLED BERMUDA	2 LBS.	2/15 – 6/15	1 TON/ACRE
FESCUE	5 – 10 LBS.	9/1 – 11/1	1 TON/ACRE

1.2 LB

FERTILIZER (LB			
SPECIES	N_2	P_2O_2	K_2O_2
HULLED BERMUDA	60 – 90	120 – 180	120 – 180
UNHULLED BERMUDA	60 – 90	120 – 180	120 – 180
FESCUE	60 – 90	120 – 180	120 – 180

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STANDARD VEGETATION (Ds4)

1. ALL NON PAVED AREAS SHALL BE SODDED WITH FESCUE PER THE LANDSCAPE PLAN.
   -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" (±1/4") OF SOIL, NOT INCLUDING SHOOTS OR THATCH.
   -SOD SHOULD BE CUT TO THE DESIRED SIZE WITHIN ±5%. TORN OR UNEVEN PADS SHOULD BE REJECTED.
   -SOD SHOULD BE CUT AND INSTALLED WITHIN 36 HOURS OF DIGGING.

2. THIS SOD SHALL BE PLACED IMMEDIATELY UPON THE COMPLETION OF GRADING WORK.
   -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 BEFORE PLACING SOD OR AS INDICATED BY SOIL TEST, AND EVERY 4-6 YEARS THEREAFTER.
   -FERTILIZE GRASSES IN ACCORDANCE WITH THE FOLLOWING TABLE OR IN ACCORDANCE WITH SOIL TESTS.

FERTILIZER REQUIREMENTS FOR SOD				
SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS./ACRE)	NITROGEN TOP DRESSING RATE (LBS./ACRE)
TALL FESCUE (COOL SEASON GRASS)	FIRST	6-12-12	1500	50-100
	SECOND	6-12-12	1000	------
	MAINTENANCE	10-10-10	400	30

Maintenance is important


Fertilizer and lime applications are needed.

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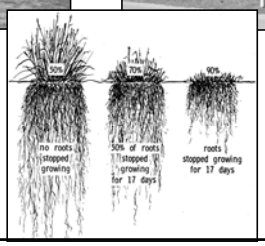
Mowing Problems



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Summary

- Vegetation can reduce soil erosion
- There are no “Cook Book Recipes”
  - -Site-specific planning is required
- List and explain components
- Plan for the entire year
- Plan for maintenance

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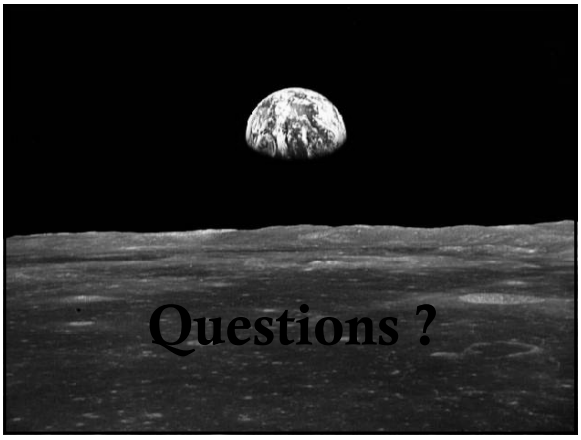
Questions ?

Insert Yellow Sheet

Back of Yellow Sheet

VEGETATIVE BEST MANAGEMENT PRACTICES

Bf

BUFFER ZONE

DEFINITION

An undisturbed or planted vegetative strip around a site or bordering a stream.

PURPOSE

- Filter sediment.
- Filter chemicals, nutrients, and germs.
- Reduce runoff velocities.
- Stabilize stream banks.
- Improve aesthetics.
- Improve fish and wildlife habitat.
- Reduce construction noise.
- Flood protection.

INSTALLATION

- Install according to approved plan, if shown.
- Mark vegetation to be retained with fencing or highly visible marks (tape, paint, etc.).
- See Section 12-7-6 of E&SC Law and local ordinances for minimum stream buffer widths.
- Three kinds of buffer vegetation are trees, shrubs and grasses.

Bf

- *A good buffer properly installed and maintained can filter out 85-95% of sediment in runoff.*
- *Good vegetative buffers are much more durable than sediment barriers and won't fail after a moderate storm.*

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

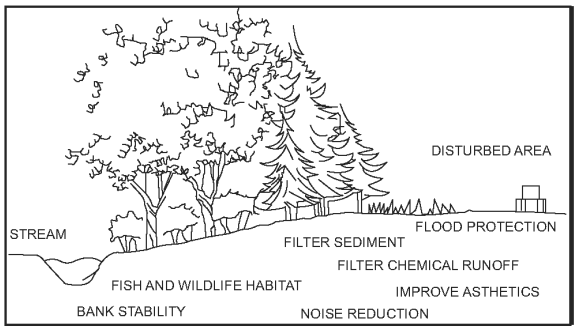

Figure 1. Some Benefits of a Riparian Buffer

Bf

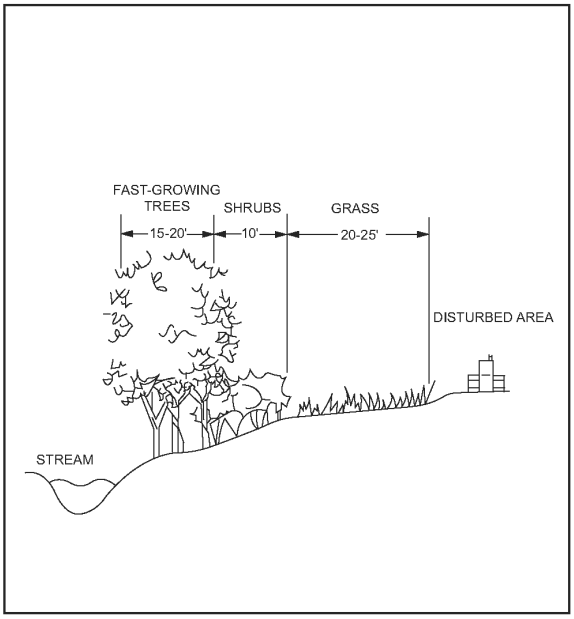

Figure 2. Typical Multi-Purpose Riparian Buffer for Urban Development

MAINTENANCE

- Lime and fertilize appropriately.
- Control weeds to promote desired vegetation.
- Use mulches when establishing new vegetation.
- Remove sediments when buffer effectiveness is reduced or lost.
- Protect trees and shrubs from wildlife and equipment.
- Check local ordinances for local buffer requirements.

Bf

REFERENCES

- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)
- Sb Streambank Stabilization (With permanent vegetation)

Cs

COASTAL DUNE STABILIZATION (WITH VEGETATION)

DEFINITION

Planting vegetation on bare dunes or where dunes are to be established.

PURPOSE

- Prevent dune erosion from wind or waves by planting vegetation.
- Provide for the development or enhancement of dunes.

INSTALLATION

- Install in accordance with an approved design/study.
- Install in accordance with all federal, state and local regulations.
- Protect dunes from vehicular and human traffic.
- Irrigate during the first year to obtain good survival.
- Mulch areas to be planted.
- 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
Marshhay Cordgrass (Spartina patens)	Plants	Spring	4"-5"
Bitter Panicum (Panicum amarum)	Rhizomes	Spring	Abt 4"
Coastal Panigrass (Panicum amarum v. amaralum)	Seeds or plants	Spring	1"-3"

Figure 1. Sand Fence and Native Plants

Sand Fences

- Install according to plans, if shown.
- Use posts made of Black Locust, Red or White Cedar, or similarly durable wood.
- Use posts with minimum length of 7 feet and minimum diameter of 3 inches.
- Space posts at a maximum of 10 feet.
- Entrench posts a minimum of 3 feet.
- Attach fence to posts with four 12-gauge galvanized wires.

Cs

- Vegetation must be established immediately following development of the dunes.
- Sand fences should be the same as commercially available snow fence approximately as shown in Figure 2.

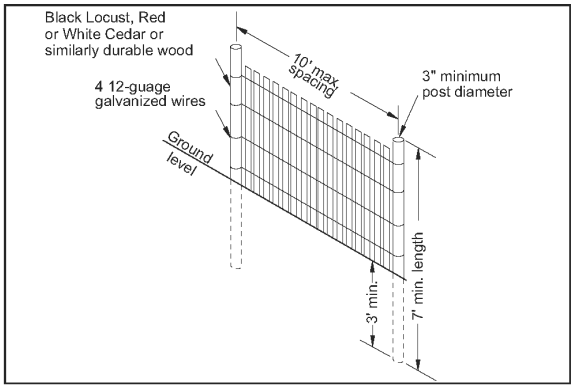

Figure 2. Sand Fence Installation Requirements

MAINTENANCE

- Blowouts and eroded areas should be repaired promptly.
- Add fencing, if needed, or use equipment to make repairs.
- Replant lost or destroyed vegetation.
- Apply 50 pounds of nitrogen/acre/year.
- Protect dunes from traffic by using paved paths, elevated or roll-up walks.

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Ds1

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DEFINITION

A temporary cover of plant residues applied to the soil surface for a period of six (6) months or less when seeding is not practical.

PURPOSE

- Reduce runoff, erosion, and sedimentation.
- Reduce dust.
- Conserve moisture.
- Prevent surface compaction and crusting.
- Control undesirable vegetation.

INSTALLATION

- Install all other required BMPs first.
- Grade site, if possible, to permit the use of equipment for applying and anchoring mulch.
- Loosen compacted soil, if possible, to a depth of three (3) inches.
- Apply straw or hay uniformly, as shown in Table 1, by hand or mechanical equipment, and anchor by pressing into soil or using netting.

Ds1

- Mulch on slopes greater than 3% should be anchored with emulsified asphalt (Grade AE-5 or SS-1) or other suitable tackifier.
- Wood waste on slopes flatter than 3:1 do not need anchoring.
- Mulch shall be applied to all disturbed areas left inactive for fourteen days.

Table 1. Mulching Application Requirements

Material	Rate	Depth
Straw or hay	-	2" to 4"
Wood waste, chips, sawdust, bark	-	2" to 3"
Cutback asphalt	1200 gal./acre, 1/4 gal./sq. yd. or See manufacturer's recommendations	---
Polyethylene film	Secure with soil, anchors, weights	---
Geotextiles, jute matting, netting, etc.	See manufacturer's recommendations	---

MAINTENANCE

- Add mulch as needed to maintain the suggested depth.
- If organic mulch is to be left and incorporated into the soil, apply 20-30 pounds of Nitrogen in addition to the fertilizer required for vegetation.

REFERENCES

- Mb Erosion Control Matting and Blankets

Ds2

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

DEFINITION

A temporary vegetative cover with fast growing seedings for up to a 12-month period or until permanent vegetation is established.

PURPOSE

- Reduce runoff, erosion, and sedimentation.
- Improve wildlife habitat.
- Improve aesthetics.
- Improve tilth and organic matter.

INSTALLATION

- Install all E&SC measures prior to applying temporary vegetation.
- Grading or shaping are not required if slopes can be planted with a hydroseeder or by hand-seeding.
- Seedbed preparation is not required if soil is loose and not sealed by rain.

- When the soil is sealed or crusted, it should be pitted, trenched or scarified to provide a place for seed to lodge and germinate.
- Agricultural lime is not required.
- Fertilize low fertility soils prior to or during planting at the rate of 500-700 pounds per acre of 10-10-10 fertilizer or equivalent (12-16 pounds/1000 square feet).
- It is imperative that you check the tag on the bag of seed to verify the type and germination of the seed to be planted.

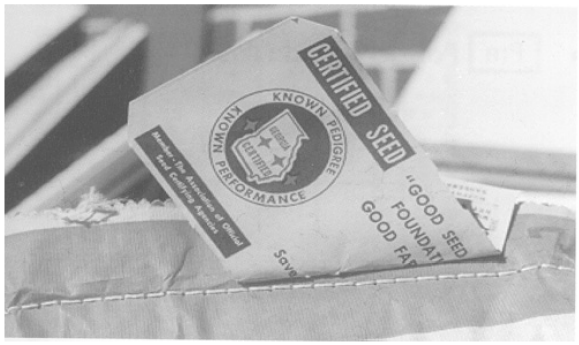


Figure 1. Typical Tag on Bag of Seed

- Apply seed by hand, cyclone seeder, drill or hydro-seeder. Seed planted with a drill should be planted 1/4"-1/2" deep. Refer to Pure Live Seed (PLS) in the Glossary.
- Apply in accordance with specifications on the E&SC plan. If information is not available, select a temporary cover from Table 1.
- Temporary cover shall be applied to all disturbed areas left idle for fourteen days. (If an area is left idle for 6 months, permanent cover shall be applied.)

MAINTENANCE

- Re-seed areas where an adequate stand of temporary vegetation fails to emerge or where a poor stand exists.

REFERENCES

- Mb Erosion Control Matting and Blankets
- Ds1 Disturbed Area Stabilization (With mulching only)
- Pm Polyacrylamide (PAM)

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.	4 lbs. 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

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 50.
4. Seeding rates are based on pure live seed (PLS).

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
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
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

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 50.
4. Seeding rates are based on pure live seed (PLS).

Ds2

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 Second Maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 --- 30
Cool season grasses & legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50 --- ---
Temporary cover crops seeded alone	First	10-10-10	500	30
Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

Ds3

DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)

DEFINITION

A permanent vegetative cover using grasses, trees, shrubs or legumes on highly erodible or critically eroded lands.

PURPOSE

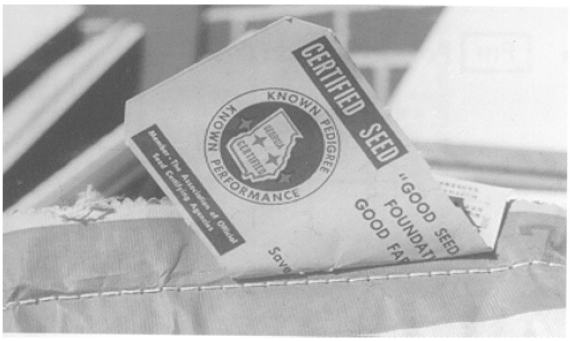
- Reduce runoff and erosion.
- Improve wildlife habitat.
- Improve aesthetics.
- Improve tilth and organic matter.
- Reduce downstream complaints.
- Reduce likelihood of legal action.
- Reduce likelihood of work stoppage due to legal action.
- Increase “good neighbor” benefits.

INSTALLATION

- Use conventional planting methods, if possible.
- Apply according to approved plan, if shown, or refer to Table 1.

- Check the tag on the bag of seed to verify the type and germination of the seed to be planted and the date of the test.

Figure 1. Typical Tag on a Bag of Seed



- Scarify, pit or trench sealed or crusted soil.
- Fertilize based on soil tests or as shown in Table 2.
- Apply agricultural lime as prescribed by soil tests or at a rate of 1 to 2 tons per acre.
- Apply seed by hand, cyclone seeder, drill or hydro-seeder. Seed planted with a drill should be planted 1/4"-1/2" deep.
- Straw or hay mulch shall be applied at a rate of 2 or 2.5 tons per acre.
- Irrigation should be used to supplement rainfall, but not to the extent to cause erosion.

Ds3

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
Bermuda Sprigs 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

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	
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.
Lespedeza, Sericea Scarified	60 lbs.	1.4 lbs.	4/1-5/31	3/15-5/31	3/1-5/15	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.

Ds3

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

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M-L	P	C	
Lespedeza, Sericea (cont.)						
Unscarified	75 lbs.	1.7 lbs.	9/1-2/28	9/1-2/28	9/1-2/28	Mix with Tall Fescue or winter annuals.
Seed-bearing hay	3 tons	138 lbs.	10/1-2/28	10/1-1/31	10/15-1/15	Cut when seed is mature but before it shatters. Add Tall Fescue or winter annuals.
Lespedeza, Ambro Virgata or Appalow						
Scarified	60 lbs.	1.4 lbs.	4/1-5/31	3/15-5/31	3/1-5/15	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.
Unscarified	75 lbs.	1.7 lbs.	9/1-2/28	9/1-2/28	9/1-2/28	

Ds3

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

Species	Rates per Acre	Rates per 1,000 sq. ft	Planting Dates by Region			Remarks
			M-L	P	C	
Lespedeza, Shrub (Lespedeza Bicolor or Lespedeza Thumbergii) Plants	3'x3' spacing		10/1-3/31	11/1-3/15	11/15-2/28	Plant in small clumps for wildlife food and cover.
Lovegrass, weeping						
Alone	4 lbs.	0.1 lbs.	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.
With other perennials	2 lbs.	0.05 lbs.				
Maidencane sprigs	2'x3' spacing		2/1-3/31	2/1-3/31	2/1-3/31	For very wet sites such as riverbanks and shorelines. Dig sprigs locally.
Panicgrass, Atlantic Coastal	20 lbs.	0.5 lbs.	---	3/1-4/30	3/1-4/30	Grows well on coastal sand dunes; mix with Sericea Lespedeza but not on sand dunes.

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	
Reed Canary Grass With other perennials	50 lbs. 30 lbs.	1.1 lbs. 0.7 lbs.	8/15-10/15	9/1-10/15	---	Grows similar to Tall Fescue; for wet sites.
Sunflower, Aztec Maximillian	10 lbs.	0.2 lbs.	4/15-5/31	4/15-5/31	4/1-5/31	Mix with Weeping Lovegrass or other low growing grasses or legumes.

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 the Glossary for an explanation of this term.
3. The resource areas are defined in the Glossary. See page 50 for your Resource Area.
4. Seeding rates are based on pure live seeds (PLS).

Ds3

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 Second Maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 --- 30
Cool season grasses & legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50 --- ---
Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30
Warm season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 1000 400	50 --- ---

Ds3

Figure 2. Crown Vetch

Figure 3. Sericea Lespedeza

MAINTENANCE

- Re-seed areas where an adequate stand of vegetation fails to emerge or where a poor stand exists.
- Apply fertilizer per Table 2.
- Apply one ton of agricultural lime or as indicated by soil test every 4-6 years.
- Mow Bermuda and Bahia as desired. Mow Sericea Lespedeza only after frost to ensure seeds are mature.
- Maintain 6" or more of top growth.

REFERENCES

- Mb Erosion Control Matting and Blankets
- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)

Ds4

DISTURBED AREA STABILIZATION (WITH SODDING)

DEFINITION

A permanent vegetation 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.

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

- Agricultural lime should be applied based on soil tests or at a rate of 1 to 2 tons per acre.
- Lay sod with tight joints and in straight lines. Don’t overlap joints. Stagger joints and do not stretch sod.
- On slopes steeper than 3:1, sod should be anchored with wooden or biodegradable 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.

Ds4

- Sod should be machine cut and contain 3/4" ±1/4" of soil, not including shoots or thatch.
- Sod should be cut to the desired size within ±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 50 for your Resource Area.

Table 2. Sod Planting Requirements

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.

Ds4

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

Table 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 Second Maintenance	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 --- 30
Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

REFERENCES

- Mb Erosion Control Matting and Blankets
- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)

Du

DUST CONTROL ON DISTURBED AREAS

DEFINITION

Controlling surface and air movement of dust on land-disturbing activities.

PURPOSE

- Prevent the movement of dust from exposed soil surfaces.
- Prevent the movement of airborne substances that may be harmful to health.

INSTALLATION

- Apply according to approved plan, if shown.
- Mulch disturbed areas and tackify with resins such as asphalt, Curasol or Terratack according to manufacturer's recommendations.
- Stabilize disturbed areas with temporary or permanent vegetation.
- Irrigate disturbed areas until surface is wet.
- Cover surfaces with crushed stone or gravel.

- Apply calcium chloride at a rate to keep surfaces moist.
- Apply spray-on adhesives to mineral soils (not muck soils) as described in Table 1.

Table 1. Spray-On Adhesive Application Requirements

Adhesive	Water Dilution	Nozzle Type	Application (Gal./Acre)
Anionic asphalt emulsion	7:1*	Coarse spray	1,200
Latex emulsion	12.5:1 *	Fine spray	235
Resin-in-water emulsion	4:1*	Fine spray	300

*Use manufacturer's recommendations when available.

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 seeding)
- Ds4 Disturbed Area Stabilization (With sodding)
- Tb Tackifiers and Binders

Mb

EROSION CONTROL MATTING AND BLANKETS

DEFINITION

A protective covering (blanket) or soil stabilization mat used to establish permanent vegetation on steep slopes, channels, or shorelines.

PURPOSE

- Reinforce turf.
- Reduce erosion.
- Reinforce channels.
- Provide protective covering.

INSTALLATION

- Install on slopes steeper than 2.5:1 and greater than 10 feet in height and in areas of concentrated flow.
- Install according to approved plan, if shown.
- All mats and netting should be appropriately staked to prevent shifting.
- These materials must be installed according to the manufacturer's specifications.

Jute or Excelsior (Wood Fiber) Matting

- Seed area.
- Cover an area completely with a heavy, uniform, jute yarn or organic mulch.
- Apply on areas with steep slopes, watercourses or where vegetation needs to be quickly established.

Figure 1. Installation of Jute Matting

Fiberglass Roving

- Seed area.
- Apply fiberglass with a compressed air ejector, at a rate of 1/2-1 ton per acre and tack with emulsifier (asphalt) at a rate of 25-35 gal/1000 ft^2 or as recommended by the manufacturer.
- Place in watercourses or on moderate slopes for stabilization and to provide a suitable microclimate for seeds.

Bonded Fiber Matrix

- A hydraulically applied bonded fiber matrix which upon drying shall adhere to the soil in the form of a continuous 100 per cent coverage biodegradable blanket.
- The bonded matrix shall not be applied on saturated soils.
- See manufacturer's specifications for installation instructions.

Mb

Turf Reinforcement Mats

- See manufacturer's specifications for installation instructions.

- Other geotextiles include silt fence, geoblocks, weight-bearing fabric, etc.
- All blanket and matting materials shall be on the Georgia Department of Transportation Qualified Products List (QPL #62 for blankets and QPL #49 for matting).

Figure 2. Geotextile Installed to Control Erosion in a Concentrated Flow Area

MAINTENANCE

- Inspect periodically and after each rainstorm until vegetation is completely established.
- Eroded or exposed areas should be seeded and stabilized with mulch as quickly as possible.

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Pm

POLYACRYLAMIDE (PAM)

DEFINITION

The land application of a product containing anionic polyacrylamide (PAM) acting as a temporary soil binding agent to reduce soil erosion.

PURPOSE

PAM is used to reduce erosion from wind and water on construction sites and agricultural lands. Other benefits may include improved water quality, infiltration, soil fertility, and visibility.

INSTALLATION

- Apply according to approved plan, if shown.
- These materials should be applied according to the manufacturer's specifications. These products are site specific.
- Use setbacks when applying anionic PAM near natural waterbodies.
- Never add water to PAM, add PAM slowly to water. If water is added to PAM, "globs" may form which can clog dispensers.
- NOT ALL POLYMERS ARE PAM.
- Only anionic PAM shall be used. Cationic PAM is toxic and shall not be used.

MAINTENANCE

Maintenance will consist of reapplying PAM to disturbed areas including high use traffic areas, which interfere in the performance of this practice.

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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 SSWCC's Guidelines for Streambank Restoration for more detailed information.

SELECTED MEASURES

- 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.

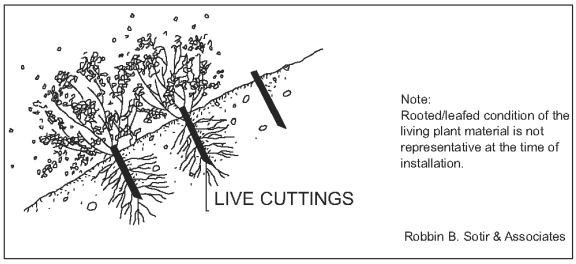

Figure 1. Illustration of a Live Stake

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 feet.
- Enables a bank previously installed with conventional rip-rap to become naturalized.

Sb

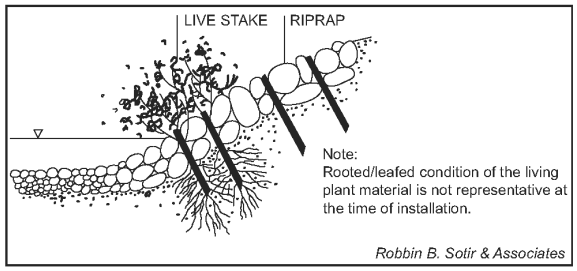

Figure 2. Illustration of Joint Planting

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 com-pared to other systems.
- Works especially well when combined with surface covers such as jute mesh or coir fabrics.

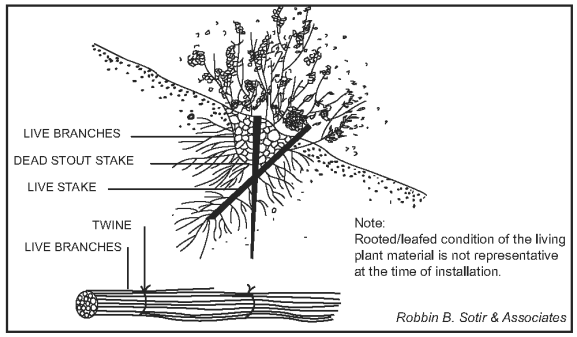

Figure 3. Illustration of a Live Fascine

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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.

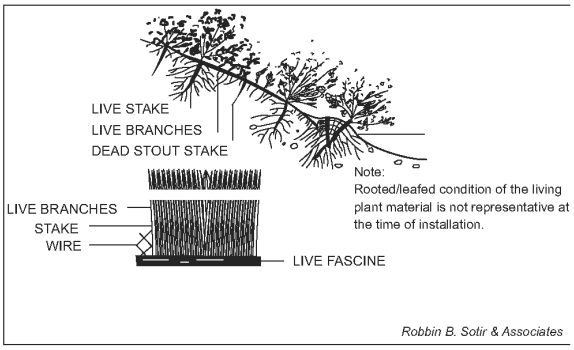

Figure 4. Illustration of a Brushmattress

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.

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

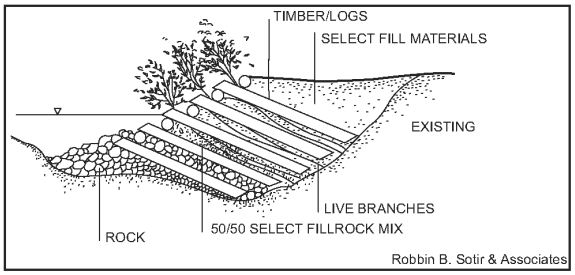

Figure 5. Illustration of a Live Cribwall

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

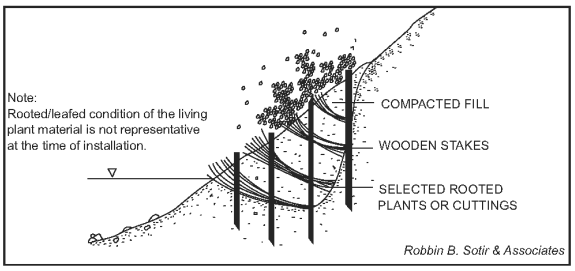

Figure 6. Illustration of Branchpacking

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Table 1. Streambank Erosion Protection Measures Relative Costs and Complexity

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 two inches tall, and one-fourth about six weeks later.

Sb

REFERENCES

- Mb Erosion Control Matting and Blankets
- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)
- Ds4 Disturbed Area Stabilization (With sodding)
- Guidelines for Streambank Restoration, Georgia Soil and Water Conservation Commission

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Tb

TACKIFIERS AND BINDERS

DEFINITION

Substances used to anchor straw or hay mulch by causing the organic material to bind together.

PURPOSE

The purpose of tackifiers and binders is to prevent the movement of mulching material from the desired location. It also increases the performance of the mulching material, so that it can:

- Increase infiltration.
- Reduce wind and water erosion.
- Conserve moisture and prevent surface compaction or crusting.
- Control undesirable vegetation.
- Modify soil temperature.
- Increase biological activity in the soil.

SPECIFICATIONS

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.

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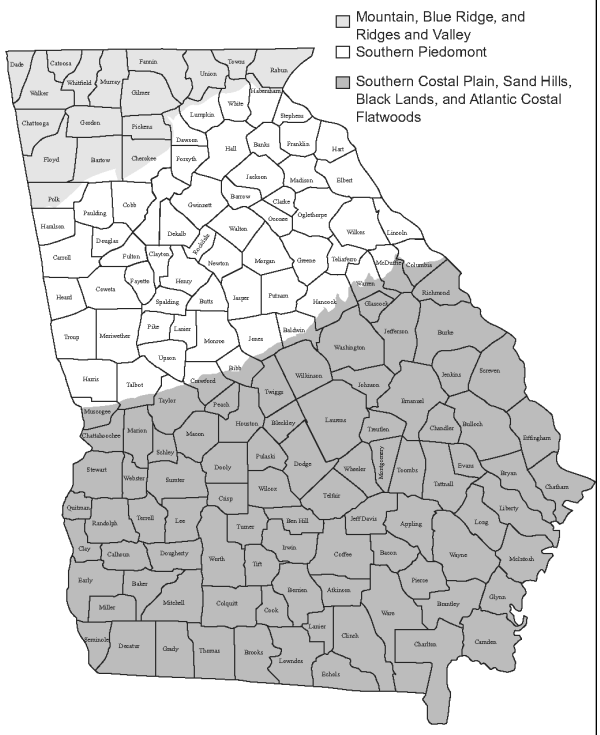
MAJOR LAND RESOURCE AREAS (MLRAS) OF GRORGIA



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LEVEL II
Introduction to Design

VEGETATIVE EROSION CONTROL IN GEORGIA

TEACHING OBJECTIVES

Temporary and permanent vegetative measures used for soil erosion and sediment control on construction sites will be reviewed. Emphasis will be placed on developing effective soil erosion and sediment control plans, site inventories, preserving existing vegetation, selecting proper vegetative measures, the sequence of each component, planning for the entire year, and maintenance provisions.

KEY POINTS

1. Excess soil erosion is not inevitable on construction sites
2. Vegetative can reduce soil erosion and sedimentation
3. Erosion and sediment control (E&SC) plans are very important
4. Proper planning is required for effective E&SC systems
5. All E&SC plans are different and site specific
6. E&SC plans should not be an afterthought
7. E&SC is a system of vegetative, structural, and management measures
8. Adequate maintenance provisions are required

BACKGROUND

Many people have important responsibilities related to soil erosion and sediment control on construction sites. Developers, planners, reviewers, contractors, inspectors, and others have key roles.

Planners prepare erosion and sediment control plans, documents that describe the potential for soil erosion and sedimentation on a site and list, explain, and schedule the measures that will be used to reduce the problems. Proper soil erosion and sediment control requires a system of vegetative, structural, and management measures. A good site-specific E&SC plan is needed for each construction project if successful soil erosion and sediment control is to be expected.

There are no “cook book recipes” for E&SC plans. All plans are different and are based on site specific conditions. It is imperative that sites are visited and evaluated before E&SC plans are developed. Additional recommendations for planners and reviewers are located on pages 22-26.

SOIL EROSION ON CONSTRUCTION SITES

Soil erosion can be a problem with any land use, but higher rates of soil erosion occur on construction sites. The reason soil erosion is so high on construction sites is because of

the presence of bare, unprotected soil. Soil erosion rates on construction sites can be hundreds of times more than that occurring on cropland, pastureland, and forestland. Although much work has been done to reduce soil erosion, sediment remains the #1 non-point source pollutant in the United States.

Soil erosion is the wearing away of the earth's surface by water, wind, ice, gravity, and other forces. Water causes more soil erosion in Georgia than the other forces. No matter the cause, the soil erosion process follows the same three basic steps: (1) detachment, (2) transport, and (3) deposition.

Detachment (or splash erosion) is the process in which soil particles are separated from each other. It occurs when raindrops hit bare soil. The separated soil particles are then **transported** down the slope by runoff and **deposited** elsewhere.

Detachment or 'splash erosion'

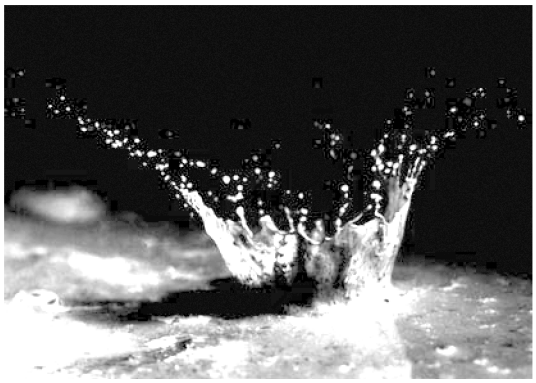


Photo courtesy of USDA-NRCS

When ample vegetation is present, the plants intercept the energy of the falling raindrops and eliminate detachment of the soil particles. Therefore, the first line of defense in reducing soil erosion and sedimentation is good vegetative cover.

Soil erosion is a natural process that is greatly affected by man. Land clearing and soil disturbance activities create many problems that result in accelerated soil erosion and sedimentation, onsite and offsite. The problems that cause increased soil erosion are:

Removal of the protective vegetative cover
Exposing soil that is more erodible than the surface layer
Changes in topography
Increased soil compaction
Reduced water infiltration
Increased runoff
Increased concentrated water flow

HOW VEGETATION REDUCES SOIL EROSION AND SEDIMENTATION

Vegetation is the most effective and most economical way to reduce soil erosion and sedimentation. The entire plant helps to reduce soil erosion. The living plant canopy, and

the dead plant residue that lies on the soil surface, protect the soil from raindrops. The roots also help by holding soil particles in place.

Some types of cover provide better soil protection than others. For example, a 3:1 slope in Gwinnett County will average this much soil erosion based on the type of cover:

Type of Cover	Soil Erosion Rate (Tons/acre/year)
Bare soil	**794**
Straw (2 T/A, 75% cover)	**87**
Grass (95% canopy cover)	**10**
Trees (95% canopy cover)	**0.5**

Photo courtesy of USDA-NRCS

OTHER BENEFITS OF VEGETATION

In addition to reducing soil erosion and sedimentation, well established and maintained vegetative practices can provide many additional benefits. Among these are increased water infiltration; less runoff; reduced runoff velocity; sediment, nutrients, and other pollutants are cleaned from runoff; the soil has more water and nutrients for plant use; improved wildlife habitat; increased soil organic matter; and improved soil quality.

Better soil quality improves the physical, chemical, and biological properties of the soil resulting in better plant growth, more biomass production, cleaner water, cleaner air, and other benefits.

Vegetative Practices Benefit Structural Measures

One practice will not solve all of the problems related to soil erosion and sediment control on construction sites. A system of measures is needed for adequate soil erosion and sediment control. Vegetative, structural, and management measures are needed on most construction sites to adequately reduce soil erosion. Each type of measure has a role to play.

Vegetative cover may reduce the maintenance requirements of applied structural measures and the need for some structural practices may be eliminated if adequate vegetative cover is established and maintained properly.

Benefits of Maintaining Existing Vegetation

We should always utilize the existing vegetation on construction sites. Existing vegetation usually provides good protective cover and the plants are either native to the

area or have adapted to site conditions. Also, replacing the existing vegetation with different species may be difficult and very expensive.

By carefully scheduling the removal of unwanted existing vegetation, we can reduce the soil's exposure to soil erosion and the cost of additional vegetative measures. Only the land that needs to be cleared should be cleared.

WHY ESTABLISHING AND MAINTAINING VEGETATION IS DIFFICULT

We are not normally dealing with ideal soil conditions needed for optimum plant growth on construction sites. Most construction sites have several problems that make them inhospitable for optimum plant establishment and growth. Among these problems are steep slopes, compacted soils, poor soil fertility, low soil pH, low soil moisture, and concentrated flow areas.

And, if adequate planning and maintenance are lacking, these problems are more difficult to solve. Because of the problems, some people call construction sites 'critical areas'. Examples of critical areas are:

Coastal dunes	Grassed waterways	Road banks
Cut and fill slopes	Gullies	Severely eroded areas
Dams	Landfills	Stream banks
Diversions	Mined land	

Normal pasture and lawn planting methods are not adequate on construction sites. Intensive planning, treatment, and maintenance are required for effective results.

THE VEGETATIVE PLAN

The vegetative plan is a very important component of the overall plan for a site. A serious problem is the lack of a good plan. It is said that "if you fail to plan, you plan to fail". Vegetation should not be afterthought.

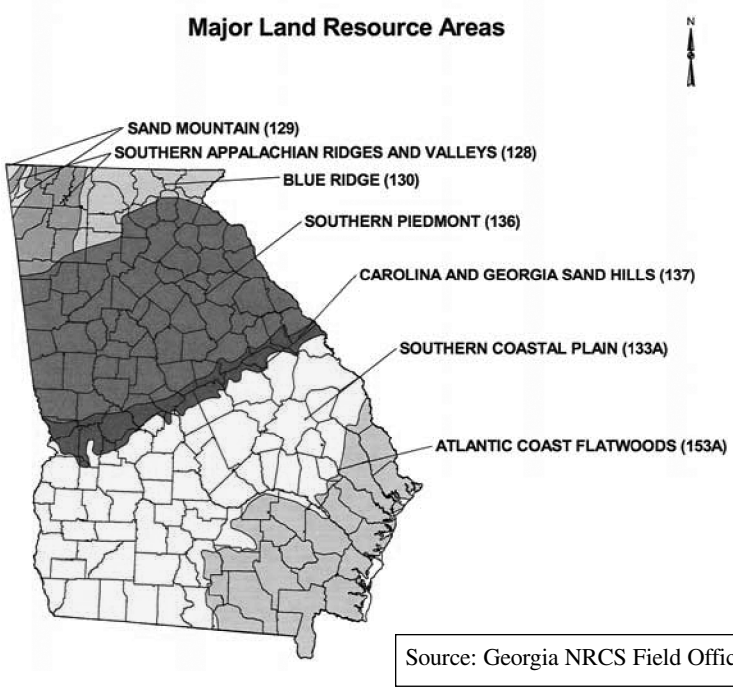
There are no 'cook book recipes' for vegetative plans because all construction sites are different. Vegetative plans must be site specific, based on the land use, soil, site, climate, and other conditions.

Georgia Soils

Soils vary across the State and on most construction sites. We have many types of soil and they differ in texture, fertility, pH, slope, permeability, water-holding capacity, erodibility, and other characteristics that affect plant growth. Although most of our soils are acid and not naturally fertile, most respond to treatment and adequate plant biomass can be grown and maintained on most construction sites with proper management.

Major Land Resource Areas

Georgia can be divided into 7 soil provinces, also called Major Land Resource Areas (MLRA). Each MLRA is a geographical area that has a particular combination of soils, climate, topography, water, and land use.



Source: Georgia NRCS Field Office Technical Guide

128 - Southern Appalachian Ridges and Valleys MLRA

This area of Northwest Georgia is highly diversified and consists of many parallel limestone, sandstone, and shale ridges with gently sloping valleys. Cities located in this MLRA include Calhoun, Dalton, Ringgold, Rome, and Summerville. Most of the soils are well drained, strongly acid, and highly leached. They range from shallow on the sandstone and shale ridges to very deep in the valleys and on the large limestone formations. The maximum precipitation is in midwinter and midsummer, the minimum is in autumn.

129 - Sand Mountain MLRA

This MLRA occurs in the northwest corner of the State, is deeply dissected, and consists mainly of a series of rather narrow valleys, steep escarpments, and broad plateaus that are underlain by sandstone and shale. The dominant soils are mostly moderately fine textured to fine textured and are over sandstone and shale. Precipitation is somewhat unevenly distributed. The maximum rainfall is in midwinter, decreasing gradually from spring to autumn and increasing slightly in midsummer.

130 - Blue Ridge MLRA

The MLRA is located in the northeastern part of Georgia. It includes the cities of Blairsville, Blue Ridge, Clayton, and Hiawassee. The area has steep mountain slopes and narrow valleys. Elevation ranges from 700 feet to more than 4,800 feet above sea level. The dominant soils of this MLRA are moderately deep and medium textured. Most of the slopes in the area are generally too steep for row crop production. Soils have slopes from 2 to 90 per cent, are acid, and have low fertility. Annual precipitation is as much as 80 inches on the highest peaks. Precipitation is somewhat unevenly distributed and the maximum rainfall is in midsummer and midwinter and the minimum is in autumn.

136 - Southern Piedmont MLRA

It stretches from the middle of the State to the foot hills of the Appalachian Mountains. Cities in this MLRA include Athens, Atlanta, Carrollton, Gainesville, Hartwell, and Madison. Drainage patterns are well defined and the topography is gently rolling to steep. The dominant soils have mostly clayey subsoils. Much of the original topsoil has eroded away leaving exposed clayey subsoil. The soils are acid and low in nitrogen and phosphorus. Precipitation is almost evenly distributed throughout the year, but the lowest is in autumn.

137 - Carolina and Georgia Sand Hills MLRA

The MLRA is a narrow belt of deep sandy soils that extend across Georgia from Augusta to Macon to Columbus. The topography is rolling and hilly. The area is dissected rolling to hilly upland and contains stabilized dunes with very irregular slopes. Local relief is mainly several yards, but a few hills are 75 to 150 feet above the adjacent areas. Most of the soils are infertile and droughty and have high infiltration rates and low water-holding capacity. The soils are best suited to drought resistant grasses. Maximum precipitation is in midsummer and the minimum is in autumn.

133A - Southern Coastal Plain MLRA

This area is located south of the Sand Hills and extends to the Atlantic Coast Flatwoods. Cities include Albany, Americus, Bainbridge, Dublin, Moultrie, Perry, Tifton, and Waynesboro. It is divided into two distinct areas: nearly level to rolling valleys and gently sloping to steep uplands. Dominant soils are deep with a loamy or sandy surface layer and loamy or clayey subsoil. The soils are diverse, respond well to good management, and are suited for a wide range of plants. In the east portion, maximum precipitation is in midsummer and in the west it is in winter and spring. Minimum precipitation is in autumn throughout the MLRA.

153A - Atlantic Coast Flatwoods MLRA

The MLRA extends from the Southern Coastal Plain to the Atlantic Ocean. The cities of Baxley, Brunswick, Jesup, Savannah, and Waycross plus the Okefenokee Swamp are

located in this MLRA. Elevation ranges from sea level to about 300 feet. The area has nearly level topography and poorly drained soils which are underlain by marine sands, loams, and/or clays. Maximum precipitation is in the summer.

(Re: *"Land Resource Regions and Major Land Resource Areas of the U.S.", USDA-SCS Handbook 296*)

Annual Precipitation and Rainfall Erosivity

The average annual precipitation is generally adequate throughout Georgia for plant growth although short dry periods and extended drought can reduce plant germination and development.

But, the erosive potential of rainfall, called rainfall erosivity, varies throughout the year. Although erosion causing storm events can occur anytime of the year in Georgia, the highest erosivity is typically in the summer when thunderstorms are more frequent. Thunderstorms have greater potential for causing soil erosion than lesser storm events.

Our rainfall erosivity pattern has great influence on plant establishment. Cool season plants such as rye, ryegrass, and tall fescue should be planted in early fall. We are fortunate that this coincides with low rainfall erosivity. Planting in early fall especially aids plant establishment in diversions, grassed waterways, and other concentrated flow areas because there should be less runoff during this period.

Historically, about 1/5 of our rainfall erosivity occurs in the month of July alone. Plant establishment with seed is especially difficult in concentrated flow areas during the summer because the thunderstorms cause increased runoff and other major problems. If possible, try to avoid seeding vegetation in diversions, grassed waterways, and other concentrated flow areas in the summer. The use of sod is a good alternative.

Plant Selection

Many grasses, legumes, vines, ground covers, shrubs, and trees perform well on construction sites in Georgia. There are many suitable annuals, perennials, single plantings, and seeding mixtures used. Plant selection should be based many factors.

The site location and soil are very important. Some plants can be grown statewide while other plants only grow in certain areas. For instance, tall fescue grows well in North Georgia, but will not survive in South Georgia. Some plants that do well in South Georgia will not perform well in other parts of the State. Some plants will persist in a certain area, but not on a droughty site within the area. Some plants do well in shade while others require full sun.

Some plants are long-lasting and can be used for permanent cover, while others provide protective cover only for the short-term and should be used only for temporary cover. Some species germinate and grow quickly and can be planted alone. Other species develop slowly and should only be planted in seeding mixtures. Some plants need to be planted in the spring while others should be planted in the fall.

Maintenance Requirements

Construction sites are usually high or low maintenance areas. The maintenance needed for different plants varies by species. The maintenance applied to vegetation in an upscale neighborhood will be different than that received by plants used on a secluded road bank, abandoned landfill, or other area that will probably receive much less treatment after establishment.

Low maintenance plants should be used on most construction sites because vegetative cover is often omitted once the plants become established. For permanent cover, use hardy, long-lived perennials that can withstand conditions such as low soil pH, poor fertility, and drought while still providing adequate soil protection.

Soil pH and Lime

Most Georgia soils have low soil pH and are therefore considered to be acidic. The pH of the soil greatly affects plant growth. Most plants used on construction sites in Georgia need a soil pH of 6.0 - 6.5 for good growth and reduced susceptibility to drought. With proper pH there is also increased growth of soil organisms which is very important for legume performance.

Acidic soil conditions can be corrected by applying appropriate amounts of agricultural lime ($CaCO_3$). Initial agricultural lime should be applied according to a soil test or at a rate of 1 to 2, preferably 2 tons/acre. Maintenance lime applications are needed after plant establishment. In Georgia, dolomitic limestone is recommended because in also contains magnesium (Mg), an important nutrient for plant growth.

Lime Application

Lime is not very mobile in the soil, does not move readily down through the soil profile, and should be applied properly or it will be lost in runoff on construction sites. Best results are achieved when agricultural lime is mixed into the soil.

For areas to be planted with conventional planting methods, agricultural lime should be evenly distributed on the soil surface and mixed well into the top 4-6 inches of soil during seedbed preparation prior to planting.

On hydroseeded sites, apply agricultural lime only after there is a protective cover on the soil. On hydroseeded sites, apply lime (1) after the straw or hay mulch is applied, (2) with topdressing fertilizer, or (3) with the second year fertilizer.

Fertilization

Plants need 16 essential elements for optimum growth and each of the sixteen elements has a specific function within plants. The exposed soil on most graded construction sites has low soil fertility.

Nutrients needed by plants on construction sites are usually provided by fertilization. Accurate fertilization is very important. If one or more of the nutrients are lacking, the deficiency reduces plant growth. Excessive nutrient applications can also cause problems, including plant toxicity, plant death, and other environmental problems. Follow a nutrient management plan, apply needed nutrients, and avoid haphazard nutrient applications.

A fertilizer is any substance added to the soil or sprayed on plants to supply those chemical elements required for plant growth. A mixed fertilizer contains two or more of the three macronutrients: Nitrogen (N), Phosphorous (P), and Potassium (K).

Numbers such as 6-12-12 tell you the contents of a bag of fertilizer. The numbers represent how much total N, available P, and available K are in the bag. For example:

6-12-12 fertilizer contains 6% N, 12% P_2O_5, and 12% K_2O.
0-20-20 fertilizer contains no N, 20% P_2O_5, and 20% K_2O
34-0-0 fertilizer contains 34% N, no P_2O_5, and no K_2O

All of the material in a bag of fertilizer is not plant food. A 50 LB bag of 6-12-12 contains 3 LB of N, 6 LB of P_2O_5, and 6 LB of K_2O. The other 70% (35 LB) is filler material. A ton of 6-12-12 contains 600 LB of plant food and 1,400 LB of filler material.

It is very important that we apply proper and timely applications of fertilizer to vegetation on construction sites. Temporary grass cover such as browntop millet, rye, and ryegrass needs initial N-P-K fertilizer applied at or before planting and also N topdressing about 6 weeks after planting.

Permanent cover needs initial, topdressing, second-year, and maintenance fertilization. Permanent grasses need initial N-P-K fertilization, N topdressing, second year N-P-K fertilization, and maintenance N-P-K fertilizer applications.

Legumes need different fertilizer than grasses. Perennial legumes are seeded with grass in mixtures and should receive initial N-P-K, N topdressing, P-K in the second year, and maintenance P-K applications. (Legumes are the target species and they get the N they need from the nitrogen-fixing bacteria if the seed are inoculated properly.)

Recommended fertilizer rates for the various plant species used on construction sites are listed in the *Manual*. Nutrient deficiency symptoms occur in plants if needed elements are lacking. Some of the most common deficiency symptoms will be discussed during the PowerPoint presentation.

Seeding Methods

Many planting methods are used to establish temporary and permanent vegetation on construction sites. Among the planting methods are conventional, hydroseeding, no-till, and hand planting.

Conventional planting should be the first choice used to plant temporary and permanent vegetation because the lime and initial fertilizer are incorporated into the soil where they are needed, seeding is done on a freshly prepared seedbed, there is good seed-to-soil contact, and many other reasons. A cultipacker, drill, rotary seeder, other mechanical seeder, and hand seeding can be used to distribute the seed uniformly over a prepared seedbed.

Hydroseeding is commonly used on steep slopes and other hard to reach areas to plant temporary and permanent vegetation. The seed, wood cellulose/pulp fiber/paper mulch, fertilizer, and water are mixed in a slurry and spread uniformly over the area treated. The slurry should be applied within one hour after the seed are placed in the hydroseeder.

No-till seeding is done with a no-till drill to plant temporary and permanent vegetation. Adequate dead plant residue is needed on the soil surface. An example is planting perennials into a mature temporary cover of rye or millet.

Hand planting of individual plants such as shrubs, vines, grass sprigs, and trees is done with appropriate planters or hand tools. Dibbles are used to plant bare root tree seedlings. Individual plants should be placed in the soil at the same level or slightly higher than they we grown at the nursery. The old saying of "Plant them low, they won't grow; plant them high, they won't die" is true with shrubs and trees.

Seedbed Preparation

Stumps, limbs, construction debris, and other trash must be removed from all areas to be vegetated. For conventionally planted sites, lime and initial fertilizer will be applied prior to seedbed preparation. The soil should be tilled to a minimum of 4 to 6 inches to alleviate surface compaction, incorporate lime and fertilizer, prepare a seedbed, and allow for the anchoring of straw or hay mulch if a mulch crimper is to be used. All tillage operations should be done on the contour. On soil too steep for the safe operation of tillage equipment, the soil should be pitted or trenched across the slope with appropriate hand tools.

Seedbed preparation is not normally required on areas hydroseeded.

For individual plants, excavate holes, open furrows, or use dibble planting. Holes should be large enough to accommodate plant roots without crowding.

Planting Dates

The optimum planting time for a plant species depends on the plant's growth habit. Some plants need to be planted in the spring while others should be planted in the fall.

Warm Season Plants

Warm season plants (those that grow during the warm seasons of the year) are best planted in early spring. This allows the plants to germinate, develop a root system, and start

growth before the hot summer temperatures and dry periods occur. Examples are bahia grass, common bermuda grass (hulled seed), browntop millet, sericea lespedeza (scarified seed), and weeping lovegrass.

Some of the above mentioned warm season plants can also be seeded successfully in the fall and winter along with companion/nurse plants. Examples are common bermuda grass (unhulled seed), bahia grass, and sericea lespedeza (unscarified seed).

Cool Season Plants

Cool season plants (those that grow during the cool seasons of the year) should be planted in early fall. This allows them time to develop a good root system before the cold winter temperatures occur. If soil temperatures are low enough, most plants will not germinate. And, frozen moisture in clay soils can heave young plant seedlings up out of the soil if they do not have adequate root systems. This is a common problem with late planted stands on soils with a high clay content. Common cool season plants that should be planted in early fall are rye, ryegrass, tall fescue, and wheat.

Winter is especially difficult to establish annual and perennial vegetation. Mid-summer is difficult also because of the increased probability of intensive thunderstorms, hot temperatures, and the possibility of short-term and long-term drought. Mulching is a good alternative to use during periods when poor seed germination can be expected.

Vegetative plans for construction sites should contain year-round seeding plans because of the possibility of construction delays caused by wet weather, equipment breakdowns, etc. Listed below are common seeding recommendations for construction sites in North and South Georgia:

North Georgia site	**South Georgia site**
September 1 - October 15	
Sericea lespedeza (unscarified), 75 LB/AC	Common bermuda (unhulled), 10 LB/AC
Tall fescue, 30 LB/AC	Rye, ½ BU/AC (28 LB)
October 15 – January 1	
Sericea lespedeza (unscarified), 75 LB/AC	Common bermuda (unhulled), 10 LB/AC
Tall fescue, 30 LB/AC	Rye, ½ BU/AC (28 LB)
Rye, 1/2 BU/AC (28 LB)	
January 1 – March 1	
Sericea lespedeza (unscarified), 50 LB/AC*	Common bermuda (unhulled), 10 LB/AC
Sericea lespedeza (scarified), 30 LB/AC	Rye, ½ BU/AC (28 LB)
Tall fescue, 30 LB/AC	
Rye, ½ BU/AC (28 LB)	
Common bermuda (unhulled), 6 LB/AC	

March 1 – June 1

Sericea lespedeza (scarified), 60 LB/AC	Common bermuda (hulled), 10 LB/AC**
Weeping lovegrass, 2 LB/AC	

June 1 – September 1

Sericea lespedeza (scarified), 60 LB/AC	Common berumda (hulled), 10 LB/AC
Weeping lovegrass, 2 LB/AC	Browntop millet, 10 LB/AC
Browntop millet, 10 LB/AC	

* It is common to use a seeding mixture of several species during this period hoping that one or more of them will germinate and grow well enough to provide adequate vegetative cover in a timely manner. Some call this "the shotgun approach".

** When planting species that will germinate and grow quickly during optimum dates, there is normally no need to include seed of a companion/nurse crop with the seeding. Use caution when using companion or nurse plants in seeding mixtures. Companion plants act like weeds and compete with the target plant species for water, nutrients, sunlight, and growing space. Commonly used companion plants that are annuals tend to be more vigorous than perennial species.

Planting Dates for Ground Covers, Shrubs, and Trees

The person who said "fall is for planting" probably had ground covers, shrubs, and trees in mind because their chance of survival is much better when planted in the fall. Fall planting allows you to take advantage of lower temperatures and expected rainfall. The amount of water you need to apply is reduced with fall planting. The plants establish a stronger root system before hot weather occurs, resulting in quicker plant growth.

The next best time to plant ground covers, shrubs, and trees is in late winter and early spring. Late spring and summer plantings should be avoided because they result in the need for more maintenance, especially frequent watering for plant survival and growth.

SEED QUALITY

Good seed are needed anytime you plant, especially on construction sites. A poor stand will result if the seed are not good. Seed are one of the cheapest items used in erosion and sediment control, but all seed are not equal.

Too often we do not determine if the seed we are planting on construction sites is of good quality. It is common for folks to grab a bag of seed and start planting without investigating to see if the seed are good or not. For all bags of seed, consider this, (1) all of the material in a bag of seed is not seed, (2) all of the seed in a bag are not seed of the desired species, and (3) all seed of the desired species in the bag are not good. Most bags of seed contain seed of the target species plus other items: plant stems, seed pods, weed seed, soil, rocks, and other material.

Always before planting, we need to determine what part of the material in the bag are good seed of the desired species. Once we answer this, we can quickly calculate the seeding rate needed for a good stand. What we are looking for is the 'Pure Live Seed' (PLS) seeding

rate of the seed. The PLS value is used to determine the actual seeding rate of any seed that we plan to use. All of the seeding rates in the Manual are based on PLS seeding rates.

The PLS value of any seed used is a valuable tool and it can be calculated in 3 easy steps:

Step 1. Determine the % purity and % germination of the seed in the bag. Look at the seed tag and find these two items: % purity and % germination.

Step 2. Calculate the PLS value of the seed. Simply multiply the % purity x the % germination to get the PLS value. (For instance, if a bag of tall fescue seed has a purity of 90% and the germination is 90%, the PLS = 0.90 x 0.90 or 0.81.)

This means that only 81% of the material in the bag is tall fescue seed that will germinate and grow. The other 19% are inferior seed, weed seed, and other material.

Step3. Determine the PLS seeding rate. Since our bag of seed has a PLS of 81%, we simply divide the recommended seeding rate for tall fescue (50 LB/AC) by the PLS (0.81) to calculate the PLS seeding rate of the seed we purchased. The answer is 62 LB/AC.

Therefore, in order to plant an equivalent of 50 LB/AC of good tall fescue seed, a seeding rate of 62 LB/AC of this seed is needed.

Note: Seed with a low PLS value has low plant vigor and will not grow properly. If the seed on hand has low PLS, it is best to obtain other seed to plant. The use of seed with a low PLS should be the last alternative chosen.

VEGETATIVE MEASURES

(Below are brief descriptions of vegetative measures used on construction sites. Additional information on each measure is provided in the *Manual*.)

BUFFER ZONE (Bf)

No construction activities shall be conducted within 25 feet of all state waters or within 50 feet along the banks of any state waters classified as 'trout streams'.

Vegetative practice Buffer Zone (Bf), as defined in the Manual, is 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. Buffer Zones serve many purposes. Among them are reduced runoff, reduced noise, improved aesthetics, filtered runoff, increased infiltration, cooler water in streams, flood protection, and improved wildlife habitat.

The *Manual* describes two types of buffers: general buffers and vegetated stream buffers.

General buffers are the undisturbed land surrounding a disturbed site. They filter and infiltrate runoff, act as a screen, and reduce construction noise.

Vegetated stream buffers are adjacent to and border streams. A vegetated stream buffer 50 feet wide or wider can protect waters from excess sedimentation. Surface water pollution can be reduced with a vegetative stream buffer that is 100 feet wide or wider. A multipurpose riparian buffer consists of three zones that have trees, shrubs, and grasses. The width of buffers is determined by site characteristics.

COASTAL DUNE STABILIZATION with Vegetation (Cs)

Coastal dune stabilization with vegetation is 'planting vegetation on dunes that are denuded, artificially constructed, or re-nourished'. The purposes of this practice are to stabilize existing dunes and to allow development of dunes that have been damaged or destroyed.

Coastal dunes are very fragile areas. Coastal dunes are subject to regulations from local, state, and federal regulations and permits must be acquired from all appropriate jurisdictions before work is performed. Human, livestock, and vehicular traffic must be kept off dunes if vegetation is to succeed and crosswalks should be installed where beach access is needed.

Native coastal plant species should be used. Irrigation is needed during the first growing season in order to obtain good survival. Sand fences may be used to build or enlarge sand dunes. Vegetation must be established soon following dune development or allowed to develop naturally from existing stands.

DISTURBED AREA STABILIZATION with Mulching only (Ds1)

This practice is applying plant residues or other suitable materials, produced on the site if possible, to the soil surface It applies toareas where plantings may not have a suitable growing season to produce adequate cover, but can be stabilized with mulch.

The mulch shall be applied to all exposed areas within 14 days of disturbance and the will be maintained so that at least 90% of the soil surface is covered. The materials will be applied uniformly and anchored immediately after application. Mulch can be used as a single erosion control device for up to 6 months.

DISTURBED AREA STABILIZATION with Temporary Seeding (Ds2)

Temporary seeding, an alternative to mulch, can be used on rough graded areas that will be exposed for less than 6 months. (If the area is expected to be undisturbed for longer than 6 months, permanent vegetative cover shall be used.) Temporary seeding

shall be applied to all exposed areas within 14 days of disturbance.

Select a plant species that will germinate quickly and provide ample protective cover for that area and season of the year. In most cases, temporary vegetation can be established without mulch. This may not be true on steep slopes and in concentrated flow areas.

DISTURBED AREA STABILIZATION with Permanent Vegetation (Ds3)

This practice includes the planting of perennial vegetation such as grasses, legumes, ground covers, shrubs, trees, or vines, on exposed areas for final permanent stabilization. The purposes of this practice are to protect the soil from erosion, to reduce sediment and runoff damage downstream, to improve wildlife habitat, and to improve aesthetics.

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than 6 months. This practice or sodding shall also be applied immediately to all areas at final grade. Low maintenance and native plant species appropriate for the region shall be planted, established, and maintained so that at least 70% of the soil is covered with perennial vegetation for long-term erosion control.

For conventional planting methods, grading and shaping will be done so that equipment can be used safely during lime and fertilizer applications, seedbed preparation, planting, mulching, and maintenance. Grading and shaping may not be required where hydroseeding is used. Concentrated water will be diverted to a safe outlet.

For adequate plant growth, the soil must have proper pH and ample plant food. For additional guidance, see the topics titled “Soil Tests”, “Soil pH and Lime”, “Lime Application”, and “Fertilization” in this document. All legume seed must be inoculated correctly with the proper strain of bacteria prior to planting.

Permanent vegetation may be planted with several methods. See the section titled “Planting Methods” in this document.

Suitable and anchored mulch is required for all sites planted with permanent vegetation, except where erosion control blankets or block sod are used. One of the following mulch materials can be used on construction sites:

1. Dry small grain straw or dry hay of good quality and free of competing weed seeds can be used on conventionally planted and most hydroseeded sites. The straw will be applied at rate of 2 tons/acre and the hay at a rate of 2 ½ tons/acre within 24 hours after planting. This will cover about 75% of the soil surface and will allow young plant seedlings to emerge and develop.

2. Wood cellulose mulch, pulp fiber, or paper mulch will be used during hydroseeding. These mulches will not contain germination or growth inhibiting factors. They will contain a dye to allow visual metering of applications.

a. On slopes flatter than 3/4 to 1, apply 500 LB/AC of one of the mulch materials in the slurry that contains the seed and fertilizer. Following hydroseeding, the area will be mulched with small grain straw or hay as mentioned in Item 1 above.

b. On slopes 3/4 to 1 and steeper, 1,000 LB/AC of the mulch will be applied in the slurry that contains the seed and fertilizer. A tackifier/binder will be included in the slurry to anchor the mulch on the steep slopes.

3. Sericea lespedeza hay that contains mature seed will be applied at a rate of 3 tons/acre. The hay will be applied within 24 hours of seeding.

4. Bedding material will be used around nursery plants, ornamentals, shrubs, and bare areas on lawns. (Note the materials used at these rates are not applicable to seeded areas. The mulch would be too thick for most young seedlings to emerge and grow.) The suitable bedding materials are:

   Pine straw at a thickness of 3"
   Pine bark at a thickness of 3"
   Small grain straw at a thickness of 4 – 6"
   Hay at a thickness of 4 – 6"

5. Bituminous treated roving applied according to Georgia Department of Transportation (GDOT) specifications may be applied on planted areas on slopes, in ditches, and in dry waterways to prevent erosion.

Anchoring Mulch

Straw or hay mulch will be anchored immediately after application with one of the following methods:

1. Where a seedbed is prepared, a 'packer disk' or 'mulch crimper' can be used to press the straw or hay into the soil without cutting it, leaving most of it in an erect position. The mulch will not be plowed into the soil.

2. Synthetic tackifiers or binders approved by GDOT shall be applied with the straw or hay during the mulch application process or immediately after application. See "Tackifiers and Binders (Tb)" on page 24 for more information.

3. Plastic mesh or netting with openings no larger than 1" x 1" may be used to anchor straw/hay on steep slopes, unstable soils, and concentrated flow areas.

4. Emulsified asphalt can be sprayed uniformly onto the mulch as it is ejected from the mulch blower or sprayed on the mulch immediately following mulch application when the mulch is spread by methods other than with special blower equipment. Protect humans, adjacent property, state waters, pavement, curbs, sidewalks, road signs, and other structures from asphalt applications.

5. Rye or wheat seed at a rate of 1/4 to 1/2 BU/AC can be included with fall and winter plantings to stabilize straw and hay mulch.

Wood cellulose, fiber mulch, or paper mulch applied with hydroseeding on slopes ¾ to 1 and steeper will be anchored with a tackifier/binder.

Management and Maintenance of Permanent Vegetation

Remember the saying "the squeaky wheel gets the grease"? Too often the vegetation on critical areas is abandoned immediately after establishment. Why is management and maintenance so important? The plants need regular care. Without adequate maintenance, vegetative cover can deteriorate to the point that it will have to be reestablished.

Among the management and maintenance items needed by permanent vegetation are:

1. Fertilization. Maintenance applications of fertilizer are very important to sustain adequate vegetative cover. Follow soil tests and a nutrient management plan.

2. Liming. Maintenance agricultural lime applications are needed by most plant species used on construction sites. Follow soil test recommendations or apply 1 ton/acre every 4 – 6 years on grasses and legumes.

3. Traffic Control. Limit vehicular and foot traffic, especially on steep slopes.

DISTURBED AREA STABILIZATION with Sodding (Ds4)

This practice is establishing permanent vegetative cover using sod on highly erodible or critically eroded soils. Sod allows you to establish immediate ground cover, reduce runoff and erosion, improve aesthetics and land value, reduce dust and sediment, and stabilize waterways and other critical areas.Sodding is more expensive than seeding, but the benefits often justify the increased cost. There is reduced plant failure compared to planting with seed and sod can also be installed year-round.

Bermuda grass, bahia grass, centipede, St. Augustine, tall fescue, and zoysia sod are used in Georgia. Apply the sod to the soil surface only and not to frozen soil or gravel type soils. Do not lay sod in extremely wet or dry weather. Anchor the sod on slopes steeper than 3%. Irrigate sod and soil to a depth of 4" immediately after installation. Irrigation should be applied as needed for a minimum of 2 – 3 weeks and also later during drought. Lime and fertilize according to soil tests or the recommendations in the Manual.

DUST CONTROL ON DISTURBED AREAS (Du)

This practice is controlling surface and air movement of dust on construction sites, roads, and demolition sites. Temporary methods of treatment are: Mulch - Standard Ds1; Synthetic Resins - Standard Tb; Vegetation - Standard Ds2; tillage with appropriate equipment that will roughen the soil surface; irrigation generally done as emergency treatment; barriers like fences, crate walls, and bales of hay; and calcium chloride.

Permanent methods of treatment are: Vegetation - Standard Ds3 and Stone - Standard Cr.

EROSION CONTROL MATTING AND BLANKETS (Mb)

A protective covering (blanket) or soil stabilization mat is used to establish permanent vegetation on steep slopes, channels, or shorelines. Concentrated flow areas, all slopes steeper than 2.5 to 1with a height of 10' or greater, and cuts and fills within stream buffers shall be stabilized with appropriate erosion control matting or blankets. Matting and blankets are also used on other areas where the erosion hazard is high and the vegetative cover is expected to be slow to develop.

All materials used will be non-toxic to vegetation and shall not be injurious to the unprotected skin of humans. All matting and blanket materials used shall be on approved GDOT lists. Follow manufacturer's recommendations for laying and stapling.

Temporary blankets will be applied immediately after liming, fertilization, and seeding have been completed. The soil surface must be smooth to ensure proper application of the products. All installed mats and blankets should be inspected periodically after storm events until the areas become permanently stabilized with vegetation. Any dislocation or failure should be repaired immediately.

POLYACRYLAMIDE (PAM)

Anionic polyacrylamide (PAM) is applied to the soil surface as temporary soil binding agent to reduce soil erosion on construction sites and agricultural land. PAM also helps to improve water quality, infiltration, soil fertility, and visibility. PAM is used on sites where the timely establishment of vegetation may not be feasible or where vegetative cover is absent or inadequate. PAM is not intended for application to surface waters.

Applications shall comply with all federal, state, and local laws governing PAM and will follow all Material Safety Data Sheet requirements and manufacturer's recommendations. Additional Best Management Practices are also required. The use of seed and mulch for vegetative protection beyond the life of PAM is recommended. Repeat the application of PAM if land disturbance occurs within the treated area. Also:

The product will be applied uniformly. The maximum application rate of PAM, in pure form, shall not exceed 200 LB/AC/YR. Avoid drift to non-target areas. The products and mixtures used shall be environmentally benign and harmless to fish, wildlife, and plants. Products used will be non-combustible. Maintenance will consist of reapplying anionic PAM to disturbed areas, including high use traffic areas.

STREAMBANK STABILIZATION using Permanent Vegetation (Sb)

This practice is the use of readily available native plants to maintain and enhance streambanks, or to prevent or repair small streambank erosion problems to reduce soil detachment, trap sediment, stabilize soil on streambanks, provide wildlife habitat, and lower summer water temperatures in streams.

You may need to ask specialists for assistance. Careful thought, planning, and execution is required for a successful streambank stabilization project. Refer to SSWCC's *Guidelines for Streambank Restoration* and the *NRCS Engineering Field Handbook*, Chapters 16 and 18 for more detailed information. Local, state, and federal permits may be needed.

Streambank stabilization includes several measures, including seeding and sodding of grasses, the use of erosion control fabrics, and the planting of woody vegetation (shrubs and trees). Refer to practices Ds3, Ds4, Bf, and Mb. Among the measures used in Sb are:

Live stakes, joint plantings, live fascines, brushmattresses, live cribwalls, and branch-packing are commonly used. When fertilizer is applied, apply 1/2 of it at planting, 1/4 when new growth is 2" tall, and 1/4 six weeks later. Check sites after each high-water event and repair problem areas at once with fresh cuttings, new plants, and mulch.

TACKIFIERS AND BINDERS (Tb)

Synthetic tackifiers and binders are used to anchor straw or hay mulch, wood cellulose, wood pulp fiber, and other mulch materials to the soil surface. They will be mixed and applied according to the manufacturer's recommendations. Approved tackifiers and binders are:

Product or Trade Name	Recommended Application Rate
A500 HYDRO-STIK	40 LB/AC
Agro Tack MP	PMR (per manufacturer's recommendations)
CONWED CON-TAC	40 LB/AC
EcoTak-OP	PMR
EcoTak-SATII	PMR
Emulsified Asphalt	100 gallons of SS-1h or CSS-1h and 100 gallons of water per ton of mulch
Hercules Soilloc-E	PMR
HYDRO-BOND	35 LB/AC
RMB-plus	80 – 120 LB/AC
TACPAC GT	PMR
TERRA-MULCH	
TACKING AGENT III	PMR

ADDITIONAL TOOLS FOR SUCCESS

1. Subsoiling. Compacted soils do not readily infiltrate water and can prevent plant root growth. Shallow soil compaction on or near the soil surface will be alleviated with chisel plows or other suitable tillage equipment during seedbed preparation. Deeper compacted soil layers will be eliminated with a subsoiler. These tillage operations will be done on the contour. Where trees are to be planted, subsoiling will be done 4 – 6 months in advance to allow the soil time to settle.

2. Stockpiling and Utilizing Topsoil. Too often on construction sites, valuable topsoil is buried in fill during land clearing and grading operations and is rarely ever available again to aid plant growth. Available topsoil should be saved, stockpiled, and spread as topdressing on sites to be vegetated.

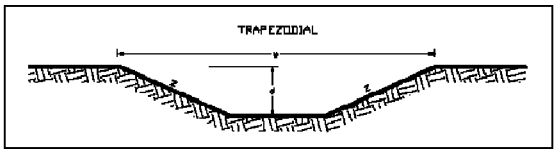
Even a small amount of topsoil on construction sites aids plant growth. Topsoil is especially beneficial where ornamental plants or high-maintenance turf will be grown, on shallow soils, soils with critically low pH, and soils containing potentially toxic materials. Use the following guidelines if topsoil is to be stockpiled and used later as topdressing on construction sites:

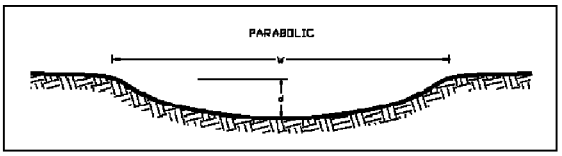
1. Topsoil should be removed from areas where further excavation will occur as soon as clearing and grubbing are completed.
2. Stockpile topsoil during stripping operations.
3. Adjust stripping equipment so that the topsoil is not mixed with the subsoil.
4. Stockpile the topsoil so that it does not interfere with other work on the site.
5. Make sure that the stockpile is stabilized during the construction phase.
6. The topsoil must be adequately bonded to the sub grade. Prior to spreading the topsoil on the areas to be planted, scarify the sub grade to a depth of at least 3".
7. Spread it uniformly. (It takes about 12 yards of topsoil to cover 1,000 square feet at a depth of 4".)
8. Do not spread topsoil that is excessively wet.
9. Do not place topsoil on areas that are excessively wet or extremely dry.
10. Do not compact topsoil. Correct surface conditions where water could stand.
11. Leave the area smooth, firm, and suitable for planting.
12. Immediately begin to establish vegetation upon completion of topsoil placement.

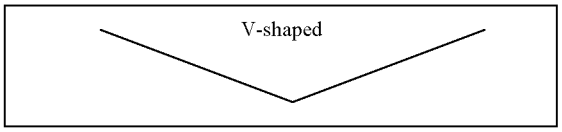
3. Shape of Grassed Waterways

It is very difficult to establish vegetation on structural measures that have concentrated water flow. The shape of channels influences the establishment and growth of plants. Grassed waterways are normally built with one of three shapes: trapezoidal, parabolic, or v-shaped.

Those installed with trapezoidal shapes are easier to establish in vegetation because they have level bottoms (horizontally) and there is sheet flow of water in them. Sheet flow causes fewer problems than if the water is concentrated in a small area. Parabolic are the next easiest to establish in vegetation. V-shaped ones are the most difficult to establish in vegetation and should be avoided.



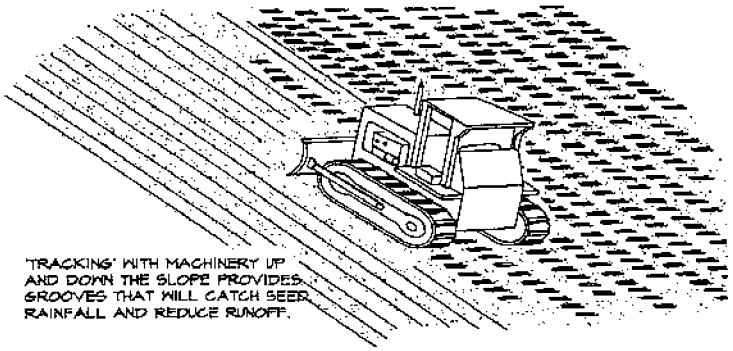




Source: New Brunswick Dept. of Ag., Canada

4. Tracking with Bull Dozier Tracks

Sometimes seed and young plant seedlings need a little additional help in order to keep from being washed down the slope. Roughening steep slopes with tracked machinery (like a bull dozier) leaves small horizontal depressions in the soil. Seed, fertilizer, mulch, and moisture collect in the depressions. Often times, this tool greatly aids vegetative establishment on steep slopes. Make as few passes as necessary to minimize soil compaction.



Source: *Florida Erosion and Sediment Control Inspector's Manual*

5. Irrigation

Supplemental irrigation is a useful tool for plant establishment and growth, especially on coastal dunes, during drought, and for getting quicker germination of plants when they are planted late in the season. Irrigation water should be applied at rates that will not result in runoff and additional soil erosion.

6. Proper Mowing Techniques

Modern mowing equipment has the capacity to do a very good job of close mowing, even on steep slopes. Mowing helps to control weeds, woody vegetation, and other competing plants, but over mowing causes major problems on construction sites. In order for grasses to survive on construction sites, we need to maintain at least 6" of top growth under any use and management.

Over mowing is a serious problem, especially on uneven slopes. And, removing too much plant canopy with one mowing can cause plant death. Never remove more than 1/2 of the existing leaf area at any one time. Don't mow sericea lespedeza until after the first killing frost each fall. This insures that the current year's seed crop is mature. Do not mow critical areas during the bird nesting season, which is May through September in Georgia.

TIPS FOR PLANNERS AND PLAN REVIEWERS

Soil Erosion on Construction Sites

Excess soil erosion on construction sites is not inevitable. Excess soil erosion can be prevented with adequately planned, applied, and maintained soil erosion and sediment control measures. Effective soil erosion and sediment control can not be accomplished without good planning. The prevention process starts with a good soil erosion and sediment control plan.

E&SC Plans

An erosion and sediment control (E&SC) plan is an important document. The purposes of an erosion and sediment control plan are to (1) describe the potential for soil erosion and sedimentation on a construction site and (2) explain and schedule the measures that will be used to reduce the problems.

The E&SC plan is a significant part of the overall plan and should not be an afterthought. E&SC should be considered in the initial plans and throughout the entire planning process for a project. When deciding the location of buildings, roads, parking lots, surface drainage, and other structures, consider the potential for soil erosion and sedimentation that can result.

How long should an E&SC plan be? The content and detail of an E&SC plan depends on many things. Among these are the size of the project, site conditions, and the potential for on-site and off-site damages. Plans for small projects on sites with flat topography normally do not need to be as complex as those for a large development with steep slopes and other characteristics that have greater potential for soil erosion. Also, a more detailed E&SC plan is needed if streams and other sensitive areas are downhill and near the project.

Site Inventory

The entire site should be visited and inventoried before you begin the E&SC plan. Consider site characteristics such as soils, topography, existing cover, drainage patterns, and all areas adjacent to the future construction site, especially streams, homes, and roads that are down the hill from the construction site. Once you are familiar with the site and adjacent areas, you will be able to identify the areas that have the highest potential for soil erosion and can develop a more effective E&SC plan.

Vegetative, Structural, and Management Measures

One measure does not provide all of the protection that is needed on a site. Effective erosion and sediment control requires a system of measures. E&SC plans should contain three types of measures: vegetative, structural, and management. Each type has temporary and permanent components.

Remember it is easier and cheaper to reduce soil erosion than to trap sediment once it is carried down hill. And, the most important tool we have to reduce soil erosion and runoff is vegetative cover. With good planning, the cost of vegetative measures can be reduced. Therefore, existing ground cover should be considered as an asset and be maintained if possible. Some vegetation is more effective in protecting the soil than others, but any and all cover helps reduce soil erosion.

Trees are the most effective plant in protecting the soil from erosion and if taken care of properly can continue to beautify the site after construction is completed. Trees that are to be left should be protected. Limit equipment and vehicular traffic near trees because of increased soil compaction. Placing excess fill around trees will kill them also.

The erosion hazard is less if the time the soil is exposed is reduced. If possible, do not clear entire sites at one time. If the existing cover must be removed, consider planning the land clearing in stages rather than removing all of the vegetation at the same time. Temporary cover and mulching can be used to stabilize disturbed areas before other areas are cleared.

For disturbed areas, all of the topsoil should be stripped and stockpiled when grading operations begin. It can then be used as topdressing immediately prior to the planting or seeding of permanent cover.

Plant Selection

The selection of vegetative measures to be installed should be based on many factors. Among these are location, land use, soils, suitability to the site, time of year planted, planting methods, maintenance requirements, and aesthetics. For instance, you would not want to plant sericea lespedeza or weeping lovegrass for a lawn. Tall fescue is not a good choice for a baseball field. Ryegrass is not a good choice for a companion/nurse plant. For temporary and permanent cover, use fast growing vegetation that will provide the quickest and most dependable soil protection with the least amount of maintenance.

Plan for the Entire Year

It is difficult to predict when a project will be finished. It is common not to finish construction on schedule. Delays occur as a result of the weather, breakdowns, and other reasons. A month or less difference in time can greatly affect species selection and the expected results of temporary and permanent vegetation. Too often E&SC plans are developed for a specific time frame. Do not develop a vegetative plan for just one period of one time, plan for the entire year.

Management measures cost little or nothing. Plan work in a logical sequence. Keep materials needed for vegetative measures on hand to limit delays in application. Be prepared especially for thunderstorms and they occur more frequently in the summer than any other time of the year in Georgia.

Minimum Criteria

The "*Manual for Erosion and Sediment Control in Georgia*" contains the minimum guidelines on how soil erosion and sediment control measures are to be planned, implemented, and maintained. The criteria in the Manual are not all that is needed on some sites. Due to the severity of problems on some construction sites, much more than is required in the Manual may be needed.

Phases of Vegetative Measures Seeded with Conventional Methods

When planning vegetative measures, consider that there is a normal sequence of the events for the components in each measure.

For seeding temporary vegetation with conventional methods, the phases are:

1. Determine plant selection based on site location and time of year to be seeded
2. Determine accurate seeding rates
3. Apply agricultural lime
4. Apply the initial fertilizer
5. Prepare seedbed to a depth of 4-6"
6. Evenly distribute the seed with a drill or other suitable method
7. Apply straw/hay mulch or blankets within 24 hours of seeding
8. Anchoring all mulch materials immediately
9. Apply topdressing fertilizer 6-8 weeks after planting
10. Maintain the vegetative cover for the desired length of time.
11. Repair and reseed damaged areas as soon as possible.

For seeding permanent vegetation with conventional methods, consider these phases:

1. Determine plant selection based on:
    -the planned use of the land
    -site location and characteristics
    -time of year to be seeded
    -maintenance that will be provided
2. Decide if seeding mixtures will be used
3. Determine accurate seeding rates
4. Apply agricultural lime
5. Apply the initial fertilizer
6. Prepare seedbed to a depth of 4-6”
7. Inoculate all legume seed immediately before seeding
8. Evenly distribute the seed with a drill or other suitable method
9. Apply straw/hay mulch or blankets within 24 hours of seeding
10. Anchoring all mulch materials immediately
11. Apply topdressing fertilizer 6-8 weeks after planting
12. Apply second year fertilizer the year after seeding
13. Apply maintenance fertilizer each year
14. Apply maintenance agricultural lime every few years or based on a soil test
15. Protect from vehicular traffic
16. Mow properly and as needed
17. Maintain the vegetative cover for the desired length of time.
18. Repair and reseed damaged areas as soon as possible.

Phases of Vegetative Measures Seeded with Hydroseeding Methods

When hydroseeding, consider also that there is a normal sequence of the events for the components in each measure.

For seeding temporary vegetation with hydroseeding, consider these phases:

1. Determine plant selection based on site location and time of year to be seeded
2. Determine accurate seeding rates
3. Mix the seed, initial fertilizer, and wood cellulose/paper mulch in a slurry
4. Evenly distribute the seed with a hydroseeder within 1 hour of mixing
5. Apply straw/hay mulch or blankets within 24 hours of seeding
6. Anchoring all mulch materials immediately
7. Apply agricultural lime after mulch application or with topdressing fertilizer
8. Apply topdressing fertilizer 6-8 weeks after planting
9. Maintain the vegetative cover for the desired length of time.
10. Repair and reseed damaged areas as soon as possible.

For seeding permanent vegetation with hydroseeding, consider these phases:

1. Determine plant selection based on:
    -the planned use of the land
    -site location and characteristics
    -time of year to be seeded
    -maintenance that will be provided
2. Decide if seeding mixtures will be used
3. Determine accurate seeding rates
4. Inoculate all legume seed immediately before placing seed in the hydroseeder
5. Mix the seed, initial fertilizer, and wood cellulose/paper mulch in a slurry
6. Evenly distribute the seed with a hydroseeder within 1 hour of mixing
7. Apply straw/hay mulch or blankets within 24 hours of seeding
8. Anchoring all mulch materials immediately
9. Apply agricultural lime (1) immediately after mulch application, (2) with topdressing fertilizer, or (3) with the second-year fertilizer
10. Apply topdressing fertilizer 6-8 weeks after planting
11. Apply second year fertilizer the year after seeding
12. Apply maintenance fertilizer each year
13. Apply maintenance agricultural lime every few years or based on a soil test
14. Protect from vehicular traffic
15. Mow properly and as needed
16. Maintain the vegetative cover for the desired length of time.
17. Repair and reseed damaged areas as soon as possible.

Maintenance

Maintenance begins when the first measure is applied and should be scheduled for each vegetative practice. Maintenance is a very important component of all E&SC plans. To often measures are forgotten and neglected as soon as they are installed. Without proper maintenance of installed measures, soil erosion and sediment control will not be successful.

Planning is a Dynamic Process

Planning is a dynamic process and it does not end once all of the planned measures are installed. Inspections should be done according to a schedule and also after each runoff event. Document if repairs or additional practices are needed. Repairs and reseeding of installed vegetative practices should be done immediately.

It is common that the original E&SC plan does not solve all of the soil erosion problems on a site. Monitor all applied vegetative measures to determine if more treatment is needed. If excessive soil erosion problems continue, revise the E&SC plan and install and maintain additional vegetative measures as soon as possible.

Insert Tab 5 – Structural BMPs

Back of Tab

Best Management Practices

-Structural Measures –

Level II: Introduction to Design
Education and Certification for Persons Involved in Land Disturbing Activities

Issued May 2009

1

The Manual for Erosion and Sediment Control In Georgia

- Referred to as the *Manual* or *Green Book*
- Chapter 6 of the Manual focuses on the standards and specifications for planning, design and installation of erosion and sediment control measures.

Updates to the Manual can be found on GSWCC's website at **www.gaswcc.georgia.gov** under

Programs ⟹ Urban Lands ⟹ New Updates to the Manual for Erosion and Sediment Control

- *Page includes newly approved practices, approved products list and other associated documents.*

2

Best Management Practices

Definition

- Vegetative measures & structural measures
- Properly designed, installed, & maintained in accordance with specification in the Manual for E&S Control
- Provide effective erosion prevention & sedimentation control

3

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

Not to be used in a live stream

4

Cd

Check Dam

Design Criteria

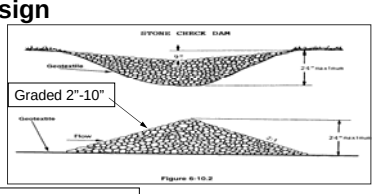
There is no formal design. The following standards shall be used:

- Drainage area shall not exceed
  - Two (2) acres for stone check dams
  - One (1) acre for haybales
- **Height** - the center of the check dam must be at least 9 inches lower than outer edge. Height should be 2 feet maximum measured to center of check dam.

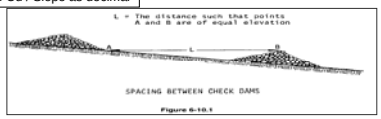
5

Check Dam

Design



How to Compute L:
L = Height of Cd / Slope as decimal



6

Check Dam

Example problem

- ✓ Independence School – School Road
- ✓ Slope From Topo = 5% – 13%

Find length between check dams for

1. 5%
2. 10%
3. 13%

7

Check Dam

Solution

1. L = Height of Cd / Slope as Decimal
   L = 2 ft. / 0.05 = 40 ft.

2. L = Height of Cd / Slope as Decimal
   L = 2 ft. / 0.10 = 20 ft.

3. L = Height of Cd / Slope as Decimal
   L = 2 ft. / 0.13 = 15 ft.

8

Check Dam

Example

9

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

10

Ch Channel Stabilization

Design Criteria

- Typical linings include vegetation, riprap, and concrete
- Lining selection depends on the velocities within the channel
- Vegetative lining shall be established using erosion control blankets or matting or sod

11

Ch Channel Stabilization

For Design Velocity

- 0 - 5 Ft/Sec → Vegetation (Ds3, Ds4, Mb)
- 5 - 10 Ft/Sec → Rock Riprap (Appendix C)
- > 10 Ft/Sec → Concrete

- Grade stabilization structures may be needed to reduce velocities

12

Ch Channel Stabilization

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

1. **The velocity in the channel**, in ft/sec, for when the channel is flowing at the bank-full discharge or 25-year frequency discharge, whichever is the lesser.
2. **The type of lining to be used** to stabilize the channel, *i.e.* vegetation (Ch-V: indicate type of vegetation and matting or blanket to be used), riprap (Ch-Rp: indicate average stone size), or concrete (Ch-C).

13

Channel Stabilization

Example

14

Co Construction Exit

Definition

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

Purpose

- To reduce or eliminate the transport of mud from construction area.

15

Co Construction Exit

Design Criteria

No formal design. The following standards shall be used:

- Aggregate size – stone in accordance with National Stone Association R-2 (1.5 to 3.5 inch stone)
- Pad thickness – gravel pad minimum thickness of 6 inches
- Pad width – minimum width should equal full width of all points of vehicular egress, but not less than 20 feet wide
- Pad length – minimum of 50 feet
- Washing - Wash tires if action of vehicles over gravel does not remove sediment. Divert tire washing to proper area

16

Co Construction Exit

17

Cr Construction Road Stabilization

Definition

- Travel way constructed as part of the construction plan including access roads, subdivision roads, parking areas, and other on-site vehicle transportation routes

18

Cr Construction Road Stabilization

Design Criteria

- 6” coarse aggregate applied immediately after grading
- Geotextile applied for additional stability
- Grades should be < 10% for slope lengths less than 200 ft
- Road Widths:
  - 14 ft for one-way traffic
  - 20 ft for two-way traffic
  - 24 ft for trailer traffic

19

Construction Road Stabilization

Geotextile underliner

20

Dc Stream Channel Diversion

Definition

- A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed within a streambed.

Purpose

- To protect the stream channel from erosion and allows work “in the dry”.

21

Dc Stream Channel Diversion

Design Criteria

- Drainage areas < 1 square mile (640 acres)
- Bottom width shall be a minimum of 6 feet or equal to the bottom width of the existing streambed, whichever is greater

22

Dc Stream Channel Diversion

Design Criteria

- Side slopes shall be no steeper than 2:1
- Table 6-12.1 gives channel linings and acceptable velocities. *Note differences from channel stabilization.*

23

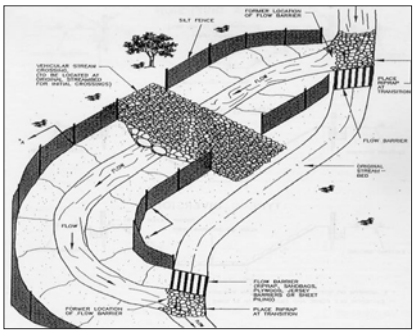
Dc Stream Diversion Channel

Stream Diversion Channel Linings

Lining Material	Acceptable Velocity
• Geotextile/ polyethylene film or sod	0 - 2.5 fps
• Geotextile alone	2.5 - 9.0 fps
• Type 1 Riprap & Geotextile	9.0 - 13.0 fps

24

Stream Channel Diversion



25

Di Diversion

Definition

- A ridge of compacted soil, constructed above, across, or below a slope to safely convey runoff to a stable outlet

Purpose

- To reduce the erosion of steep or otherwise highly erodible areas by reducing slope length, intercepting storm runoff and diverting it to a stable outlet at a non-erosive velocity.

26

Di Diversion

Design Criteria

- Location determined by outlet conditions, topography, land use, soil type, length of slope, seep planes, and the development layout
- A diversion consists of two components:
  - **Ridge Design** – have stable side slopes, no steeper than 2:1 and minimum width of 4 ft at the design water elevation after settlement. Design shall allow 10% for settlement
  - **Channel Design** – Land slope must be taken into consideration

27

Di

Diversion

Selection of design storm based on type of diversion to be used

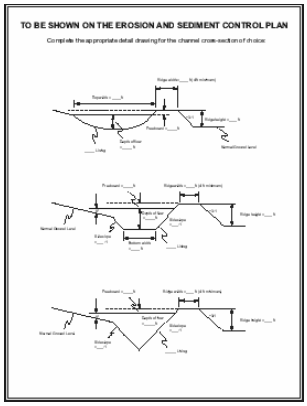
- ✓ Temporary 10-yr, 24-hr storm
- ✓ Permanent 25 or 50-yr, 24-hr storm

Diversion Type	Land or Improvement Protected	Storm[1] Frequency	Freeboard	Minimum Top Width
Temporary	Construction areas Building sites	10 years[2]	0.3'	4 feet
Permanent	Landscaped, recreation and similar areas.	25 years	0.3'	4 feet
	Dwellings, schools, commercial bldgs., and similar installations.	50 years	0.5'	4 feet

[1] Use 24-hour storm duration

[2] Use 10 years or the storm frequency specified in Title 12 of the Official Code of Georgia Annotated

Diversion



29

Dn1

Temporary Downdrain Structure

Definition

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

Purpose

- To safely conduct storm runoff from one elevation to another without causing slope erosion and allowing the establishment of vegetation on the slope.

30

Dn1 Temporary Downdrain Structure

Design Criteria

There is no formal design. The following standards shall be used:

- **Placement** – located on undisturbed soil or well compacted fill
- **Diameter** – provide sufficient capacity required to convey the max runoff expected during the life of the drain
  - Sized according to its contributing drainage area
    - * 0.3 Ac = 10 in. * 0.5 Ac. = 12 in.
    - * 1.0 Ac. = 18 in.

31

Dn1 Temporary Downdrain Structure

Commonly used in conjunction with Diversions (Di)

- Removed once the permanent storm water disposal system is installed and functioning
- Storm drain outlet protection (St), shall be placed at the downdrain outlet

32

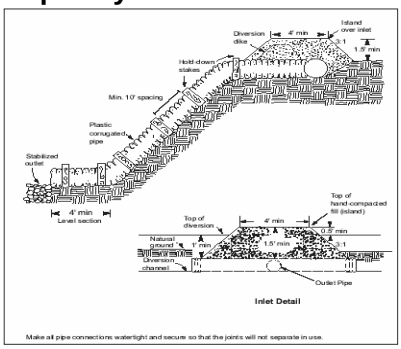
Dn1

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

1. The drainage area for each downdrain, in acres.
2. The diameter of each downdrain, in inches, based on Table 6-14.1.
3. The dimensions of the outlet protection, including flow rate, velocity, and apron length, upstream and downstream widths, average stone diameter and depth.

33

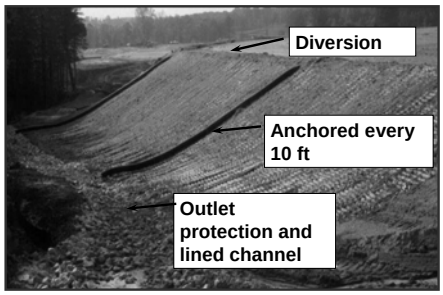
Temporary Downdrain Structure



34

Temporary Downdrain Structure

Placement



35

Dn2 Permanent Downdrain Structure

Definition

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

Purpose

- Minimize erosion due to concentrated storm runoff on cut of fill slopes

36

Dn2 Permanent Downdrain Structure

Design Criteria

- May be constructed of concrete, pipe, pre-fabricated sectional conduit or other adequate materials
- Should be designed by professionals familiar with these structures
- All structures shall satisfy GDOT Standards and Specs
- Shall safely convey the 25-yr, 24-hr storm
- Outlets must be stabilized

37

Permanent Downdrain Structure

38

Fr Filter Ring

Definition

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

Purpose

- Reduces flow velocities, preventing the failure of other sediment control devices**.** Prevents sediment from leaving the site or entering drainage systems, prior to permanent stabilization.

39

Fr

Filter Ring

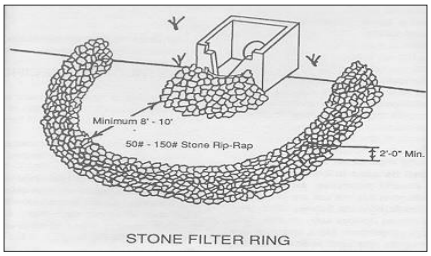
Design Criteria

There is no formal design. The following standards shall be used:

- **Location-** Shall surround all sides of the structure receiving runoff and should be placed no less than 4 ft. from the structure. When placed in front of a retrofit it should be placed no less than 8-10 ft. from the retrofit
- **Stone Size –** Constructed of stone no smaller than
  - 3-5 inches in diameter for inlets with diameters less than 12 inches
  - 10-15 inches in diameter for pipes with diameters greater than 12 inches
- **Height –** no less than two feet from grade

40

Filter Ring



STONE FILTER RING

41

Filter Ring

Example

42

Ga

Gabion

Definition

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

Purpose

- Used to stabilize steep or highly erosive slopes

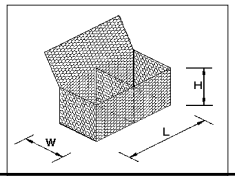
43

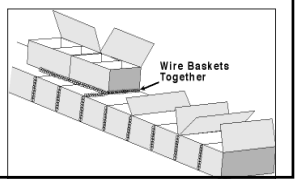
Ga

Gabion

Design Criteria

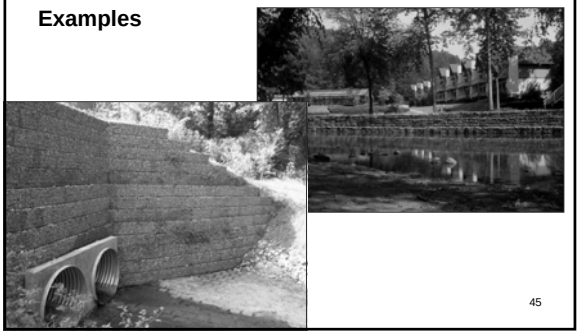
- Construction plans and drawings should be prepared by professionals familiar with the use of gabions
- Should be securely "keyed" into the foundations and abutment surfaces





Gabion

Examples



45

Gr

Grade Stabilization Structure

Definition

- Structure used to stabilize the grade in natural or artificial channels

Purpose

- Prevent the formation or advancement of gullies and reduce erosion and sediment pollution

46

Gr

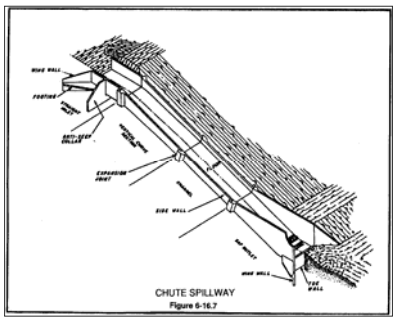
Grade Stabilization Structure

Design Criteria

- **Structures –** designed in accordance with sound engineering practices – can be constructed of concrete, rock, masonry, steel**,** aluminum, treated wood
- **Types -** straight drop, drop inlet, box inlet, chute spillway
- **Capacity –** Conditions of adjacent areas is considered when determining the storm frequency
  - Residences/commercial & recreation buildings — 100-yr, 24-hr
  - Recreation & landscape areas — 25-yr, 24-hr
  - Agricultural Land — 25-yr, 24-hr

47

Grade Stabilization



48

Grade Stabilization

Example

49

Level Spreader

Definition

- A storm flow outlet device constructed at zero grade across the slope whereby concentrated runoff may be discharged onto stabilized ground and converted to sheet flow.

Purpose

- To dissipate storm flow energy at the outlet by converting storm runoff into sheet flow and to discharge it onto areas stabilized by existing vegetation without causing erosion**.**

50

Level Spreader

Design Criteria

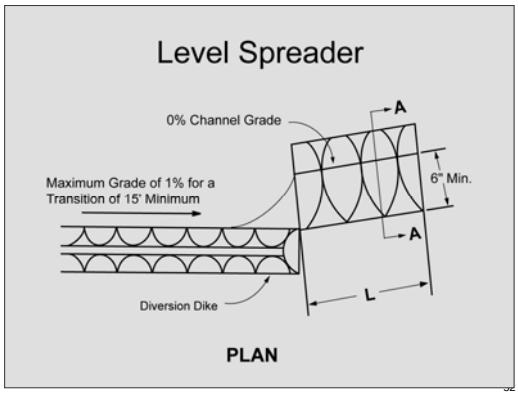
- Length – Determined by 10-yr, 24-hr storm

Peak Q (cfs)	*Minimum Length (ft)*
Up to 10	10
11 – 20	20
21 – 30	30
31 – 40	40
41 – 50	50

- Width – Minimum 6 feet

51

Level Spreader



52

Rd Rock Filter Dam

Definition

- A temporary stone filter dam installed across small streams or drainageways

Purpose

- Capture and filter sediment for removal when working in a stream or water body.
- Reduce velocity of water.

*The use of a rock filter dam in a stream is considered fill by the U.S. Army Corps of Engineers and is not allowed in their permit.

53

Rd Rock Filter Dam

Design Criteria
There is no formal design. The following standards shall be used:

Drainage area - shall not exceed 50 acres

Height –should not be higher than the channel banks
-center should be at least 6 inches lower than outer edge

Slide slopes – shall be 2:1 or flatter

Location – as close to the source of sediment as possible

Stone size - determined by design criteria for Riprap

54

Rd

Rock Filter Dam

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

1. Figure 6-18.1, noting rock size as specified in Appendix C.

Table C-1 Graded Rip-Rap Stone

Flow Velocity (Ft./sec.)	N.S.A. No.[1]	Size Inches (Sq. Opening) Max.	Avg.[2]	Min.	Filter Stone N.S.A. No.[1]
2.5	R-1	1 1/2	3/4	No. 8	FS-1
4.5	R-2	3	1 1/2	1	FS-1
6.5	R-3	6	3	2	FS-2
9.0	R-4	12	6	3	FS-2
11.5	R-5	18	9	5	FS-2
13.0	R-6	24	12	7	FS-3
14.5	R-7	30	15	12	FS-3

[1] National Stone Association

[2] At least 50% of the individual stone particles must be equal or larger than this listed size

55

Rock Filter Dam

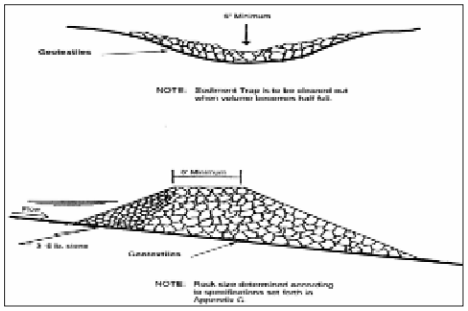


Figure 6-18.1

56

Re

Retaining Wall

Definition

- A wall constructed of concrete masonry, reinforced concrete cribbing, treated timbers, steel pilings, gabions, stone drywall, rock riprap, etc

Purpose

- Used to stabilize cut or fill slopes where stable slopes are not attainable without the use of wall.

Design Criteria

- Requires design specific to the site

57

Retaining Wall

Example

58

Rt Retrofitting

Definition

- A device or structure placed in front of a permanent storm water detention pond outlet structure to serve as a temporary sediment filter

Purpose

- Allows permanent storm water detention basins to function as temporary sediment basins for LDAs
- Shall not be used in detention basins on live streams or DA >30 acres for Rt-P

59

Rt-P Perforated Half-Round Pipe with Stone Filter

- Should be used only in detention ponds with less than 30 acre total drainage area.
- Never to be used on exposed pipe end or winged headwall.
- Diameter of half-round pipe should be 1.5 times the diameter of the principal pipe outlet or wider than the greatest width of the concrete weir.
- Perforations and stone sizes are shown in Figure 6-19.1.
- Shall be fixed by specified means (bolts, etc) to concrete outlet structure.

60

Rt-B Slotted Board Dam with Stone

- Can be used in detention ponds with drainage areas up to 100 acres.
- Can be used with open end pipe outlets, winged headwalls, or concrete weir outlets.
- Should be installed with minimum size 4x4 inch posts.
- Boards should have 0.5-1.0 inch space between them.

61

Rt Retrofitting

Design Criteria

- Height should be approx. ½ the height of outlet structure.
- Pond must be capable of storing the required volume of storage in addition to required stormwater volume.

62

Retrofitting

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

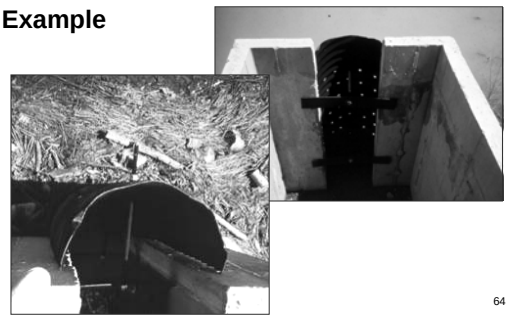
Storage Calculations

1. Required stormwater storage = _____ cy
   (as determined by local ordinance)
2. Required sediment storage = _____ cy
   (67 cy/ac * _____ ac disturbed area)
3. Total required storage = _(1)_ + _(2)_ = _(3)_ cy
4. Available storage = _(4)_ cy
5. Is the available storage (4) greater than the total required storage (3)?
   _____ yes _____ no
6. If "no", the sediment storage capacity of the pond must be increased. Choose the method to be used:
   _____ Raise the invert of the outlet structure _____ inches
   _____ Undercut the pond _____ feet
   _____ Other _____
7. Clean-out elevation = _____ ft
   (Elevation corresponding to 22 cy/ac *_____ ac disturbed area)
8. Is the length-width ratio 2:1 or greater?
   _____ yes _____ no
9. If "no", the length of flow must be increased. Choose the method to be used:
   _____ Baffles (Type of baffle: _____)
   _____ Other _____

Note the CMP diameter and height if a half-round CMP retrofit is to be used.
Diameter =_____inches Height =_____feet

Retrofitting

Example



64

Retrofitting

Example

65

Sd1 Sediment Barrier

Definition

- Temporary structures typically constructed of silt fence supported by steel or wood posts. Other types may include sandbags, straw bales, brush piles or other filtering material.

Purpose

- Prevent sediment carried away by sheet flow from leaving the site and entering natural drainage way.

66

Sd1

Silt Fence

Design Criteria

- Shall not be installed across streams, ditches, waterways or other concentrated flow areas
- Structure and all accumulated sediment will be removed as soon as project is permanently stabilized
- Types
  - Type A - 36" wide
  - Type B - 22" wide
  - Type C - 36" wide
    - Wire reinforced, high flows and velocities

Alternatives for Type – B and Type – C are available at www.gaswcc.georgia.gov

67

Criteria for Silt Fence Placement

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
<2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20*	15

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of the slope to the fence should be provided.

Sd1-C

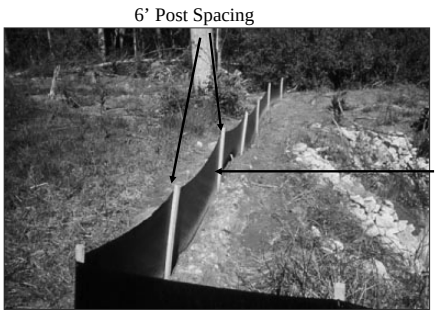
Silt Fence

- For stream buffers and other sensitive areas, two rows of Type C silt fence or one row of Type C Silt Fence backed by hay bales shall be used

69

Sd1-A

Type A silt fence



70

Silt Fence

Example

71

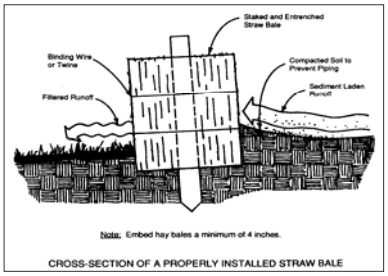
Mulch Berms

72

Sd1-Hb

Straw Bale

Detail

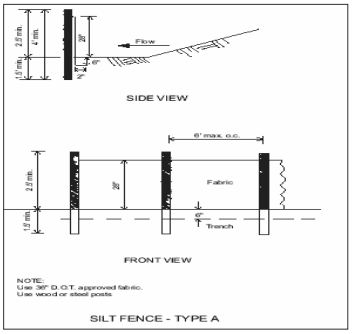


CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

73

Silt Fence

Detail of Type A



SILT FENCE - TYPE A

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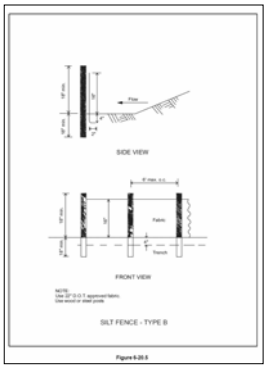
Silt Fence

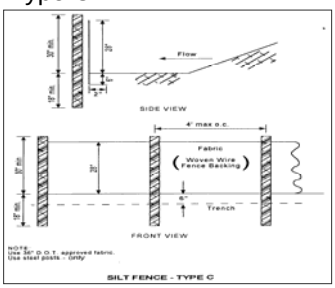
Detail of Type B



75

Silt Fence

Detail of Type C



76

Sd2 Inlet Sediment Trap

Definition

- Temporary protective device formed around a storm drain drop inlet to trap sediment.

Purpose

- To prevent sediment from leaving site or from entering drainage systems prior to permanent stabilization of disturbed area
- Should be installed around all storm drain drop inlets that receive runoff from disturbed areas.

77

Sd2 Inlet Sediment Trap

Design Criteria

- The drainage area shall be no greater than one acre
- An excavation may be created around the inlet sediment trap to provide additional sediment storage at the rate of 67 cubic yards per acre of drainage area

78

Excavated Inlet Sediment Trap

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

If the EXCAVATED INLET SEDIMENT TRAP is used, show the following information:

1. Drainage area = _____ ac
2. Required sediment storage = 67 cy/ac * drainage area
   Required sediment storage = 67 cy/ac * _____ ac
   Required sediment storage = _____ cy = _____ cf
3. Assume excavation depth (minimum of 1.5 ft.) = _____ ft
4. Assume slope of sides (shall not be steeper than 2:1) = __ :1
5. Determine required surface area
   SA_{min} = Required sediment storage / excavation depth
   SA_{min} = _____ cy / _____ ft
   SA_{min} = _____ sf
6. Assume shape of excavation and determine dimensions.
   (A rectangular shape with 2:1 length to width ratio is recommended.)
   Shape: _____
   Dimensions: l = _____ ft w = _____ ft diameter (*if applicable*) = _____ ft

Provide a detail showing the depth, length and width, or diameter (*if applicable*), and side slopes of the excavation.

79

Inlet Sediment Trap (Sd2-F)

- For inlets that drains a relatively flat area (slope no greater than 5%) and shall not apply to inlets receiving concentrated flows

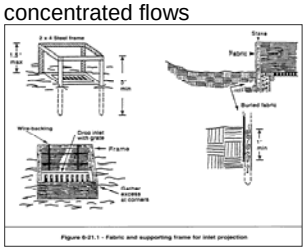
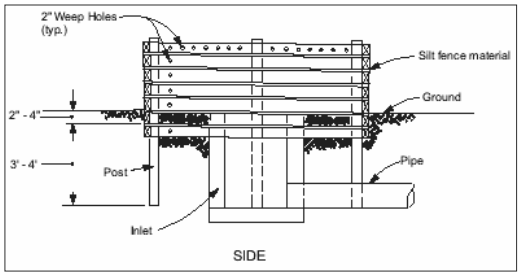


Figure 6-21.1 - Fabric and supporting frame for inlet protection

80

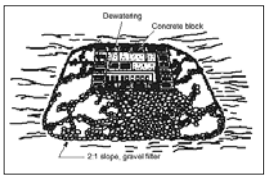
Inlet Sediment Trap (Sd2-B)

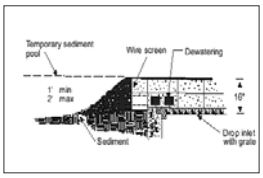
- For inlets receiving runoff with a higher volume or velocity



Inlet Sediment Trap (Sd2-Bg)

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

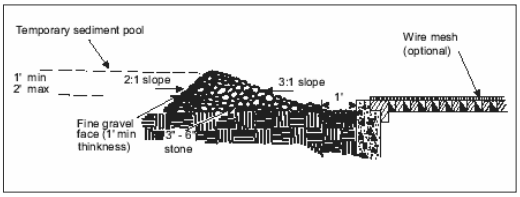




82

Inlet Sediment Trap (Sd2-G)

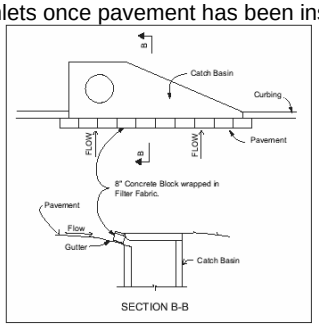
- For inlets where heavy concentrated flows are expected



83

Inlet Sediment Trap (Sd2-P)

- For inlets once pavement has been installed



84

Inlet Sediment Trap

- Examples

Protection needed

85

Sd3 Temporary Sediment Basin

Definition

- A basin created by excavation or the construction of a barrier or dam across a concentrated flow area
- Consists of a dam, pipe outlet, and an emergency spillway

Purpose

- To detain runoff waters and trap sediment from erodible areas to protect properties and drainage ways

86

Sd3 Temporary Sediment Basin

Design Criteria

Size according to location, size of drainage area, soil type, and rainfall pattern

- **Location** – shall never be placed in live streams
- **Volume** – shall be 67 cubic yards per acre drained
- **Surface Area**
- **Shape** – Length to Width Ratio greater than 2:1
- **Spillways** – Principal and Auxiliary. Even if the principal spillway is designed to convey the peak rate of runoff from a 25-yr, 24-hr storm, an emergency spillway shall be present

87

Sd3 Temporary Sediment Basin

Spillways

- ❑Principal
  - Typically CMP
  - Conduit through dam (8 inch minimum)
  - Perforated Riser (1/2 inch holes, 3 inches apart) or Skimmer outlet
  - Anti-seep Collars
  - St – Outlet Protection
- ❑Emergency
  - Ch – Channel Stabilization

88

Sd3 Temporary Sediment Basin

TO BE SUBMITTED WITH/ON
THE EROSION AND SEDIMENT CONTROL PLAN

On the E&SC Plan

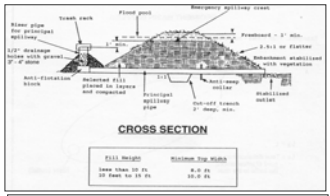
1. The specific location of the basin, showing existing and proposed contours.
2. Maintenance equipment access points.
3. Completed Figures 6-22.8 and 6-22.9. (details for the cross section of dam, principal spillway, and emergency spillway, and profile of emergency spillway).
4. Details of trash rack, concrete riser base, and outlet structure assembly. (Refer to Figures 6-22.4 to 6-22.7.)

On 8 1/2" x 11"Sheet(s)

1. Hydrological study, including information regarding stage/storage relationship.
2. Temporary sediment basin design sheet, p. 6-168 to 6-170.
3. Completed Figures 6-22.8 and 6-22.9 (details for the cross section of the dam, principal spillway, and emergency spillway, and profile of emergency spillway).

89

Sd3 Temporary Sediment Basin



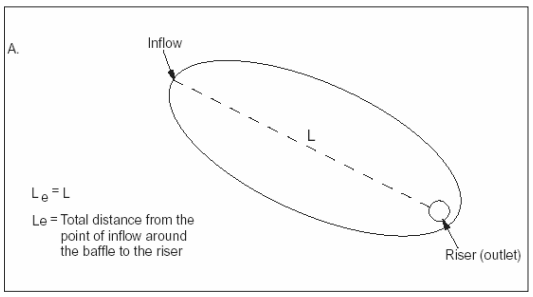
TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET
EXAMPLE PROBLEM

Computed by_____ Date_____
Checked by_____ Date_____

Project Name Independence School, Paradise City
Basin No. 1
Total area draining to basin = 18.1 acres
Disturbed area draining to basin = 18.1 acres

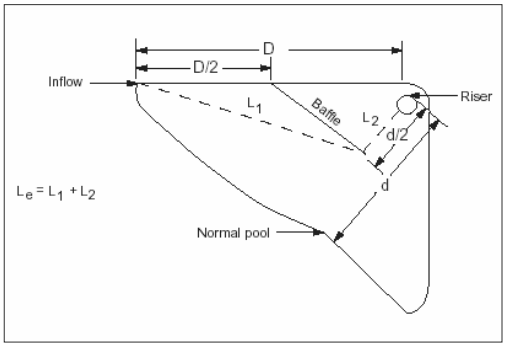
90

Baffles



91

Baffles



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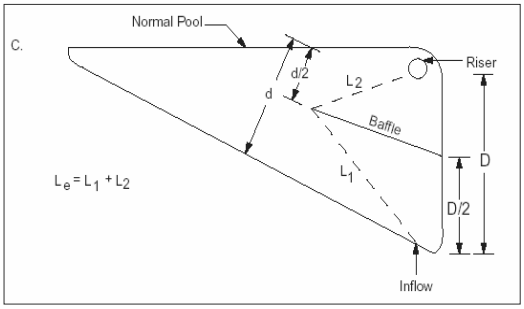
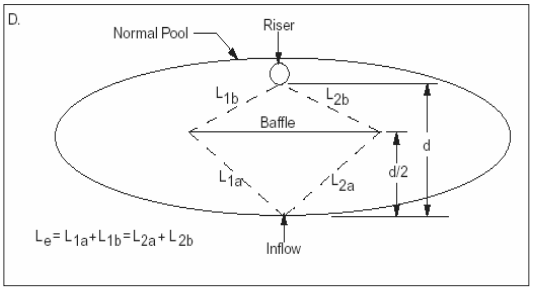


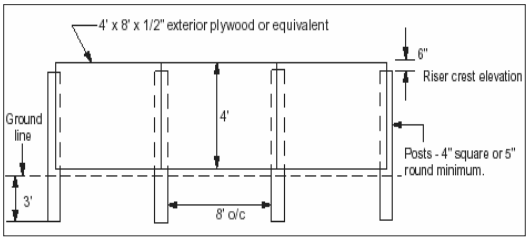
93

Baffles



94

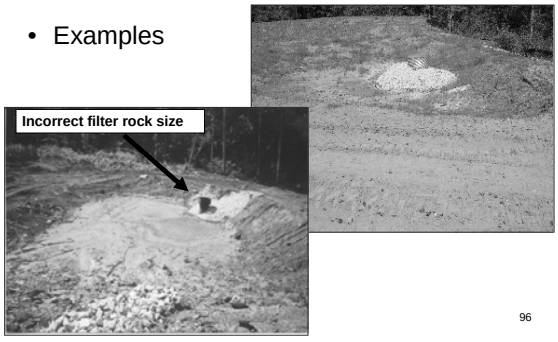
Baffle Detail



95

Sd3 Temporary Sediment Basin

- Examples



96

Sr Temporary Stream Crossing

Definition

- Temporary structure installed across a flowing stream or watercourse for use by construction equipment.

Purpose

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

97

Sr Temporary Stream Crossing

Design Criteria

- Not to be used on streams with a drainage area greater than one square mile (640 Acres)
- In place for less than one year
- Design based on drainage area and slope of watershed
- Must convey 2-yr, 24-hr storm
- Bridge or culvert crossings may be used
- Installed perpendicular to stream

98

TO BE SHOWN ON THE ES&PC PLAN

1. Drainage area (ac), average slope of watershed (%), and stream flow rate at bankfull flow (cfs).

2. Detailed dimensions of components for the type of crossing to be used.

99

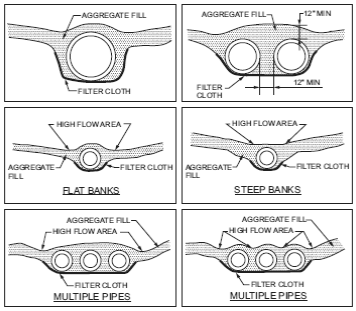


Figure 8-23.3 - Configuration of Temporary Culvert Crossing

100

Temporary Stream Crossing

- Example

101

St Storm Drain Outlet Protection

Definition

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

Purpose

- Reduce the velocity of flow from storm drain outlets
- Reduce erosion of receiving channels
- Stabilize grades

102

St Storm Drain Outlet Protection

Design Criteria

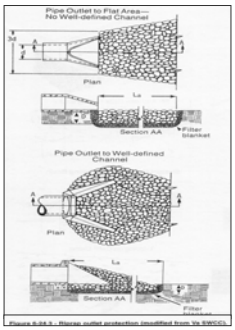
- Capacity
- Tailwater Depth
- Apron Length and Thickness
- Apron Width
- Bottom Grade
- Side Slope
- Alignment
- Geotextile
- Materials

103

Outlet Protection

Notes

1. L_a is the length of the riprap apron.
2. D = 1.5 times the maximum stone diameter but not less than 6".
3. In a well-defined channel extend the apron up the channel banks to an elevation of 6" above the maximum tailwater depth or to the top of the bank, whichever is less.
4. A filter blanket or filter fabric should be installed between the riprap and soil foundation.



104

Outlet Protection

TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

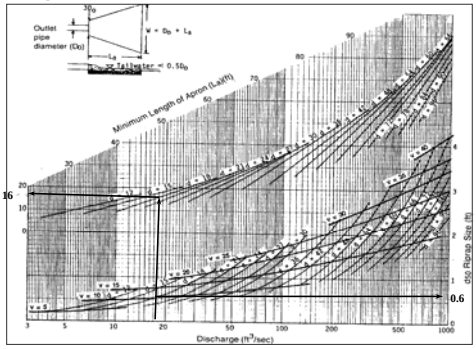
1. The flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tailwater condition.
2. The dimensions of the apron including length (La), width at the headwall (W_1), downstream width (W_2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-24.1 and 6-24.2.

6-180 GaSWCC (Amended - 2000)

105

Outlet Protection

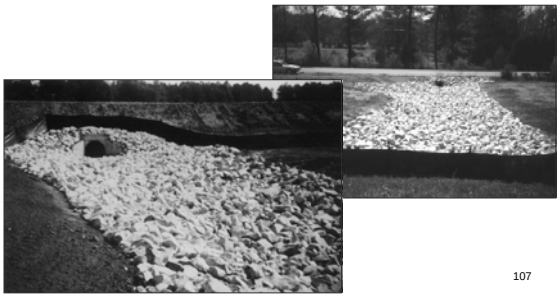
Design



106

Outlet Protection

Example



107

Su Surface Roughening

Definition

- Providing a rough soil surface 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

Soil surface should not be roughened if slope is to be stabilized with matting or blankets

108

Su Surface Roughening

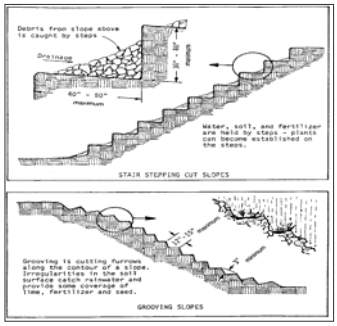
Design Criteria

Selection of an appropriate method of surface roughening depends on the type of slope. Slope steepness, mowing requirements and whether the slope is formed by cutting or filling should be considered when choosing one of the three methods of achieving a roughened slope surface.

- **Stair-Step Grading**
- **Grooving**
- **Tracking**

109

Surface Roughening



110

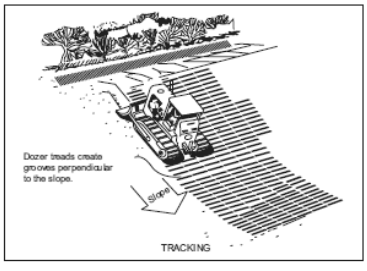


Figure 6-35.2

Tracking with bulldozer treads on clay soils is not recommended unless no alternatives are available. The soil surface is severely compacted and runoff is increased.

111

Tp Topsoiling

DEFINITION

- Stripping off the more fertile top soil, storing it, then spreading it over the disturbed area after completion of construction activities.

PURPOSE

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

112

Tp Topsoiling

Conditions

- This practice is recommended for sites of 2:1 or flatter slopes 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.

113

Wt Vegetated Waterway

Definition

- A waterway that is shaped or graded to required dimensions and stabilized with vegetation.

Purpose

- Dispose of stormwater runoff
- Prevent erosion
- Reduce sedimentation

114

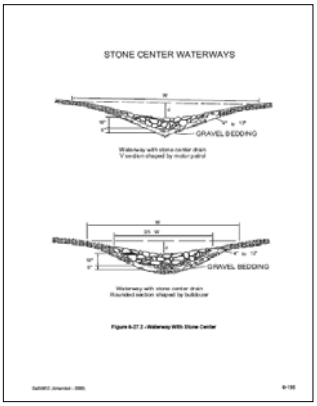
Wt Vegetated Waterway

Design Criteria

- **Capacity** – At a minimum convey peak runoff expected from a 25-yr, 24-hr storm
- **Velocity –**Is well within the limits of permissible velocity
- **Drainage -** Subsurface drainage measures shall be provided for sites with high water tables or seepage problems. When base flow is present a stone center or lined channel is required.

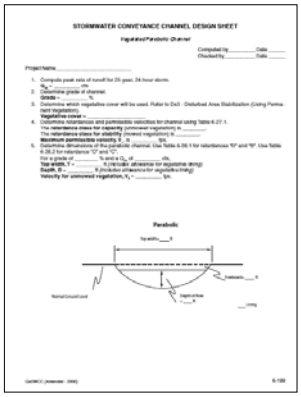
115

Vegetative Waterway



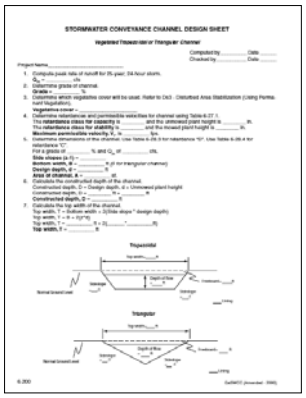
116

Vegetative Waterway



117

Vegetative Waterway



STORMWATER CONVEYANCE CHANNEL DESIGN SHEET

Trapezoidal

Triangular

118

TO BE SUBMITTED WITH/ON
THE EROSION AND SEDIMENT CONTROL PLAN

GRASS-LINED CHANNEL

1. **Stormwater Conveyance Channel Design Sheet** for the appropriate channel shape.
2. **Cross-sectional detail** of the channel (include with Design Sheet *and* show on E&SC plan).

STONE CENTER CHANNEL

1. **Cross-sectional detail** of the channel on the E&SC plan.

119

Sediment Storage Requirements

67 cubic yards per acre drained of sediment storage is required for each project

- ✓ Temporary Sediment Basins
- ✓ Excavated Inlet Sediment Traps
- ✓ Retrofitted storm water detention ponds

120

Design Storms for Structures

- 2-year, 24-hour Storm
  - ✓ Temporary sediment basin
    - (Principal spillway)
  - ✓ Temporary stream crossing
- 10-year, 24-hour Storm
  - ✓ Level spreader
  - ✓ Diversion (Temporary)
  - ✓ Grade stabilization structure
    - (Agricultural)

121

Design Storms for Structures

- 25-year, 24-hour Storm
  - ✓ Temporary sediment basin
    - (Emergency spillway)
  - ✓ Diversion (Permanent)
  - ✓ Grade stabilization structure
    - (Landscaping & recreation)
  - ✓ Storm drain outlet protection
  - ✓ Vegetated waterway

122

Clean-out Elevations

- One-Half (1/2) Full
  - ✓ Silt fence
  - ✓ Check dams
  - ✓ Rock filter dams
  - ✓ Inlet sediment traps
- One-Third (1/3) Full
  - ✓ Temporary sediment basins
  - ✓ Retrofitted detention ponds

123

Review

- BMPs
  - Required on LDAs by Erosion and Sedimentation Act of 1975
  - Proper design, installation, and maintenance
- Vegetative Measures
  - Control erosion
  - Treat at source
- Structural Measures
  - Control sedimentation
  - Treat after erosion has begun

124

Insert Yellow Sheet

Back of Yellow Sheet

STRUCTURAL BEST MANAGEMENT PRACTICES

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 approved plan, if shown.
- Place in small, open channels, **not in live streams**.
- Construct center at least 9 inches 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.

Cd

Stone Check Dams Cd-S

- Drainage area not to exceed 2 acres.
- Constructed of graded size 2"-10" stone.
- 2 feet maximum dam height measured to center of check dam.
- Place a suitable geotextile between the rock and its soil base and abutments.

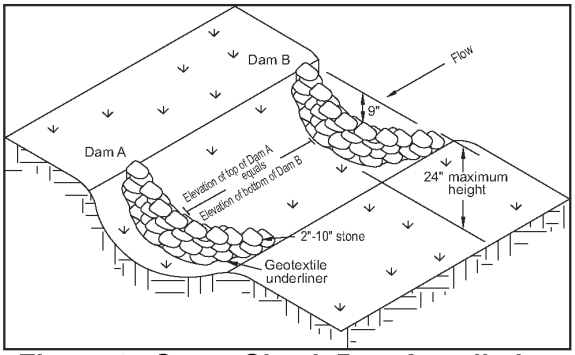


Figure 1. Stone Check Dam Installation Requirements

MAINTENANCE

- Periodic inspection and maintenance required.
- Remove sediment when it reaches a depth of one-half the original dam height.
- Remove at the completion of its useful life.

REFERENCES

- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)
- 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 approved plan, if shown.
- Drainage area not to exceed one square mile.
- Establish or install immediately after construction or as soon as weather permits.

Vegetative Lining Ch-V

- Permanent or temporary vegetation may be used.
- Install erosion control blankets, if required.

Ch

Rock Riprap Lining Ch-Rp

- 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.

Concrete Lining Ch-C

- For channels where velocities exceed 10 feet per second.

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.

MAINTENANCE

Periodic inspection and maintenance required.

REFERENCES

- Gr Grade Stabilization Structure
- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

Co

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.

INSTALLATION

- Install according to approved plan, if shown.
- Use 1.5"-3.5" stone.
- Minimum pad thickness of 6 inches.
- Minimum pad width of 20 feet.
- Minimum pad length of 50 feet.
- Excavate footprint 3 inches.
- If tire washing is required, route runoff from washing to an approved sediment trap or sediment basin.
- Install filter fabric under the entire pad.

Co

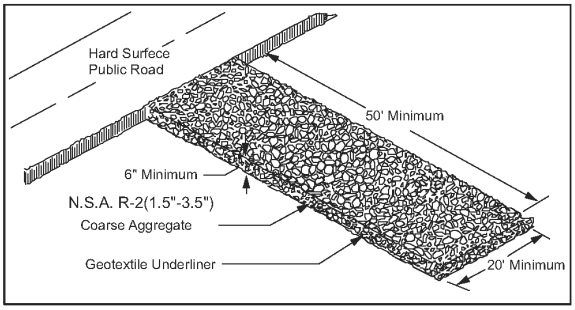


Figure 1. Crushed Stone Construction Exit Installation Requirements

Figure 2. Geotextile Underliner Under Gravel Pad

MAINTENANCE

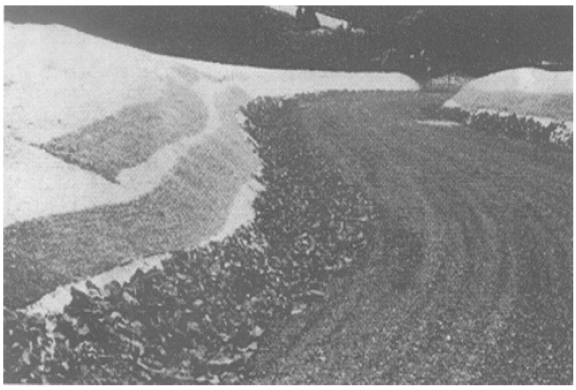
- Periodically dress with 1.5"-3.5" stone.
- Maintain in a condition that will prevent tracking or flow of mud onto public rights-of way.
- Immediately remove mud and debris tracked or spilled onto roadways.

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

To provide a fixed route of travel for construction traffic and to reduce erosion and subsequent regrading of permanent roadbeds between time of initial grading and final stabilization.

INSTALLATION

- Install according to 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 temporary stream crossing (Sr) specifications.

Cr

- Grades for temporary roads should not exceed 10 per cent except for short lengths with a maximum of 20 per cent for special uses.
- Temporary roadbeds shall be at least 14 feet wide for one-way traffic, 20 feet wide for two-way traffic, and 24 feet wide for trailer traffic.
- All cut and fills shall have side slopes at a maximum of 2:1 or 3:1 if mowing is planned.
- Drainage channels shall be designed to be on stable grades or protected with structures or linings for stability.
- Geotextile should be applied to the roadbed for additional stability according to the design manual specifications.
- A 6-inch layer of coarse aggregate shall be applied immediately after grading.

MAINTENANCE

Roads and parking areas may require a periodic top dressing of gravel to maintain the gravel depth at 6 inches. Vegetated areas should be checked periodically to ensure a good stand of vegetation is maintained. Remove any silt or other debris causing clogging of roadside

REFERENCES

- Sr Temporary Stream Crossing

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.

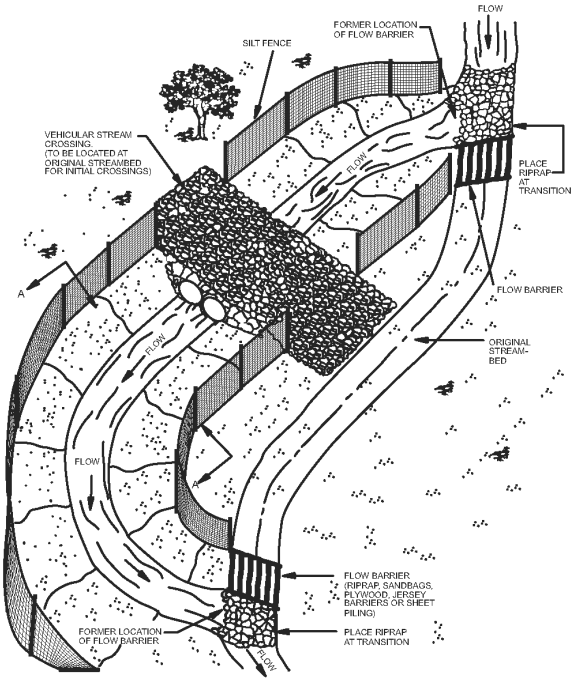


Figure 1. Stream Diversion Channel (Perspective View)

PURPOSE

To protect the streambed from erosion and allow work “in the dry”.

Dc

INSTALLATION

- Install according to approved plan.
- Drainage area not to 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. The linings are as follows:
  1) Geotextile, polyethylene film or sod (Dc-A) for a velocity range of 0-2.5 fps.
  2) Geotextile alone (Dc-B) for a velocity range of 2.5-9.0 fps.
  3) Class I riprap and geotextile (Dc-C) for a velocity range of 9.0-13.0 fps.
- The channel shall be excavated, constructing plugs at both ends.
- Silt fence 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.

Dc

- 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.
- All other appropriate agencies, including the COE, must be contacted to ensure compliance with other Laws.

MAINTENANCE

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

REFERENCES

- Mb Erosion Control Matting and Blankets

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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 approved plan, if shown.
- 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.

Di

- Stabilize channel and outlet with vegetation (mulch required for all seeded or sprigged channels), riprap, or pavement.
- Dispose of and/or stabilize unneeded excavated material.

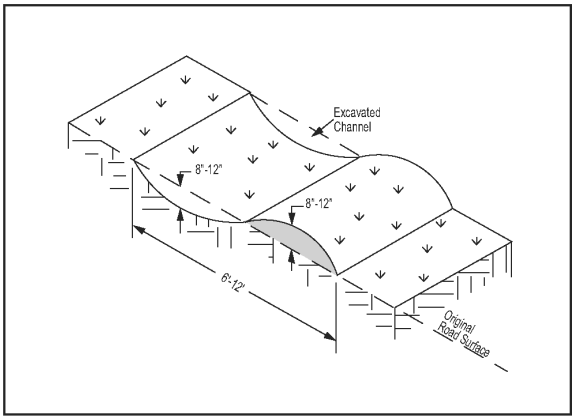

Figure 1. Typical Diversion Across Road

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 seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

Dn1

TEMPORARY DOWN DRAIN 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 approved plan, if shown.
- Install heavy-duty, flexible materials such as non-perforated, corrugated plastic pipe.

Dn1

Table 1. Pipe Diameter for Temporary Downdrain

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

- Place on undisturbed soil or well-compacted fill.
- Install tee, “L” or flared end section inlet at the top of the slope.
- Entrance sloped 1/2" per foot toward inlet.
- Compact a dike ridge no less than one foot above the top of the pipe.
- Anchor with hold-down grommets or stakes at intervals not to exceed 10 feet.
- Ensure connections are watertight.
- Extend pipe beyond the toe of the slope.
- Direct outlet uphill.
- Stabilize outlet with tee, riprap or other suitable material.
- Vegetate all disturbed areas immediately.
- See Figure 1.

MAINTENANCE

- Inspect drain and diversion after every rainfall and promptly make necessary repairs.
- Remove once the permanent water disposal system is installed.

REFERENCES

- (St) Storm Drain Outlet Protection

Dn1

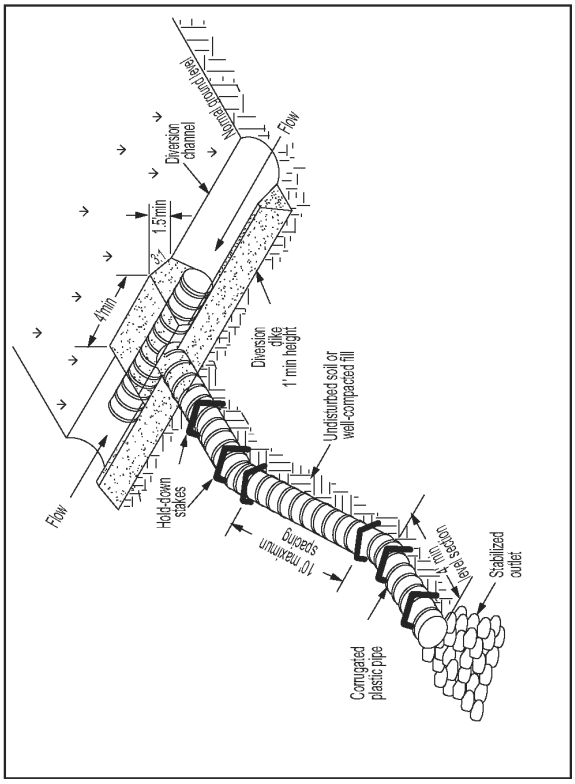

Figure 1. Temporary Downdrain and Inlet Detail

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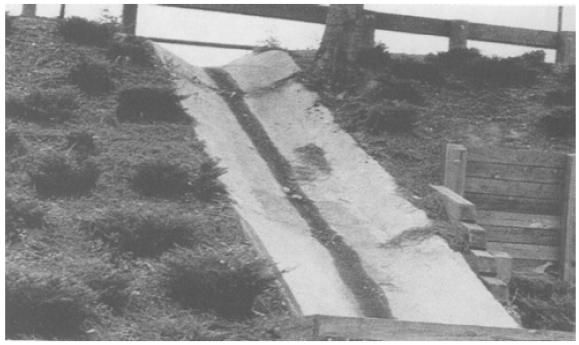
Dn2

PERMANENT DOWN DRAIN STRUCTURE

DEFINITION

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



PURPOSE

Minimize erosion due to concentrated storm runoff on cut or fill slopes.

INSTALLATION

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

Dn2

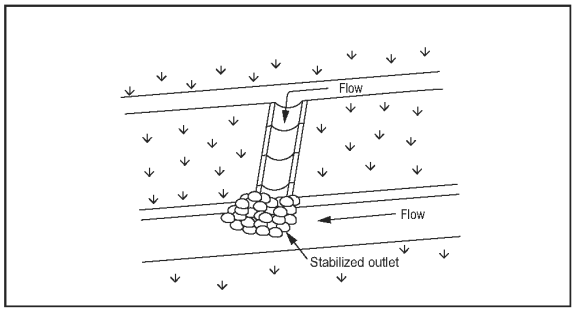


Figure 1. Typical Concrete Paved Flume

MAINTENANCE

Periodic inspection and maintenance required.

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 seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

Fr

FILTER RING

DEFINITION

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

PURPOSE

This structure reduces flow velocities, preventing the failure of other sediment control devices. It also prevents sediment from leaving the site or entering drainage systems, prior to permanent stabilization of the disturbed area.

INSTALLATION

- Filter rings shall be used in conjunction with other sediment control measures, except where other practices defined in this manual are not appropriate.
- The filter ring shall surround all sides of the structure receiving runoff from disturbed areas.
- The ring should be placed a minimum of 4 feet from the structure.
- If the ring is utilized above a retrofit structure, it should be a minimum of 8 to 10 feet from the retrofit.
- When utilized at inlets with diameters less than 12 inches, the filter ring shall be constructed of stone no smaller than 3-5 inches (15-30 lbs).
- When utilized at pipes with diameters greater than 12 inches, the filter ring shall be constructed of stone no smaller than 10-15 inches (50-100 lbs).
- The filter ring shall be constructed at a height no less than 2 feet above grade.

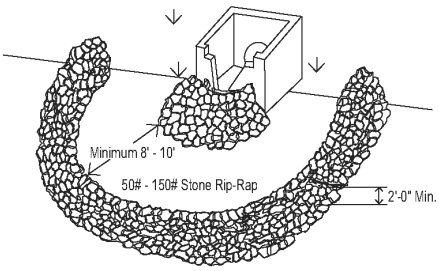
Fr

MAINTENANCE

The filter ring must be kept clear of trash and debris. This will require continuous monitoring and maintenance, which includes sediment removal when one-half full. These structures are temporary and should be removed when the land-disturbing project has been stabilized.

REFERENCES

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



STONE FILTER RING

Ga

GABION

DEFINITION

Large, multi-celled, rock-filled 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 approved plan, if shown.
- Foundations must be smooth and level.
- Only galvanized or PVC coated wire should be used.
- 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 (normally 4"-8") to be retained in the baskets.
- “Key” structure securely into foundations and abutment surfaces.

Ga

MAINTENANCE

Periodically inspect for signs of undercutting or excessive erosion at transition areas, and make 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 approved plan, if shown.
- Construct with concrete, rock, masonry, steel, aluminum, or treated wood.
- Dewater excavations prior to filling.
- Construct minimum top width of 10 feet with side slopes of 3:1 or flatter on earthfill embankments that are constructed in 6" to 8" horizontal lifts.
- Compact fill to approximately 95 percent of standard density.
- Construct keyway 8 or more feet wide and 2 feet deep along centerline of the structure and embankment.

Gr

- Provide adequate outlet for discharge.
- Apply protective cover immediately after completion of the structure.
- Vegetate all disturbed areas immediately.
- All other appropriate agencies, including the COE, must be contacted to ensure compliance with other Laws.

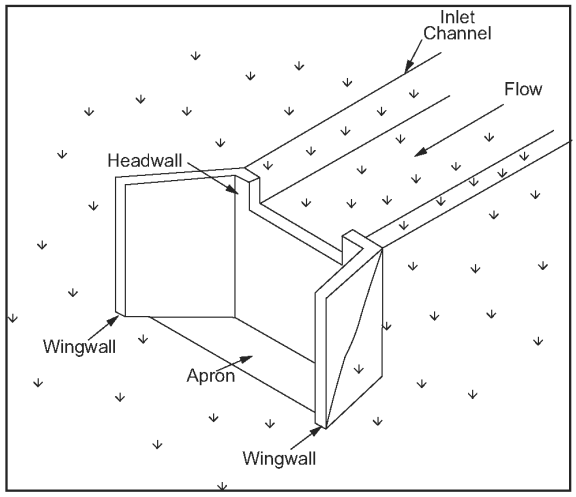


Figure 1. Typical Drop Spillway Structure

MAINTENANCE

Periodic inspection and maintenance required.

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 seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

Lv

LEVEL SPREADER

DEFINITION

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

PURPOSE

- Minimize erosion.
- Convert concentrated storm runoff to sheet flow.
- Guide storm runoff to an undisturbed, vegetated area.

INSTALLATION

- Install according to approved plan, if shown.
- Grade the channel no greater than 1% for the last 15 feet of the dike or diversion.
- Construct on undisturbed soil that is stabilized with vegetation.
- Minimum width of 6 feet.
- Minimum, uniform depth of 6 inches as measured from the lip.
- Uniform depth across the entire length.

Lv

- Level lip constructed on zero percent grade.
- Discharge onto an undisturbed, stabilized area at zero grade.
- Provide a smooth outlet.
- Prevent water from concentrating below point of discharge.
- Vegetate all disturbed areas immediately.

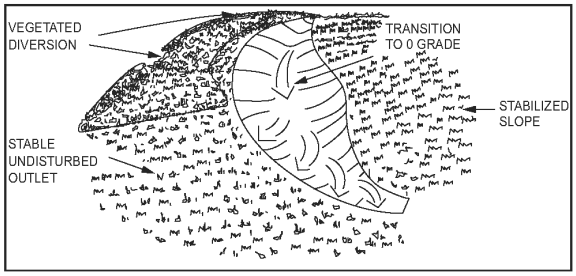


Figure 1. Level Spreader Installation Requirements

MAINTENANCE

Periodic inspection and maintenance is required.

REFERENCES

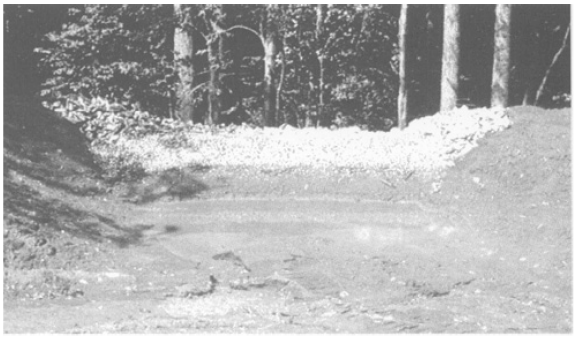
- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

Rd

ROCK FILTER DAM

DEFINITION

A temporary stone filter dam installed across small streams or drainageways.



PURPOSE

- Capture and filter sediment for removal when working in a stream or water body.
- Reduce velocity of water.

INSTALLATION

- Install according to approved plan, if shown.
- For use in small channels with drainage areas of 50 acres or less.
- Must be used in conjunction with other appropriate sediment control measures.
- Use below culvert installations, dam construction, or any project that may involve grading activity directly in a stream.
- Not intended to substantially impound water.
- Use at the upstream end of ponds or lakes.
- Edges should not be higher than the channel banks.

Rd

- Center should be at least 6 inches lower than the outer edges of the dam at the channel banks.
- Height should not exceed elevation of upstream property line.
- Side slopes should be 2:1 or flatter.
- Top width should be greater than 6 feet.
- Extend completely across the channel and securely tie into both channel banks.
- All other appropriate agencies, including the COE, must be contacted to ensure compliance with other Laws.

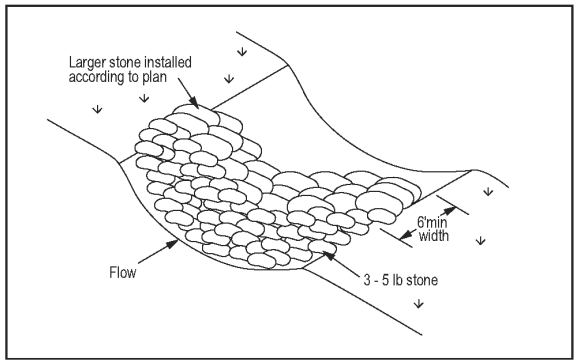


Figure 1. Rock Filter Dam Installation Requirements

MAINTENANCE

- Requires periodic inspection and maintenance.
- Sediment removed when it reaches one-half of the original dam height.
- Remove at the completion of its useful life.

Re

RETAINING WALL

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

To assist in stabilizing cut or fill slopes where stability could only be obtained with the use of a wall.

INSTALLATION

Retaining walls require *specific designs* which are within the capabilities of a design engineer or a licensed architect. Close supervision is required to ensure proper installation.

Figure 1. Typical Stone Retaining Wall

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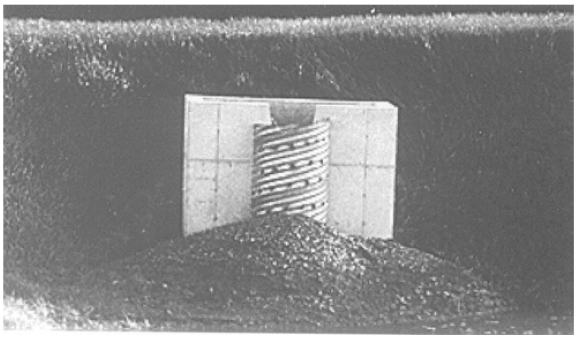
Rt

RETROFITTING

DEFINITION

A device placed in front of an outlet structure to temporarily filter sediment.



PURPOSE

Allow stormwater detention basins to function as temporary sediment retention basins.

INSTALLATION

- Install according to approved plan, if shown.
- Prohibited in detention basins on live streams.
- Install on approximately 1/2 the height of the outlet structure.

Perforated Half-Round Pipe with Stone Filter

Rt-P

- Half-round pipe diameter should be 1.5 times the diameter of the principal pipe outlet or wider than the greatest width of the concrete weir.
- Attach to the outlet structure, but never use on exposed pipe end or winged headwall.
- Drainage area not to exceed 30 acres.
- See Figures 1 and 2.

Rt

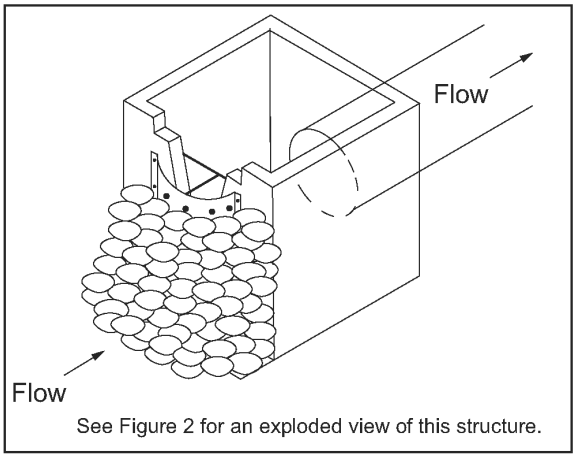


Figure 1. Perforated Half-Round Pipe Retrofit with Stone Filter.

Stone Filter Ring

- Use in conjunction with half-rounds or board dams.
- Minimum height of 2'.
- Minimum distance of 8' to 10' between retrofit and ring.
- Pipe with diameter larger than 12" requires 10"-15" stone, faced with smaller filter stone.

85

Rt

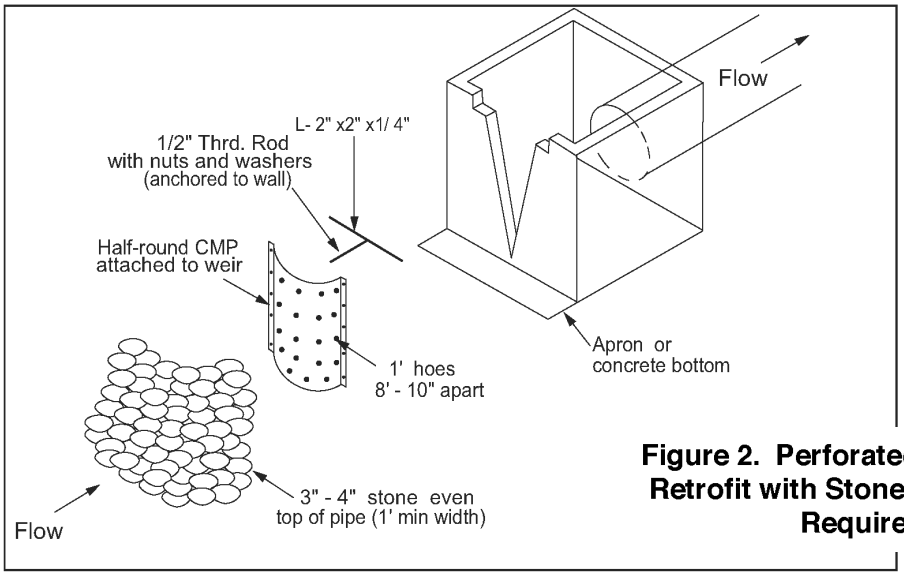


Figure 2. Perforated Half-Round Pipe Retrofit with Stone Filter Installation Requirements

86

Rt

Slotted Board Dam with Stone (Rt-B)

- Can be used with open pipe ends, winged headwalls, or concrete weir outlets.
- Install with 4x4" or larger posts with 0.5" to 1" spacing.
- Drainage area not to exceed 100 acres.
- Can excavate in front of the retrofitted outlet structure or raise the outlet structure to obtain required sediment storage.

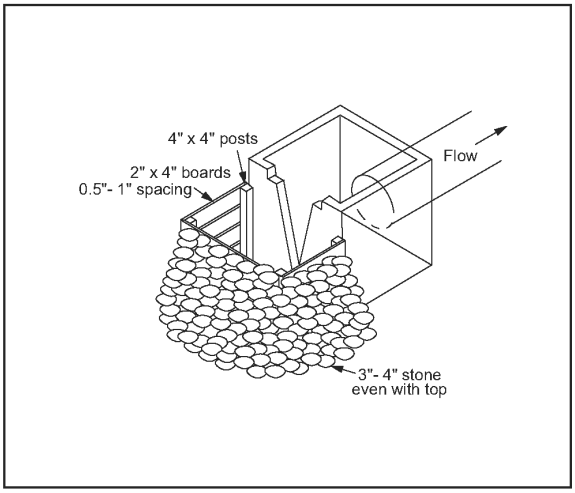


Figure 3. Slotted Board Dam Installation Requirements

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 of silt fence supported by steel or wood posts, sandbags, straw bales or other filtering material.

PURPOSE

- Slow the velocity of runoff and cause sediment deposition at the structure.
- Filter sediment from runoff.

INSTALLATION

- Install according to approved plan, if shown.
- Install along contours with ends pointing uphill.
- Do not place in waterways or areas of concentrated flow.

Sandbags (Sd1-S)

- Flow under or between bags should be minimal.
- Anchoring with steel rods may be required if height exceeds two bags.

Sd1

Hay or Straw Bales (Sd1-Hb)

- Place in a single row, lengthwise, on the contour.
- Embed in the soil to a depth of 4 inches.
- Secure with stakes or bars driven through the bales or by other adequate means.
- Place in areas of low rate sheet flow.
- For use on projects with a duration of three months or less.

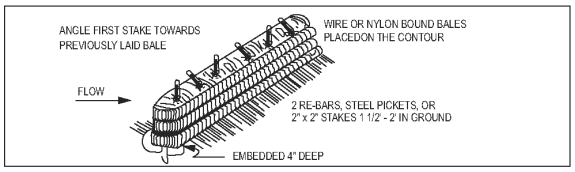


Figure 1. Straw Bale Barrier Installation Requirements

Brush (use during timber clearing operations) (Sd1-Bb)

- Pile in a row along the perimeter of land-disturbing activities.
- Windrow on the contour as close as possible.
- Compaction may be required.
- Filter fabric may be placed on the construction side of the brush barrier for added filtering capacity. Lower edge must be entrenched 4 to 6 inches deep. The upper edge must be fastened to the brush barrier.

Silt Fence (Sd1-A) (Sd1-B) (Sd1-C)

- Install where sheet flow conditions exist.
- Drainage area is not to exceed 1/4 acre per 100 ft. of silt fence.

Sd1

- Verify fabric by inspection of fabric name printed every 100 ft. of silt fence.
- Start post installation at the center of the lowest point with remaining posts spaced according to Figures 2, 3, or 4.
- If non-erosive outlets are provided, slope length may be increased beyond that shown in Table 1.

Table 1. Criteria for Sediment Barrier Placement

Land Slope (percent)	**Maximum Slope Length behind Fence** (feet)
<2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20	15

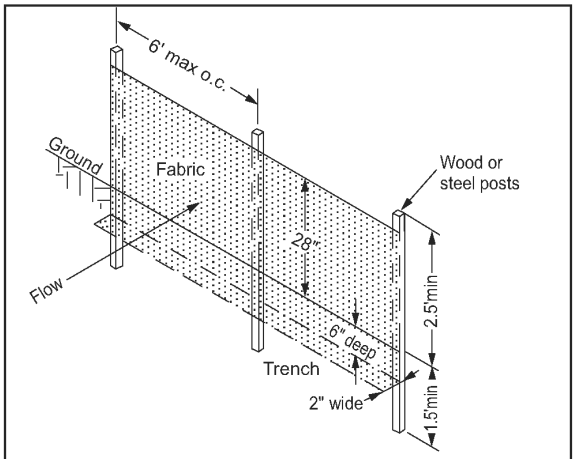
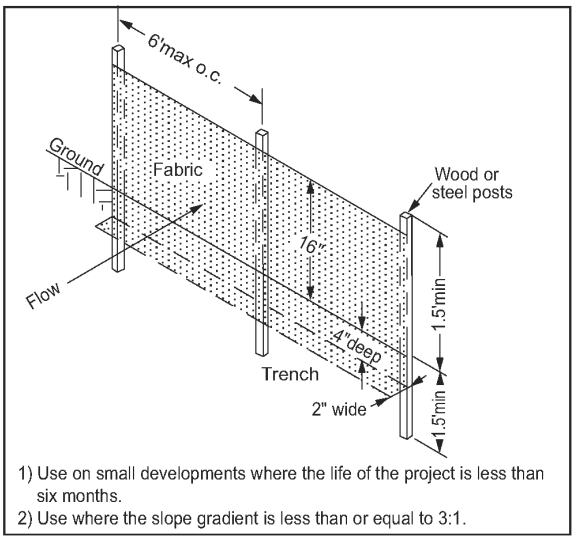


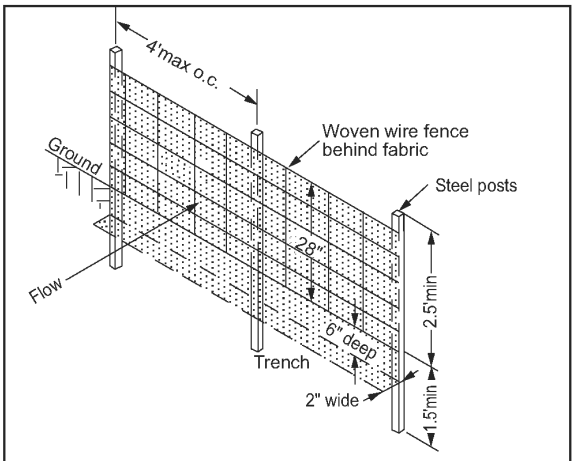
Figure 2. Type "A" Silt Fence (Sd1-A)

Sd1



1) Use on small developments where the life of the project is less than six months.
2) Use where the slope gradient is less than or equal to 3:1.

Figure 3. Type "B" Silt Fence (Sd1-b)



Use where fill slopes exceed a vertical height of 20 feet and the slope gradient is steeper then 3:1.

Figure 4. Type "C" (Sd1-C) Wire-Reinforced Silt Fence

Sd1

Figure 5. Typical Type "C" Silt Fence

MAINTENANCE

- Inspect barriers at the end of each working day, or after each rain, and repair or clean as necessary.
- Remove sediment from barrier when one-half full.
- Dispose of sediment and stabilize it with vegetation.
- Replace filter fabric when deteriorated.
- Design life of a synthetic silt fence is approximately 6 months.
- Maintain until the project is vegetated or otherwise stabilized.
- Remove barriers and accumulated sediment and stabilize the exposed area when the project is stabilized.
- Approved silt fence fabrics are listed in the Georgia Department of Transportation Qualified Products List #36 (QPL-36).

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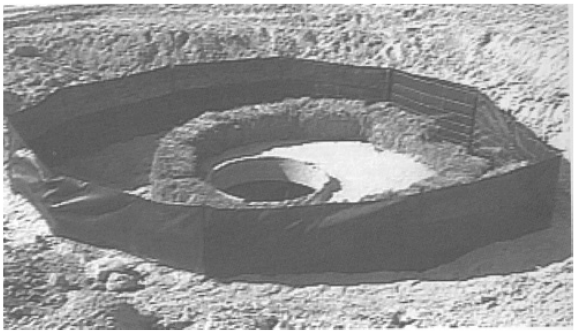
Sd2

INLET SEDIMENT TRAP

DEFINITION

A temporary sediment barrier placed around a storm drain drop inlet.



PURPOSE

Prevent sediment from entering storm drainage systems.

INSTALLATION

- Install according to approved plan, if shown.
- Do not install where vehicular traffic will be affected.
- 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

- Minimum of 1.5 feet of sediment storage in excavated sediment traps.
- Must be self-draining unless otherwise protected.

94

Sd2

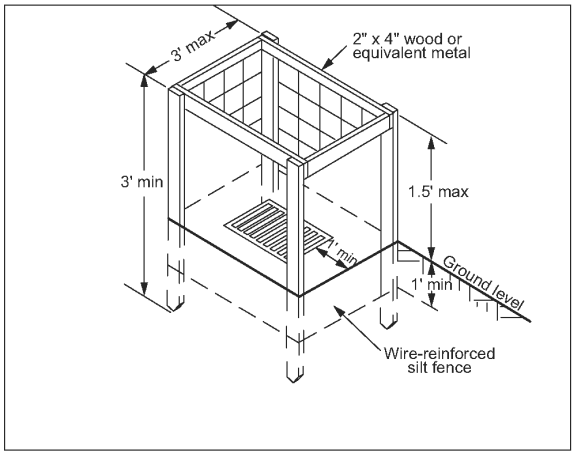


Figure 1. Fabric and supporting Frame for Inlet Protection (Sd2-F)

Block and Gravel Drop Inlet Protection

Sd2-Bg

- Excavate foundation at least 2 inches 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 inch openings over all block openings to hold gravel in place.
- Place clean gravel 2 inches below the top of the block on a 2:1 or flatter slope and smooth it to an even grade. DOT #57 stone is recommended.

Sd2

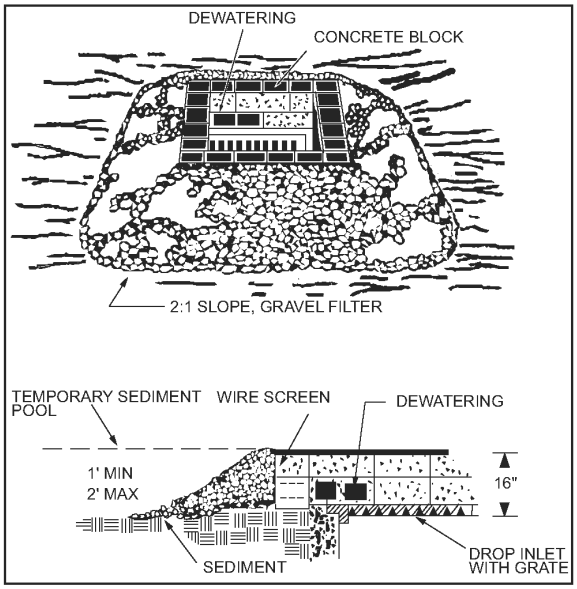


Figure 2. Block and Gravel Drop Inlet Protection Installation Requirements (Sd2-Bg)

Gravel Drop Inlet Protection (Gravel Donut)

Sd2-G

- 3:1 or flatter slope toward the inlet.
- Create a minimum 1-foot wide level stone area between the structure and the inlet to prevent gravel from entering the inlet.
- Place stone 3 inches 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

Curb Inlet Filter (Pigs-in-a-Blanket") Sd2-P

- Install filter after asphalt pavement installation.
- Wrap 8" concrete blocks in filter fabric and span across catch basin inlet.
- Face openings in blocks outward.
- Leave a gap of approximately 4 inches between the curb and the filters to allow for overflow to prevent hazardous ponding.
- Install outlet protection below storm drain outlets.

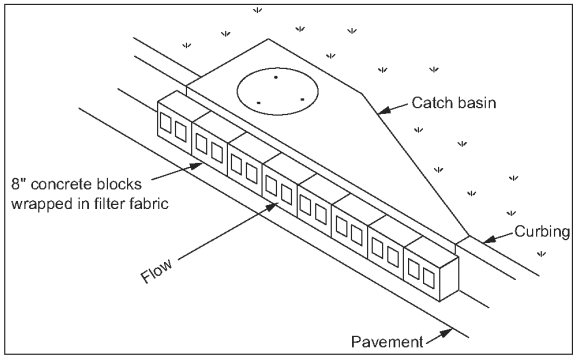


Figure 3. Curb Inlet Filter Installation Requirements (Sd2-P)

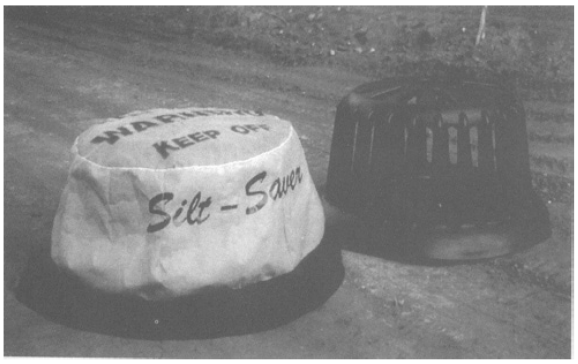


Figure 4. Alternative Inlet Sediment Trap

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 storm drain.
- Remove sediment from the trap and stabilize it with vegetation.
- Remove all materials and any unstable soil once the contributing drainage area has been adequately stabilized.
- Appropriately stabilize all bare areas around the inlet.

REFERENCES

- Sd1 Sediment Barrier

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99

Sd3

TEMPORARY SEDIMENT BASIN

DEFINITION

A basin created by excavation or the construction of a dam for sediment collection.

PURPOSE

- Detain runoff waters and trap sediment.
- Protect properties and drainageways below the basin from damage by excessive sedimentation and debris.

INSTALLATION

- Install according to approved plan, if shown.
- Length to width ratio shall be greater than 2:1, where length is the distance between the inlet and outlet.

100

Sd3

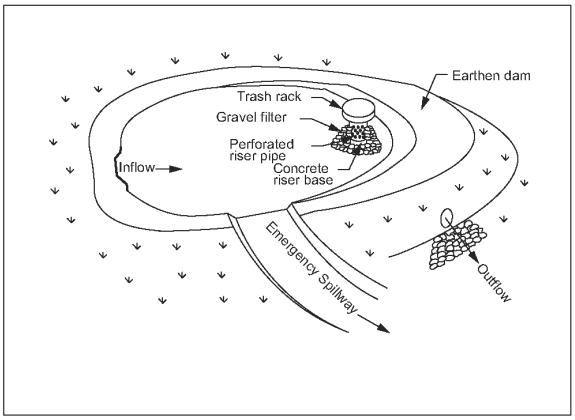

Figure 1. Components of a Typical Temporary Sediment Basin

Location

- Must never be placed 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.

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.
- Perforate lower half of riser with 1/2 inch holes spaced approximately 3 inches, and cover with two feet of 1/2 to 3/4 inch aggregate.
- Install pipe with a minimum diameter of 8 inches.
- Equip with a trash rack and anti-vortex device.

Sd3

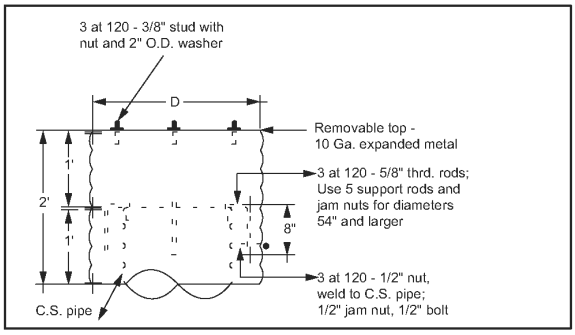

Figure 2. Typical Sediment Basin Trash Rack

- Attach riser to the base with a watertight connection. Embed riser 9 inches into an 18" thick concrete base.
- The riser and all pipe connections shall be completely watertight.

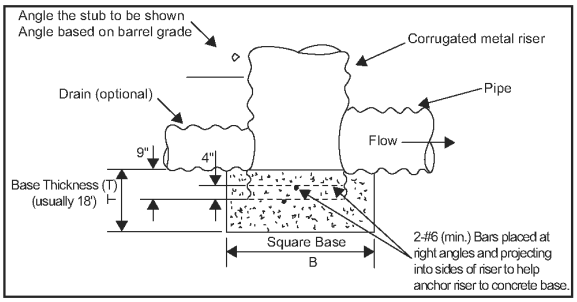

Figure 3. Concrete Riser Base Detail

Emergency Spillway

- Constructed in undisturbed ground (not fill).
- Excavate a trapezoidal channel with minimum bottom width of 8 feet.
- Stabilize with vegetation, riprap, asphalt, or concrete.

Sd3

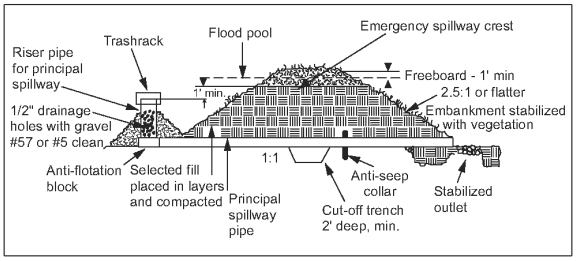

Figure 4. Section Through Embankment and Typical Features

Table 1. Sediment Basin Dam Width Requirements

Fill Height	Minimum Top Width
Less than 10 feet	8.0 feet
10 to 15 feet	10.0 feet

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.

- Stabilize with permanent vegetation immediately following construction.

MAINTENANCE

- Remove sediment when storage volume has been reduced by one-third.
- Dispose and stabilize sediment beyond the reach of the pond.
- Do not deposit sediment downstream from the embankment, adjacent to a stream or floodplain.

Sd3

- Indicate clean-out elevation with a mark on the riser or by a marked post near the riser.
- Do not remove basin until the sediment-producing area is permanently stabilized.

REFERENCES

- St Storm Drain Outlet Protection
- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area StabilizationI (With permanent seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

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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

Protect streams from damage and erosion.

INSTALLATION

- Install according to approved plan, if shown.
- Includes bridges (Sr-B), round pipes or pipe arches (Sr-C).
- Drainage area not to exceed one square mile.
- Minimize clearing and excavation of the streambed and banks.
- Cross very small streams with armored, protected fords, such as rock riprap.
- Elevate crossing to reduce the possibility of washout from a 25-year peak discharge.
- Convey full bank flow without appreciably altering or restricting stream flow habits.

Sr

- 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.

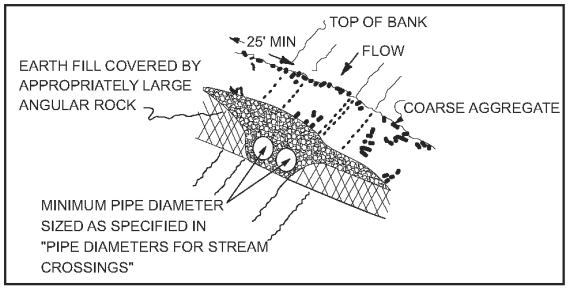

Figure 1. Temporary Stream Crossing Installation Requirements

Table 1. Pipe Diameters for Stream Crossings (inches)

Drainage Area (acres)	Average Slope of Watershed			
	1%	4%	8%	16%
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

- Remove when no longer necessary for project construction.
- Properly reshape the stream and its banks to the original cross-section after removal of the crossing.
- Stabilize denuded areas with appropriate vegetation.
- All other appropriate agencies, including the COE, must be contacted to ensure compliance with other Laws.

MAINTENANCE

- Inspect structure after every rainfall and at least once a week.
- Repair all damages immediately.

REFERENCES

- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

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St

STORM DRAIN OUTLET PROTECTION

DEFINITION

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

PURPOSE

- Reduce the velocity of flow from storm drain outlets.
- Reduce erosion of receiving channels.
- Stabilize grades.

INSTALLATION

- Install according to approved plan, if shown.
- Place a filter blanket or filter fabric between riprap and soil foundation.
- Install a graded gravel layer if geotextile is not used.
- Line with riprap, grouted riprap, or concrete. Use field or quarry stone with minimum diameter of 6 inches for riprap.
- Minimum apron thickness should be 1.5 times the maximum stone diameter.
- Extend apron length to at least six times the outlet pipe diameter.

St

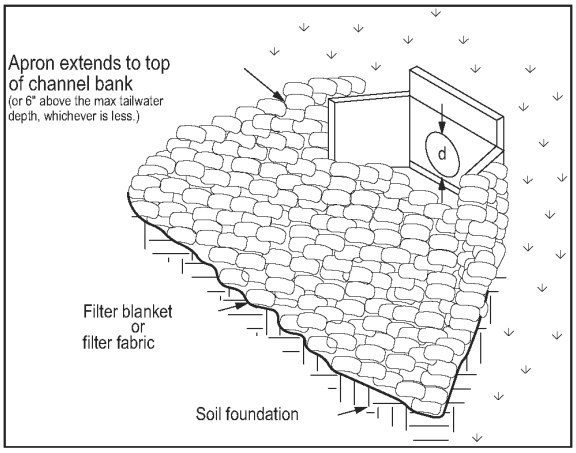

Figure 1. Outlet Protection for a Well-Defined Channel

Apron Width for a Well-Defined Channel

- Side slopes of the channel no steeper than 2:1.
- Apron extends across the channel bottom.
- Apron extends up the channel banks to an elevation one foot to the top of the bank.

Apron Width for a Flat Area

- Upstream width three times the diameter of the outlet pipe.
- Downstream width three times the diameter of the outlet pipe plus the length of the apron.
- Construct apron at zero grade with no overfall at the end.
- Conform to bottom grade of receiving channel.

St

- Locate to prevent bends in horizontal alignment.
- Place necessary curves in the upper section of the apron.
- Vegetate all disturbed areas immediately.

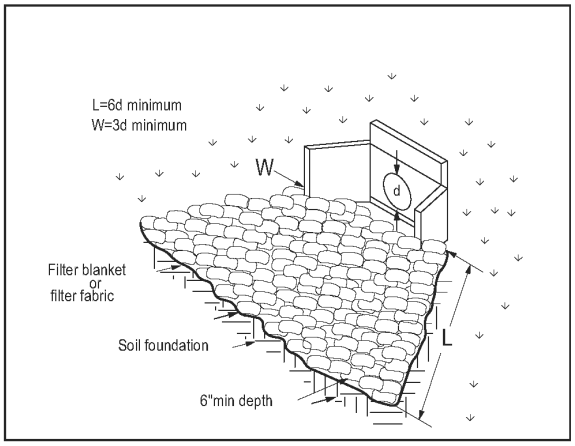

Figure 2. Outlet Protection for a Flat Area

MAINTENANCE

- Inspect after heavy rains for erosion and dislodged stones.
- Make all repairs immediately.

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Su

SURFACE ROUGHENING

DEFINITION

Providing a rough soil surface on the contour.

PURPOSE

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

INSTALLATION

- Apply according to approved plan, if shown.
- Not required on slopes with a stable rock face.
- Stair-step, groove, furrow, or track slopes that are to be vegetated.
- Lightly roughen and loosen soil to a depth of 2"-4" on slopes 3:1 or flatter.
- Slopes requiring mowing shall not be steeper than 3:1.
- Groove or maintain roughness of fill slopes steeper than 3:1.
- Stair-step or groove cut slopes steeper than 3:1.

Su

Stair-Step Grading

- Particularly good for slopes with soft rock.
- Vertical cut distance to horizontal distance shall be less than 1:1. Horizontal portion of the “step” shall slope toward the vertical wall.
- Individual vertical cuts are not to exceed 30 inches on soft materials and not more than 40 inches in rocky materials.

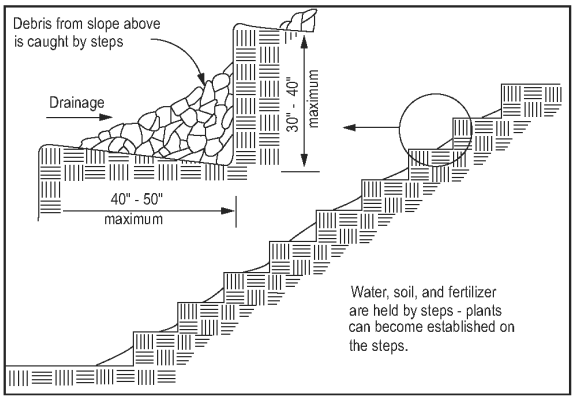


Figure 1. Stair-Stepping Cut Slopes

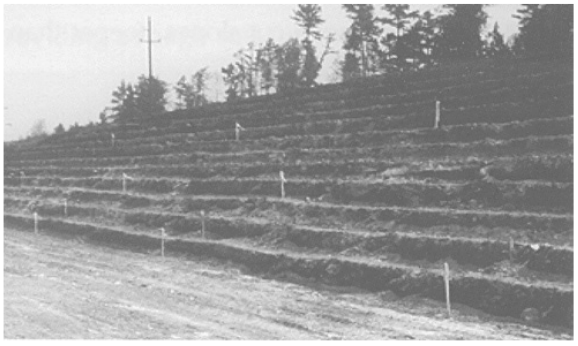


Figure 2. Typical Stair-Step Grading

Su

Grooving

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

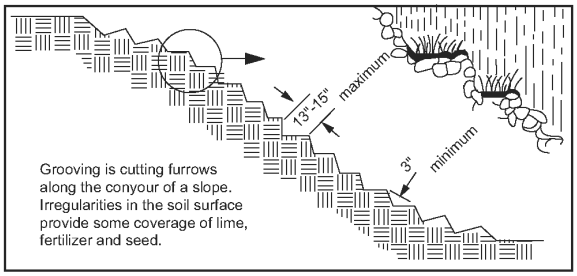


Figure 3. Grooving Slopes

Su

Tracking

- Not recommended unless no alternatives are available.
- Minimize machine passes to minimize compaction.

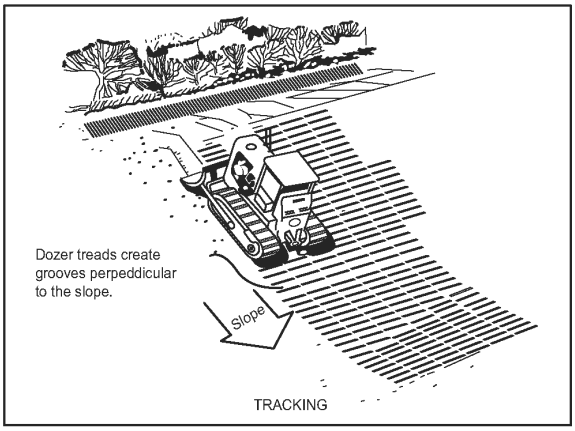


Figure 4. Roughening with Tracked Machinery

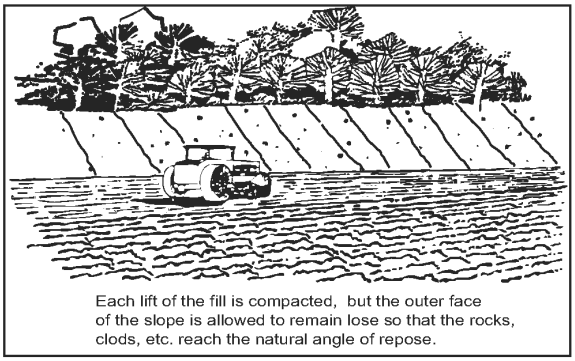


Figure 5. Fill Slope Treatment

- Seed and mulch roughened areas as soon as possible.

Tp

TOPSOILING

DEFINITION

Stripping-off the fertile top soil, storing it, then spreading it over the disturbed area after construction is completed.

PURPOSE

Provide a suitable soil medium for vegetative growth on low fertility areas.

SPECIFICATIONS

- Apply according to approved plan, if shown.
- Recommended for sites with slopes 2:1 or flatter where:
  - the texture of the exposed subsoil or parent material is not suitable to produce adequate vegetative growth,
  - the root zone is too shallow, or
  - 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.

Tp

- Stripping depth of 4 to 6 inches is common and should be confined to the immediate construction area.
- Stockpiles may be vegetated and should not obstruct natural drainage or cause off-site environmental damage.
- If subsoil is composed of heavy clays, lime shall be spread at the rate of 100 pounds per 1,000 square feet.
- Subsoil should be loosened by discing or scarifying to a minimum depth of 3 inches 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 inches (unsettled), but may be adjusted at the discretion of the engineer or landscape architect.

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

Depth (inches)	Per 1,000 Square Feet	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

Wt

VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL

DEFINITION

A waterway that is shaped or graded to required dimensions and stabilized with vegetation.

PURPOSE

- Dispose of stormwater runoff.
- Prevent erosion.
- Reduce sedimentation.

INSTALLATION

- Install according to approved plan, if shown.
- Remove all woody growth, obstructions and other objectionable material.
- Waterway cross-section may be parabolic or trapezoidal in shape.
- Maximum permissible velocity within a vegetated channel is approximately 5 feet per second without geosynthetic material.

Wt

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

- Maximum bottom width of 50 feet unless multiple or divided waterways or other means are provided to control meandering of low flows within this limit.

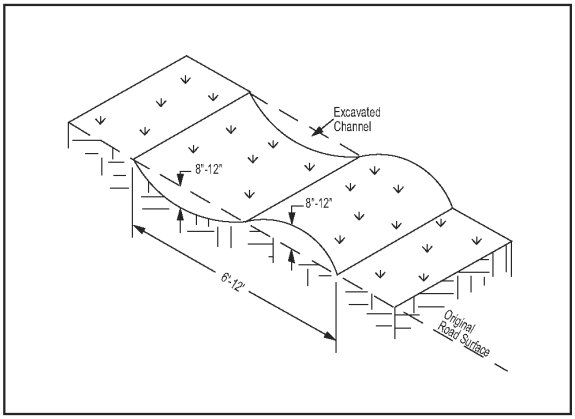


Figure 1. Typical Vegetated Waterway or Stormwater Conveyance Channel

- 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 may be required.

Wt

- Disturbed areas must be stabilized with vegetation immediately following construction.
- Mulching is required for all seeded or sprigged channels.
- Erosion control fabrics which are designed to protect seed and slopes during the establishment of vegetation shall be used.
- If conditions permit, water should be temporarily diverted from the channel, or otherwise disposed of, during the establishment of vegetation.

REFERENCES

- Ds1 Disturbed Area Stabilization (With mulching only)
- Ds2 Disturbed Area Stabilization (With temporary seeding)
- Ds3 Disturbed Area Stabilization (With permanent seeding)
- Ds4 Disturbed Area Stabilization (With sodding)

Insert Yellow Sheet

Back of Yellow Sheet

Revised: January 8, 2009

Georgia Department of Transportation

Office of Materials and Research
Qualified Products List

Following is a list of **Silt Fence Fabrics** that have been evaluated by the Office of Materials and Research and have proven their capability of meeting the requirements of Sub-section 881.2.07 of the Standard Specifications and have satisfied the requirements of SOP-17 Physical and Chemical, "Acceptance of Miscellaneous Construction Items."

QPL-36
Silt Fence Fabric

Physical / Chemical Branch
15 Kennedy Dr.
Forest Park, GA 30297

Office Phone: 404-363-7606
Office Fax: 404-363-7684

Note: Filter fabric used in the construction of Type "A" and "B" fences may be either the woven or non-woven type. In the construction of woven fabrics, slit tape yarns will be allowed in one direction (warp or fill) only. Filter Fabric used in the construction of Type "C" fences shall be a non-calendared woven fabric constructed with mono filament yarns only. Type "C-System" shall be an approved Type "C" Silt Fence Fabric with a polypropylene support mesh sewn to the fabric.

All Trade Names are Registered Trademarks of the appropriate company.
Ending Source # is 018

Source	Source # / Location	Address	Contact	Product	Type
ACF Environmental	19/ USA	2831 Cardwell Road Richmond, VA 23234 www.acfenvironmental.com	800-223-9021 800-448-3636	LSGA A LSGA C	A C
Belton Industries, Inc.	002 / USA	P.O. Box 127 1205 Hamby Road Belton, SC 29627 www.beltonindustries.com	864-338-5711 800-845-8753 800-848-9608	BELTECH 935 BELTECH 936- High Visibility Orange	A A
Cady Bag	003 / USA	509 North King Street, Box 68 Pearson, GA 31642	800-243-2451 912-422-3298	20-CSF 350 36" 20-CSF 350 24"	A B
Carthage Mills, Inc.	004 / USA	4243 Hunt Road Cincinnati, OH 45242 www.carthagemills.com	513-794-1600 800-543-4430	Carthage 15%	C
Cherokee Manufacturing	018 / USA	300 Relihan St. Pearson, GA 31639 www.cherokeemfg.com	912-422-6321 800-876-5218	CF1200 A CF 1500 C	A C
Construction Fabrics and Supply, LLC	013 / USA	1603 James P. Rogers Drive Valdosta, GA 31601 www.siltfenceUSA.com	229-244-0004 800-686-1862	ConFab CFS-5026 ConFab CFS-5007	A C
DDD Erosion Control, Inc.	017 / USA	P.O. Box 694 1383 Industrial Drive	229-567-0751	DDDGA36-A Pro-3D/DOT A	A A

Georgia Department of Transportation

Office of Materials and Research
Qualified Products List

Source	Source # / Location	Address	Contact	Product	Type
		Ashburn, GA 31714 www.3derosion.com		DDDGA36-C Pro-3D/DOT C	C C
Geo Fabrics, LLC	011 / USA	123 Nashville Hwy. P.O. Box 46 Enigma, GA 31749	229-533-5785 229-533-9217	ASH-SFC-36 ASH-SFC-36 (Orange) PSFG-36B PSFG-36B (Orange) GF-55 GEOPAC-A GEOPAC-450 GFG-A GFG-C GFG-CF	C C A A A A A A C C-System
General Fibers and Fabrics, Inc.	014 / USA	1404 Orchard Hill Road LaGrange, GA 30240	706-882-8801	GFF-4815 CGF	A C
Global Erosion Products, LLC	022 / USA	3533 Liberty Ridge Trail Marietta, GA 30062	404-402-1782	GEP-A	A
Hanes Geo Components	009 / USA	815 Buxton Street Winston Salem, NC 27101 www.hanesgeo.com	888-239-4539 866-445-2739	TerraTex GASF Terra Tex GASF-C TerraTex GASF-CSF (Silt Fence System)	A C C-System
L & M Bag and Supply Co. Inc.	20 / USA	P.O. Box 640 1800 Springhead Church Willacoochee, GA 31650 www.landmsupplyco.com	912-534-6071 800-948-7870	LMSF-A100 LMSF-C200	A C
Landscape Depot	21 / USA	185 Walter Way Fayetteville, GA 30214 www.landscape-depot.com	770-719-3330 877-719-3330	C-POP (Silt Fence System)	C-System
LINQ Industrial Fabrics, Inc.	005 / USA	2550 W. 5th North Street Summerville, SC 29483 www.linqind.com	843-875-8106 800-543-9966	GTF-400EO	C

Georgia Department of Transportation

Office of Materials and Research
Qualified Products List

Source	Source # / Location	Address	Contact	Product	Type
Propex Fabrics, Inc.	001 / USA	6025 Lee Highway, Suite 425 P.O. Box 22788 Chattanooga, TN 37422 www.geotextile.com	423-899-7619 800-621-1273	Geotex 106F (Formerly:Propex-1198) Geotex 102F (Formerly:Propex-2019) Geotex 111F (Formerly:Geotex 111)	C A C
Skaps Industries	015 / USA	316 S. Holland Drive Pendergrass, GA 30567 www.skaps.com	706-639-3440	M404	C
SunCoast Fabrics	016 / USA	1055 Windward Ridge Pkwy., Suite 170 Alpharetta, GA 30005 www.suncoastfabrics.com	678-339-9942 800-366-5003	SCF 1200 SCF 1500	A C
Tencate Geosynthetics	007 / USA	365 South Holland Drive Pendergrass, GA 30567 www.mirafi.com	706-693-2226 800-685-9990	Mirafi FW 402 (black) (filter weave) Mirafi FW 402-O (orange) (filter weave)	C C
TNS Advanced Technologies	008 / USA	9855 Greenville Highway Spartanburg, SC 29301	864-949-1006 800-867-6181	TNS M404	C
Willacoochee Industrial Fabrics, Inc.	010 / USA	Highway 82 West P.O. Box 599 Willacoochee, GA 31650	912-534-5757	1215 Silt Fence 1216 Silt Fence 2098 Silt Fence WIF-2099	A A C C

Insert Tab 6 – Checklists Procedures

Back of Tab

Checklist Procedures for Designers and Reviewers

Level II: Introduction to Design
Education and Certification for Persons Involved in Land Disturbing Activities

Issued May 2009

1

Three Checklists

- Stand Alone Projects
- Infrastructure Projects
- Common Developments
  - Appendix 1
- Guidance Document
  - Available at www.gaswcc.georgia.gov

2

Updates

- The new revised checklists include all of the previous requirements of the July, 2007 version
- Updated to include revisions to the NPDES General Permits

3

Effective January 1, 2009

- All ES&PC plans submitted for review starting January 1, 2009 are required to include a copy of the appropriate completed checklist.

4

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.

5

2.

- Level II certification number issued by the Commission, signature and seal of certified Design Professional.
- Signature, seal, and GSWCC issued Level II certification number must be on each sheet pertaining to ES&PC or the Plan will not be reviewed.

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

6

3.

- 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.

24-HOUR CONTACT:
JOHN DOE
(XXX)XXX-XXXX

7

4.

- Provide the name, address and phone number of primary permittee or tertiary permittee.
- May be shown on cover sheet, ES&PC Plan or under ES&PC notes

OWNER/DEVELOPER	(FIRM)
APPLICANT:	(ADDRESS)
	(CONTACT)
	(PHONE:)

8

5.

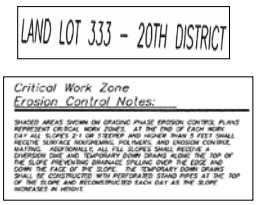
- Note total and disturbed acreage of the project or phase under construction. (The disturbed area shall be the total estimated disturbed area of the primary and secondary permittees or the tertiary permittee.)
- Must be shown on ES&PC Plan or under ES&PC notes.

Total Site Area: 76.9 Acres
Total Disturbed Area: 24.7 Acres

9

6.

- Provide Land Lot and District numbers for site location. Describe critical areas and any additional measures that will be utilized for these areas.
- Land Lot and District numbers must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes.



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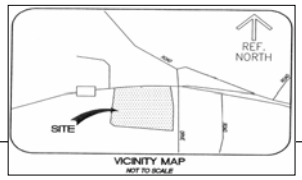
7.

- Provide vicinity maps showing site's relation to other 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.



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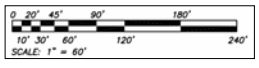
8.

- Graphic scale and North arrow.
- The graphic scale and North arrow must be clearly shown on all phases of the ES&PC Plan sheets.



12

9.

- Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:
- The initial, intermediate, and final phase sheets of the Plan must show the proposed grade in bold contour lines with the below intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.

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

13

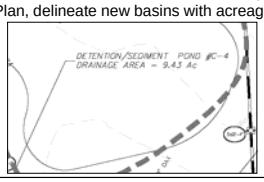
10.

- Boundary line survey.
- The ES&PC Plan shall include existing conditions and topography sheet with the boundary lines of the project or phase shown on the sheet.

14

11.

- Delineation and acreage of contributing drainage basins on the project site.
- The existing site Plan or the initial phase Plan must show delineation of each drainage basin on the project site with the acreage of each basin noted. As the basins are altered during grading for the intermediate phase of the Plan, the new basins and acreage must be delineated. If the basins are changed on the final phase of the Plan, delineate new basins with acreage noted.



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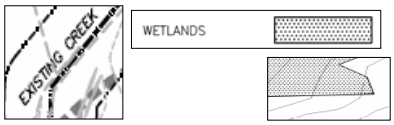
12.

•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.



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13

- 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.

17

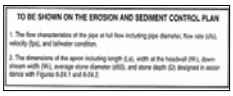
14

- 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.

18

15

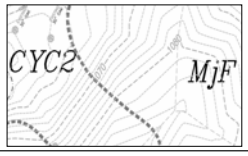
- Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
- The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tail water conditions. This information should be 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 6-24.1 and 6-24.2 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.



19

16

- 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.



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17

- Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, 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.

21

18

- 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 Macro invertebrate 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) - (t) of the Permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's 2008 and subsequent "305(b)/303(d) List Documents (Final)" can be viewed on the GA EPD website at www.gaepd.org.

22

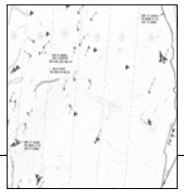
19

- If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 18 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 GA EPD website, www.gaepd.org.

23

20

- 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.



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21

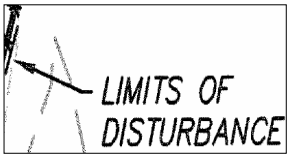
- Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
- The initial Plan date should be shown on all pages. With each re-submittal the revision date and entity requesting revisions should be shown on cover sheet and each sheet that has been revised.

Revisions	
Date	Description

25

22

- The limits of disturbance for the initial 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.



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23

- Limit of disturbance shall be no greater than 50 acres for each individual permittee (i.e. Primary, Secondary or Tertiary) at any one time and no more than 50 contiguous acres at one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at anyone 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.

27

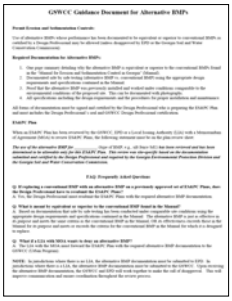
24

- 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 rationale 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. 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.
- For each common drainage location, a temporary (or Permanent) sediment basin (Sd3, 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 67cubic 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 rationale 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.

28

25

- 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.georgia.gov.



GSWCC Guidance Document for Alternative BMPs

29

26

- Best Management Practices to minimize off-site vehicle tracking of sediments and the generation of dust.
- The Plan must establish BMPs designed to minimize or eliminate the off-site vehicle tracking of dust, dirt, sand, soils and sediment and the generation of dust to the maximum extent practicable. The plan should indicate structural BMPs such as construction exits as well as a narrative description of the actions to be taken and/or equipment to be available and used as necessary to control dust and off-site vehicle tracking. Some requirements of the Plan may need a more detailed description of BMPs than a typical drawing can provide. These items should be clarified with a narrative description shown on the Plan or in the ES&PC notes.

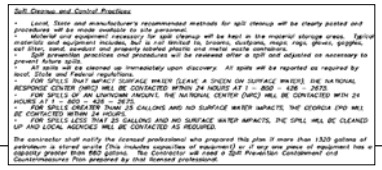
27

- BMPs for concrete wash down 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 wash down 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(s) of BMPs that will be used. If the project does not allow the concrete washdown on the project site state so on the plan.

31

28

- 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.



Spill Cleanup and Control Practices

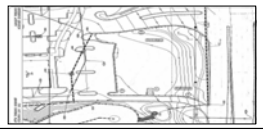
- Local, State and manufacturer's recommended methods for spill cleanup will be clearly posted and procedures will be made available to site personnel.
- Material and equipment necessary for spill cleanup will be kept in the material storage area. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, goggles, cat litter, sand, sawdust and property labeled plastic and metal waste containers.
- Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent reoccurrence.
- All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, State and Federal regulations.
- FOR SPILLS that IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1 – 800 – 424 – 8802.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITH 24 HOURS AT 1 – 800 – 424 – 8802.
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAT 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

The contractor shall notify the licensed professional who prepared this plan if more than 1320 gallons of petroleum is stored onsite (this includes capacities of equipment) or if any one piece of equipment has a capacity greater than 660 gallons. The Contractor will need a Spill Prevention Containment and Countermeasures Plan prepared by that licensed professional.

32

29

- 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 C silt fence must be shown adjacent to buffer), lots adjacent to wetlands, lots with an extreme grade, etc.



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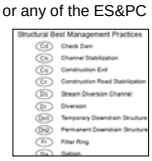
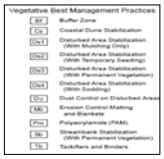
- Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
- BMPs for all phases of the Plan must be consistent with and no less stringent than 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.





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31

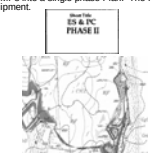
- Description of the nature of construction activity.
- Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes.

> Existing land is currently undeveloped and forested with primarily pines and hardwoods. Proposed project is a 25 lot single-family residential development that will disturb 15.5 acres. Project does not propose any encroachments into the State Waters buffer area.

35

32

- 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.
- 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.



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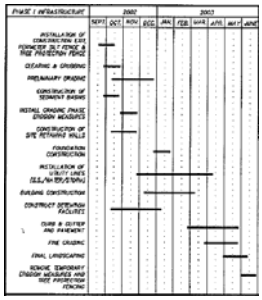
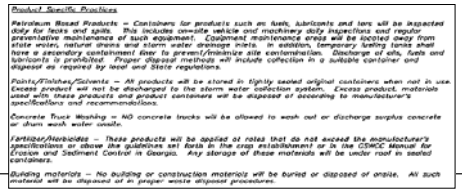
33

- 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.



34

- 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.



Product Specific Practices

Petroleum Based Products – Containers for products such as fuels, lubricants and tars will be inspected daily for leaks and spills. This includes on-site vehicle and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from state water, natural drains and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils, fuels and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and State regulations.

Paints/Finishes/Solvents – All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products and product containers will be disposed of according to manufacturer's specifications and recommendations.

Concrete Truck Washing – NO concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water onsite.

Fertilizer/Herbicides – These products will be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers.

Building materials – No building or construction materials will be buried or disposed of onsite. All such material will be disposed of in proper waste disposal procedures.

35

- 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.

36

- Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 17 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."

40

37

- 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 page 17 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 10000_."

41

38

- Certification statement and signature of the permittee or the duly authorized representative as stated in section V.G.2.d. of the state general permit.
- The following statement and the signature of the permittee or the duly authorized representative must be shown on the ES&PC Plan or under ES&PC notes.

" 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 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."

42

39

- 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.

Runoff Coefficient

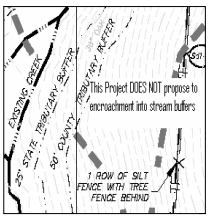
- Weighted pre construction CN curve number: ????
- Weighted post construction CN curve number: ????

See "Site Hydrologic Study for Shopping Center" dated ??????? for additional information.

43

40

- Indication that non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.
- See Part IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN (I) and (II) on pages 17 & 18 of the permit and show under ES&PC notes.

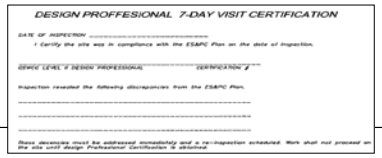


1. NO ACTIVITIES SHALL BE CONDUCTED WITHIN THE 25 OR 50-FOOT STREAM BUFFER ALONG THE BANKS OF ALL STATE WATERS, UNLESS A VARIANCE HAS BEEN OBTAINED FROM THE GA EPD DIRECTOR.

44

41

- Indication 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 and tertiary permittee(s) must retain the design professional who prepared the Plan, except when the 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 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.


DESIGN PROFFESIONAL 7-DAY VISIT CERTIFICATION

DATE OF INSPECTION _____

I Certify the site was in compliance with the ES&PC Plan on the date of inspection.

GEORGIA LEVEL II DESIGN PROFESSIONAL _____ CERTIFICATION # _____

Inspection revealed the following discrepancies from the ES&PC Plan.

_____

_____

_____

Above discrepies must be addressed immediately and a re-inspection scheduled. Work shall not proceed on the site until design Professional Certification is obtained.

45

42

- Indication 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 20 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.

J. ANY AMENDMENT TO THE EROSION CONTROL PLANS WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

46

43

- Indication 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.

Indication that waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

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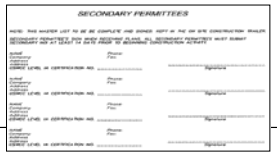
- Indication that the applicable portion of ES&PC Plan is to be provided to each secondary permittee prior to the secondary conducting any construction activity and that each secondary shall sign the Plan or portion of the Plan applicable to their site. List the names and addresses of all secondary permittees.
- 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.


SECONDARY PERMITTEES

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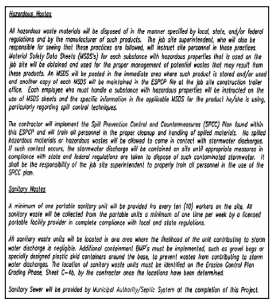
- Documentation that the ES&PC Plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations during and after construction activities have been completed.
- The Plan must provide for the proper disposal of sewage and other wastes generated during construction operations. The plan must ensure that the site complies with any applicable State or local regulations regarding waste disposal, sanitary sewer, or septic tanks.



Hazardous Wastes

All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. The job site superintendent, who will also be responsible for seeing that these practices are followed, will instruct site personnel in these practices. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the ESP&PC file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

The contractor will implement the Spill Prevention Control and Countermeasures (SPCC) Plan found within this ESP&P and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

Sanitary Wastes

A minimum of one portable sanitary unit will be provided to every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations.

All sanitary waste units will be located in area where the likelihood of the unit contributing to storm water discharge is negligible. Additional containment BMP's must be implemented, such as gravel bags or specially designed plastic grid containers around the base, to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on the Erosion Control Plan Grading Phase, Sheet C-10, by the contractor once the locations have been determined.

Sanitary Sewer will be provided by Municipal Authority/Septic System at the completion of this Project.

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- Provide complete requirements of inspections and record keeping by the primary permittee, secondary permittees and tertiary permittees.
- The Plan must include all of the inspections and record keeping requirements of the primary, secondary and tertiary permittees as stated in Part IV.D.4.on pages 24 - 28 of the Permit. The complete inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

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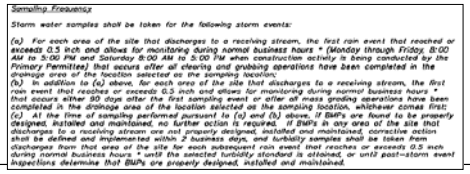
- Provide complete requirements of sampling frequency and reporting of sampling results
- See page 30 Sampling Frequency and page 31 section E. Reporting in the permit. Complete sampling frequency and reporting requirements are to be shown on the Plan under ES&PC notes.



Sampling Frequency:

Storm water samples shall be taken for the following storm events:

(a) For each area of the site that discharges to a receiving stream, the first rain event that reached or exceeds 0.5 inch and allows for monitoring during normal business hours * (Monday through Friday, 8:00 AM to 5:00 PM and Saturday 8:00 AM to 5:00 PM when construction activity is being conducted by the Primary Permittee) that occurs after all clearing and grubbing operations have been completed 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 stream, the first rain event that reaches or exceeds 0.5 inch and allows for monitoring during normal business hours * that occurs either 90 days after the first sampling event or after all mass grading operations have been completed 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 BMP's are found to be properly designed, installed and maintained, no further action is required. If BMPs in any area of the site that discharges to a receiving stream are not properly designed, installed and maintained, corrective action shall be defined and implemented within 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 obtained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained.

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- Provide complete details for retention of records as per Part IV.F. of the permit.
- See page 31 section F. Retention of Records in the permit. Complete details of retention of records are to be shown on the Plan under ES&PC notes.

Primary Permittee

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 monitoring 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.(1)(c) of this permit.

Note: requirements for the different permittees vary slightly

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- Description of analytical methods to be used to collect and analyze the samples from each location.
- This narrative is to be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location.

STORMWATER SAMPLING

SAMPLE ANALYSIS

Storm water samples are to be analyzed in accordance with methodology and test procedures established by 40 CFR Part 136 and the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001."

Storm water is to be sampled for nephelometric turbidity units (NTU) at the outfall location. 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 for each day on which such condition results in the turbidity of the discharge exceeding 50, the value that was selected from Appendix B in Permit No. GAR 100003. The NTU is based upon the disturbed acreage of ???? acres for the project site, the surface water drainage area of ???? square miles, and receiving water which supports warm water fisheries.

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- Appendix B rationale for 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).

Warm Water (Supporting Warm Water Fisheries)

Surface Water Drainage Area, square miles

Site Size, acres	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

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- Cleary note statement in bold letters- **"The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities."**
- Must be shown on ES&PC Plan or under ES&PC notes.

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- Cleary note maintenance statement in bold letters – **"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.

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- Clearly note the statement in bold letters – **"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.

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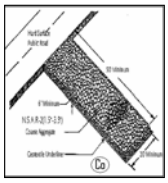
- Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
- The erosion and sediment control detail sheet must show a detailed drawing for each structural BMP shown on the Plan. 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.



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- 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.

Details are available in CAD format at: www.gaswcc.georgia.gov

Species	Rates Per 1,000 sq. ft.	Rates per Acre	Planting Dates by Region		
			M-A	P	C
Oats Alone Oats In Mixtures	2.5 lbs. 2 lbs.	4 bu. 1 bu.	9/15-11/15	9/15-11/15	9/15-11/15
Rye (Grain) Alone Rye In Mixtures	3.5 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	9/15-12/15	9/15-12/31
Sudangrass	1.4 lbs.	60 lbs.	3/1-7/31	3/1-7/31	4/1-7/31
Triticale Alone Triticale In Mixtures	3.2 lbs. .6 lbs.	3 bu. .5 bu.	NA	NA	10/15-11/30
Wheat Alone Wheat In Mixtures	4.1 lbs. 2 lbs.	3 bu. .5 bu.	9/15-11/30	10/1-12/15	10/15-12/31

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Questions?

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Insert Yellow Sheet

Back of Yellow Sheet

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
COMMON DEVELOPMENTS

SWCD:_____

Project Name:_____ **Address:**_____

City/County:_____ **Date on Plans:**_____

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.
2. Level II certification number issued by the Commission, signature and seal of the certified Design Professional.
   Signature, seal and GSWCC issued Level II certification number must be on each sheet pertaining to ES&PC or the Plan will not be reviewed.
3. 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.
4. Provide the name, address and phone number of primary permittee or tertiary permittee.
   May be shown on cover sheet, ES&PC Plan or under ES&PC notes.
5. Note total and disturbed acreage (the disturbed area shall be the total estimated disturbed area of the primary and secondary permittees or the tertiary permittee) of the project or phase under construction.
   Must be shown on ES&PC Plan or under ES&PC notes.
6. Provide land lot and district numbers for site location. Describe critical areas and any additional measures that will be utilized for these areas.
   Land Lot and District numbers must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes.
7. 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.
8. Graphic scale and north arrow.
   The graphic scale and north arrow must be clearly shown on all phases of the ES&PC Plan sheets.
9. 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% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 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.
10. Boundary line survey.
    The ES&PC Plan shall include an existing conditions and topography sheet with the boundary lines of the project or phase shown on the sheet.
11. Delineation and acreage of contributing drainage basins on the project site.
    The existing site Plan or the initial phase Plan must show delineation of each drainage basin on the project site with the acreage of each basin noted. As the basins are altered during grading for the intermediate phase of the Plan the new basins and acreage must be delineated. If the basins are changed on the final phase of the Plan delineate new basins with acreage noted.
12. 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.
13. 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.
14. 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.
15. 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 (W_1), down-stream width (W_2), average stone diameter (d50), and stone depth (D) designed in accordance with Figures 6-24.1 and 6-24.2 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.

16. 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.

17. Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, 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.

18. 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) - (t) of the Permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's 2008 and subsequent "305(b)/303(d) List Documents (Final)' can be veiwed on the GAEPD website. www.gaepd.org/Documents/305b.html

19. If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 18 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.

20. 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.

21. 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.

22. 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.

23. Limit of disturbance shall be no greater than 50 acres for each individual permittee (i.e. Primary, Secondary or Tertiary) at any one time and no more than 50 contiguous acres at 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.

24. 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 rationale 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. 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.
For each common drainage location, a temporary (or Permanent) sediment basin (Sd3, 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 67cubic 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 rationale 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.

25. 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.

26. Best Management Practices to minimize off-site vehicle tracking of sediments and the generation of dust.
The Plan must establish BMPs designed to minimize or eliminate the off-site vehicle tracking of dust, dirt, sand, soils and sediment and the generation of dust to the maximum extent practicable. The plan should indicate structural BMPs such as construction exits as well as a narrative description of the actions to be taken and/or equipment to be available and used as necessary to control dust and off-site vehicle tracking. Some requirements of the Plan may need a more detailed description of BMPs than a typical drawing can provide. These items should be clarified with a narrative description shown on the Plan or in the ES&PC notes.

27. 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(s) of BMPs that will be used. If the project does not allow the concrete washdown on the project site state so on the plan.

28. 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.
29. 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 C silt fence must be shown adjacent to buffer), lots adjacent to wetlands, lots with an extreme grade, etc.
30. 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.
31. 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.
32. 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.
    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.
33. 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.
34. 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.
35. 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.
36. Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 17 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."
37. 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 page 17 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."
38. Certification statement and signature of the permittee or the duly authorized representative as stated in section V.G.2.d. of the state general permit.
    The following statement and the signature of the permittee or the duly authorized representative must be shown on the ES&PC Plan or under ES&PC notes.
    "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 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."
39. 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.

40. Indication that non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.
See Part IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN (I) and (II) on pages 17 & 18 of the permit and show under ES&PC notes.

41. Indication 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 and tertiary permittee(s) must retain the design professional who prepared the Plan, except when the 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 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.

42. Indication 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 20 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.

43. Indication 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.

44. Indication that the applicable portion of 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.

45. Documentation that the ES&PC Plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations during and after construction activities have been completed.
The Plan must provide for the proper disposal of sewage and other wastes generated during construction operations. The plan must ensure that the site complies with any applicable State or local regulations regarding waste disposal, sanitary sewer, or septic tanks.

46. Provide complete requirements of inspections and record keeping by the primary permittee, secondary permittees and tertiary permittees.
The Plan must include all of the inspections and record keeping requirements of the primary, secondary and tertiary permittees as stated in Part IV.D.4. on pages 24 - 28 of the Permit. The complete inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

47. Provide complete requirements of sampling frequency and reporting of sampling results.
See page 30 Sampling Frequency and page 31 section E. Reporting in the permit. Complete sampling frequency and reporting requirements are to be shown on the Plan under ES&PC notes.

48. Provide complete details for retention of records as per Part IV.F. of the permit.
See page 31 section F. Retention of Records in the permit. Complete details of retention of records are to be shown on the Plan under ES&PC notes.

49. Description of analytical methods to be used to collect and analyze the samples from each location.
This narrative is to be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location.

50. Appendix B rationale for 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).

51. Cleary note statement in bold letters- **"The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities."**
Must be shown on ES&PC Plan or under ES&PC notes.

52. Cleary note maintenance statement in bold letters - **"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.

53. Clearly note the statement in bold letters - **"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.

54. 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.

55. 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.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

SWCD:_____

Project Name:_____ Address:_____

City/County:_____ Date on Plans:_____

Plan Page #	Included Y/N	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)
		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)
		3. The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls
		4. Provide the name, address and phone number of primary permittee
		5. Note total and disturbed acreage of the project or phase under construction
		6. Provide land lot and district numbers for site location. Describe critical areas and any additional measures that will be utilized for these areas.
		7. Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary
		8. Graphic scale and north arrow.
		9. 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% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 2,5 or 10

		10. Boundary line survey.
		11. Delineation and acreage of contributing drainage basins on the project site
		12. Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site
		13. 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
		14. Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.
		15. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion Identify/Delineate all storm water discharge points.
		16. Soil series for the project site and their delineation.
		17. Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.
		18. 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.
		19. If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 18 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.
		20. Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions
		21. Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions
		22. The limits of disturbance for each phase of construction.
		23. 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. (A copy of the written approval by EPD must be attached to the plan for the plan to be reviewed.)
		24. 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 rationale 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. 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.
		25. 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.

26. Best Management Practices to minimize off-site vehicle tracking of sediments and the generation of dust
27. BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drun at the construction site is prohibited.
28. Provide BMPs for the remediation of all petroleum spills and leaks.
29. 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
30. Description of the nature of construction activity.
31. A description of appropriate controls and measures that will be implemented at the construction site including: (1) initia sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) fina BMPs.
32. 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).
33. Description of the practices that will be used to reduce the pollutants in storm water discharges
34. Description of the measures that will be installed during the construction process to control pollutants in storm water tha will occur after construction operations have been completed.
35. Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 14 of the permit.
36. 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 page 14 of the permit
37. Certification statement and signature of the permittee or the duly authorized representative as stated in section V.G.2.d. of the state general permit.
38. An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
39. Indication that non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits
40. Indication 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
41. Indication 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.
42. Indication that waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.
43. Documentation that the ES&PC Plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations during and after construction activities have been completed.
44. Provide complete requirements of inspections and record keeping by the primary permittee.
45. Provide complete requirements of sampling frequency and reporting of sampling results
46. Provide complete details for retention of records as per Part IV.F. of the permit
47. Description of analytical methods to be used to collect and analyze the samples from each location
48. Appendix B rationale for outfall sampling points where applicable.
49. Cleary note statement in bold letters- "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities."
50. Cleary note maintenance statement in bold letters - "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.'
51. Clearly note the statement in bold letters - "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
52. 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.
53. 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

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD:_____

Project Name:_____ Address:_____

City/County:_____ Date on Plans:_____

Plan Page #	Included Y/N	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)
		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)
		3. The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
		4. Provide name, address and phone number of primary permittee.
		5. Note total and disturbed acreage of the project or phase under construction.
		6. Provide land lot and district numbers for site location. Describe critical areas and any additional measures that will be utilized for these areas.
		7. Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
		8. Graphic scale and north arrow.
		9. 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

		10. Delineation and acreage of contributing drainage basins on the project site.
		11. Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
		12. 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.
		13. Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.
		14. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
		15. Soil series for the project site and their delineation.
		16. Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.
		17. 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.
		18. If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 18 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.
		19. Delineate on-site drainage and off-site watersheds using USGS 1" : 2000' topographical sheets.
		20. Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
		21. The limits of disturbance for each phase of construction.
		22. 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 rationale 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. 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.
		23. 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.
		24. Best Management Practices to minimize off-site vehicle tracking of sediments and the generation of dust.
		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.

26. Provide BMPs for the remediation of all petroleum spills and leaks.
27. 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.
28. Description of the nature of construction activity.
29. 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.
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).
31. Description of the practices that will be used to reduce the pollutants in storm water discharges.
32. 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.
33. Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 15 of the permit.
34. 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 page 14 of the permit.
35. Certification statement and signature of the permittee or the duly authorized representative as stated in section V.G.2.d. of the state general permit.
36. An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
37. Indication that non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.
38. Indication 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.
39. Indication 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.
40. Indication that waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.
41. Documentation that the ES&PC Plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations during and after construction activities have been completed.
42. Provide complete requirements of inspections and record keeping by the primary permittee.
43. Provide complete requirements of sampling frequency and reporting of sampling results.
44. Provide complete details for retention of records as per Part IV.F. of the permit.
45. Description of analytical methods to be used to collect and analyze the samples from each location.
46. Appendix B rationale for outfall sampling points where applicable.
47. Cleary note statement in bold letters- "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities."
48. Cleary note maintenance statement in bold letters - "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."
49. Clearly note the statement in bold letters - "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
50. 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.
51. 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.

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
COMMON DEVELOPMENTS

SWCD:_____

Project Name:_____ Address:_____

City/County:_____ Date on Plans:_____

Plan Page #	Included Y/N	

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)
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)
3. The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls
4. Provide the name, address and phone number of primary permittee or tertiary permittee
5. Note total and disturbed acreage (the disturbed area shall be the total estimated disturbed area of the primary and secondary permittees or the tertiary permittee) of the project or phase under construction
6. Provide land lot and district numbers for site location. Describe critical areas and any additional measures that will be utilized for these areas.
7. Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
8. Graphic scale and north arrow.
9. 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% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 2,5 or 10

10. Boundary line survey.
11. Delineation and acreage of contributing drainage basins on the project site.
12. Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
13. 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.
14. Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.
15. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion Identify/Delineate all storm water discharge points.
16. Soil series for the project site and their delineation.
17. Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.
18. 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.
19. If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 18 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.
20. Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.
21. Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
22. The limits of disturbance for each phase of construction.
23. Limit of disturbance shall be no greater than 50 acres for each individual permittee (i.e. Primary, Secondary or Tertiary) at any one time and no more than 50 contiguous acres at 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.)
24. 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 rationale 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. 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.
25. 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.
26. Best Management Practices to minimize off-site vehicle tracking of sediments and the generation of dust.
27. 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.

28. Provide BMPs for the remediation of all petroleum spills and leaks.
29. 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.
30. 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.
31. Description of the nature of construction activity.
32. 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) fina BMPs.
33. 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).
34. Description of the practices that will be used to reduce the pollutants in storm water discharges.
35. 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.
36. Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 17 of the permit.
37. 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 page 17 of the permit
38. Certification statement and signature of the permittee or the duly authorized representative as stated in section V.G.2.d. of the state general permit.
39. An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
40. Indication that non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.
41. Indication 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.
42. Indication 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.
43. Indication that waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.
44. Indication that the applicable portion of 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.
45. Documentation that the ES&PC Plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations during and after construction activities have been completed.
46. Provide complete requirements of inspections and record keeping by the primary permittee, secondary permittees and tertiary permittees.
47. Provide complete requirements of sampling frequency and reporting of sampling results.
48. Provide complete details for retention of records as per Part IV.F. of the permit.
49. Description of analytical methods to be used to collect and analyze the samples from each location.
50. Appendix B rationale for outfall sampling points where applicable.
51. Cleary note statement in bold letters- "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities."
52. Cleary note maintenance statement in bold letters - "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."
53. Clearly note the statement in bold letters - "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
54. 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.
55. 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.

APPENDIX 1

THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO A IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 5O ACRES OR MORE AT ANY ONE TIME.

Plan Page #	Included Y/N		
		a.	During construction activities, 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.
		b.	Increase all temporary sediment basins and retrofitted storm water 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 storm water management basins to at least double the conventional flow path length to the outlet structure.
		d.	Place a large sign (minimum 4 feet x 8 feet) on the site visible from the roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s).
		e.	Use anionic polyacrylamide (PAM) and/or mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Part III. D.1. of the NPDES Permit GAR 100003.
		f.	Conduct turbidity and Total Suspended Solids (TSS) 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 the NPDES Permit GAR 100003.
		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.	Limit the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations).
		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.
		j.	Use "Dirt II" techniques to model and manage storm water runoff (e.g., seep berms, sand filters, anionic Pam), available on the EPD website, www.gaepd.org.
		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 storm water may be discharged.
		m.	Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1.
		n.	Use appropriate erosion control matting or blankets instead of concrete in construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
		o.	Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
		p.	Install sod for a minimum 20 foot width, in lieu of seeding, along the site perimeter wherever storm water may be discharged.
		q.	Use a surface draining skimmer designed to drain temporary sediment basins and retrofitted storm water management basins over a minimum three (3) day period.
		r.	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.(2). (a) - (c), Part IV.D.4.b.(3). (a) - (c) or Part IV.D.4.c.(2). (a) - (c) of the NPDES Permit GAR 100003, as applicable. (*If working under NPDES Permit GAR 100002 see below*)
		r.1.	** Certified personnel shall conduct inspections at least once every seven calendar days and within 24 hours of the end of the storm that is 0.5 inches or greater in accordance with part IV.D.4.a.(2). (A) - (C) of this permit.**
		s.	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.
		t.	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 State Soil and Water Conservation Commission). (If using this item please refer to the Alternative BMP guidance document found at www.gaswcc.org)

GSWCC Guidance Document for Alternative BMPs

Permit Erosion and Sedimentation Controls:

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).

Required Documentation for Alternative BMPs:

1. One page summary detailing why the alternative BMP is equivalent or superior to the conventional BMPs found in the "Manual for Erosion and Sedimentation Control in Georgia" (Manual).
2. Documented side by side testing (alternative BMP vs. conventional BMP) using the appropriate design requirements and specifications contained in the Manual.
3. Proof that the alternative BMP was previously installed and worked under conditions comparable to the environmental conditions of the proposed site. This can be documented with photographs.
4. All specifications including the design requirements and the procedures for proper installation and maintenance.

All forms of documentation must be signed and certified by the Design Professional who is preparing the ES&PC Plan and must includes the Design Professional's seal and GSWCC Design Professional certification.

ES&PC Plan

When an ES&PC Plan has been reviewed by the GSWCC, EPD or a Local Issuing Authority (LIA) with a Memorandum of Agreement (MOA) to review ES&PC Plans, the following statement must be on the plan review sheet:

The use of the alternative BMP for _____ (type of BMP, e.g., silt fence Sd1) ***has been reviewed and has been determined to be allowable only for this ES&PC Plan. This review was site-specific based on the documentation submitted and certified by the Design Professional and required by the Georgia Environmental Protection Division and the Georgia Soil and Water Conservation Commission.***

FAQ: Frequently Asked Questions

Q: If replacing a conventional BMP with an alternative BMP on a previously approved set of ES&PC Plans, does the Design Professional have to resubmit the ES&PC Plans?
A: Yes, the Design Professional must resubmit the ES&PC Plans with the required alternative BMP documentation.

Q: What is meant by equivalent or superior to the conventional BMP found in the Manual?
A: Based on documentation that side by side testing has been conducted under comparable site conditions using the appropriate design requirements and specifications contained in the Manual: The alternative BMP is just as effective in its purpose and meets the same criteria as the conventional BMP in the Manual, OR its effectiveness exceeds those in the Manual for its purpose and meets or exceeds the criteria for the conventional BMP in the Manual for which it is designed to replace.

Q: What if a LIA with MOA wants to deny an alternative BMP?
A: The LIA with the MOA must forward the ES&PC Plan with the required alternative BMP documentation to the GSWCC (Urban Program).

NOTE: In jurisdictions where there is no LIA, the alternative BMP documentation must be submitted to EPD. In jurisdictions where there is a LIA, the alternative BMP documentation must be submitted to the GSWCC. Upon receiving the alternative BMP documentation, the GSWCC and EPD will work together to make the call of disapproval. This will improve communication and ensure coordination throughout the review process.

Insert Tab 7 – Elements of an Effective Plan

Back of Tab

ELEMENTS OF AN EFFECTIVE SEDIMENT CONTROL PLAN

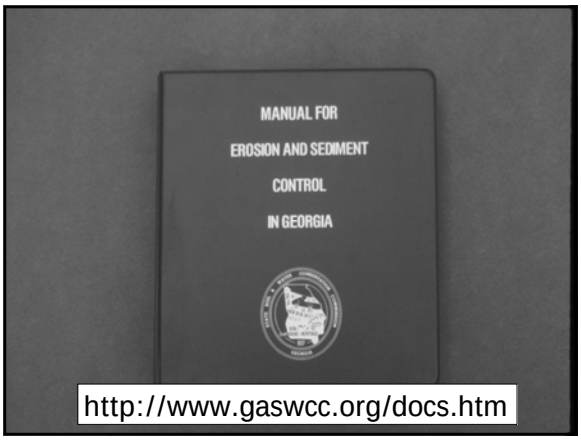
PLANNING APPROACH

Level II: Introduction to Design
Education and Certification for Persons Involved in Land Disturbing Activities

Issued May 2009

TOOLS TO USE

- Site Survey
- County Topo Maps
- USGS Survey
- Soil Survey
- Soils Investigation
- Wetlands Maps
- Phase I Investigation
- Recorded Plats
- FEMA Flood Maps
- Blue Book – GA Stormwater Manual
- Manual for Erosion and Sediment Control in GA_2



WHAT CAN BE DETERMINED FROM SOIL TYPES

- Available water capacity
- Depth to bed rock
- Depth to water table
- Drainage
- Erodibility
- Fertility
- Infiltration
- Percolation rate
- Permeability
- Slope
- Shrink-swell potential
- Susceptibility to flooding

PROJECT CONSTRUCTION ISSUES

- Project Location
- Required Predesign Site Visit
- Phasing
- Project Size
- Project Type
- Project Schedule

REQUIRED PREDESIGN SITE VISIT

APPROVED RULE –

Plan preparer/design professional must certify that a site visit by the plan preparer (or their designee) has been conducted prior to creation of the plan

SITE VISIT CERTIFICATION ON PLANS

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.

Design Professional Date

7

SITE VISIT CHECKLIST

THINGS TO LOOK FOR –

- Existing vegetation – specimen trees, etc.
- State waters potential
- US waters potential
- Flood plain
- Springs
- Soils conditions
- Topography
- Basin delineation/visual evaluation
- Offsite drainage
- Offsite/downstream conditions
- Wetlands
- Archaeological

8

STATE WATERS

Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells and other bodies of surface or subsurface waters, 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 (Ref. GESA)

9

NOT JUST STATE WATERS U.S. WATERS TOO…….

- 404 permits may be required (U.S. Clean Water Act)
- Feds noted that much confusion may exist related to utility and road construction
- Reference EPA letter (appendix)

STATE/US WATERS ISSUES

- While there may be some activities which are exempt from state regulation, the USACE recommends a developer (permittee) contact them if **any** amount of fill material may be placed in a water of the U.S.

U.S. WATERS GUIDELINE

- Projects impacting more than a 0.10 acre of wetlands or 300 feet of stream will likely require an individual Department of the Army Permit.

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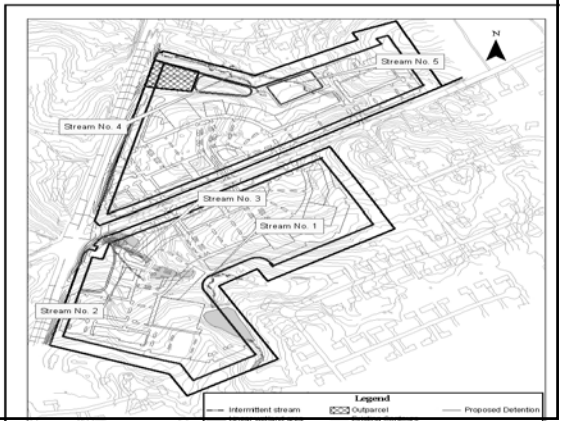

Minimum Requirements

- Stripping of vegetation, regrading and other development activities shall be conducted in such a manner so as to minimize erosion
- Cut and fill operations must be kept to a minimum
- Development plans must conform to topography and soil type, so as to create the lowest practicable erosion potential
- Whenever feasible, natural vegetation shall be retained, protected and supplemented
  (Ref. O.C.G.A. 12-7-6)

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Minimum Requirements

- Disturbed soil shall be stabilized as quickly as practicable
- Temporary vegetation or mulching shall be employed to protect exposed critical areas during development
- Permanent vegetation and structural erosion control measures must be installed as soon as practicable.
- Sediment in runoff water must be trapped by the use of debris basins, sediment basins, silt traps or similar measures until the disturbed area is stabilized
- Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surfaces of fills

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

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Minimum Requirements

- Cuts and fills may not endanger adjoining property
- Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners
- 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

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

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Minimum Requirements

- The disturbed area and duration of exposure to erosive elements shall be kept to a practicable minimum.
- Land disturbing activity plans for erosion and sedimentation control shall include provisions for control or treatment of any source of sediments and adequate sedimentation control facilities to retain sediments on site or preclude sedimentation of adjacent waters.

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

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PLAN CONCEPTS

- Adapt the plan to resources available
- When possible, fit the project into the existing terrain
- Recommendations must be cost-effective
- The plan must be flexible
- Maintain open communication with developer, contractors and local issuing authority

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PLAN CONCEPTS

- Notes and instructions must be clear and simple
- Timing and scheduling are very important
- Establish an effective maintenance program
- Identify critical offsite areas
- Monitor impacts

20

CONSTRUCTION SEQUENCING

- Plan sequence with contractor.
- Advise inspector/LIA of sequence at pre-construction meeting.
- Evaluate sequence during implementation.
- Make sequence revisions.
- Provide LIA/GA EPD/contractor documentation of revised design.

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THREE PHASE CONSTRUCTION

- CLEARING PHASE (clearing & grubbing)
- GRADING PHASE (grading & temporary vegetation)
- FINAL PHASE (stormwater management & permanent vegetation)

22

PERHAPS THE MOST IMPORTANT STEP IS…..

TO UNDERSTAND HOW A SITE ACCOMODATES RUNOFF IN PRE-DURING AND POST-CONSTRUCTION CONDITIONS.

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Insert Yellow Sheet

Back of Yellow Sheet

Stormwater Management

Level II: Introduction to Design
Education and Certification for Persons Involved in Land Disturbing Activities

Issued May 2009

Stormwater Management

- Stormwater Runoff
- Urbanization
- Stormwater Controls
- Design and Review Focus

What is Stormwater Runoff?

- Stormwater is…
  - Rain that hits the earth's surface
- Stormwater Runoff is…
  - Rain that runs off hardened surfaces

Stormwater Runoff “Non-Point Source” Pollution

- Stormwater runoff picks up pollutants as it runs off impervious surfaces
  - Oils/Grease
  - Metal Particles
  - Pesticides
  - Pet Wastes/Pathogens
  - Nutrients
  - Excessive Sediment

Stormwater runoff is the real problem

4

Erosion and Sedimentation

- Sediment is the #1 nonpoint source of water pollution
- Erosion causes additional problems
  - Loss of property
  - Degradation of streams

5

Start at the Source

- Uncontrolled construction sites dump huge amounts of sediment downstream

6

Common Misconception

- Stormwater from roads and construction sites is directed to storm drains
- Stormwater that enters a storm drain gets treated
- **Where does it really go?**

7

The Truth Is…

- Stormwater usually receives no treatment at all
- It goes to the nearest stream!

8

Impacts of Sedimentation

- Bare soil easily washes into storm drains and into streams, clouding the water and suffocating aquatic life.

9

Impacts of Sedimentation

- Sediments can block culverts and displace flood waters

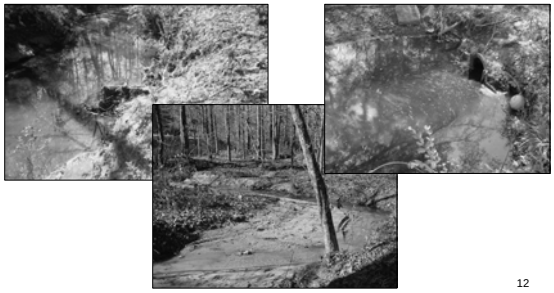
10

What's All the Fuss ?

- 3% of Earth's water is freshwater
- < 1% Earth's freshwater is potable – limited resources
- 40% of streams are not clean enough for fishing and swimming

11

Problem: Stream Pollution



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Goal: Clean Healthy Streams

13

Penalties

- **Builder ordered to pay $2.3 million over storm runoff**

  "A Cobb County jury this week slapped a builder with what may be the largest judgment in a storm water pollution case in Georgia history."

The Atlanta Journal-Constitution 05/12/05

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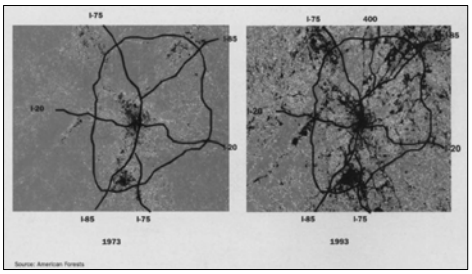
Growth and Development

- Urbanization happens…



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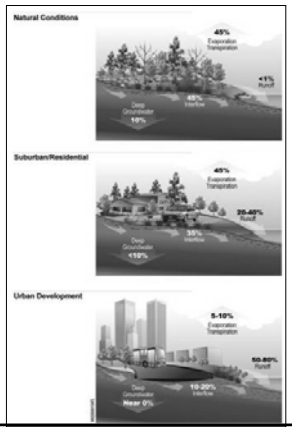
Urbanization

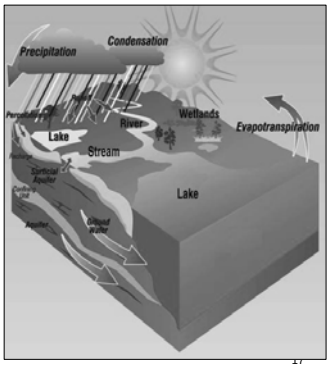
- Understanding stormwater impacts due to Urbanization



Source: *District-Wide Watershed Management Plan-Preliminary Draft*, Metropolitan North Georgia Water Planning District, March 10, 2003.

Back to Basics

- Rainfall
- Infiltration
- Evapotranspiration
- Runoff



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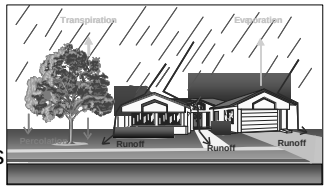
Stormwater and Urbanization

As land is developed:

- Ground is compacted - less water can naturally infiltrate
- Less trees and less evapotranspiration
- MORE stormwater runs off



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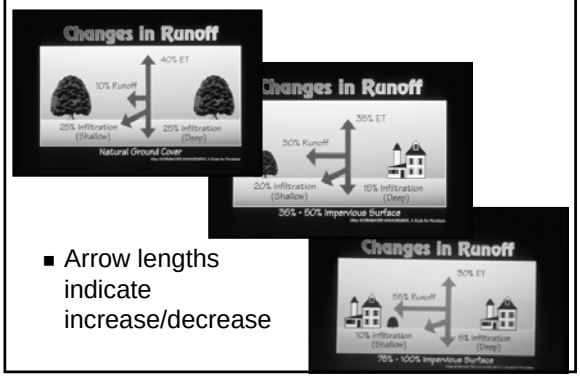
Stormwater and Urbanization



- Arrow lengths indicate increase/decrease

From “River of Fire” to Clean Water Act

- Cuyahoga River 1949-1969

20

Stormwater Management

- Stormwater Quality – “how good”
- Stormwater Quantity – “how much”

Quantity is directly related to …

Quality

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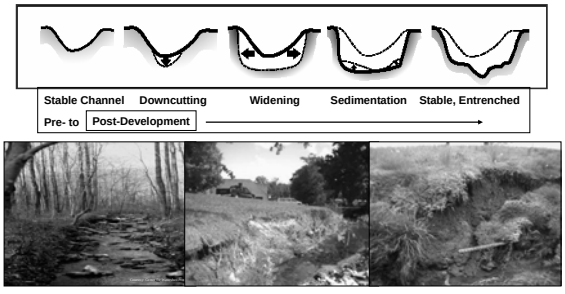
What's It All About?

- Remember…

Streams, streams, streams

Stormwater Quantity Impacts



Stormwater Quantity Impacts

- Impervious surfaces cause higher runoff volume
- High velocity stormwater runoff causes stream erosion
- Stream erosion causes habitat and property loss

Stormwater Quantity Impacts

- Downcutting exposes sewer lines that can break, leading to water quality impacts

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Stormwater Quality Impacts

- Increased wash-off of pollutants
- Increased water temperature
- Results in:
  - Decrease in aquatic life
  - Loss of vegetation
  - Loss of healthy streams for recreation
  - Declining quality of drinking water supplies

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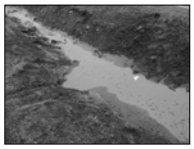
Stormwater Quality Impacts

Microbial Pollution

Transportation



Hydrocarbons

Trash & Debris

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Construction Site Controls

- Use of construction site controls protect water quality

Left - stream drains farm/pasture
Right - drains development area

Design & Review Focus

- Locate streams, drainage patterns
- Delineate sub-basins for each phase
- Calculate flows
- Calculate sediment storage requirements
- Permanent vs temporary pond
- Locate monitoring stations
- Maintenance plan

Design & Review Focus

Base Sheet

- Locate all streams
- Identify state waters and wetlands
- Determine drainage patterns for existing conditions including route of storm sewer infrastructure
- Delineate drainage basins for existing conditions

ES&PC Sheets

- Determine # phases of construction and ES&PC Plans
- Prepare separate sheet for each phase
- Clearly identify streams, state waters, wetlands, existing pipe outfalls, discharge points on each sheet
- Identify limits of disturbance for each phase

Delineation of Basins

- Identify discharge points
- Determine drainage patterns based upon grading plan for each phase
- Identify off-site drainage and drainage from undisturbed areas
- Delineate drainage subbasins for each phase
- Determine area of each subbasin including bypass drainage

Calculations

- Calculate sediment storage needed for each subbasin based on 67 cy per acre drained
- Provide flow rates and/or runoff coefficients; use consistent methodology throughout various phases
- Prepare table with subbasin areas
- Any storm drain system designed will be prepared per design standards

Sediment Storage

- Determine location of temporary and permanent sediment ponds/structures

Reviewer Focus

- Check sheets against topo/aerial map
  - Find streams, wetlands
  - Does pattern make sense?
- Check critical points of discharge; streams, structures, etc
- Check slopes
- Check discharge points and off-site flows
- Calculations of sediment volume

Base Plan Sheet (existing conditions, phase I E&S)

- Locate all streams; name and label perennial, intermittent, ephemeral
- Identify state waters, required protective buffers, floodplain limits, wetlands
- Determine existing drainage basins and flow direction, include existing storm sewer pipe system
- Delineate drainage basins
- Label receiving water bodies and discharge points
- Identify if stream is impaired (on Georgia 305b/303d lists)

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Reviewer Focus #1

- Verify state waters, buffers, floodplain limits, wetlands
- Verify drainage basins using topo/aerial map
- Ensure all state waters are identified, labeled, & protected w/ buffers
- Site visit, if necessary

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ES&PC Sheets (all phases)

- Determine phases of construction on ES&PC Plans
- Prepare separate sheet for each phase
- Clearly identify streams, state waters, wetlands, buffers, floodplain limits, existing pipe outfalls, discharge points on each sheet with any impaired streams labeled
- Identify limits of disturbance for phases II & III

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Reviewer Focus #2

- Use approved plan review checklist to verify compliance
- Look for critical areas where extra measures may be needed

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Delineation of Basins (phases II & III)

- Identify discharge points on-site
- Determine drainage patterns based on Grading Plan for each phase
- Identify and label off-site drainage and drainage from on-site undisturbed areas
- Delineate drainage sub-basins for each phase
- Determine area of each sub-basin including bypass drainage

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Reviewer Focus #3

- Verify discharge points and check off-site flows
- Review topo map and verify drainage sub-basins
- Review construction activities in each phase and in each sub-basin
- Mark areas of steep slopes and anticipate location of sediment ponds and other BMPs

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Sediment Pond

- Determine location of temporary and permanent sediment ponds/structures
- Permanent ponds can be used for sediment ponds in initial and intermediate phases
- Sediment ponds are not perfect solution to sediment control; important to use other BMPs
- Sediment ponds are most effective under smaller storm events
- Permanent ponds are better at controlling sediment
- Calculate sediment storage needed based on 67 C.Y. per disturbed acre
- Calculate elevation of pond and label elevation of 1/3 storage volume. Provide note stating “Sediment shall be removed from the basin when 1/3 of the storage volume has been lost to sediment accumulation.”
- Standpipe in sediment pond acts as 100-year overflow, determine top elevation

Reviewer Focus #4

- Verify sediment storage of 67 C.Y. per acre for entire drainage basin is provided
- Verify use of excavated inlet protection, retrofitted detention ponds, or temporary sediment basins for sediment storage
- Check elevation/storage table and verify 1/3 depth and 100-year discharge elevation

Other BMPs

- Use other measures with sediment ponds to protect during higher storm events
  - Double silt fence with mulch
  - Berm at downstream construction limits
- Protect slopes with appropriate measures
- Use applicable vegetative measures

Reviewer Focus #5

- Check slopes
- Verify vegetative plan includes all temporary and permanent species with planting dates and seeding, fertilizer and mulching rates appropriate to seasons and region

Calculations and Data to Provide

- Prepare table with sub-basin areas
- Provide elevation/storage table for sediment storage needed for entire site based on 67 C.Y. per acre
- Provide the 100-year hydrograph & flow rate using SCS methodology for Sd3 calculations
- Calculate elevation of standpipe to route 100-year storm through sediment pond
- Any storm drain system designed will be prepared per design standards
- Outfall calculations including energy dissipaters, etc.

Reviewer Focus #6

- Verify chart is provided of storm drain pipe and weir discharge velocities
- Verify outlet protection calculations to ensure discharges will not produce erosion
- Check calculations of sediment volume
- Calculations, stone size, dimensions of outlet protection must be shown

Monitoring Stations

- Goal – to determine increase in sediment due to site disturbance
- Option #1 – place at all stormwater outfalls and final discharge points
- Option #2 – place upstream and downstream of site, sample within receiving waters
- Site may discharge to more than one receiving water body so provide equal # downstream monitoring stations

Reviewer Focus #7

- Verify monitoring stations are identified on plans
- Verify each outfall/discharge point has monitoring station labeled (option #1)
- Verify each receiving water body has monitoring station labeled (option #2)

Helpful Tips for Designers

- Obtain checklist from GSWCC or local government and use while designing
- For pipe outfall design, provide junction box and short section on flat slope (1%) to be effective energy dissipater
- Table of sub-basin acreage will help to quickly show what flows bypass and what is collected in a sediment pond
- Identification of sub-basins and discharge points helpful in locating monitoring stations

Helpful Tips for Designers

- For large developments, may have discharge points in one phase that flows through unconstructed phase
  - Convey by open channel; or
  - Place into black, flexible pipe until next phase is constructed
- Permanent ponds are more effective with less chance of releasing sediment during high storm events

Questions?

Insert Yellow Sheet

Back of Yellow Sheet

ELEMENTS OF AN EFFECTIVE SEDIMENT CONTROL PLAN

DESIGN APPROACH- THE BASICS

Issued May 2009

OBJECTIVE

THE BEST EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS

STEPS TO AN EFFECTIVE EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

1. Project requirements
2. Project/resources description
3. Data collection
4. Data interpolation
5. Plan preparation
6. Implementation
7. Operations & maintenance

THE BASICS

1. REQUIREMENTS OF A GOOD PLAN
2. COMPONENTS OF A GOOD PLAN

REQUIREMENTS

1. MEET REQUIREMENTS OF GESA
2. MEET REQUIREMENTS OF GENERAL PERMIT
3. MEET FEDERAL REGULATIONS
4. MEET LIA REQUIREMENTS

NPDES Requirements

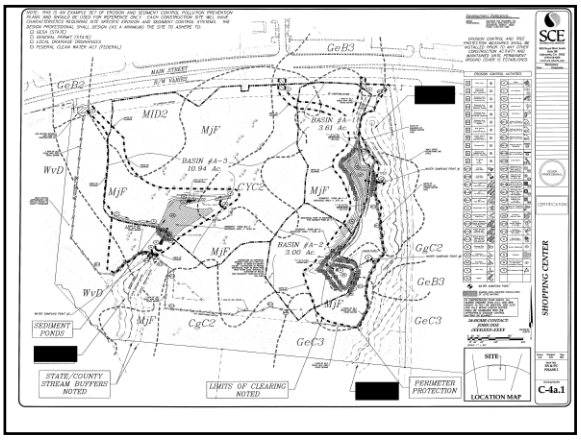
DESIGN A 3 PHASE ES&PC PLAN

- Initial Phase (Clearing & Grubbing)
- Intermediate Phase (Grading & Drainage)
- Final Phase (Final Stabilization)

EXAMPLE PLAN CLEARING PHASE

- Establish clearing limits
- Locate state waters/wetlands
- Establish perimeter protection
- Provide the required initial storage
- Observe sensitive soil areas
- Establish construction exits
- Define special BMP requirements
- Generation of dust shall be eliminated or minimized to the maximum extent practical

7



CLEARING PHASE

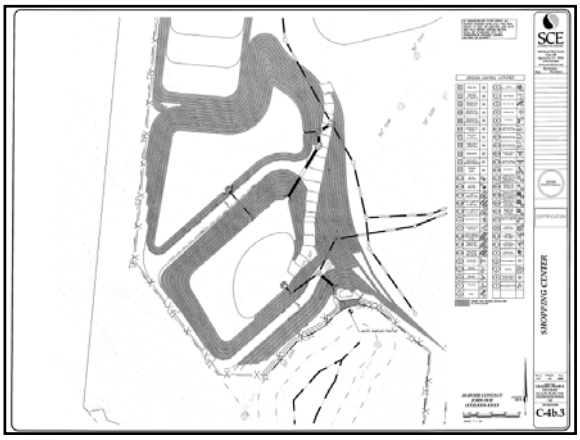
- Define sub phases if required
- Establish full implementation of sediment ponds
- Make adjustments if required
- Define critical work zones
- Establish locations of concentrated & sheet discharge
- Maintain full coordination between the contractor, design professional and the regulatory inspector regarding project sequence

9

SEDIMENT PONDS

- Design as per requirements based on sub basin size, soils, etc.
- Divert offsite flows around disturbed areas and sediment basins if possible
- Provide construction details as necessary

10



CLEARING PHASE

- Prior to the land disturbing activity, the contractor should schedule a preconstruction meeting with the area site development inspector.
- No staging areas, material storage, concrete wash out areas, or debris burn and burial holes should be located within 500 ft. of designated tree protection areas or stream buffers.
- A copy of the approved land disturbance plan and permit shall be present on the site at all times. Post on day one.

12

CLEARING PHASE

- Prior to commencing land disturbance activity, the limits of land disturbance should be clearly and accurately demarcated with stakes, ribbons, or other appropriate means. The location and extent of all authorized land disturbance activity should be demarcated for the duration of the construction activity. No land disturbance shall occur outside the approved limits indicated on the approved plans.

13

CLEARING PHASE

- Prior to any other construction, a stabilized construction entrance/exists, all perimeter controls and sediment storage devices shall be constructed at each point of entry to or exit from the site or onto any public roadway as shown on plans.
- Immediately after the establishment of construction entrance/exits, all perimeter erosion control and stormwater management devices shall be installed as shown on the clearing phase ES&PC Plan.

14

CLEARING PHASE

- Silt fence should be installed at the perimeter of the disturbed area as shown on the plan. Silt should be removed when accumulation reaches ½ height of the barrier. The perimeter silt fence should be inspected weekly and after qualifying rain events for any failures. Any failures of said fencing should be repaired immediately.

15

CLEARING PHASE

- Inlet sediment protection measures shall be installed on all existing storm structures as shown on the plan.
- Stone check dams shall be installed in areas of concentrated flows as shown on the plan.

16

CLEARING PHASE

- Tree protection fencing and stream buffer limits should be installed prior to the start of any land disturbance activity and maintained until final landscape is installed. The tree protection fencing should be inspected daily. Any failures of said fencing should be repaired immediately.

17

CLEARING PHASE

- 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 (DP) who prepared the ES&PC Plan, except when the permittee has requested in writing and EPD has agreed to an alternate DP, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the DP designed within seven (7) days after installation.

18

CLEARING PHASE (cont)

- The DP shall determine if these BMPs have been installed and are being maintained as designed. The DP 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 DP unless weather related site conditions are such that additional time is required.

Gar 100003 Part IV.A.5.

19

CLEARING PHASE

- After approval of the initial erosion control installation, the contractor may proceed with clearing and grubbing activities. As clearing permits, the contractor shall construct temporary sediment ponds and diversion dikes as shown on the clearing phase plan to control erosion and stormwater runoff.

20

CLEARING PHASE

- Mulch or temporary grassing shall be applied to all exposed areas within 14 days of land disturbance (LIAs may require ground cover be applied in less 14 days).

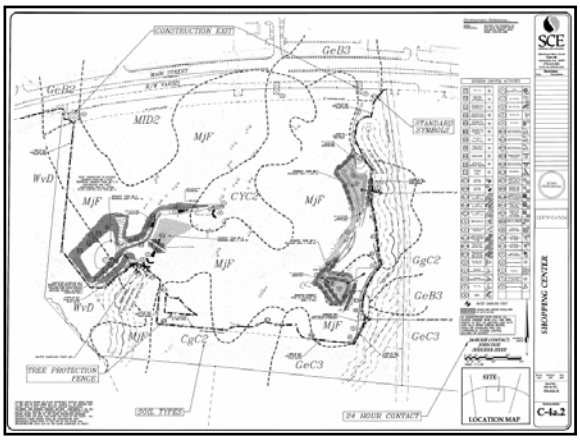
21

CLEARING PHASE

- Permittees shall inspect control measures as required by NPDES
- 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 as directed by the onsite inspector or design professional.

CLEARING PHASE

- Failure to properly install, operate, or maintain all erosion control measures can result in all construction being stopped on the job until such measures are corrected back to the approved erosion control plans, i.e., mandatory stop work order!



GRADING & DRAINAGE PHASE

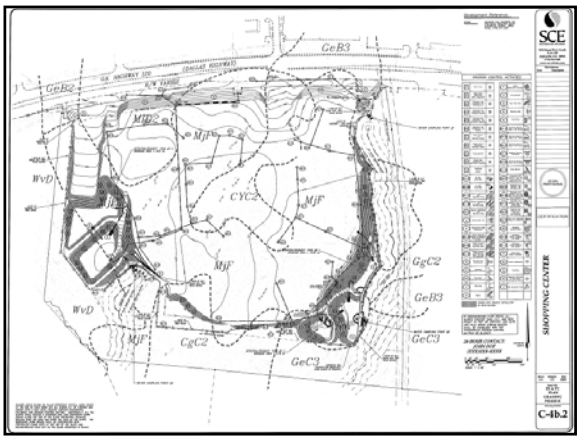
- Establish diversion dikes
- Define mulching, temporary stabilization measures
- Define critical work zones
- Define special BMPs/methods
- Maintain communication with contractor/inspector
- Generation of dust shall be eliminated or minimized to the maximum extent practical

25

GRADING & DRAINAGE PHASE

- During construction, the contractor should maintain careful scheduling and performance to ensure that land stripped of its natural ground cover is exposed only in small quantities and therefore limited durations, before permanent erosion protection is established.

26



GRADING & DRAINAGE PHASE

- Maintain full coordination with the design professional, contractor and regulatory inspector at all times regarding project sequence.
- Earthwork operations in the vicinity of stream buffers should be carefully controlled to avoid dumping or sloughing into the buffer areas.

28

GRADING & DRAINAGE PHASE

- Sediment shall not be washed into inlets. It shall be removed from the sediment traps and disposed of and stabilized so that it will not enter the inlets again.

29

GRADING & DRAINAGE PHASE

- All slopes steeper than 2.5:1 and with a height of 10 ft. or greater, and cuts and fills within stream buffers, shall be stabilized with appropriate erosion control matting or blankets.
- Appropriate silt fence shall be placed at the toe of all dirt stock pile areas.
- Inlet sediment protection measures shall be installed on all storm structures as they are constructed.

30

GRADING & DRAINAGE PHASE

- Storm drain outlet protection shall be placed at all outlet headwalls as soon as the headwall is constructed.
- Stone check dams shall be installed in areas of concentrated flows as shown on the plan.
- Mulch or temporary vegetation shall be applied to all exposed areas within 14 days of land disturbance. Note local requirements

31

GRADING & DRAINAGE PHASE

- Sediment and erosion control measures should be checked weekly and after each qualifying rain event. Each device is to be maintained if sediment accumulation has reached ½ the capacity of the device. 1/3 of the storage capacity of temporary sediment basin and retrofit structures

32

GRADING & DRAINAGE PHASE

- The construction exit shall be maintained in a condition which will prevent track or flow of mud onto public right-of-way. This may require periodic top dressing with 1.5”-3.5” of stone, as conditions demand. All materials spilled, dropped, washed or tracked from a vehicle onto public roadway or into storm drain must be removed immediately.

33

GRADING & DRAINAGE PHASE

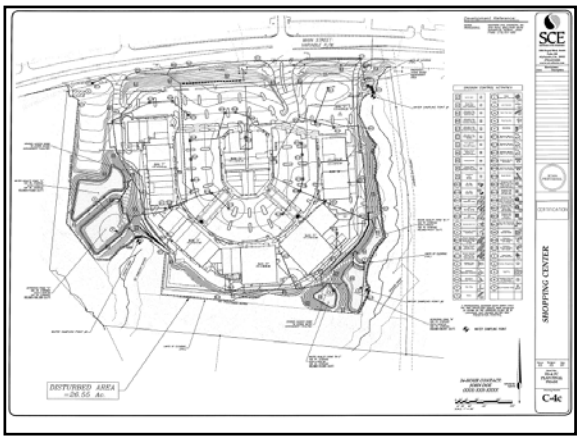
- Define sub phases as required
- Redefine sedimentation ponds as required
- Provide special details as required
- Merge sedimentation ponds with stormwater management facilities
- Utilize special BMPs as required

34

FINAL PHASE

- Final vegetative measures
- Final structural measures
- Final stormwater systems

35



FINAL PHASE

- Maintain full coordination with the design professional, contractor and regulatory inspector at all times regarding project sequence.
- Sediment shall not be washed into inlets. It shall be removed from the sediment traps and disposed of and stabilized so that it will not enter the inlets again.
- Mulch or temporary grassing shall be applied to all exposed areas within 14 days of land disturbance.
- Implement final stabilization.

37

FINAL PHASE

- The contractor shall maintain all sediment ponds and erosion control measures until permanent ground cover is established. Sediment shall be cleaned out of the ponds when it reaches one third full.
- After curbing, graded aggregate base, and pavement have been installed, all inlet sediment traps on single and double wing catch basins along with any curb inlets shall be removed and replaced with curb filter inlet protection.

38

IMPORTANT COMPONENTS

- Notes – per phase
- Schedule
- Certifications
- Sediment pond design
- Details

39

Insert Tab 8 – Sample E&S Plan Review

Back of Tab

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
COMMON DEVELOPMENTS

SWCD:_____

Project Name:_____ Address:_____

City/County:_____ Date on Plans:_____

Plan Page #	Included Y/N	

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)
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)
3. The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls
4. Provide the name, address and phone number of primary permittee or tertiary permittee
5. Note total and disturbed acreage (the disturbed area shall be the total estimated disturbed area of the primary and secondary permittees or the tertiary permittee) of the project or phase under construction
6. Provide land lot and district numbers for site location. Describe critical areas and any additional measures that will be utilized for these areas.
7. Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
8. Graphic scale and north arrow.
9. 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% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 2,5 or 10

10. Boundary line survey.
11. Delineation and acreage of contributing drainage basins on the project site.
12. Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
13. 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.
14. Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.
15. Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion Identify/Delineate all storm water discharge points.
16. Soil series for the project site and their delineation.
17. Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.
18. 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.
19. If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 18 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.
20. Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.
21. Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
22. The limits of disturbance for each phase of construction.
23. Limit of disturbance shall be no greater than 50 acres for each individual permittee (i.e. Primary, Secondary or Tertiary) at any one time and no more than 50 contiguous acres at 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.)
24. 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 rationale 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. 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.
25. 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.
26. Best Management Practices to minimize off-site vehicle tracking of sediments and the generation of dust.
27. 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.

28. Provide BMPs for the remediation of all petroleum spills and leaks.
29. 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.
30. 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.
31. Description of the nature of construction activity.
32. 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) fina BMPs.
33. 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).
34. Description of the practices that will be used to reduce the pollutants in storm water discharges.
35. 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.
36. Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 17 of the permit.
37. 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 page 17 of the permit
38. Certification statement and signature of the permittee or the duly authorized representative as stated in section V.G.2.d. of the state general permit.
39. An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
40. Indication that non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.
41. Indication 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.
42. Indication 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.
43. Indication that waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.
44. Indication that the applicable portion of 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.
45. Documentation that the ES&PC Plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations during and after construction activities have been completed.
46. Provide complete requirements of inspections and record keeping by the primary permittee, secondary permittees and tertiary permittees.
47. Provide complete requirements of sampling frequency and reporting of sampling results.
48. Provide complete details for retention of records as per Part IV.F. of the permit.
49. Description of analytical methods to be used to collect and analyze the samples from each location.
50. Appendix B rationale for outfall sampling points where applicable.
51. Cleary note statement in bold letters- "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities."
52. Cleary note maintenance statement in bold letters - "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."
53. Clearly note the statement in bold letters - "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
54. 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.
55. 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.

APPENDIX 1

THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO A IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 5O ACRES OR MORE AT ANY ONE TIME.

Plan Page #	Included Y/N		
		a.	During construction activities, 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.
		b.	Increase all temporary sediment basins and retrofitted storm water 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 storm water management basins to at least double the conventional flow path length to the outlet structure.
		d.	Place a large sign (minimum 4 feet x 8 feet) on the site visible from the roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s).
		e.	Use anionic polyacrylamide (PAM) and/or mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Part III. D.1. of the NPDES Permit GAR 100003.
		f.	Conduct turbidity and Total Suspended Solids (TSS) 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 the NPDES Permit GAR 100003.
		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.	Limit the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations).
		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.
		j.	Use "Dirt II" techniques to model and manage storm water runoff (e.g., seep berms, sand filters, anionic Pam), available on the EPD website, www.gaepd.org.
		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 storm water may be discharged.
		m.	Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1.
		n.	Use appropriate erosion control matting or blankets instead of concrete in construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
		o.	Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
		p.	Install sod for a minimum 20 foot width, in lieu of seeding, along the site perimeter wherever storm water may be discharged.
		q.	Use a surface draining skimmer designed to drain temporary sediment basins and retrofitted storm water management basins over a minimum three (3) day period.
		r.	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.(2). (a) - (c), Part IV.D.4.b.(3). (a) - (c) or Part IV.D.4.c.(2). (a) - (c) of the NPDES Permit GAR 100003, as applicable. (*If working under NPDES Permit GAR 100002 see below*)
		r.1.	** Certified personnel shall conduct inspections at least once every seven calendar days and within 24 hours of the end of the storm that is 0.5 inches or greater in accordance with part IV.D.4.a.(2). (A) - (C) of this permit.**
		s.	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.
		t.	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 State Soil and Water Conservation Commission). (If using this item please refer to the Alternative BMP guidance document found at www.gaswcc.org)

Insert Yellow Sheet

Back of Yellow Sheet

Plan Review for Not a Clue Development

Level II: Introduction to Design
Education and Certification for Persons Involved In Land Disturbing Activities

Issued May 2009

Plan Review Exercise

- Sample plans will now be distributed. Please get into groups of 2 or 3 to review the plans.
- You will need your plan review checklist.
- We will then discuss the plan as an entire group.

#1.

X

- 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 appropriate checklist must be completed and submitted with the ES&PC Plan or the Plan will not be reviewed.

#2.

- Level II certification number issued by the Commission, signature and seal of certified Design Professional.
- Signature, seal, and GSWCC issued Level II certification number must be on each sheet pertaining to ES&PC or the Plan will not be reviewed.

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #

#3

- Name and phone number of 24-hour local contact responsible for erosion, sedimentation and pollution controls.

24-HOUR CONTACT:
(NAME)
(FIRM)
(PHONE)

#4.

- Provide the name, address and phone number of primary permittee or tertiary permittee.
- May be shown on cover sheet, ES&PC Plan or under ES&PC notes

OWNER/DEVELOPER	*(FIRM)*
APPLICANT:	*(ADDRESS)*
	(CONTACT)
	(PHONE)

#5.

- Note total and disturbed acreage of the project or phase under construction. The disturbed area shall be the total estimated disturbed area of the primary and secondary permittees or the tertiary permittee.
- Must be shown on ES&PC Plan or under ES&PC notes.

Total Site Area: 76.9 Acres
Total Disturbed Area: 24.7 Acres

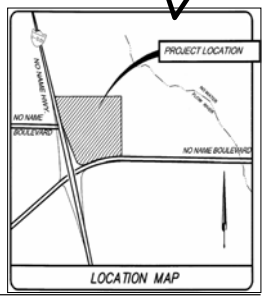
#6

- Provide land lot and district numbers for site location. **Describe critical areas and any additional measures that will be utilized for these areas.**

The site is located in Land Lot ??, District??, Section??, ???? County, GA. Gross acreage of tract: ???? more or less.

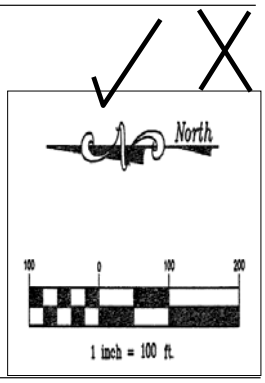
#7

- Provide vicinity map showing site's relation to surrounding area, including designation of specific phase, if necessary.



#8

- Show graphic scale and north arrow.



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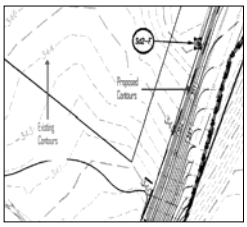
#9

- Provide both existing and planned contours with contour lines drawn at an interval in accordance with the following:

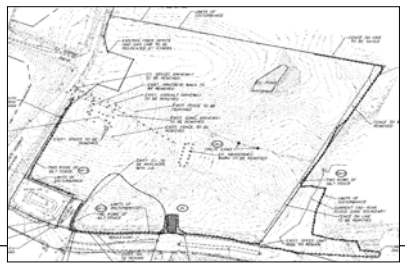
Map Scale	Ground Slope	Contour Interval, ft.
1 inch = 100 ft. or larger scale	Flat 0-2%	0.5 or 1
	Rolling 2-8%	1 or 2
	Steep 8% +	2, 5 or 10



11

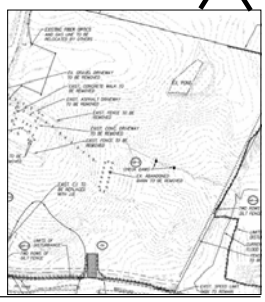
#10

- Boundary line survey



#11

- Delineation and acreage of contributing drainage basins on the project site.



13

#12

- Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
  - –Need statement:

    "State Waters exist on and within 200' of this site."

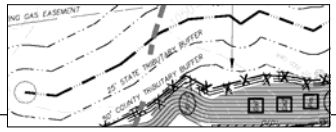
    or

    "State Waters DO NOT exist and or within 200' of this site."

14

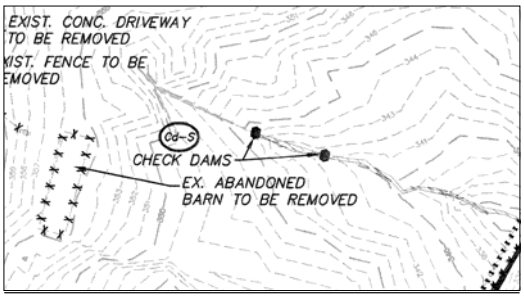
#13

- Delineation of 25-foot undisturbed buffers of state waters and 50-foot undisturbed buffers along designated trout streams. 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.



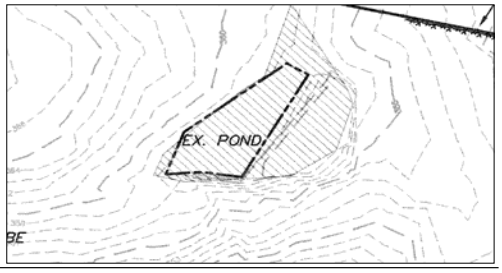
15

Possible State Waters



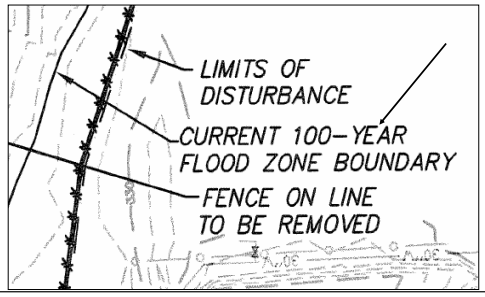
16

Possible State Waters



17

State Waters Nearby???



18

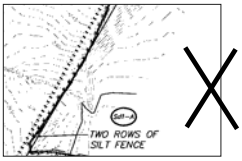
#14

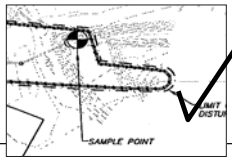
- Delineate sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.

19

Sampling Locations

- Sampling locations are shown in intermediate and final phase but not initial phase





20

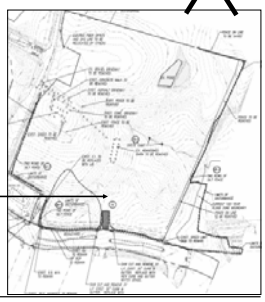
15

- 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 tail water conditions. This information should be 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 6-24.1 and 6-24.2 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.

#16

- Include soil series and their delineation.

Soil series not delineated



22

#17

- Identify the project receiving waters and describe all adjacent areas including streams, lakes, residential areas, wetlands, etc. which may be affected.

23

#18

- 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 Macro invertebrate 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) - (t) of the Permit. The Impaired Stream Segment(s) should be delineated on the ES&PC Plan. Georgia's 2008 and subsequent "305(b)/303(d) List Documents (Final)" can be viewed on the GAEPD website.

#19

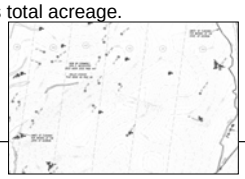
NA

- If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 18 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.

#20

X

- 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.



#21

X

- 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 re-submittal the revision date and entity requesting revisions should be shown on cover sheet and each sheet that has been revised.

Drawn	Designer	Date
	ABC	

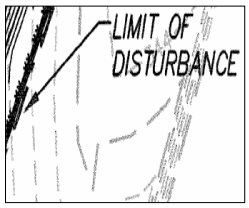
Revisions	
Date	Description

✓

#22

✓

- Show limits of disturbance for each phase of construction.



28

#23

NA

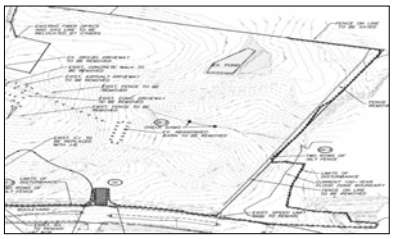
- Limit of disturbance shall be no greater than 50 acres for each individual permittee (i.e. Primary, Secondary or Tertiary) at any one time and no more than 50 contiguous acres at one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at anyone 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.

#24

X

- 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 rationale 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. 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.

Storage?



Initial/clearing phase does not have any measures for sediment storage

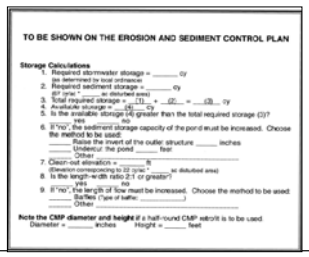
Calculations?

Sediment basins are in grading phase, but no structural and storage calculations are provided

Include specific design information and calculations for structural measures on site

- Complete all necessary worksheets from the Manual:

  Complete Rt worksheet for each retrofitted detention pond→



TO BE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

Storage Calculations

1. Required stormwater storage = _____ cy
   (as determined by local ordinance)
2. Required sediment storage = _____ cy
   (if y/a_d " _____ ac disturbed area)
3. Total required storage = ___(1)___ + ___(2)___ = ___(3)___ cy
4. Available storage = ___(4)___ Cy
5. Is the available storage (4) greater than the total required storage (3)?
   _____ yes _____ no
6. If "no", the sediment storage capacity of the pond must be increased. Choose the method to be used:
   _____ Raise the invert of the outlet structure _____ inches
   _____ Undercut the pond _____ feet
   _____ Other _____
7. Clean-out elevation = _____ ft
   (Elevation corresponding to 22 cy/ac * _____ ac disturbed area)
8. Is the length-width ratio 2:1 or greater?
   _____ yes _____ no
9. If "no", the length of flow must be increased. Choose the method to be used:
   _____ Baffles (*type of baffle: _____)
   _____ Other _____

Note the CMP diameter and height if a half-round CMP retrofit is to be used.
Diameter = _____ inches Height = _____ feet

Complete the Temporary Sediment Basin Design Sheet for each temporary basin

TEMPORARY SEDIMENT BASIN DESIGN SHEET

Computed by_____ Date_____
Checked by _____ Date_____

Project name _____
Basin No. _____
Total area draining to basin = _____ acres
Disturbed area draining to basin = _____ acres

Volume

1. Compute minimum required storage volume (V_s).
   V_s = 67 cy/ac * _____ acres = _____ cy
2. Compute volume of basin at clean-out (V_c).
   V_c = 22 cy/ac * _____ acres = _____ cy
3. Determine elevation corresponding to minimum required storage volume, V_s.
   Minimum riser crest elevation = _____ ft (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_c.
   Clean-out elevation = _____ ft (determined by stage/storage relationship)
   Note: Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser.
5. Compute length of riser.
   Riser length = Minimum elevation of riser crest – Lowest elevation of pipe at riser
   Riser length = _____ ft - _____ ft
   Riser length = _____ ft

#25

NA

- 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 GA EPD or the Georgia Soil and Water Conservation Commission).
- Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.

GSWCC Guidance Document for Alternative BMPs

Permit Erosion and Sedimentation Controls

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).

Required Documentation for Alternative BMPs:

1. One page summary detailing why the alternative BMP is equivalent or superior to the conventional BMPs found in the "Manual for Erosion and Sedimentation Control in Georgia" (Manual).
2. Complete design details, including calculations, for the alternative BMP using the appropriate design requirements and specifications contained in the Manual.
3. Proof that the alternative BMP was previously installed and worked under conditions comparable to the environmental conditions of the proposed site. This can be documented with photographs.
4. All specifications including the design requirements and the procedures for proper installation and maintenance.

All forms of documentation must be signed and certified by the Design Professional who is preparing the ESAPC Plan and must include the Design Professional's seal and GSWCC Design Professional certification.

ESAPC Plan

When an ESAPC Plan has been reviewed by the GSWCC, EPD or a Local Issuing Authority (LIA) with a Memorandum of Agreement (MOA) to review ESAPC Plans, the following statement must be on the plan review sheet:

The use of the alternative BMP for _____ (type of BMP, e.g., silt fence, SAF) has been reviewed and has been determined to be allowable only for this ESAPC Plan. This review was site-specific based on the documentation submitted and certified by the Design Professional and required by the Georgia Environmental Protection Division and the Georgia Soil and Water Conservation Commission.

FAQ: Frequently Asked Questions

Q: If replacing a conventional BMP with an alternative BMP on a previously approved set of ESAPC Plans, does the Design Professional have to resubmit the ESAPC Plans?
A: Yes. The Design Professional must resubmit the ESAPC Plans with the required alternative BMP documentation.

Q: What is meant by equivalent or superior to the conventional BMP found in the Manual?
A: Based on documentation that side by side testing has been conducted under comparable site conditions using the alternative BMP and conventional BMP and the alternative BMP is equivalent or superior to the conventional BMP for the purpose and meets or exceeds the criteria for the conventional BMP in the Manual. OR an effectiveness factor that is in the Manual for its purpose and meets or exceeds the criteria for the conventional BMP in the Manual for which it is designed to replace.

Q: What if a LIA with MOA wants to deny an alternative BMP?
A: The LIA with the MOA must forward the ESAPC Plan with the required alternative BMP documentation to the GSWCC (Urban Program).

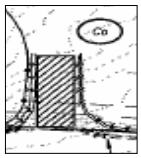
NOTE: In jurisdictions where there is no LIA, the alternative BMP documentation must be submitted to EPD. In jurisdictions where there is a LIA, the alternative BMP documentation must be submitted to the GSWCC. Upon receiving the alternative BMP documentation, the GSWCC and EPD will work together to make the call if disapproved. This will require communication and onsite coordination throughout the review process.

#26

✓ X

- Best Management Practices to minimize off-site vehicle tracking of sediments and the generation of dust.

DUST?



#27

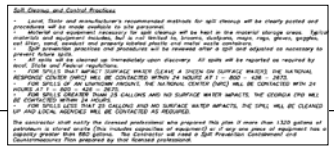
X

- 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 for 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(s) of BMPs that will be used. If the project does not allow the concrete washdown on the project site state so on the plan.

#28

✓

- 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.



Spill Cleanup and Control Practices

- Local, State and manufacturer's recommended methods for spill cleanup will be clearly posted and procedures will be made available to site personnel.
- Material and equipment necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment necessary may include, but not limited to, rags, gloves, goggles, cat litter, sand, sawdust and properly labeled plastic and metal waste containers.
- Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent future spills.
- All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, State and Federal regulations.
- FOR SPILLS THAT IMPACT SURFACE WATER CLEAN, A SPILLTN (IN SURFACE WATERS) THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1 - 800 - 424 - 8802.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITH 24 HOURS AT 1 - 800 - 424 - 8802.
- FOR SPILLS LESS THAT 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED within 24 HOURS.
- FOR SPILLS LESS THAT 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

The contractor shall notify the licensed professional who prepared this plan if more than 1320 gallons of petroleum is stored onsite (This includes capacities of equipment) or if any one piece of equipment has a capacity greater than 660 gallons. The Contractor will need a Spill Prevention Containment and Countermeasures Plan prepared by that licensed professional.

#29

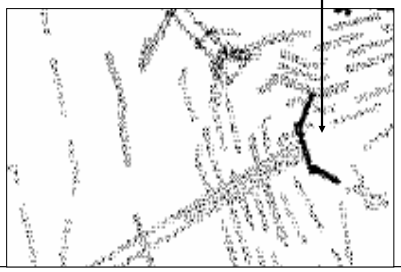
X

- Plan addresses BMP's 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.

#30

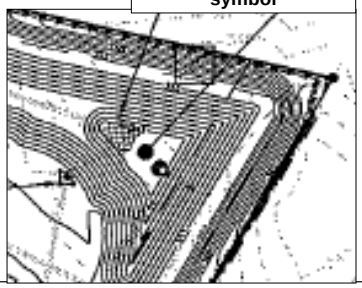
- Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
- BMPs for all phases of the Plan must be consistent with and no less stringent than 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.

Missing St Symbol



41

Outlet control structure missing Rt symbol



42

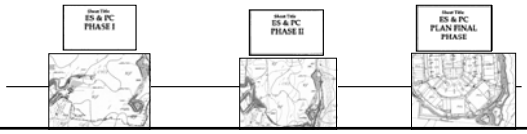
#31

- Description of the nature of construction activity.

43

#32

- 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.
- 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.



#32

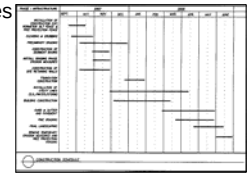
- A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs.

#32

- 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.

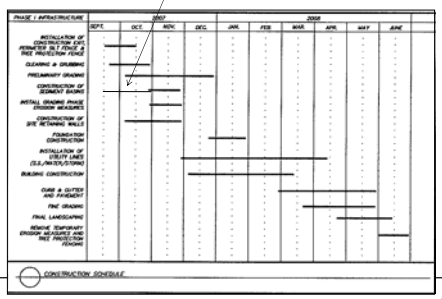
#33

- 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 BMP's, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).



A construction activity schedule is on plans, however… 47

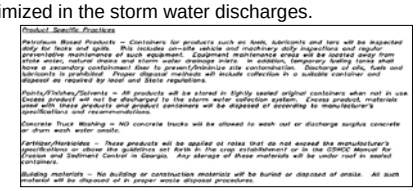
Modify schedule to show installation of sediment basins in initial phase



48

#34

- 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.



Product Specific Practices

Petroleum Based Products – Containers for products such as fuels, lubricants and tars will be inspected daily for leaks and spills. This includes on-site vehicle and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from state water, natural drains and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils, fuels and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and State regulations.

Paints/Finishes/Solvents – All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products and product containers will be disposed of according to manufacturer's specifications and recommendations.

Concrete Truck Washing – NO concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water onsite.

Fertilizer/Herbicides – These products will be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSMCC Manual for Erosion and Sediment Control in Georgia. Any storage of these materials will be under roof in sealed containers.

Building materials – No building or construction materials will be buried or disposed of onsite. All such material will be disposed of in proper waste disposal procedures.

#35

- 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**.

#36

- Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 17 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."

#37

- 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 page 17 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 10000_."

#38

- Certification statement and signature of the permittee or the duly authorized representative as stated in section V.G.2.d. of the state general permit.
- The following statement and the signature of the permittee or the duly authorized representative must be shown on the ES&PC Plan or under ES&PC notes.

(3) "I CERTIFY UNDER THE 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 QUALIFIED PERSONAL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED UPON 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."

#39

- An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.

#40

- Indication that non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation without first acquiring the necessary variances and permits.

1. NO ACTIVITIES SHALL BE CONDUCTED WITHIN THE 25 OR 50-FOOT STREAM BUFFER ALONG THE BANKS OF ALL STATE WATERS, UNLESS A VARIANCE HAS BEEN OBTAINED FROM THE GA EPD DIRECTOR.

#41

- Indication 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 and tertiary permittee(s) must retain the design professional who prepared the Plan, except when the 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 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.

#42

- Indication that amendments/revisions to the ES&PC Plan which have a significant effect on BMP's with a hydraulic component must be certified by the design professional.

3. ANY AMENDMENT TO THE EROSION CONTROL PLANS WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

#43

- Indication that waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

WASTE DISPOSAL. SOLID MATERIALS INCLUDING BUILDING MATERIALS, WILL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

#44

- Indication that the applicable portion of the 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.

2. EACH SECONDARY PERMITTEE WILL BE PROVIDED WITH A COPY OF THE EROSION CONTROL PLAN OR PORTIONS OF THE PLAN APPLICABLE TO THEIR SITE AND EACH SECONDARY PERMITTEE SHALL SIGN THE PLAN OR PORTION OF THE PLAN APPLICABLE TO THEIR SITE.

#45

- Documentation that the ES&PC Plan is in compliance with waste disposal, sanitary sewer, or septic tank regulations during and after construction activities have been completed.
- The Plan must provide for the proper disposal of sewage and other wastes generated during construction operations. The plan must ensure that the site complies with any applicable State or local regulations regarding waste disposal, sanitary sewer, or septic tanks.

#46

- Provide complete requirements of inspections and record keeping by the primary permittee, secondary permittees and tertiary permittees.
- The Plan must include all of the inspections and record keeping requirements of the primary, secondary and tertiary permittees as stated in Part IV.D.4.on pages 24 - 28 of the Permit. The complete inspection and record keeping requirements shall be shown on the Plan under ES&PS notes.

#47

- Provide complete requirements of sampling frequency and reporting of sampling results
- See page 30 Sampling Frequency and page 31 section E. Reporting in the permit. Complete sampling frequency and reporting requirements are to be shown on the Plan under ES&PC notes.

#48

- Provide complete details for retention of records as per Part IV.F. of the permit.
- See page 31 section F. Retention of Records in the permit. Complete details of retention of records are to be shown on the Plan under ES&PC notes.

Primary Permittee

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 monitoring 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.(1)(c) of this permit.

Note: requirements for the different permittees vary slightly

#49

- Description of analytical methods to be used to collect and analyze the samples from each location.

64

#50

- Appendix B rationale for outfall sampling points where applicable.

65

#51

- Cleary note statement in bold letters- **"The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities."**

"THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES."

66

#52

- Cleary note maintenance statement in bold letters - **"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."**

"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."

67

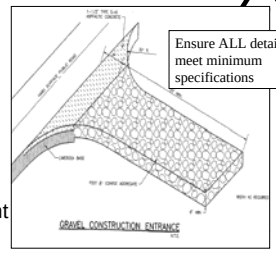
#53

- Clearly note the statement in bold letters - "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

68

#54

- Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.



Ensure ALL details meet minimum specifications

Label all details with proper code from the Manual code.

Co

69

Need additional details

- Mb
- Cd
- Sd3
- St
- Rt
- Sd2-F
- Sd2-P

70

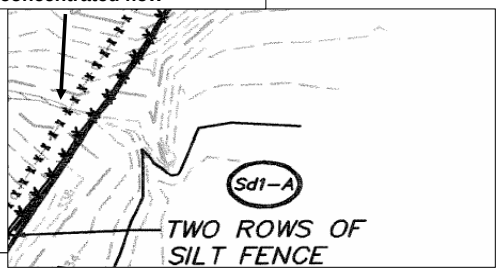
#55

- 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.

71

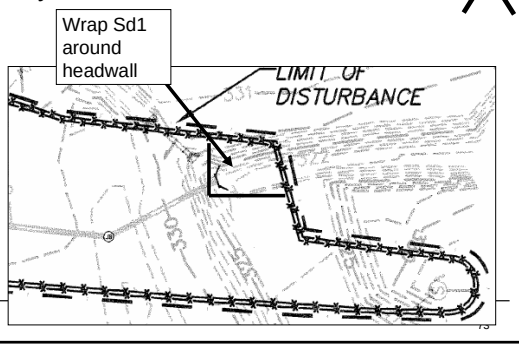
Beyond the Checklist

Sd1 shown in area of concentrated flow

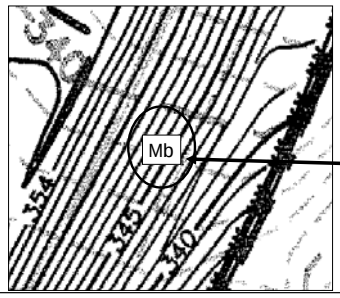


72

Beyond the Checklist

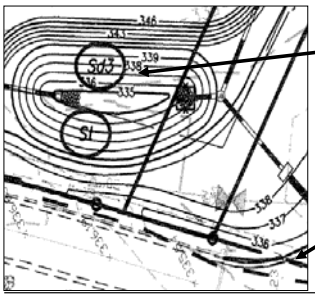


Beyond the Checklist



Show Mb in grading phase

Beyond the Checklist



Remove temporary Sd3's in final phase

Show Sd1 placement in final phase

Did we miss anything?

Questions?

Insert Tab 9 – Resource Information

Back of Tab

Commonly Used Acronyms

BMP: Best Management Practices

COE: US Army Corps of Engineers (Federal)

CWA: Clean Water Act

DNR: Department of Natural Resources (Federal)

EPA: Environmental Protection Agency (Federal)

EPD: Environmental Protection Division (State)

ES & PC Plan: Erosion, Sedimentation and Pollution Control Plan

FEMA: Federal Emergency Management Agency (Federal)

GESA: Georgia Erosion and Sediment Control Act

GSWCC: Georgia Soil & Water Conservation Commission

LDA: Land Disturbing Activity

LIA: Local Issuing Authority

MLRA: Major Land Resource Areas

NOI: Notice of Intent

NOT: Notice of Termination

NPDES: National Pollution Discharge and Elimination System

NRCS: Natural Resource Conservation Service (Federal)

NTU: Nephelometric turbidity unit

O.C.G.A.: Official Code of Georgia, Annotated

SWCD: Soil and Water Conservation District (State)

USDA: United States Department of Agriculture (Federal)

Georgia Soil and Water Conservation Commission
Erosion and Sediment Control Contact Information

State Headquarters
4310 Lexington Rd
PO Box 8024
Athens, GA 30603
(706) 542-3065

E&SC Education and Certification Program
PO Box 1665
Athens, GA 30603
(706) 542-1840
certification@gaswcc.org

Region 1
700 East 2nd Ave, Suite J
Rome, GA 30161-3359
(706) 295-6131

Region 2
PO Box 8024
Athens, GA 30603
(706) 542-9233

Region 3
1500 Klondike Road, Suite A109
Conyers, GA 30094
(770)- 761-3020

Region 4
3014 Heritage Road, Suite 1
Milledgeville, GA 31061
(478) 445-5766

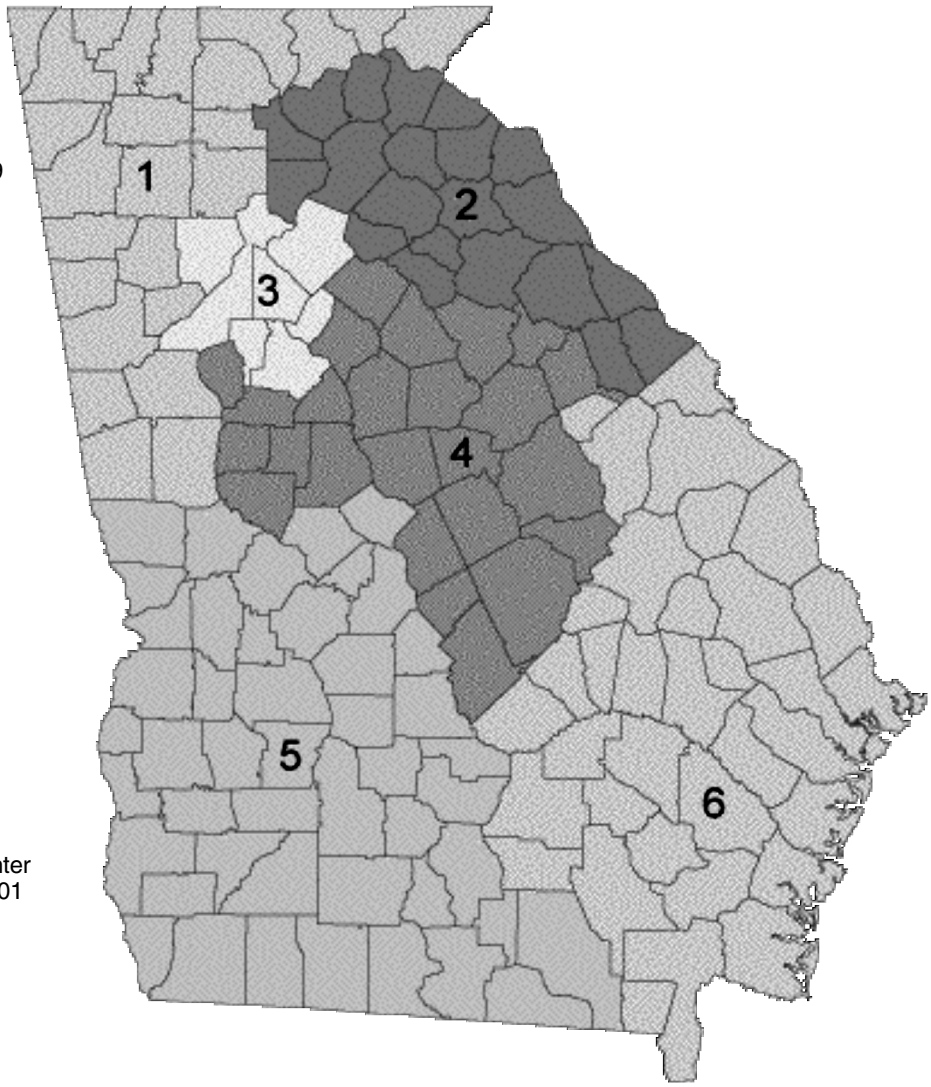
Covington/Newton County
1113 Usher Street
Covington, GA 64147
(478) 934-7299

Region 5
4344 Albany Highway
Dawson, GA 39842
(229) 995-6001

Region 6
151 Langston Chapel Road
Suite 700
Statesboro, GA30459
(912) 681-5241

Coastal District Office
Jack Kingston Conservation Center
185 Richmond Davis Dr, Suite 201
Richmond Hill, GA 31324
(912) 459-2350

Brunswick/Jesup
3661 Altama Ave
Brunswick, GA 31520
(912) 265-8043



GEORGIA SOIL AND WATER CONSERVATION COMMISSION

P.O. Box 8024
Athens, GA 30603
706-542-3065
706-542-4242 FAX
e-mail director@gaswcc.org

COMMISSION MEMBERS

Garland Thompson, Chairman
P.O. Box 2703
Douglas, GA 31534
912-384-7614

Carl E. Brack
25 Maple Lane
Carrollton, GA 30116
770-832-3501 (O)
770-214-0278 (H)
770-832-9679 (Fax)

Dennis T. Brown
2063 GA. Hwy. 326
Commerce, GA 30530
706-335-2953 (H)

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c/o Mansfield Group
1108 Monticello St.
Covington, GA 30014
770-787-5400 (O)

Steve Singletary
P.O. Box 628
Blakely, GA 39823
229-723-3525 (O)
229-723-3808 (H)

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David A. Eigenberg –Deputy Executive Director – deigenberg@gaswcc.org
Cynthia Wilbur - Administrative Assistant **–** cwilbur@gaswcc.org
Deborah P. Bray - Secretary - dbray@gaswcc.org

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Niki Strain - Personnel Representative – nstrain@gaswcc.org
Karen D. Parson - Procurement & Services Officer - kparson@gaswcc.org
Lindsey Carden – Administrative Assistant – lcarden@gaswcc.org
Andy Pope – Contract Specialist – apope@gaswcc.org

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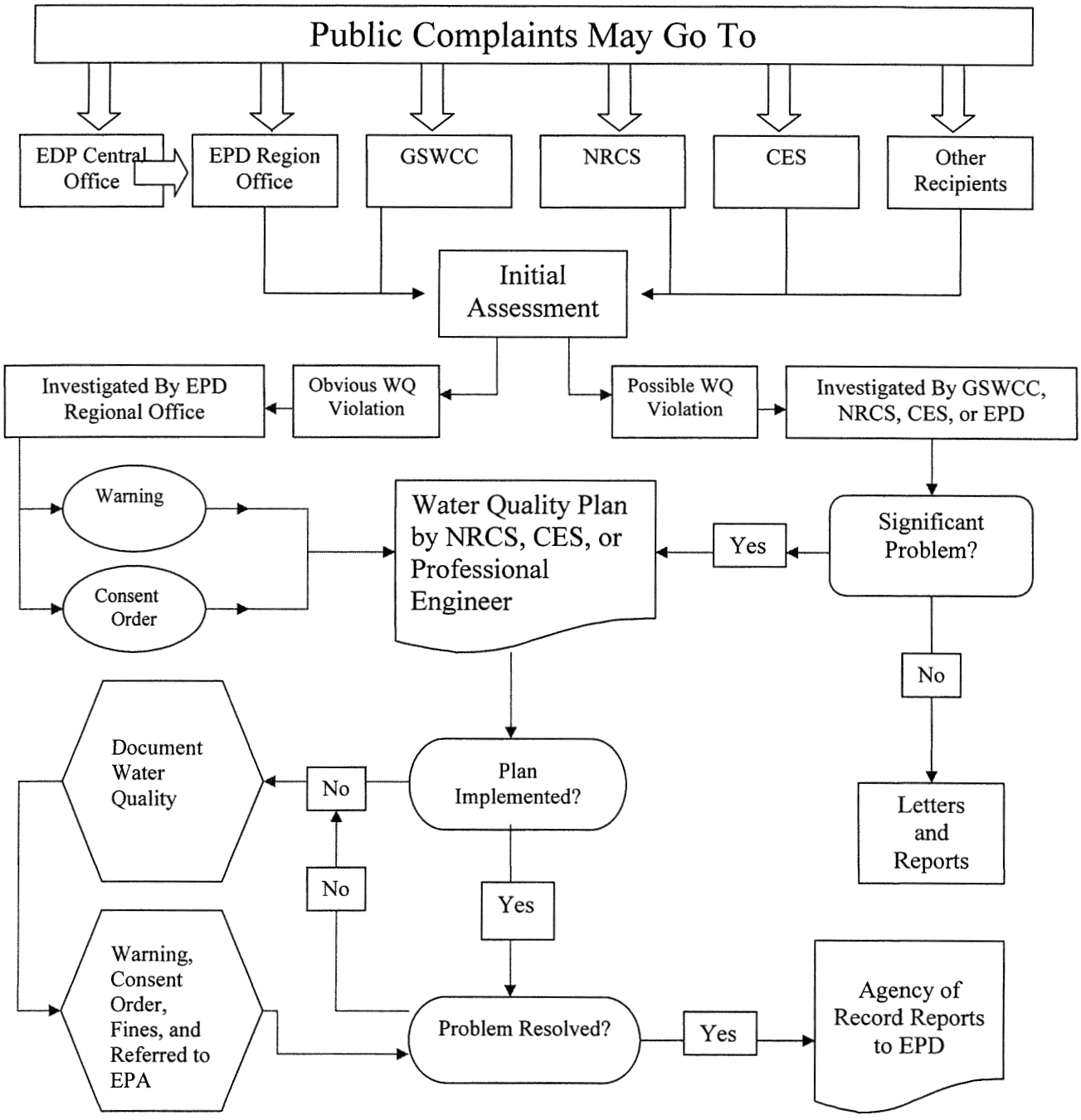
Ben Ruzowicz- Technical Specialist-Urban Water Resources - bruzowicz@gaswcc.org
Wyukia Coleman– Administrative Assistant – E&SC Certification – wcoleman@gaswcc.org
Melanie Hill – Administrative Assistant – E&SC Certification – mhill@gaswcc.org
Jennifer Standridge – Data Entry Specialist – E&SC Certification – jstandridge@gaswcc.org

Information Technology Program

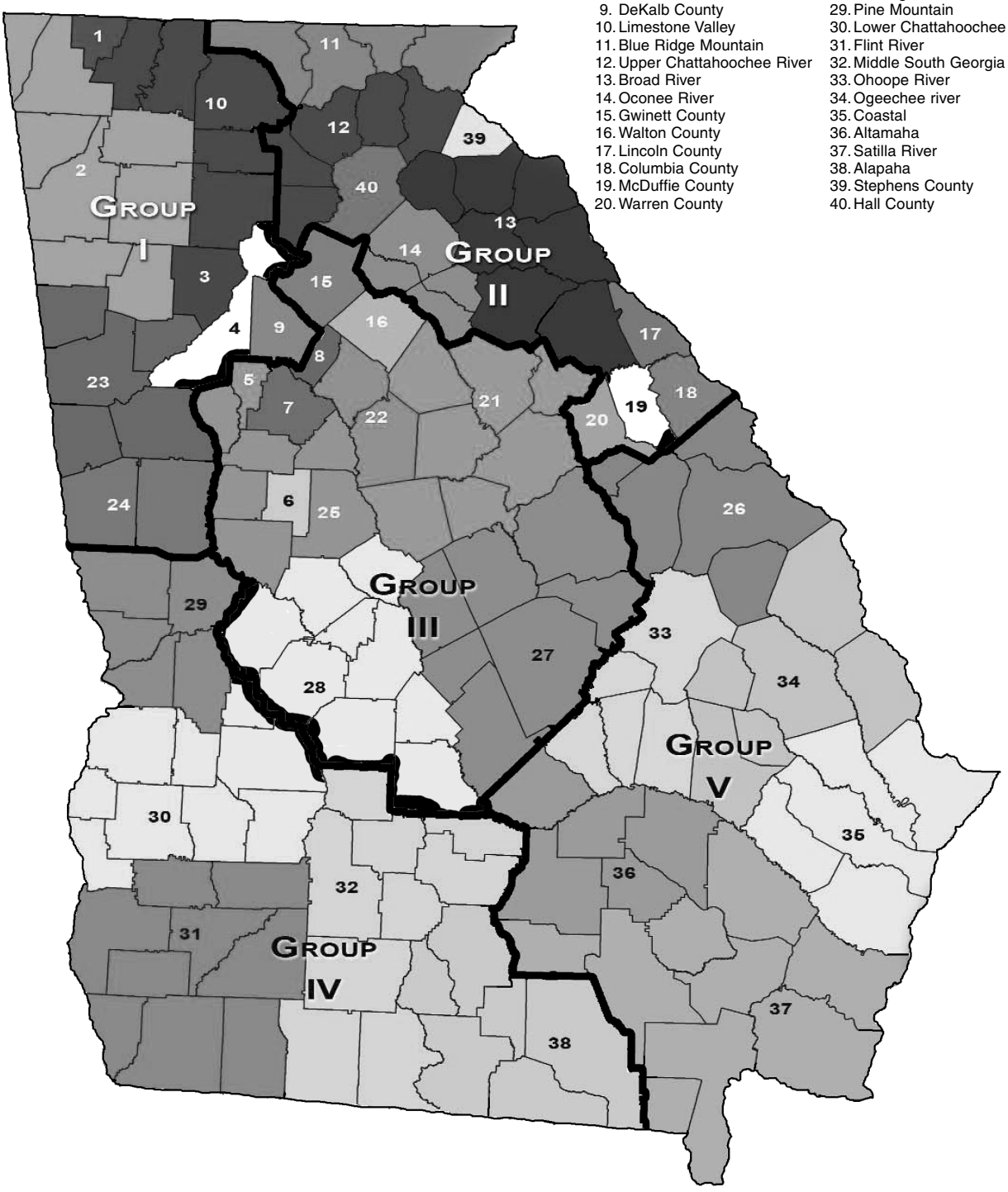
William Bunney – IT Director – wbunney@gaswcc.org
Erik McCutcheon – IT Project Specialist –emccutcheon@gaswcc.org

Agricultural Complaint Procedures



Conservation Districts
Georgia Soil and Water Conservation Commission

1. Catoosa County
2. Coosa River
3. Cobb County
4. Fulton County
5. Clayton County
6. Lamar County
7. Henry County
8. Rockdale County
9. DeKalb County
10. Limestone Valley
11. Blue Ridge Mountain
12. Upper Chattahoochee River
13. Broad River
14. Oconee River
15. Gwinett County
16. Walton County
17. Lincoln County
18. Columbia County
19. McDuffie County
20. Warren County
21. Piedmont
22. Upper Ocmulgee River
23. West Georgia
24. Roosevelt
25. Tawaliga
26. Brier Creek
37. Central Georgia
28. Ocmulgee River
29. Pine Mountain
30. Lower Chattahoochee River
31. Flint River
32. Middle South Georgia
33. Ohoope River
34. Ogeechee river
35. Coastal
36. Altamaha
37. Satilla River
38. Alapaha
39. Stephens County
40. Hall County



GEORGIA SOIL AND WATER CONSERVATION DISTRICT SUPERVISORS

(C) Chairman (VC) Vice Chairman (ST) Secretary Treasurer *Appointed Supervisors

		ALAPAHA	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Jarrod T. Griner	Berrien	139 Willie Hendley Rd, Nashville, GA 31639-	(229) 686-9104	
*		Carlos Vickers	Berrien	Route 3 Box 1655, Nashville, GA 31639-	(229) 543-1630	
	VC	Talmadge Guess	Clinch	P O Box 402, Homerville, GA 31634-	(912) 487-2365	(912) 487-3792
*		Marvin Smith	Clinch	224 Sycamore Street, Homerville, GA 31634-	(912) 487-5802	
		Julian Howell	Cook	3245 Antioch Road, Adel, GA 31620	(229) 549-5818	
*		Simmie King	Cook	2780 Hutchinson Pond Road, Hahira, GA 31632-	(229) 896-4386	
	C	Owen C Prince	Echols	461 Roy Padgett Road, Lake Park, GA 31636-	(229) 559-5577	
*		James Michael Coggins	Echols	2429 J. Frank Culpepper Road, Lake Park, GA 31636-	(229) 559-1110	(229) 559-7972
		Paul W Folsom	Lanier	430 N Pecan Street, Lakeland, GA 31635-	(229) 482-3340	
*	ST	William P Darsey	Lanier	111 W. Main Street, Lakeland, GA 31635-	(229) 482-2495	(229) 460-3125
		Greg Hall	Lowndes	5819 Nankin Rd., Valdosta, GA 31601-	(229) 244-8039	
*		Johnny O Swilley	Lowndes	3691 Hickory Grove Road, Valdosta, GA 31606-9624	(229) 242-5318	(229) 242-5318

		ALTAMAHA	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	ST	Frank E Miles	Appling	10 Kelly Davis Road, Baxley, GA 31513-	(912) 367-2992	(912) 367-4343
*		J M Vaughn	Appling	7770 County Farm Road SW, Baxley, GA 31513-	(912) 367-2312	(912) 367-2312
		George M Yearty	Bacon	1017 Wolf Pit Church Road, Nicholls, GA 31554-3664	(912) 632-5792	
*		Charles P Tanner	Bacon	119 Biscayne Road, Alma, GA 31510-	(912) 632-5036	
		Orson Adams	Coffee	P O Box 665, Douglas, GA 31533-	(912) 384-3610	
*	VC	Garland Thompson	Coffee	P O Box 2703, Douglas, GA 31534-	(912) 384-7614	(912) 384-9224
		Tabatha K. Wooten	Jeff Davis	466 W.H. Smith Road, Denton, GA 31532-	(912) 375-5246	(912) 375-5246
*		B H Claxton	Jeff Davis	50 Dogwood Road, Hazlehurst, GA 31539-	(912) 375-5838	(912) 375-2412
		Garry R Spires	Telfair	Route 1 Box 258A, McRae, GA 31055-	(229) 868-5285	(229) 868-5285
*	C	Travis P Cook	Telfair	P O Box 277, McRae, GA 31055-	(229) 868-6268	(229) 868-5619

		BLUE RIDGE MOUNTAIN	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Richard A Stanley	Fannin	Box 157 Toccoa Valley Drive, Blue Ridge, GA 30513-	(706) 838-4324	
*		George F Daves	Fannin	247 Pickelsimer Road, Morganton, GA 30560-	(706) 838-4204	
		Dallas Taylor	Rabun	P O Box 482, Tiger, GA 30576-	(706) 490-3030	(706) 490-3030
*		Marty Lewis Kilby	Rabun	P O Box 1556, Clayton, GA 30525-	(706) 490-2543	(706) 746-5197
	ST	Virginia Dyer Palmer	Towns	1340 Palmer Place 76E, Hiawassee, GA 30546-	(706) 896-3851	(706) 896-3943
*		John Wesley Kay	Towns	P O Box 125, Young Harris, GA 30582-	(706) 379-3219	(706) 379-3111
		Jeffrey Warren Payne	Union	8401 Jones Creek Lane, Blairsville, GA 30512-	(706) 745-4032	
*	C	James W Dobson Jr	Union	P O Box 925, Blairsville, GA 30512-	(706) 745-2517	

		BRIER CREEK	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Henry Wayne Syms	Burke	622 Lake Pearl Road, Waynesboro, GA 30830-	(706) 554-4510	
*		Charles E McGregor III	Burke	395 McGregor Circle, Girard, GA 30426-	(478) 569-4266	
		Jack Williford	Glascock	2425 Highway 171 North, Gibson, GA 30810-	(706) 598-3628	
*		Calvin McCoy	Glascock	P.O. Box 203, Gibson, GA 30810	(706) 598-3421	
		Larry M Hodges	Jefferson	1004 James Road, Louisville, GA 30434-	(478) 625-8323	(478) 625-2000
*	C	P Austin Rheney	Jefferson	P O Box 246, Wadley, GA 30477-	(478) 252-5625	
	AT	W Elbert Burke	Jenkins	1676 Highway 23 North, Millen, GA 30442-	(478) 982-5413	
*	ST	John T Herrington	Jenkins	2531 Perkins Greenfork Road, Perkins, GA 30822-	(478) 982-5589	
	VC	Hugh Fulcher Jr.	Richmond	2948 Highway 88, Hephzibah, GA 30815-	(706) 592-4242	
*		Arthur M. Rider	Richmond	1367 Brown Road, Hephzibah, GA 30815	(706) 793-5396	

		BROAD RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	C	Dennis T Brown	Banks	2063 Georgia Highway 326, Commerce, GA 30530-	(706) 335-2953	
*	VC	Carol H Hodgkins	Banks	1665 Georgia Highway 326, Commerce, GA 30530-	(706) 335-5042	
		O. Dan Holmes	Elbert	2723 Winns Mill Road, Royston, GA 30662-	(706) 245-5631	
*		Laura Bass	Elbert	3601 Mize Farm Drive, Bowman, GA 30624-	(706) 245-4334	
		Michael Gary Bruce	Franklin	315 Powers Road, Lavonia, GA 30553-	(706) 356-3381	
*		Owen Mark Thomason	Franklin	1040 Crenshaw Road, Martin, GA 30557-	(706) 384-4463	(706) 384-4813
		Bobby McLane	Hart	1391 McLane-Morris Road, Hartwell, GA 30643	(706) 376-4616	
*		Charles A Brown	Hart	1407 Airline & Goldmine Road, Canon, GA 30502-		
		Terry P Chandler	Madison	202 Fowler Freeman Road, Danielsville, GA 30633-	(706) 795-3182	(706) 338-6341
*		Frank C Fleming	Madison	1263 Highway 72 East, Comer, GA 30629-	(706) 783-5336	
		Charles E Andrews	Oglethorpe	340 Old Edwards Road, Arnoldsville, GA 30619-	(706) 742-2040	
*		Russ Yeany	Oglethorpe	563 Hutchins Road, Crawford, GA 30639-	(706) 743-5947	
		Marvin McAvoy	Wilkes	2922 Greensboro Road, Washington, GA 30673-	(706) 678-2597	(706) 678-1745
*		Joseph W Bennett	Wilkes	P O Box 248, Washington, GA 30673-	(706) 678-5757	

		CATOOSA COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	VC	Dean LeBron O'Donald	Catoosa	4047 Three Notch Road, Ringgold, GA 30736-	(706) 937-4684	(706) 866-6744
	C	Roger O Bowman Jr	Catoosa	360 Bowman Springs Road, Ringgold, GA 30736-	(706) 935-5584	(706) 935-5572
	ST	Harry Edward Watts	Catoosa	12767 Alabama Highway, Ringgold, GA 30736-	(706) 965-3514	(706) 638-3889
*		Marshall R Taylor	Catoosa	2436 Salem Valley Road, Ringgold, GA 30736-	(706) 935-2555	
*		J M Plemons	Catoosa	P O Box 295, Ringgold, GA 30736-	(706) 935-4324	(404) 635-4600

		CENTRAL GEORGIA	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	VC	Wayne Dykes	Bleckley	176 Nicholson Carr Rd., Cochran, GA 31014-	(478) 934-6856	
*		Paul F English	Bleckley	108 Marie Drive, Cochran, GA 31014-	(478) 934-2932	(478) 278-0204
		Michael Jones	Dodge	1040 McRae Highway, Eastman, GA 31023-	(478) 374-3194	(478) 374-6055
*		James McCranie	Dodge	Route 3 Box 138, Eastman, GA 31023-	(478) 374-4259	
	C	Nick Holton	Johnson	997 Bill Oliver Road, Wrightsville, GA 31096-	(478) 864-2253	
*		James L Jackson	Johnson	9274 Hwy 15 N, Wrightsville, GA 31096-	(478) 864-3834	(478) 864-2223
		Danny B Hogan	Laurens	888 Hillbridge Road, Dexter, GA 31019-	(478) 875-3476	(478) 875-3476
*		Harry D Green	Laurens	936 Green Loop, Montrose, GA 31065-	(478) 676-3489	(877) 678-2863
		Sam Floyd Jr	Twiggs	Route 1, Danville, GA 31017-	(478) 945-3793	
*		Alton V White III	Twiggs	1150 Alton White Boulevard, Dry Branch, GA 31020-	(478) 945-3069	
		Rufus Hodges Hartley Jr	Washington	270 News Bridge Road, Tennille, GA 31089-	(478) 552-0361	(478) 552-7413
*		Wendell Glenn Waller	Washington	1289 Brantley Road, Harrison, GA 31035-	(478) 552-9430	
		Frank G Wall Jr	Wilkinson	135 Springhill Drive, Irwinton, GA 31042-	(478) 946-2081	(478) 946-2667
*	ST	Dan M Dixon	Wilkinson	137 Elam Street, P O Box 362, Gordon, GA 31031-	(478) 628-2551	

		CLAYTON COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	C	Vacal Dee Caldwell	Clayton	4180 Renard Way, Rex, GA 30273-	(770) 474-0876	(770) 473-5480
*		Charlie Wiggins	Clayton	3782 Paddington Trail, Rex, GA 30273-	(770) 474-0071	
	VC	Joseph C Shelnutt	Clayton	7761 Morant Drive, Jonesboro, GA 30236-	(770) 478-5642	(770) 477-3798
*		VACANT	Clayton	, , GA		
*		Rufus Ladson	Clayton	7753 Kennington Lane, Jonesboro, GA 30236-	(770) 478-2040	

		COASTAL	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		William C Tillman	Bryan	276 Sterling Woods Drive, Richmond Hill, GA 31324-	(912) 727-2848	(912) 727-4290
*	ST	Charles F. Warnell Jr.	Bryan	374 Strathy Hall Drive, Richmond Hill, GA 31324-	(912) 727-3334	
		Horace B Waller	Chatham	702 Bloomingdale Road, Bloomingdale, GA 31302-	(912) 748-4241	(912) 748-4210
*	VC	Edward H Zipperer	Chatham	126 Grove Point Island Road, Savannah, GA 31419-	(912) 925-7790	(912) 920-8100
		Jerry Holcomb	Liberty	P O Box 2187, Hinesville, GA 31310-	(912) 368-5920	(912) 271-0133
*		M L Coffer	Liberty	P O Box 366, Fleming, GA 31309-	(912) 884-2304	(912) 876-3130
	C	Cecil Stafford Jr	Long	Route 1 Box 129-A, Ludowici, GA 31316-	(912) 545-9421	
*		Thomas D. Houston	Long	Route 1, Box 85, Ludowici, GA 31316-	(912) 545-2208	(912) 545-2208
		Bob Monroe	McIntosh	P.O. Box 2298, Darien, GA 31305-	(912) 832-2401	
*		Daniel Russell Hawthorne	McIntosh	P O Box 196, Darien, GA 31305-	(912) 437-4526	

		COBB COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Alice M Champagne	Cobb	3587 Spencer Lane, Marietta, GA 30066-	(770) 928-2430	(770) 641-3715
	C	Fred W Snell III	Cobb	4880 Lower Roswell Road, Suite 165# 524, Marietta, GA 30068-	(770) 993-9992	(404) 512-4583
	T	Donald Ayres	Cobb	2100 Cannon Way, Marietta, GA 30064-	(770) 422-4676	(770) 421-8140
*		Alan Bowling	Cobb	1266 Powder Springs Road, Marietta, GA 30064-	(770) 943-7237	(770) 424-7168
*		Jim Lanier	Cobb	c/o Aquascape Envir, 605-B Mauldin Drive, Woodstock,	GA 30188	(770) 973-2288
(678) 445-0077						

		COLUMBIA COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Samuel W Booher	Columbia	4387 Roswell Drive, Martinez, GA 30907-		
	VC	Jeanie Hill	Columbia	2102 Magnolia Parkway, Grovetown, GA 30813-	(706) 860-1039	(706) 868-3736
		Edward E. Hair	Columbia	5260 Columbia Road, Grovetown, GA 30813-	(706) 863-1413	
*		John C Shearouse	Columbia	152 Misty Woods Drive, Grovetown, GA 30813-	(706) 860-4763	(706) 868-3711
*	C	Rick Crawford Jr	Columbia	189 Kestwick Drive West, Martinez, GA 30907-	(706) 860-7850	(706) 868-4670

		COOSA RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Charles E. Croft	Bartow	71 Macedonia Road SW, Kingston, GA 30145-	(770) 382-8754	(678) 313-3419
*		Davis R Nelson	Bartow	20 Angus Trail, Cartersville, GA 30120-	(770) 382-4963	(404) 656-2804
		Greg Hurley	Chattooga	221 Trixie Lane, Summerville, GA 30747-	(706) 857-7689	
*		Jim Parker	Chattooga	333 Parker Lane, Lyerly, GA 30730-	(706) 875-4834	(706) 857-0700
		Loyd C. Gass	Dade	1688 Highway 136, Trenton, GA 30752-	(706) 657-2001	
*		Thomas R. Black	Dade	1285 District Line Road, Trenton, GA 30752-	(706) 657-7654	(423) 718-1725
		Jarrell R. Cagle	Floyd	462 Reynolds Bend Drive SE, Rome, GA 30161-	(706) 291-8651	
*	C	Thad Rush	Floyd	3853 Calhoun Highway NE, Rome, GA 30161-	(706) 291-4849	
		Sam Payne	Gordon	P O Box 246, Calhoun, GA 30703-		
*		George Stewart	Gordon	P O Box 1269, Calhoun, GA 30703-	(706) 629-3534	(706) 346-5599
		Charles Rutland Sr	Paulding	2240 Pine Valley Road, Powder Springs, GA 30073-	(770) 943-5798	
*	VC	James S. Smith	Paulding	3836 Hiram Douglasville Highway, Hiram, GA 30141-	(770) 943-2253	
		Jewell Tuck	Polk	206 Judkin Mill Road, Cedartown, GA 30125-	(770) 748-1867	
*		John Groover	Polk	558 Runyon Road, Cedartown, GA 30125-	(770) 749-9239	(770) 317-5630
	ST	J B Lemons	Walker	3617 Chamberlain Road, LaFayette, GA 30728-	(706) 638-1885	
*		Roger Neal	Walker	6204 W. Armuchee Road, Summerville, GA 30747-	(706) 397-2407	(706) 638-0258

		DEKALB COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Donald L Murray	DeKalb	3984 Brookside Parkway, Decatur, GA 30034-5630	(770) 322-0815	
		William D Denton	DeKalb	P O Box 1341, Decatur, GA 30031-	(404) 377-8388	(404) 372-1051
	C	Dell MacGregor	DeKalb	432 Burlington Road NE, Atlanta, GA 30307-	(404) 378-6040	
*		Wyvern Budram	DeKalb	3966 Brookside Parkway, Decatur, GA 30034	(770) 593-9351	(678) 437-7195
*		Jan D Dunaway	DeKalb	4672 Fellswoods Drive, Stone Mountain, GA 30083-	(404) 294-9215	

		FLINT RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		James Rhodes Jr.	Baker	P O Box 70, Newton, GA 39870-	(229) 734-5343	
*		Ernest Leon Miller	Baker	1127 Kreg, Albany, GA 31707-	(229) 883-7188	
	C	Martin L McLendon	Calhoun	3986 GA Hwy 55, Leary, GA 39862	(229) 881-2767	
*		Chris Kendrick	Calhoun	15599 College Road, Edison, GA 39846-	(229) 835-3178	(229) 835-3178
	VC	Wayne Thomas	Decatur	801 Attapulgus Climax Road, Climax, GA 39834-	(229) 246-2504	
*		Parker D "Pete" Miller Jr.	Decatur	2107 Backlake Circle, Bainbridge, GA 39819-	(229) 465-3987	(229) 465-3987
		VACANT	Dougherty	, ,		
*		Doug Wilson	Dougherty	2617 East Doublegate Dr, Albany, GA 31721-	(229) 436-0016	(229) 430-2900
		Steve Singletary	Early	P O Box 628, Blakely, GA 39823	(229) 723-3808	(229) 723-3525
*		Hal Haddock	Early	14050 Highway 200 West, Damascus, GA 39841-	(229) 725-4202	
		John C Harrell	Grady	2536 Harrell Road, Whigham, GA 39897-	(229) 377-2255	(229) 221-8255
*		VACANT	Grady	, ,		
		M Louie Grimes	Miller	233 Bush Grimes Road, Colquitt, GA 39837-	(229) 758-2102	(229) 221-1781
*	T	Billy W. Roland	Miller	209 Mayhaw Road, Colquitt, GA 39837-	(229) 758-3847	(229) 758-3847
		Donald E. Shirah	Mitchell	2227 Red Hill Road, Camilla, GA 31730-	(229) 294-4361	(229) 294-4361
*		David G Holton	Mitchell	5806 Horseshoe Road, Camilla, GA 31730	(229) 336-7767	(229) 336-7767
		Steve Bailey	Seminole	5966 Highway 91 South, Donalsonville, GA 39845-	(229) 524-2814	(229) 524-5720
*		Charles G Mims	Seminole	6104 Hebrew Road, Donalsonville, GA 398456517	(229) 524-8170	(229) 524-5534

		FULTON COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Preston D Mason	Fulton	2631 Forrest Avenue NW, Atlanta, GA 30318-	(404) 794-1507	(770) 361-6661
	VC	John M Spotts	Fulton	4274 McClatchey Circle NE, Atlanta, GA 30342-	(404) 252-9218	(770) 263-1012
	C	Alan O Toney	Fulton	330 River Knoll Drive, Sandy Springs, GA 30328-	(770) 350-9887	(770) 433-3552
*		Walter S Rekuc Jr	Fulton	615 Scarlet Oak Trail, Alpharetta, GA 30004-0914	(770) 998-1276	(404) 867-8283
*		James R. Hamilton Jim	Fulton	3010 Royal Blvd South Suite 100, Alpharetta, GA 30022	(770) 751-1833	(770) 619-4280

		GWINNETT COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Lawrence K Kaiser	Gwinnett	325 Amberbrook Circle, Grayson, GA 30017-	(770) 609-6193	(404) 909-5619
		Ellis R Lamme	Gwinnett	3536 Marion Court, Buford, GA 30519-	(770) 945-7330	(770) 932-6550
	C	Mark S Brock	Gwinnett	385 Pandemar Trail, Lawrenceville, GA 30043-	(770) 962-3955	(770) 962-4125
*	VC	Connie Wiggins	Gwinnett	P O Box 1146, Buford, GA 30518-	(770) 945-3712	(770) 822-5187
*		Jim Steele	Gwinnett	53 Gwinnett Dr Bldg C, Lawrenceville, GA 30045-		(770) 513-6708

		HALL COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	ST	T Larry Nix	Hall	3776 Anglin Drive, Gainesville, GA 30507-	(770) 534-7890	(770) 534-7890
		Edward E Anderson	Hall	5118 High Meadow Run, Gainesville, GA 30506-	(770) 506-0400	(770) 531-6988
	C	Mike R Haynes	Hall	4877 Clarks Bridge Road, Gainesville, GA 30506-	(770) 983-3035	(770) 983-3352
*		Jane R Hemmer	Hall	3645 White Sulphur Road, Gainesville, GA 30507-	(770) 532-2768	(770) 532-1203
*		Douglas S Blackstock	Hall	3759 Blackstock Road, Talmo, GA 30575-	(770) 536-5317	

		HENRY COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Amy Rollins	Henry	52 New Hope Drive, McDonough, GA 30252-	(678) 850-2466	
	C	James D Almand	Henry	465 Countryside Drive, McDonough, GA 30252-	(770) 954-9930	(770) 957-4300
	T	Ronald M Turpin	Henry	812 Elliott Road, McDonough, GA 30252-	(770) 474-1543	
*		Butch Oliver	Henry	125 McDonough Parkway, McDonough, GA 30253-	(770) 914-7863	(678) 583-8003
*	VC	Hugh M Simpson	Henry	688 Oakland Road, McDonough, GA 30253		

		LAMAR COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	S/	Lynn Parker	Lamar	530 Fredonia Church Rd., Barnesville, GA 30204-	(770) 358-6826	
		Joshua E Horne	Lamar	149 Old Milner Road, Barnesville, GA 30204-	(770) 550-4316	(770) 358-1454
	C	J. Paul Wallace	Lamar	646 Forsyth-Yatesville Rd, Yatesville, GA 31097-	(770) 358-4896	(770) 358-4896
*	VC	Andy Bush	Lamar	314 Westchester Drive, Barnesville, GA 30204-	(770) 358-1311	(770) 358-1311
*		Mark R Korb	Lamar	204 Burnette Road, Barnesville, GA 30204-	(770) 358-3763	(770) 358-3763

		LIMESTONE VALLEY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Ronald M. James	Cherokee	1179 Arborhill Drive, Woodstock, GA 30189-	(770) 924-3661	(770) 656-7080
*	C	Kenneth Patton	Cherokee	P O Box 416, Ball Ground, GA 30107-	(770) 735-4315	(770) 735-3820
		Mark A. Holden	Gilmer	1906 Roy Road, Ellijay, GA 30536-	(706) 276-3864	
*	VC	Paul Nealey	Gilmer	175 Jennifer Drive, Ellijay, GA 30540-	(706) 635-5629	(706) 692-3581
		James F. Petty	Murray	459 Gregory Mill Road, Crandall, GA 30711-	(706) 695-4374	(706) 264-2368
*		Linda Loughridge	Murray	322 Ballground Road, Chatsworth, GA 30705-	(706) 695-4987	
		Jerry L Edwards	Pickens	49 Cape Trail, Jasper, GA 30143-	(706) 692-5610	(706) 253-7035
*	ST	Dorothy M Brown	Pickens	920 Camp Dobbs Road, Jasper, GA 30143-	(770) 735-3046	(706) 253-3703
		Donald H Baldridge	Whitfield	2132 Beaverdale Road, NE, Dalton, GA 30721-	(706) 259-3412	
*		Arvil Westmoreland	Whitfield	1877 Lower Kingsbridge Road NE, Dalton, GA 30720-	(706) 259-8468	(706) 259-8468

		LINCOLN COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	S	Stanton Eugene Tankersley Sr	Lincoln	4458 Double Branches Road, Lincolnton, GA 30817-	(706) 359-3077	
	VC	Curry Hogan Jr	Lincoln	P O Box 545, Lincolnton, GA 30817-	(706) 359-3933	(706) 359-7162
	Ch	Leroy Bufford	Lincoln	1664 Graball Road, Tignall, GA 30668-	(706) 359-2180	(706) 359-1390
*		Marcus Matthews	Lincoln	350 May Avenue, Lincolnton, GA 30817-	(706) 359-3802	(706) 359-7179
*	C	T Olin Reed	Lincoln	2167 Reed Road, Lincolnton, GA 30817-	(706) 359-4677	

		LOWER CHATTAHOOCHEE RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Chad Brooks	Clay	162 Enterprise Road, Edison, GA 39846-	(229) 835-3198	
*		Rodney Gerald Isler	Clay	2902 Edison Highway, Coleman, GA 39836-	(229) 835-2644	(229) 835-2191
	T	Floyd Holmes Griffith Jr	Lee	608 State Highway 195, Leesburg, GA 31763-	(229) 759-6272	
*		Charles Usry Jr	Lee	691 State Highway 118 E, Smithville, GA 31763-	(229) 942-2304	(229) 942-2304
		George Cathrall	Quitman	110 Sunny View Farms Rd., Georgetown, GA 39854-	(229) 334-9285	(334) 726-1173
*		Ralph M Balkcom Jr	Quitman	344 Ralph Sr Road, Georgetown, GA 39854-	(334) 687-1325	
		Frankie Sauls	Randolph	Route 1 Box 675, Shellman, GA 39887	(229) 679-2264	
*		Hiram Bo Beard	Randolph	Route 1 Box 510, Shellman, GA 39887	(229) 679-5714	
		VACANT	Schley	, ,		
*		William Welch	Schley	790 County Line Road, Oglethorpe, GA 31068-	(229) 937-5024	
		Buren W. Jones	Stewart	Post Office Box 176, Lumpkin, GA 31815-	(229) 838-6269	(877) 809-2526
*		VACANT	Stewart	, , GA		
		Hal Israel Jr	Sumter	265 Della Glass Rd, Smithville, GA 31787-	(229) 846-8868	
*		Bill Bowen	Sumter	789 Highway 49 South, Americus, GA 31719-	(229) 924-7581	
	C	Art Johns	Terrell	1075 Cox Road, Dawson, GA 39842	(229) 995-5371	
*		Jack H Hufstetler	Terrell	1334 Johnson Street SE, Dawson, GA 39842	(229) 995-5524	
		VACANT	Webster	(Dennis Wills filling in until filled), , GA		
*		Andrew Payne	Webster	1872 Payne Pond Road, Weston, GA 31832-	(229) 828-2140	(229) 815-4560

		MCDUFFIE COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	ST	George R Reeves	McDuffie	3390 Wrens Highway, Thomson, GA 30824-	(706) 595-2980	
		Frederick R Vergeer	McDuffie	3256 Cedar Road NW, Thomson, GA 30824-	(706) 595-5321	(706) 541-6133
	VC	Larry D Morris	McDuffie	3125 Whiteoak Road, Thomson, GA 30824-	(706) 595-3344	(706) 595-5969
*	C	Carroll C Burton	McDuffie	259 Happy Valley Road SW, Thomson, GA 30824-	(706) 595-3257	(706) 595-3257
*	Ch	Donald F Palmer Jr	McDuffie	153 Story-Randall Road, Thomson, GA 30824-	(706) 595-5391	(706) 595-3777

		MIDDLE SOUTH GEORGIA	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Milton Ussery	Ben Hill	119 Justice Circle, Fitzgerald, GA 31750-	(229) 424-3532	
*	VC	Joseph K Phillips	Ben Hill	244 El Harris Road, Fitzgerald, GA 31750	(229) 483-4083	(229) 424-3620
		VACANT	Brooks	, ,		
*		R Andrew Thompson	Brooks	2542 Dixie Road, Dixie, GA 31629-	(229) 263-6485	(229) 560-9733
		Thomas Ralph Coleman Jr	Colquitt	4518 Dunn Road, Hartsfield, GA 31756-	(229) 941-2930	(229) 941-5394
*		Richard C Kleedehn	Colquitt	369 Faison Road, Hartsfield, GA 31756-	(229) 941-5227	(229) 941-5227
		John Woodard	Crisp	170 Drayton Lane, Cordele, GA 31015-	(229) 273-3510	(229) 273-3510
*	T	James Farrow Baker	Crisp	165 Bodrey Road, Cordele, GA 31015-	(229) 273-3626	(229) 273-7811
	C	Donald Register	Irwin	302 Tugaloo Circle, Chula, GA 31733-	(229) 382-7523	(229) 382-7523
*		Donald McWhorter	Irwin	447 Ocierfield Drive, Fitzgerald, GA 31750-	(229) 468-5124	
		Donald L. Hall Sr	Thomas	1094 Rose Garden Road, Meigs, GA 31765-	(229) 683-3322	(229) 413-3403
*		Carrol S Fort Sr	Thomas	632 Antioch Church Road, Pavo, GA 31778-	(229) 859-2503	
		Brian Ponder	Tift	121 W R Ponder Road, Tifton, GA 31794-	(229) 528-4714	(229) 392-1374
*		Grady M Thompson Jr	Tift	21 Connell Ray Road, Tifton, GA 31794-	(229) 382-5981	(229) 382-6117
		H M Ponder	Turner	714 West Road, Ashburn, GA 31714-	(229) 567-2573	(229) 268-2889
*		Alex Sumner	Turner	315 Sumner Road, Sycamore, GA 31790-	(229) 567-3721	
		Keith White	Worth	648 Shingler/Sumner Rd., Poulan, GA 31781-	(229) 776-5834	(229) 317-1721
*		William M. Young Jr.	Worth	165 Billy Young Road, Sumner, GA 31789-	(229) 776-4108	(229) 881-0275

		OCMULGEE RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		V. Bernard Kendrick	Bibb	105 Amalie Drive, Macon, GA 31220-	(478) 475-1026	(404) 775-7189
*		Donald Newberry	Bibb	, Lizella, GA		
	T	Charlie F Harris	Crawford	6717 U S Highway 341 North, Musella, GA 31066-	(478) 836-4475	
*	VC	Jimmy Moncrief	Crawford	4076 Hollis Road, Roberta, GA 31078-	(478) 836-4749	(478) 825-0865
	C	John W Sanders Sr	Dooly	1387 Shiloh Road, Vienna, GA 31092-	(229) 938-3456	
*		James D Warbington Sr	Dooly	3200 Tippettville Road, Vienna, GA 31092-	(229) 268-6946	(229) 268-9181
		Donald E Free Jr.	Houston	1208 Beckham Circle, Perry, GA 31069-	(478) 987-2940	(478) 951-5183
*	AT	David Muse	Houston	P O Box 35, Perry, GA 31069-	(478) 987-3386	(478) 987-3386
		Carl S Cummings Jr.	Macon	2509 Old Perry Road, Marshallville, GA 31057-		
*		Gary Slaton	Macon	P O Box 235, Oglethorpe, GA 31068-	(478) 472-8675	(478) 472-8675
		George Hancock	Peach	5409 Mosley Road, Byron, GA 31008-	(478) 825-2666	(478) 825-5323
*		VACANT	Peach	, ,		
		VACANT	Pulaski	, ,		
*		Robert A Lancaster	Pulaski	Route 2 Box 1940, Hawkinsville, GA 31036-	(478) 892-2855	
		James H Willis	Taylor	P O Box 28, Rupert, GA 31081-	(478) 862-5749	(478) 862-3115
*		Jack McGlaun	Taylor	426 W Old Wire Road, Butler, GA 31006-	(478) 862-3240	
		Thomas M Whittle	Wilcox	Route 1 Box 315, Rochelle, GA 31079-	(229) 365-2650	
*		Bobby Holliday Sr.	Wilcox	16068 GA Hwy 112, Rochelle, GA 31079	(229) 624-2747	

		OCONEE RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	T	Boyd S. McLocklin	Barrow	1553 Doc McLocklin Road, Statham, GA 30666-	(770) 725-0981	(770) 540-3341
*	C	David Jackson	Barrow	P O Box 160, Winder, GA 30680-	(770) 867-5185	(404) 378-3671
		Frank N. Fleming	Clarke	2100 Morton Road, Athens, GA 30605-	(706) 369-0170	
*		Balfour Hunnicutt	Clarke	345 Nowhere Road, Athens, GA 30601-	(706) 543-3021	
		William D Johnson	Jackson	2738 Cedar Grove Church Road, Jefferson, GA 30549-	(706) 367-8634	(706) 215-5322
*		Henry E Braselton	Jackson	P.O. Box 535, Braselton, GA 30517-	(706) 654-3348	(706) 654-2236
	VC	George A Hillsman	Oconee	P O Box 93, Watkinsville, GA 30677-	(706) 769-5802	
*		Bernard A Garrett	Oconee	1100 Bernard Garrett Road, Statham, GA 30666-	(770) 725-7266	(770) 725-7655

		OGEECHEE RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	ST	Charles L. Finch	Bulloch	3894 Old Portal Road, Portal, GA 30450-	(912) 865-2939	(912) 865-2939
*	C	Fred G Blitch Jr	Bulloch	625 Fred Blitch Road, Statesboro, GA 30458-	(912) 865-5454	(912) 865-5454
		George W McGowan	Candler	5595 Olifftown Road, Metter, GA 30439-	(912) 685-5372	
*		Homer L Lanier	Candler	2946 Lanier Road, Metter, GA 30439-	(912) 685-2202	
		G Wendell Arnsdorff	Effingham	P O Box 949, Springfield, GA 31329-	(912) 754-3475	
*		VACANT	Effingham	, , GA		
	VC	Gary Bell	Evans	P O Box 62, Bellville, GA 30414-	(912) 739-4177	(912) 739-2273
*		Cornelius Garrison	Evans	1304 Archie Mitchell Rd, Claxton, GA 30417-	(912) 739-1845	(912) 739-1696
		Lamar E Zipperer	Screven	3574 Newington Highway, Sylvania, GA 30467-	(912) 829-4241	(912) 682-2946
*		A.W. Robinson III	Screven	2831 Cameron Road, Sylvania, GA 30467-	(912) 863-7653	
		Adair Branch	Tattnall	14845 Highway 169, Glennville, GA 30427-	(912) 654-4014	
*		Lavanda Lynn	Tattnall	2585 Cedar Creek Church Road, Collins, GA 30421-	(912) 684-3216	

		OHOOPEE RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Jerry H Fagler	Emanuel	618 Bird Flanders Road, Swainsboro, GA 30401-	(912) 469-3626	
*		F Bennett Whitfield	Emanuel	2561 Lambs Bridge Road, Twin City, GA 30471	(478) 763-2951	(478) 763-3308
		W Colon Sammons	Montgomery	837 Cypress Creek Road, Mt Vernon, GA 30445-	(912) 583-2703	(912) 594-6525
*		Keith Hamilton	Montgomery	1144 Old Kibbee Road N, Tarrytown, GA 30470-	(912) 537-2370	(912) 583-2363
		Ben Newton	Toombs	123 Sid Newton Road, Lyons, GA 30436-	(912) 565-7150	
*	VC	William D Warthen	Toombs	1204 Loop Road, Vidalia, GA 30474-	(912) 537-4430	(912) 537-4430
	ST	LaVerne W Davis	Treutlen	503 3rd Street North, Soperton, GA 30457-	(912) 529-4798	
*	C	Jim L Gillis Jr	Treutlen	P O Box 86, Soperton, GA 30457-	(912) 529-4233	(912) 529-3212
		Roy E Gilder	Wheeler	Route 1 Box 86, Alamo, GA 30411-	(912) 568-7696	
*		Lynn Johnson	Wheeler	Route 1 Box 303, Alamo, GA 30411-	(912) 568-7672	

		PIEDMONT	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Ralph A Harrington	Baldwin	321 Glenhaven Drive, Milledgeville, GA 31061-	(478) 452-2609	
*		David Blizzard	Baldwin	179 O'Quinns Pond Road NE, Milledgeville, GA 31061-	(478) 453-3115	
		Tim Duvall	Greene	1440 Copelan Road, Madison, GA 30650	(706) 453-2521	(706) 453-6079
*		Larry J Eley	Greene	2331 Eley Road, White Plains, GA 30678-	(706) 467-2184	
		Richard S Joslyn	Hancock	9687 Jones Street, Sparta, GA 31087-	(706) 444-0407	(706) 444-7412
*		Bob Woodall Jr.	Hancock	1664 Rives Road, Sparta, GA 31087	(706) 444-5464	
		Ralph Deas Crumbley	Jones	281 Salem Church-Miller Road, Gray, GA 31032-	(478) 932-5363	
*	ST	David M Pitts	Jones	130 Etheridge Drive, Haddock, GA 31033-	(478) 932-5231	
		John Marvin Ruark	Morgan	6350 Bostwick Road, Bostwick, GA 30623-	(706) 342-3290	(706) 342-0553
*	C	Patrick H Hardy	Morgan	1531 Greensboro Road, Madison, GA 30650-	(706) 342-1448	(706) 342-1448
	VC	Heck Davis	Putnam	302 Glades Road NW, Eatonton, GA 31024-	(706) 485-8961	(706) 485-8020
*		Grady V Calvert	Putnam	399 Glades Road NW, Eatonton, GA 31024-	(706) 485-5501	
		VACANT	Taliaferro	, ,		
*		Stanley Jackson	Taliaferro	1931 Malcom Place Road, SW, Crawfordville, GA 30631-	(706) 456-2757	(706) 456-2757

		PINE MOUNTAIN	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Benjamin M Miller	Chattahoochee	115 Manta Road, Cusseta, GA 31805-	(706) 577-1248	(706) 989-3312
*		Larry F Dillard	Chattahoochee	502 Patterson Road, Cusseta, GA 31805-	(706) 989-1059	
		Raymond H Reames Jr.	Harris	1033 D Street, Hamilton, GA 31811	(706) 580-0747	
*		Jerold K Edwards	Harris	2439 Barnes Mill Road, Hamilton, GA 31811-	(706) 628-4844	(706) 582-2833
	T	Joey S Wells	Marion	190 Ronnie Road, Buena Vista, GA 31803-	(229) 649-7181	(229) 649-7267
*	C	Sam T Rigdon Sr	Marion	320 Oliver Street, Buena Vista, GA 31803-	(229) 649-7547	(229) 649-7547
		VACANT	Muscogee	, ,		
*		Harvey L Milner	Muscogee	8558 Liberty Hall Drive, Midland, GA 31820-4293	(706) 569-4264	(706) 653-4160
		Lee Lucas Jr.	Talbot	P O Box 454, Talbotton, GA 31827-	(706) 665-8839	(706) 665-8839
*		Frank J Jordan Jr	Talbot	P O Box 456, Talbotton, GA 31827-	(706) 665-8678	(706) 665-8606

		ROCKDALE COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		James D. Garrison	Rockdale	3750 Dial Mill Road, Conyers, GA 30013-	(770) 760-8849	
		Roger C Hatch	Rockdale	2385 White Road NE, Conyers, GA 30012-	(770) 483-6539	
	C	Michael W Breedlove	Rockdale	510 McDaniel Mill Road, Conyers, GA 30012-	(770) 922-2547	(770) 483-1173
*	T	Fox McCarthy	Rockdale	1776 Old Camp Trail, Conyers, GA 30012-	(770) 483-9474	(770) 483-9474
*		LeRoy Bigham	Rockdale	2300 Smyrna Road, Conyers, GA 30094-	(770) 483-3681	

		ROOSEVELT	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Willis Thomas Woodruff	Meriwether	2300 Piney Woods Road, Hogansville, GA 30230-	(706) 637-4732	
	VC	Cullen Reid Patton Jr	Meriwether	6891 Hwy 100, Hogansville, GA 30230-	(770) 927-6545	(706) 672-1246
*		Johnny R Rowe	Meriwether	6282 Strickland Town Road, Luthersville, GA 30251-	(770) 927-6304	(706) 692-2692
		Marcus Jones	Troup	270 Frost School Road, LaGrange, GA 30241-	(706) 884-6917	(706) 298-1726
	C	Joel David Keith	Troup	4541 Mountville Road, Hogansville, GA 30230-	(706) 637-8818	(706) 637-6236
*	ST	Julian M Jones III	Troup	121 Ashling Drive, LaGrange, GA 30240-	(706) 882-3114	(706) 884-5333

		SATILLA RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Marvin H Giddens Jr	Atkinson	Route 1 Box 112, Pearson, GA 31642-	(912) 422-3045	(912) 422-8002
*		James C Grantham	Atkinson	RR2 Box 4400, Willacoochee, GA 31650	(912) 534-5413	
		Curtis J Tumlin	Brantley	P O Box 452, Nahunta, GA 31553-	(912) 462-5336	
*		Walter C Thomas	Brantley	Route 1 Box 374, Hoboken, GA 31542-	(912) 458-2353	
		Milner S. Carnes	Camden	PO Box 297, Waverly, GA 31565-	(912) 269-2050	
*	VC	William R Alexander	Camden	P O Box 416, Woodbine, GA 31569-	(912) 729-2458	
		Alton Dinkins	Charlton	Route 3 Box 570, Folkston, GA 31537	(912) 496-7791	
*		John L Murray	Charlton	P O Box 65, Folkston, GA 31537-	(912) 496-6162	
	T	Ann T Keene	Glynn	1975 GA Highway 99, Brunswick, GA 31523-	(912) 265-8808	
*		David Johns	Glynn	114 Riverwood Road, Brunswick, GA 31523-	(912) 265-4938	(912) 663-1080
	C	Kenneth Bennett	Pierce	2278 Golf Course Road, Blackshear, GA 31516-	(912) 285-1416	
*		James Waters	Pierce	4625 Hwy 203, Blackshear, GA 31516-	(912) 449-8795	
		Neal Penland	Ware	6689 Neal Penland Road, Waycross, GA 31503-	(912) 283-8867	
*		Joseph Jordan	Ware	5114 Telmore Dixie Union Road, Waycross, GA 31503-	(912) 285-1268	
		Wallace Moody	Wayne	17 Pine Forest Drive, Jesup, GA 31546-	(912) 427-9233	(912) 294-0781
*		Jonny Harris	Wayne	334 Kayville Road, Screven, GA 31560-	(912) 586-6585	

		STEPHENS COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	VC	Evan B Hellenga	Stephens	743 East Tugalo Street, Toccoa, GA 30577-	(706) 886-9700	(706) 779-3341
	C	Roger Dale Sheppard	Stephens	9084 Rock Quarry Circle, Toccoa, GA 30577-	(706) 886-9628	(706) 886-3316
		Willard Kimsey	Stephens	466 Rose Lane, Toccoa, GA 30577-	(706) 886-3507	
		Henry Fields	Stephens	8580 Prather Bridge Road, Toccoa, GA 30577-	(706) 886-1580	
*	LL	Mary Jeanette Jamieson	Stephens	P O Box 852, Toccoa, GA 30577-	(706) 886-1168	(706) 886-6889

		TOWALIGA	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	VC	Douglas G Cawthon	Butts	1023 Highway 36 East, Jackson, GA 30233-	(770) 775-4070	
*		Tommy Presley	Butts	815 Keys Ferry Road, Jackson, GA 30233-	(770) 775-3404	(770) 775-3404
		Travis R Hardy	Fayette	108 Mask Road, Brooks, GA 30205-	(770) 719-8376	
*		Tom Kerlin	Fayette	1759 Hwy 85 S, Fayetteville, GA 30215	(770) 461-8974	(404) 557-8711
	C	Barry S Peters	Monroe	208 Union Gin Road, Forsyth, GA 31029-	(478) 994-2706	(478) 994-9246
*		James Vernon Ham	Monroe	P.O. Box 255, Smarr, GA 31086-	(478) 994-0589	(478) 993-7879
		Thomas M Lacey	Pike	P O Box 114, Williamson, GA 30292-0114	(770) 228-9739	
*	ST	Rex J Yerkes	Pike	14334 Highway 109 East, Meansville, GA 30256-	(770) 567-8659	
		Dorothy Lee Rucks	Spalding	6209 Newnan Road, Brooks, GA 30205-	(770) 599-3515	
*		Walter Cliff Futral Jr	Spalding	4953 Jackson Road, Griffin, GA 30223-	(770) 227-7017	(770) 228-1811
		Sidney L Beach	Upson	P O Box 5074, Thomaston, GA 302860020	(706) 647-9396	(706) 647-0580
*		Harold D Fallin	Upson	461 Atwater Road, Thomaston, GA 30286-	(706) 648-2553	(706) 648-2553

		UPPER CHATTAHOOCHEE RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		George W. Lyons	Dawson	2732 Highway 9 South, Dawsonville, GA 30534-	(706) 265-3328	(706) 265-3328
*		Charles A Tatum	Dawson	475 Grizzle Farm Road, Dawsonville, GA 30534-	(706) 216-7182	
	T	Leonard Wilbur Ridings	Forsyth	5955 Keith Bridge Road, Cumming, GA 30131-	(770) 887-4786	
*		E H Reid	Forsyth	7327 Majors Road, Cumming, GA 30040-	(770) 887-5389	
		Morris C Frady	Habersham	313 Morris Frady Road, Mt Airy, GA 30563-	(706) 754-4801	
*		Gilbert Barrett	Habersham	388 Smith Loop, Demorest, GA 30535-	(706) 776-5812	
		Tracy Lee Grizzle	Lumpkin	158 Tracy Grizzle Road, Dahlonega, GA 30533-	(706) 864-3216	
*		Kenneth Beasley	Lumpkin	41 Beasley Circle, Dahlonega, GA 30533-	(706) 864-6261	
		David Sills	White	3495 Post Road, Cleveland, GA 30528-	(706) 865-7047	(706) 878-8606
*	C	Edsel R Nix	White	5177 Westmoreland Road, Cleveland, GA 30528-	(706) 865-3567	

		UPPER OCMULGEE RIVER	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
		Preston Wynens	Jasper	270 Sugar Hill Rd, Hillsboro, GA 31038-	(706) 468-8583	
	VC	William H Whitten	Jasper	2984 Smithboro Road, Monticello, GA 31064-	(706) 468-8955	
*		Charlie Lane	Jasper	659 Avant Road, Monticello, GA 31064-	(706) 468-1616	
		Larry McSwain	Newton	35 Glengarry Chase, Covington, GA 30014-	(770) 786-3221	(678) 410-9728
		David T Hays	Newton	c/o Mansfield Group 1108 Monticello St, Covington, GA 30014-	(770) 786-7038	(770) 787-5400
*	C	Phillip M Standard	Newton	5428 Salem Road, Covington, GA 30016-	(770) 786-4178	(770) 784-2095

		WALTON COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	ST	George Nathan Malcom	Walton	830 Pleasant Valley Road, Monroe, GA 30655-	(770) 267-1230	
		Dan Bennett	Walton	c/o Walton EMC P O Box 260, Monroe, GA 30655-	(770) 267-8829	(770) 267-6253
		Clifton R Harrison	Walton	1189 Criswell Road SE, Monroe, GA 30655-	(770) 267-7040	
*	C	John H Redding	Walton	P O Box 409, Monroe, GA 30655-	(770) 267-5012	(770) 267-5283
*		Cristina Carrell	Walton	630 Riverbend Road, Monroe, GA 30655-	(770) 267-3547	(770) 990-6392

		WARREN COUNTY	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	VC	James H McMichael	Warren	435 Main Street, Warrenton, GA 30828-	(706) 465-3857	(706) 465-2453
		W Aaron Johnson	Warren	299 Jimmy Johnson Road NE, Warrenton, GA 30828-	(706) 465-3910	
		Dan N Crumpton	Warren	P O Box 47, Warrenton, GA 30828-	(706) 465-2488	(706) 465-3241
*	C	Edgar Joe Shurley	Warren	642 Shurley Road, Warrenton, GA 30828-	(706) 465-3161	
*	ST	Charles L Harper	Warren	5512 Gibson Road, Warrenton, GA 30828-	(706) 465-1315	

		WEST GEORGIA	COUNTY	ADDRESS	HOME PHONE	OFFICE PHONE
	VC	Carl Brack	Carroll	25 Maple Lane, Carrollton, GA 30116-	(770) 214-0278	(770) 832-3501
*		Hugh L Brock Jr	Carroll	1224 Brock Road, Carrollton, GA 30117-	(770) 854-4784	
		Lisle Robinson Bowers	Coweta	4146 Gordon Road, Senoia, GA 30276-	(770) 251-2419	(770) 253-7005
*		Matthew Burns Jr.	Coweta	P O Box 2032, Newnan, GA 30264-	(770) 252-1094	(770) 683-4790
		Tommy E Waldrop	Douglas	2912 Post Road, Winston, GA 30187-	(770) 942-4571	(770) 920-7128
*	C	Mac C Abercrombie Jr	Douglas	P O Box 67, Douglasville, GA 30133-	(770) 942-7128	(770) 942-2441
		Billy Gene Sims	Haralson	969 Seventh Courtground Road, Bremen, GA 30110-	(770) 537-3585	(770) 537-5159
*		Joan M Boalch	Haralson	2655 Monroe Mill Road, Buchanan, GA 30113-	(770) 646-3277	
	ST	Talmadge Davis	Heard	P O Box 127, Franklin, GA 30217-	(706) 675-3552	
*		Denney H Rogers	Heard	4137 Veal Road, Ephesus, GA 30170-	(770) 854-5957	(770) 854-8412

Environmental Protection Dividiona
Erosion and Sediment Control Contact Information

Watershed Protection Branch
NonPoint Source Program
4220 International Parkway, Suite 101
(404) 675-6240

ENVIRONMENTAL MANAGEMENT DISTRICTS

Mountain District	Atlanta	(404) 362-2671	Mountain District	Cartersville	(770) 387-4900
Northeast District	Athens	(706) 369-6376	Southwest District	Albany	(229) 430-4144
West Central District	Macon	(478) 751-6612	East Central District	Augusta	(706) 792-7744
Coastal District	Brunswick	(912) 264-7284	Coastal District	Savannah	(912) 353-3225

Revised February 2007

Georgia Department of Transportation

6/1/2007

Name	Room #	Phone Number	Fax Number	Office
Commissioner and Special Staff				
Harold Linnenkohl	102	(404) 656-5206	(404) 657-8389	Commissioner
Buddy Gratton, P.E.	108	(404) 656-5212	(404) 657-0193	Deputy Commissioner
David Studstill	122	(404) 656-5277	(404)463-7991	Chief Engineer
Kim Cameron	102	(404) 656-5206	(404) 657-8389	Confidential Assistant to Commissioner
Mike Dover	104	(404) 656-5206	(404) 657-8389	Executive Assistant to the Commissioner
Glenn S. Bowman		(404) 651-8355	(404) 463-7911	Executive Assistant to the Chief Engineer
Karlene Barron	315	(404) 463-6464	(404) 656-6927	Communications Administrator
Mike Malcom		(770) 785-6947	(770) 785-6955	Statewide Equipment Management; (7565 Honeycreek Ct., Lithonia, GA 30058)
Mike Johnson	270	(404) 656-5260	(404) 657-5792	Personnel Director
Terry Gable	201	(404) 656-5185	(404) 657-3300	State Aid Administrator
Brian Summers 2	66	(404) 656-6843	(404) 463-6131	Project Review Engineer
Leigh Priestley		(404) 463-1049	(404) 463-3045	Bureau of Environmental Compliance
Elizabeth Osmon	106	(404) 656-5211	(404) 657-0193	DOT Board Secretary
Treasurer				
Earl Mahfuz	148	(404) 656-5224	(404) 463-6026	Treasurer
Chris Jones	416-D	404-463-5468		Executive Assistant to the Treasurer
Dave Carmichael		(404) 699-4483	(404) 699-448	6Air Transportation Administrator; (4175 S. Airport Rd., Atlanta 30336)
Beryl Renfroe	301	(404) 656-5598	(404) 657-4278	Trans. Accts. Adm. - Audits
Chip Meeks	143	(404) 463-6029		Office of General Support Adm.
Jim Davis		(404) 656-5181	(404) 657-5193	Strategic Development Administrator 276 Memorial Dr. Atlanta, GA 30303
Administration Division				
Meg Pirkle	143	(404) 656-5239		Administration Director
Angela Robinson	150	(404) 656-5237	(404) 463-6026	Budget Administrator
Dawn Maddox	169	(404) 656-5566	(404) 657-0174	Trans. Accts. Adm - General Accounting
Jamie Simpson	170	(404) 463-2799		Financial Management Adm.
Construction Division				
Greg Mayo	134	(404) 656-5207	(404) 657-5810	Director of Construction
David Hoge	223	(404) 656-5325	(404) 651-6540	State Trans. Office Eng. - Contract Adm.
Matthew Cline	209	(404) 656-2106	(404) 656-9726	Trans. Eng. Adm. - Construction Claims
Georgene Geary		(404) 363-7512	(404) 363-7684	State Materials & Research Adm.; (15 Kennedy Dr., Forest Park 30297)
Randall Lee Hart	237	(404) 656-5306	(404) 657-0783	State Construction Engineer
EEO Division				
Michael Cooper	142	(404) 656-5323	(404) 656-5509	Director of E.E.O.
John Kirkpatrick	142	(404) 463-4280	(404) 656-5509	E.E.O. Asst. Administrator
Patricia Flowers	142	(404) 656-1710	(404) 656-5509	DBE Asst. Administrator

Field Districts Division

Russell McMurry		(770) 532-5526	(770) 532-5542	District #1/Gainesville (District Engineer)
Mike Thomas		(478) 552-4601	(478) 552-4677	District #2/Tennille (District Engineer)
Thomas Howell, P.E.		(706) 646-6500	(706)646-6584	District #3/Thomaston (District Engineer)
Joe Sheffield		(229) 386-3280	(229) 386-3612	District #4/Tifton (District Engineer)
Glenn Durrence		(912) 427-5711	(912) 427-5763	District #5/Jesup (District Engineer)
Kent L. Sager		(770) 387-3602	(770) 387-3653	District #6/Cartersville (District Engineer)
Bryant Poole		(770) 986-1001	(770) 986-1016	District #7/Chamblee (District Engineer)

Information Technology Division

Jeffery Hill	180	(404) 656-6034	(404) 651-7163	Director of Information Technology
Gary Blanton	179	(404) 656-6034	(404) 651-7163	Office of Infrastructure Administrator
Doug Chambers	West Annex	(404) 463-2860 ext. 103	(404) 463-2898	Office of I.T. Applications Administrator (276 Memorial Drive, Atlanta, Ga. 30303)
Tony Williams	183	(404) 656-6034	(404) 651-7163	Office of IT Business Practices

Legal Services Division

Sandra Burgess	333	(404) 657-5808	(404) 657-4781	Director of Legal Services
Kenneth Thompson	329	(404) 657-5806	(404) 657-4781	Legal Services Administrator

Operations Division

Steve Henry	TMC	(404) 635-8043	(404) 635-8001	Director of Operations (TMC--935 Confederate Ave. 30316)
David Crim	TMC	(404) 635-8734	(404) 635-8172	State Maintenance Engineer
Jeff Baker	TMC	(404) 635-8045	(404) 635-8066	State Utilities Engineer
Keith Golden	TMC	(404) 635-8038	(404) 635-8037	State Traffic Operations Engineer
TMC/General Information	TMC	(404) 624-1300	(404) 635-8001	(TMC--935 Confederate Ave. 30316)
Keith Golden	TMC	(404) 635-8115	(404) 635-8116	State Traffic Safety & Design Engineer
Kathleen Gibson	TMC	(404) 635-8176	(404) 635-8166 (1-800-570-5428)	Oversize Permit Unit Administrator

Planning, Data & Intermodal Development Division

Gerald Ross	127	(404) 656-0610	(404) 656-0584	Director of Planning, Data and Intermodal
Angela Alexander	372	(404) 656-5411	(404) 657-5228	State Transportation Planning Adm.
Vacant	West Annex	(404) 651-9200	(404) 657-4221	Intermodal Programs Administrator;
Jane Smith	North Annex	(770) 986-1360	(770) 986-1139	State Transportation Data Administrator North Annex - Chamblee

Pre-Construction Division

Todd Long	129	(404) 656-5187	(404) 656-0584	Director of Preconstruction
Brent Story	444	(404) 656-5386	(404) 657-0653	State Road and Airport Design Engineer
Ben Buchan	356	(404) 656-5436	(404) 657-7921	State Urban Design Engineer
Paul Liles	258	(404) 656-5280	(404) 651-7076	State Bridge and Structural Design Engineer
Harvey Keepler		(404) 699-4401	(404) 699-4440	State Environmental/Location Engineer; (3993 Aviation Circle, Atlanta 30336)
Phil Copeland	409	(404) 656-5372	(404) 657-8482	State Right of Way Administrator
Babs Abubakari	433	(404) 463-6133	(404) 463-6136	State Consultant Design Engineer

Georgia Forestry Commission

Georgia Forestry Commission
5645 Riggins Mill Road
Dry Branch, Georgia 31020

P. O. Box 819
Macon, Georgia 31202-0819

478-751-3500
1-800-GA-TREES (428-7337)
Fax: 478-751-3465

Georgia Forestry Commission
Human Resources Department
6835 James B. Rivers/Memorial Drive
Stone Mountain, GA 30083
678-476-6220
Fax: (678) 476-6230

Forestry Departments

Communications	(478) 751-3530	Email: Kassie Odum
Forest Fire Protection • County Rangers	(478) 751-3488	Email: Carol Layton
Forest Management • County Foresters • Forest Health & Water Quality Foresters	(478) 751-3485	Email: Bonny Adams
Forest Marketing	(706) 867-2899	Email: Nathan McClure
Seedlings - Reforestation	(478) 751-3520	Email: Russ Pohl
Sustainable Community Forestry Program (SCFP) • Urban & Community Forestry Grant • SCFP Foresters	(706) 542-6880 (678) 476-6226	Email: Sherrie Gabriel Email: Joan Scales

State Managed Forests and Nursery

Baldwin State Forest	(478) 445-5164	
Bartram Educational Forest	(478) 445-2119	Email: Bartram
Brender-Hitchiti Forest	(478) 986-3914	
Dawson Forest	(706) 265-3707	Email: Tony Page
Dixon Memorial State Forest	(912) 287-6612	Email: Joe Wall
Flint River Nursery	(229) 268-7308	
Hightower Educational Forest	(706) 216-6073	Email: Hightower
Paulding Forest	(706) 265-3707	Email: Tony Page
Spirit Creek Educational Forest	(706) 790-2351	Email: Spirit Creek

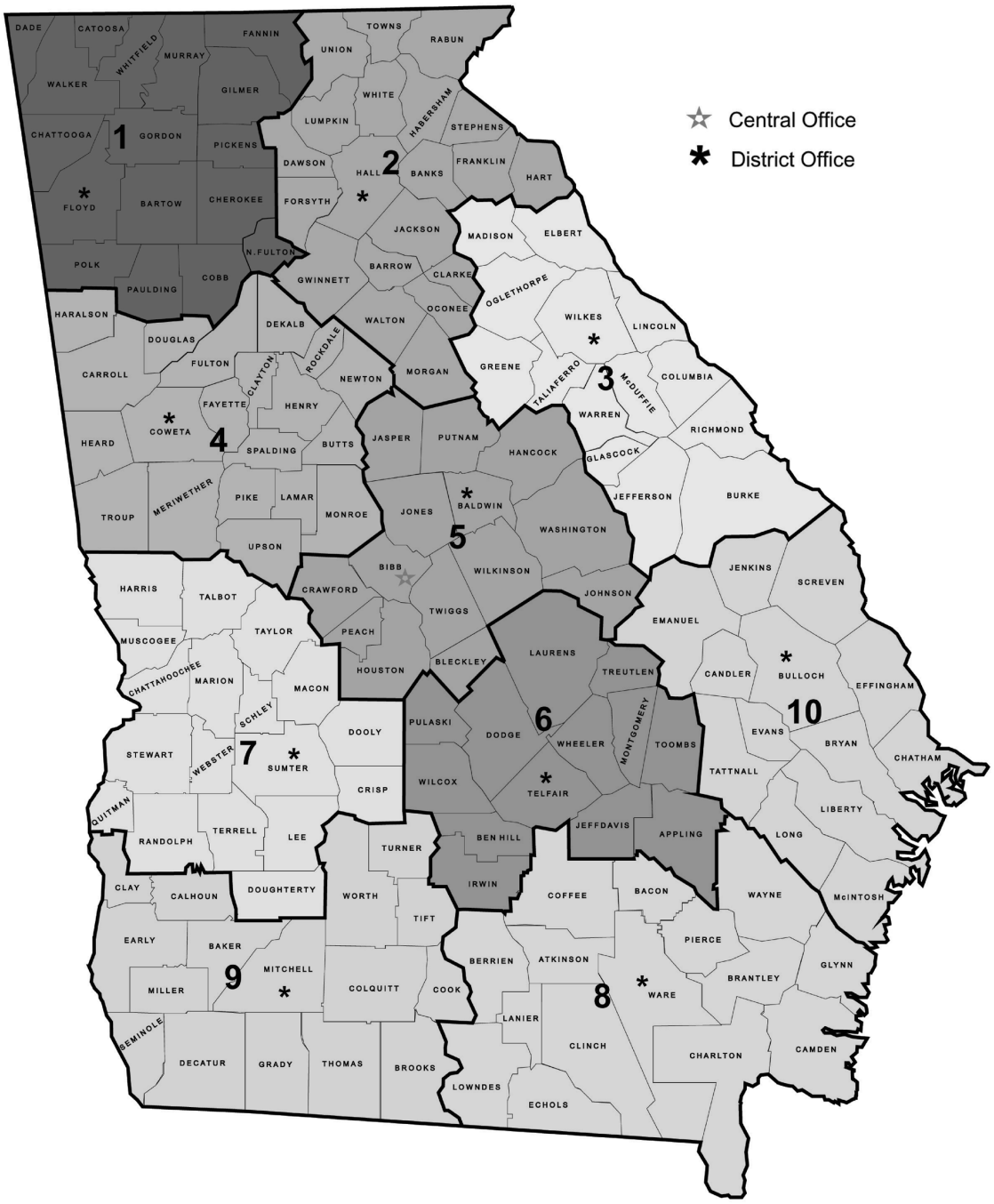
District Offices

Rome 3086 Martha Berry Hwy NE Rome GA 30165	706-295-6021/6022 706-295-6921	Forester: lkelley@gfc.state.ga.us Ranger: tfloyd@gfc.state.ga.us Secretary: scumming@gfc.state.ga.us
Gainesville 3005 Atlanta Hwy Gainesville GA 30507	770-531-6043/6048 770-531-4080	Forester: kmasten@gfc.state.ga.us Ranger: salexander@gfc.state.ga.us Secretary: jthomas@gfc.state.ga.us
Washington 1465 Tignall Rd Washington GA 30673	706-678-2015 706-678-1766	Forester: chargrove@gfc.state.ga.us Ranger: mmunns@gfc.state.ga.us Secretary: atreadwell@gfc.state.ga.us
Newnan 187 Corinth Rd Newnan GA 30263	770-254-7218 770-254-7371	Forester: jsibley@gfc.state.ga.us Ranger: wboston@gfc.state.ga.us Secretary: greid@gfc.state.ga.us
Milledgeville 119 Hwy 49 Milledgeville GA 31061	478-445-5164/5548 478-445-2897	Forester: tclymer@gfc.state.ga.us Ranger: gwilliams@gfc.state.ga.us Secretary: trsemmler@gfc.state.ga.us
McRae Route 1 Box 67 Helena GA 31037	229-868-3385 229-868-3387	Forester: ldefee@gfc.state.ga.us Ranger: jlassiter@gfc.state.ga.us Secretary: bsteele@gfc.state.gfc.us
Americus 243 US Hwy 19 North Americus GA 31709	229-931-2436/2437 229-931-2762	Forester: cpritchett@gfc.state.ga.us Ranger: jconner@gfc.state.ga.us Secretary: pkennedy@gfc.state.ga.us
Waycross 5003 Jacksonville Hwy Waycross GA 31503	912-287-4915 912-284-2911	Forester: bwynn@gfc.state.ga.us Ranger: fsorrells@gfc.state.ga.us Secretary: jkent@gfc.state.ga.us
Camilla 3561 Hwy 112 Camilla GA 31730	229-522-3580/3581 229-522-3583	Forester: gfindley@gfc.state.ga.us Ranger: fsumner@gfc.state.ga.us Secretary: ljohnson@gfc.state.ga.us

GEORGIA FORESTRY
COMMISSION

5645 Riggins Mill Road
Dry Branch, GA 31020
1-800-GA-TREES (428-7337)
www.gatrees.org

Districts



Key NRCS Staff in Georgia

State Public Affairs Specialist -
Mary Ann McQuinn
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E-mail:david.lamm@ga.usda.gov

Assistant State Conservationist for Operations -
Dorothy Harris
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State Resource Conservationist - Vacant
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Fax: 706 546-2275

Water Resources Team Leader -
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State Conservation Engineer -
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Soil Sciences/NRI Team Leader -
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State Administrative Officer -
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Plant Materials Team Leader -
Don Surrency
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Fax: 706 595-5025
E-mail:don.surrency@ga.usda.gov

*****Complete directory available online at**
www.ga.nrcs.usda.gov

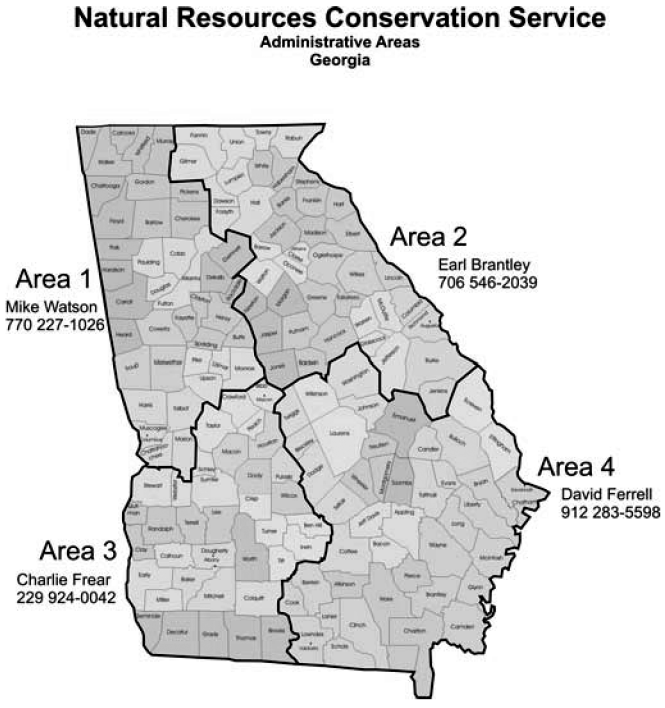
Georgia NRCS Administrative Areas

Area 1 - Griffin
Assistant State Conservationist for Field Operations - Michael Watson
Phone: 770 227-1026 Fax: 770 227-1511
E-mail: michael.watson@ga.usda.gov

Area 2 - Athens
Assistant State Conservationist for Field Operations - Earl Brantley
Phone: 706 546-2039 Fax: 706 546-2253
E-mail: earl.brantley@ga.usda.gov

Area 3 - Americus
Assistant State Conservationist for Field Operations - Charlie Frear
Phone: 229 924-0042 Fax: 229 924-0013
E-mail: charlie.frear@ga.usda.gov

Area 4 - Waycross
Assistant State Conservationist for Field Operations - David Ferrell
Phone: 912 283-5598 Fax: 912 283-8648
E-mail: david.ferrell@ga.usda.gov



REVISED 23 Jan 2009

For current information, please contact Frank M. Carubba with the EPD Watershed Protection Branch at (404) 675-1634

No.	Jurisdiction	Issuing Authority	Permits	Compliance	SWCD
001	**APPLING**	EPD	EPD	Coastal District	Altamaha
	01 Baxley	City	Code E O	Code E O	
	02 Graham	EPD	EPD	Coastal District	
	03 Surrency	EPD	EPD	Coastal District	
002	**ATKINSON**	EPD	EPD	Coastal District	Satilla River
	01 Pearson	City	City Clerk	City	
	02 Willacoochee	City	City Clerk	City Clerk	
003	**BACON**	EPD	EPD	Coastal District	Altamaha
	01 Alma	EPD	EPD	Coastal District	
004	**BAKER**	EPD	EPD	SW District	Flint River
	01 Newton	EPD	EPD	SW District	
005	**BALDWIN**	County	Code E O	Code E O	Piedmont
	01 Milledgeville	City	Zon. Admin.	Zon. Admin.	
006	**BANKS**	County	Pl. Comm.	Co. Marshall	Broad River
	Alto	**See**	**Habersham**		
	Baldwin	**See**	**Habersham**		
	Gillsville	**See**	**Hall**		
	01 Homer	City	City	City	
	Lula	**See**	**Hall**		
	02 Maysville	City	Mayor	Mayor	
007	**BARROW**	County	Pl. Dir.	Bldg. Insp.	Oconee River
	01 Auburn	EPD	EPD	NE District	
	02 Bethlehem	EPD	EPD	NE District	
	03 Carl	EPD	EPD	NE District	
	04 Statham	EPD	EPD	NE District	
	05 Winder	EPD	EPD	NE District	
008	**BARTOW**	County	Code E O	Code E O	Coosa River
	01 Adairsville	City	City	City	
	02 Cartersville	City	City	Bldg. Off.	
	03 Emerson	City	City	City	
	04 Euharlee	City	City		
	05 Kingston	EPD	EPD	Mountain Dist.	
	06 Taylorsville	EPD	EPD	Mountain Dist.	
	07 White	City	City	City	
009	**BEN HILL**	County	Bldg. Insp.	Bldg. Insp.	Middle South Ga.
	01 Fitzgerald	City	Bldg. Insp.	Bldg. Insp.	

No.	Jurisdiction	Issuing Authority	Permits	Compliance	SWCD
010	**BERRIEN**	County	County	SW District	Alapaha
	01 Alapaha	EPD	EPD	SW District	
	02 Enigma	EPD	EPD	SW District	
	03 Nashville	City	Zon. Admin.	Zon. Admin.	
	04 Ray City	City	City Clerk	Soil & EC Insp	
011	**BIBB**	County	Co. Eng.	Co. Eng.	Ocmulgee River
	01 Macon	City	City Eng.	City Eng.	
	02 Payne City	EPD	EPD	WC District	
012	**BLECKLEY**	County	Bldg. Dept.	Bldg. Dept.	Central Ga.
	Allentown	**See**	**Wilkinson**		
	01 Cochran	EPD	EPD	W. Cen. Dist.	
013	**BRANTLEY**	EPD	EPD	Coastal Dist.	Satilla River
	01 Hoboken	EPD	EPD	Coastal Dist.	
	02 Nahunta	EPD	EPD	Coastal Dist.	
014	**BROOKS**	County	Zon. Admin.	Zon. Admin.	Middle South Ga.
	Barwick	**See**	**Thomas**		
	01 Morven	EPD	EPD	SW District	Middle South Ga.
	Pavo	**See**	**Thomas**		
	02 Quitman	EPD	EPD	SW District	
015	**BRYAN**	County	Co. P&Z	Co. P&Z	Coastal
	01 Pembroke	City	Bldg. Insp.	Bldg. Insp.	
	02 Richmond Hill	City	Bldg. Insp.	Bldg. Insp.	
016	**BULLOCH**	County	Bldg. Off.	Bldg. Off.	Ogeechee River
	01 Brooklet	EPD	EPD	Coastal Dist.	
	02 Portal	EPD	EPD	Coastal Dist.	
	03 Register	EPD	EPD	Coastal Dist.	
	04 Statesboro	City	City Eng.	City Engineer	
017	**BURKE**	County	Bldg. Off.	Bldg. Off.	Brier Creek
	Blythe	**See**	**Richmond**		
	01 Girard	EPD	EPD	W. Cen. Dist.	
	02 Keysville	EPD	EPD	W. Cen. Dist.	
	03 Midville	EPD	EPD	W. Cen. Dist.	
	04 Sardis	EPD	EPD	W. Cen. Dist.	
	05 Vidette	EPD	EPD	W. Cen. Dist.	
	06 Waynesboro	EPD	EPD	W. Cen. Dist.	
018	**BUTTS**	County	Zon. Admin.	Zon. Admin.	Towaliga
	01 Flovilla	EPD	EPD	NE District	
	02 Jackson	City	Co. B.I.	Co. B.I.	
	03 Jenkinsburg	EPD	EPD	NE District	
019	**CALHOUN**	EPD	EPD	SW District	Flint River
	01 Arlington	EPD	EPD	SW District	

No.	Jurisdiction	Issuing Authority	Permits	Compliance	SWCD
	02 Edison	EPD	EPD	SW District	
	03 Leary	EPD	EPD	SW District	
	04 Morgan	EPD	EPD	SW District	
020	**CAMDEN**	County	County	County	Satilla River
	01 Kingsland	City	City Engineer	City Engineer	
	02 St. Marys	City	Co. P&Z	City Engineer	
	03 Woodbine	EPD	EPD	Coastal Dist.	
021	**CANDLER**	County	Public Works	Public Works	Ogeechee River
	01 Metter	City	Co. Pub. Wk	Co. Pub. Wk.	
	02 Pulaski	EPD	EPD	Coastal Dist.	
022	**CARROLL**	County	Code E.O.	Code E.O.	West Georgia
	01 Bowdon	EPD	EPD	Mountain Dist.	
	Bremen*				
	02 Carrollton	City	City Manager	City Manager	
	03 Mt. Zion	City	City	City	
	04 Roopville	EPD	EPD	Mountain Dist.	
	05 Temple	EPD	EPD	Mountain Dist.	
	06 Villa Rica	City	Bldg. Insp.	Bldg. Insp.	
	07 Whitesburg	EPD	EPD	Mountain Dist.	
023	**CATOOSA**	County	Pl. Comm.	Pl. Comm.	Catoosa County
	01 Ft. Oglethorpe	City	Bldg. Insp.	Bldg. Insp.	
	02 Ringgold	City	City Manager	Bldg. Insp.	
024	**CHARLTON**	County	Bldg. Off.	Bldg. Off.	Satilla River
	01 Folkston	City	City	Bldg Insp.	
	02 Homeland	City	City	City	
025	**CHATHAM**	County	Pl. Comm.	Co. Engineer	Coastal
	01 Bloomingdale	City	City	Bldg. Off.	
	02 Garden City	City	City	Bldg. Off.	
	03 Pooler	City	Insp. Dept.	Insp. Dept.	
	04 Port Wentworth	City	Bldg. Insp.	Bldg. Insp.	
	05 Savannah	City	City	City Engineer	
	06 Thunderbolt	EPD	EPD	Coastal District	
	07 Tybee Island	City	City		
	08 Vernonburg	EPD	EPD	Coastal District	
026	**CHATTAHOOCHEE**	EPD	EPD	W. Cen. Dist.	Pine Mountain
	01 Cusseta	EPD	EPD	W. Cen. Dist.	
027	**CHATTOOGA**	County	County	County	Coosa River
	01 Lyerly	EPD	EPD	Mountain Dist.	
	02 Menlo	EPD	EPD	Mountain Dist.	
	03 Summerville	EPD	EPD	Mountain Dist.	
	04 Trion	EPD	EPD	Mountain Dist.	

028	**CHEROKEE**	County	Co. Engineer	Co. Engineer	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
	01 Ball Ground	EPD	EPD	Mountain Dist.	
	02 Canton	City	City Manager	City Engineer	
	03 Holly Springs	City	City	City	
	Mountain Park	**See**	**Fulton**		
	04 Waleska	EPD	EPD	Mountain Dist.	
	05 Woodstock	City	Bldg. Dept.	City Engineer	
029	**CLARKE**	Cons. Gov't	Pub. Wks.	Pub. Wks.	Oconee River
	01 Athens	Cons. Gov't	Pub. Wks	Pub. Wks.	
	Bogart	**See**	**Oconee**		
	02 Winterville	EPD	EPD	NE District	
030	**CLAY**	EPD	EPD	SW District	Lwr. Chattahoochee
	01 Bluffton	EPD	EPD	SW District	
	02 Fort Gaines	EPD	EPD	SW District	
031	**CLAYTON**	County	Co. Director	Co. Director	Clayton County
	College Park	**See**	**Fulton**		
	01 Forest Park	City	Co. P., B&Z	Co. P., B&Z	
	02 Jonesboro	City	City Director	City Director	
	03 Lake City	EPD	EPD	Mountain Dist.	
	04 Lovejoy	City	City Director	City Director	
	05 Morrow	City	City	City	
	06 Riverdale	EPD	EPD	Mountain Dist.	
032	**CLINCH**	County	County Clerk	County Clerk	Alapaha
	01 Argyle	EPD	EPD	Coastal Dist.	
	02 DuPont	EPD	EPD	Coastal Dist.	
	03 Fargo	EPD	EPD	Coastal Dist.	
	04 Homerville	City	City	City	
033	**COBB**	County	County	County	Cobb County
	01 Acworth	City	Bldg. Off.	Bldg. Off.	
	02 Austell	City	Comm. Affairs	Comm. Affairs	
	03 Kennesaw	City	City	City	
	04 Marietta	City	Public Works	City Engineer	
	05 Powder Springs	City	Bldg. Dept.	Public Works	
	06 Smyrna	City	Com. Dev.	Com. Dev.	
034	**COFFEE**	County	Bldg. Insp.	Bldg. Insp.	
	01 Ambrose	EPD	EPD	Coastal Dist.	
	02 Broxton	City	City Clerk	Mayor	
	03 Douglas	City	Bldg. Insp.	Bldg. Insp.	
	04 Nicholos	EPD	EPD	Coastal Dist.	

No.	Jurisdiction	Issuing Authority	Permits	Compliance	SWCD
035	**COLQUITT**	County	County	County	Middle South GA
	01 Berlin	EPD	EPD	SW District	
	02 Doerun	City	City Clerk	City Insp.	
	03 Ellenton	EPD	EPD	SW District	
	04 Funston	EPD	EPD	SW District	
	05 Moultrie	City	Bldg & Codes	City Engineer	
	06 Norman Park	City	City Clerk	Mayor	
	07 Riverside	EPD	EPD	SW District	
036	**COLUMBIA**	County	County	County	Columbia County
	01 Grovetown	City	City Engineer	City Engineer	
	02 Harlem	City	City Engineer	Co. Engineer	
037	**COOK**	County	County	County	Alapaha
	01 Adel	City	Bldg. Off.	Bldg. Off.	
	02 Cecil	EPD	EPD	SW District	
	03 Lenox	EPD	EPD	SW District	
	04 Sparks	City	City Clerk	Bldg. Insp.	
038	**COWETA**	County	Planning Dept.	Planning Dept.	West Georgia
	Corinth	**See**	**Heard**		
	01 Grantville	EPD	EPD	Mountain Dist.	
	02 Haralson	EPD	EPD	Mountain Dist.	
	03 Moreland	EPD	EPD	Mountain Dist.	
	04 Newnan	City	Bldg. Off.	Bldg. Off.	
	Palmetto	**See**	**Heard**		
	05 Senoia	EPD	EPD	Mountain Dist.	
	06 Sharpsburg	City	City	City	
	07 Turin	EPD	EPD	Mountain Dist.	
039	**CRAWFORD**	EPD	EPD	W. Cen. Dist.	Ocmulgee River
	01 Roberta	EPD	EPD	W. Cen. Dist.	
040	**CRISP**	County	Planning Dept.	Planning Dept.	Middle South GA
	01 Arabi	EPD	EPD	SW District	
	02 Cordele	City	Com. Dev.	Com. Dev.	
041	**DADE**	County	County	County	
	01 Trenton	EPD	EPD	Mountain Dist.	
042	**DAWSON**	County	Planning Dept.	Planning Dept.	Upper Chatt. River
	01 Dawsonville	City	City	City	
043	**DECATUR**	EPD	EPD	SW District	Flint River
	01 Attapulgus	EPD	EPD	SW District	
	02 Bainbridge	City	Bldg. Dept.	Bldg. Off.	
	03 Brinson	EPD	EPD	SW District	
No.	**Jurisdiction**	**Issuing**	**Permits**	**Compliance**	**SWCD**

		Authority			
	04 Climax	EPD	EPD	SW Region	
044	**DEKALB**	County	Public Wks.	Public Wks	DeKalb County
	Atlanta	**See**	**Fulton**		
	01 Avondale Est.	City	City	City	
	02 Chamblee	City	City Engineer	City Insp.Dept.	
	03 Clarkston	EPD	EPD	Mountain Dist.	
	04 Decatur	City	City Engineer	City Engineer	
	05 Doraville	City	City	City	
	06 Lithonia	EPD	EPD	Mountain Dist.	
	07 Pine Lake	EPD	EPD	Mountain Dist.	
	08 Stone Mtn.	City	City	City	
	09 Dunwoody	EPD	EPD	Mountain Dist.	
045	**DODGE**	EPD	EPD	SW District	Central Georgia
	01 Chauncey	EPD	EPD	SW District	
	02 Chester	EPD	EPD	SW District	
	03 Eastman	City	City Manager	Code E.O.	
	Milan	**See**	**Telfair**		
	04 Rhine	EPD	EPD	SW Dist.	
046	**DOOLY**	County	Bldg. Insp.	Bldg. Insp.	Ocmulgee River
	01 Byromville	EPD	EPD	W. Cen. Dist.	
	02 Dooling	EPD	EPD	W. Cen. Dist.	
	03 Lilly	EPD	EPD	W. Cen. Dist.	
	04 Pinehurst	City	Co. Bldg. Insp.	Co. Bldg. Insp.	
	05 Unadilla	City	City	City	
	06 Vienna	EPD	EPD	W. Cen. Dist.	
047	**DOUGHERTY**	County	Public Wks.	Public Wks	Flint River
	01 Albany	City	Eng. Dept.	Eng. Dept.	
048	**DOUGLAS**	County	Dept. of Eng.	Dept. of Eng.	West Georgia
	Austell	**See**	**Cobb**		
	01 Douglasville	City	City Engineer	City Engineer	
	Villa Rica	**See**	**Carroll**		
049	**EARLY**	EPD	EPD	SW District	Flint River
	Arlington	**See**	**Calhoun**		
	01 Blakely	City	Bldg. Off.	Bldg. Off.	
	02 Damascus	EPD	EPD	SW District	
	03 Jakin	EPD	EPD	SW District	
050	**ECHOLS**	EPD	EPD	SW District	Alapaha
051	**EFFINGHAM**	County	Zoning Admin.	Bldg.& Z Insp.	Ogeechee River
	01 Guyton	EPD	EPD	Coastal Dist.	
	02 Rincon	Town	Bldg. Insp.	Bldg. Insp.	
	03 Springfield	EPD	EPD	Coastal Dist.	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**

052	**ELBERT**	County	Tax Assessor	Tax Assessor	Broad River
	01 Bowman	EPD	EPD	NE District	
	02 Elberton	City	City	City	
053	**EMANUEL**	EPD	EPD	E. Cen. Dist.	
	Adrian	**See**	**Johnson**	E. Cen. Dist.	
	01 Garfield	EPD	EPD	E. Cen. Dist.	
	02 Nunez	EPD	EPD	E. Cen. Dist.	
	03 Oak Park	EPD	EPD	E. Cen. Dist.	
	04 Stillmore	EPD	EPD	E. Cen. Dist.	
	05 Summertown	EPD	EPD	E. Cen. Dist.	
	06 Swainsboro	EPD	EPD	E. Cen. Dist.	
	07 Twin City	EPD	EPD	E. Cen. Dist.	
054	**EVANS**	EPD	EPD	Coastal Dist.	Ogeechee River
	01 Bellville	EPD	EPD	Coastal Dist	
	02 Claxton	City	City Admin.	City	
	03 Daisy	EPD	EPD	Coastal Dist	
	04 Hagan	EPD	EPD	Coastal Dist	
055	**FANNIN**	County	Land Dev.	Land Dev.	Blue Ridge Mtn.
	01 Blue Ridge	City	Bldg. Insp.	Bldg. Insp.	
	02 McCaysville	EPD	EPD	Mountain Dist.	
	03 Mineral Bluff	EPD	EPD	Mountain Dist.	
	04 Morganton	EPD	EPD	Mountain Dist.	
056	**FAYETTE**	County	Co. Engineer	Co. Engineer	Towaliga
	01 Brooks	EPD	EPD	Mountain Dist.	
	02 Fayetteville	City	City	City	
	03 Peachtree City	City	Bldg. Dept.	Bldg. Dept.	
	04 Tyrone	Town	Town	Zoning Admin.	
	05 Woolsey	EPD	EPD	Mountain Dist.	
057	**FLOYD**	County	Bldg. Insp.	Bldg. Insp.	Coosa River
	01 Cave Spring	EPD	EPD	Mountain Dist.	
	02 Rome	City	Bldg. Insp.	Bldg. Insp.	
058	**FORSYTH**	County	County	County	Upper Chatt. River
	01 Cumming	City	City	City	
059	**FRANKLIN**	EPD	EPD	NE District	Broad River
	01 Canon	EPD	EPD	NE District	
	02 Carnesville	EPD	EPD	NE District	
	03 Franklin Sprgs.	EPD	EPD	NE District	
	04 Lavonia	EPD	EPD	NE District	
	05 Royston	EPD	EPD	NE District	
060	**FULTON**	County	Dev. Ser. Dept.	Dev. Ser. Dept.	Fulton County
	01 Alpharetta	City	P&C Dev.	City	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
	02 Atlanta	City	Public Works	Public Works	

	03 College Park	City	City Engineer	City Engineer	
	04 East Point	City	Public Works	Public Works	
	05 Fairburn	City	City	City	
	06 Hapeville	City	Pub. Wks. Dir.	Pub. Wks. Dir.	
	07 Mountain Park	City	City	Bldg. Insp.	
	08 Palmetto	City	City Admin.	City Engineer	
	09 Roswell	City	City Engineer	City	
	10 Sandy Springs	City	City	City	
	11 Union City	City	City	City Engineer	
	12 Johns Creek	City	City	City	
	13 Milton	City	City	City	
061	**GILMER**	County	Pl. Comm.	Pl. Comm.	Limestone Valley
	01 East Ellijay	City	Soil Con. Off.	Soil Con. Off.	
	02 Ellijay	City	E & S Officer	E & S Officer	
062	**GLASCOCK**	County	Comm. Off.	Comm. Off.	Brier Creek
	01 Edgehill	EPD	EPD	E. Cen. Dist.	
	02 Gibson	EPD	EPD	E. Cen. Dist.	
	03 Mitchell	EPD	EPD	E. Cen. Dist.	
063	**GLYNN**	County	Bldg. Insp.	Bldg. Insp.	Satilla River
	01 Brunswick	EPD	EPD	Coastal Dist.	
064	**GORDON**	County	Bldg. Insp.	Bldg. Insp.	Coosa River
	01 Calhoun	City	Bldg. Insp.	Bldg. Insp.	
	02 Fairmount	City	City	City	
	03 Plainville	EPD	EPD	Mountain Dist.	
	04 Ranger	EPD	EPD	Mountain Dist.	
	05 Resaca	EPD	EPD	Mountain Dist.	
065	**GRADY**	County	B.O. Comm.	B.O. Comm.	Flint River
	01 Cairo	City	City	City	
	02 Whigham	EPD	EPD	SW District	
066	**GREENE**	County	Bldg. Insp.	Bldg. Insp.	Piedmont
	01 Greensboro	City	Bldg. Insp.	Bldg. Insp.	
	02 Siloam	EPD	EPD	NE District	
	03 Union Point	City	Bldg. Insp.	Bldg. Insp.	
	04 White Plains	EPD	EPD	NE District	
	05 Woodville	EPD	EPD	NE District	
067	**GWINNETT**	County	Co. Engineer	Co. Engineer	Gwinnett County
	01 Berkeley Lake	City	Zoning Enf.	Zoning Enf. Off.	
	02 Buford	City	City	City	
	03 Dacula	City	City	Bldg. Insp.	
	04 Duluth	City	P & Z Director	Dev. Inspector	
	05 Grayson	City	City	City	
	06 Lawrenceville	City	City	City	
	07 Lilburn	City	Planning Dir.	Planning Dir.	
No.	**Jurisdiction**	**Issuing**	**Permits**	**Compliance**	**SWCD**

		Authority			
	Loganville	**See**	**Walton**		
	08 Norcross	City	City	P & Z	
	09 Rest Haven	EPD	EPD	EPD	
	10 Snellville	City	City Engineer	City Inspector	
	11 Sugar Hill	City	Insp. Dept.	Insp. Dept.	
	12 Suwanee	City	City	City	
068	**HABERSHAM**	County	P & Z Officer	P & Z Officer	Upper Chatt. River
	01 Alto	EPD	EPD	Mountain Dist.	
	02 Baldwin	EPD	EPD	Mountain Dist.	
	03 Clarksville	EPD	EPD	Mountain Dist.	
	04 Cornelia	City	City Pl. Dept.	City Pl. Dept.	
	05 Demorest	EPD	EPD	Mountain Dist.	
	06 Mount Airy	EPD	EPD	Mountain Dist.	
	07 Tallulah Fall	EPD	EPD	Mountain Dist.	
069	**HALL**	County	Co. Engineer	Co. Engineer	Hall County
	Buford	**See**	**Gwinnett**		
	01 Clermont	EPD	EPD	NE District	
	02 Flowery Branch	City	Co. Engineer	Co. Engineer	
	03 Gainesville	City	Public Works	Public Works	
	04 Gillsville	EPD	EPD	NE District	
	05 Lula	City	City Clerk	City	
	06 Oakwood	City	City	City	
070	**HANCOCK**	County	Bldg. & Zon.	Zoning Admin.	Piedmont
	01 Sparta	EPD	EPD	NE District	
071	**HARALSON**	County	Bldg. & Zon.	Zoning Admin.	West Georgia
	01 Bremen	City	Per. Off.	Co. Code E.O.	
	02 Buchanan	EPD	EPD	Mountain Dist.	
	03 Tallapoosa	EPD	EPD	Mountain Dist.	
	04 Waco	EPD	EPD	Mountain Dist.	
072	**HARRIS**	County	Community Dev.	Community Dev.	Pine Mountain
	01 Hamilton	City	City	City	
	02 Pine Mountain	City	County	County	
	03 Shiloh	EPD	EPD	W. Cen. Dist.	
	04 Waverly Hall	EPD	EPD	W. Cen. Dist.	
	West Point	**See**	**Troup**		
073	**HART**	EPD	EPD	NE District	Broad River
	01 Bowersville	EPD	EPD	NE District	
	Canon	**See**	**Franklin**		
	02 Hartwell	EPD	EPD	NE District	
	Royston	**See**	**Franklin**		
074	**HEARD**	EPD	EPD	Mountain Dist.	West Georgia
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**

	01 Centralhatchee	EPD	EPD	Mountain Dist.	
	02 Corinth	EPD	EPD	Mountain Dist.	
	03 Ephesus	EPD	EPD	Mountain Dist.	
	04 Franklin	EPD	EPD	Mountain Dist.	
075	**HENRY**	County	County	County	Henry County
	01 Hampton	EPD	EPD	Mountain Dist.	
	02 Jenkinsburg	**See**	**Butts**		
	03 Locust Grove	City	City	City	
	04 McDonough	City	P & Z	P & Z	
	05 Stockbridge	City	City	City	
076	**HOUSTON**	County	Co. Engineer	Co. Engineer	
	01 Centerville	City	Utility Supt.	Utility Supt.	
	02 Perry	City	P & Z	P & Z	
	03 Warner Robins	City	City Engineer	City Engineer	
077	**IRWIN**	County	Bldg. Insp.	Bldg. Insp.	
	01 Ocilla	City	Bldg. Insp.	Bldg. Insp.	
078	**JACKSON**	County	P& D Director	P & D Director	
	01 Arcade	City	City	City	
	02 Braselton	Town	Co. P & D	Co. P & D	
	03 Commerce	City	Bldg. & Const.	Bldg. Insp.	
	04 Hoschton	City	Co. P & D	Co. P & D	
	05 Jefferson	City	Co. P & D	Co. P & D	
	Maysville	**See**	**Banks**		
	06 Nicholson	EPD	EPD	NE District	
	07 Pendergrass	City	City	City	
	08 Talmo	City	City	City	
079	**JASPER**	County	Zoning Admin.	Bldg.&Zon. Off.	U. Ocmulgee R.
	01 Monticello	City	Zoning Admin.	Bldg. Off.	
	02 Shady Dale	EPD	EPD	NE Distict	
080	**JEFF DAVIS**	EPD	EPD	Coastal Dist.	Altamaha
	01 Denton	EPD	EPD	Coastal Dist.	
	02 Hazelhurst	City	City	Bldg. Insp.	
081	**JEFFERSON**	County	Tax Assessor	Bldg. Insp.	Brier Creek
	01 Avera	EPD	EPD	E. Cen. Dist.	
	02 Bartow	EPD	EPD	E. Cen. Dist.	
	Keysville	**See**	**Burke**		
	03 Louisville	City	City	City Admin.	
	04 Stapleton	EPD	EPD	E. Cen. Dist.	
	05 Wadley	EPD	EPD	E. Cen. Dist.	
	06 Wrens	City	Bldg. Insp.	Bldg. Insp.	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
082	**JENKINS**	EPD	EPD	E. Cen. Dist.	Brier Creek

	01 Millen	EPD	EPD	E. Cen. Dist.	
083	**JOHNSON**	EPD	EPD	E. Cen. Dist.	Central Georgia
	01 Adrian	EPD	EPD	E. Cen. Dist.	
	02 Kite	EPD	EPD	E. Cen. Dist.	
	03 Wrightsville	EPD	EPD	E. Cen. Dist.	
084	**JONES**	County	Zoning E.O.	Zoning E.O.	Piedmont
	01 Gray	City	Zoning Enf.	Zoning Enf.	
	Macon	**See**	**Bibb**		
085	**LAMAR**	County	Zoning Off.	Zoning Off.	Lamar County
	01 Aldora	EPD	EPD	W. Cen. Dist.	
	02 Barnesville	City	Bldg. & Zon.	Bldg. & Zon.	
	03 Milner	EPD	EPD	W. Cen. Dist.	
086	**LANIER**	County	Co. Comm.	Co. Comm.	Alaphaha
	01 Lakeland	City	Zoning Board	City Inspector	
087	**LAURENS**	County	County Admin.	Co. Admin.	Central Georgia
	Allentown	**See**	**Wilkinson**		
	01 Cadwell	EPD	EPD	E. Cen. Dist.	
	02 Dexter	EPD	EPD	E. Cen. Dist.	
	03 Dublin	City	City	City	
	04 Dudley	EPD	EPD	E. Cen. Dist.	
	05 East Dublin	City	City	City	
	06 Montrose	EPD	EPD	E. Cen. Dist.	
	07 Rentz	EPD	EPD	E. Cen. Dist.	
088	**LEE**	County	County En.	County Eng.	Lwr. Chattahoochee
	01 Leesburg	City	Co. Pl. Office	Co. Pl. Office	
	02 Smithville	EPD	EPD	SW District	
089	**LIBERTY**	County	Jnt. Pl. Com.	Jnt. Pl. Com.	Coastal
	01 Allenhurst	Town	Jnt. Pl. Com.	Jnt. Pl. Com.	
	02 Flemington	City	Jnt. Pl. Com.	Jnt. Pl. Com.	
	03 Gum Branch	City	Jnt. Pl. Com.	Jnt. Pl. Com.	
	04 Hinesville	City	Insp. Director	Insp. Director	
	05 Midway	City	Jnt. Pl. Com.	Jnt. P. Com.	
	06 Riceboro	City	Jnt. Pl. Com.	Jnt. Pl. Com.	
	07 Walthourville	City	Jnt. Pl. Com.	Jnt. Pl. Com.	
090	**LINCOLN**	County	Pl. Comm.	Pl. Director	Lincoln County
	01 Lincolnton	City	City	E&SC Off.	
091	**LONG**	County	County	County	Coastal
	01 Ludowici	EPD	EPD	Coastal Dist.	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
092	**LOWNDES**	County	Co. Engineer	Co. Engineer	Alapaha

	02 Hahira	City	Co. Engineer	Co. Engineer	
	03 Lake Park	City	Co. Engineer	Co. Engineer	
	04 Naylor	EPD	EPD	SW Dist.	
	05 Remerton	EPD	EPD	SW Dist.	
	06 Valdosta	City	City Engineer	City Engineer	
093	**LUMPKIN**	County	Pl. Off.	Pl. Off.	Upr. Chattahoochee
	01 Dahlonega	City	Bldg. Insp.	Bldg. Insp.	
094	**MACON**	EPD	EPD	W. Cen. Dist.	Ocmulgee River
	01 Ideal	EPD	EPD	W. Cen. Dist.	
	02 Marshallville	EPD	EPD	W. Cen. Dist.	
	03 Montezuma	EPD	EPD	W. Cen. Dist.	
	04 Oglethorpe	EPD	EPD	W. Cen. Dist.	
095	**MADISON**	EPD	EPD	NE District	Broad River
	01 Carlton	EPD	EPD	NE District	
	02 Colbert	EPD	EPD	NE District	
	03 Comer	EPD	EPD	NE District	
	04 Danielsville	City	City	City	
	04 Hull	EPD	EPD	NE District	
	05 Ila	City	City Clerk	E&SC Enf. Off.	
	Royston	**See**	**Franklin**		
096	**MARION**	EPD	EPD	WC District	Pine Mountatin
	01 Buena Vista	EPD	EPD	WC District	
097	**MCDUFFIE**	County	Pl. Admin.	Pl. Admin	McDuffie Co.
	01 Dearing	EPD	EPD	E. Cen. Dist.	
	02 Thomson	City	Co. Pl. Comm.	County	
098	**MCINTOSH**	EPD	EPD	Coastal Dist.	Coastal
	01 Darien	City	City	City	
099	**MERIWETHER**	County	Bldg. Dept.	Bldg. Dept.	Roosevelt
	01 Gay	EPD	EPD	W. Cen. Dist.	
	02 Greenville	EPD	EPD	W. Cen. Dist.	
	Haralson	**See**	**Coweta**		
	03 Lone Oak	EPD	EPD	W. Cen. Dist.	
	04 Luthersville	EPD	EPD	W. Cen. Dist.	
	05 Manchester	City	Bldg. Dept.	Bldg. Dept.	
	06 Warm Springs	EPD	EPD	W. Cen. Dist.	
	07 Woodbury	EPD	EPD	W. Cen. Dist.	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
100	**MILLER**	EPD	EPD	WC District	
	01 Colqutt	EPD	EPD	WC District	

101	**MITCHELL**	EPD	EPD	SW District	Flint River
	01 Baconton	EPD	EPD	SW District	
	02 Camilla	City	Bldg. Insp.	Bldg. Insp.	
	Meigs	**See**	**Thomas**		
	03 Pelham	EPD	EPD	SW District	
	04 Sale City	EPD	EPD	SW District	
102	**MONROE**	County	Zoning Off.	Zoning Off.	Towaliga
	01 Culloden	City	City	City	
	02 Forsyth	City	Bldg. Off.	Bldg. Off.	
103	**MONTGOMERY**	EPD	EPD	EC District	Ohoopee River
	01 Ailey	EPD	EPD	E. Cen. Dist.	
	02 Alston	EPD	EPD	E. Cen. Dist	
	03 Higgston	EPD	EPD	E. Cen. Dist	
	04 Mt. Vernon	EPD	EPD	E. Cen. Dist	
	05 Tarrytown	EPD	EPD	E. Cen. Dist	
	06 Uvalda	EPD	EPD	E. Cen. Dist	
	Vidalia	**See**	**Toombs**		
104	**MORGAN**	County	County	Bldg. Insp.	Piedmont
	01 Bostwick	EPD	EPD	NE District	
	02 Buckhead	EPD	EPD	NE District	
	03 Madison	City	City	Bldg. Insp.	
	04 Rutledge	EPD	EPD	NE District	
105	**MURRAY**	County	Bldg. Insp.	Bldg. Insp.	Limestone Valley
	01 Chatsworth	City	Bldg. Insp.	Bldg. Insp.	
	02 Eton	City	City	City	
106	**MUSCOGEE**	Cons. Gov't	Eng. Dept.	Eng. Dept.	Pine Mountain
	01 Bibb City	EPD	EPD	W. Cen. Dist.	
	02 Columbus	Cons. Gov't	Cons. Gov't	Eng. Dept.	
107	**NEWTON**	County	P & Z	City Engineer	U. Ocmulgee R.
	01 Covington	City	City Engineer	City Engineer	
	02 Mansfield	EPD	EPD	NE District	
	03 Newborn	EPD	EPD	NE District	
	04 Oxford	EPD	EPD	NE District	
	05 Porterdale	EPD	EPD	NE District	
108	**OCONEE**	County	Insp. Dept.	Insp. Dept	Oconee River
	01 Bishop	EPD	EPD	NE District	
	02 Bogart	EPD	EPD	NE District	
	03 N. High Shoals	EPD	EPD	NE District	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
	04 Watkinsville	City	Mayor	Bldg. Insp.	

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109	**OGLETHORPE**	County	Insp. Dept.	Insp. Dept.	Broad River
	01 Arnoldsville	EPD	EPD	NE District	
	02 Crawford	EPD	EPD	NE District	
	03 Lexington	EPD	EPD	NE District	
	04 Maxeys	EPD	EPD	NE District	
110	**PAULDING**	County	Eng. Dept.	Eng. Dept.	Coosa River
	01 Braswell	EPD	EPD	Mountain Dist.	
	02 Dallas	EPD	EPD	Mountain Dist.	
	03 Hiram	City	Eng. Dept.	Eng. Dept.	
111	**PEACH**	County	Bldg. Official	Zoning E.O.	Ocmulgee River
	01 Byron	City	P & Z	City Marshall	
	02 Ft. Valley	EPD	EPD	W. Cen. Dist.	
112	**PICKENS**	County	Lnd. Dev. Off.	Lnd. Dev. Off.	Limestone Valley
	01 Jasper	City	City	City	
	02 Nelson	City	City		
	03 Talking Rock	City	Mayor	Mayor	
113	**PIERCE**	County	Jt. Pl. Comm.	Jt. Pl. Comm.	Satilla River
	01 Blackshear	City	City	City Insp.	
	02 Patterson	City	Jt. P. Comm.	Jt. Pl. Comm.	
114	**Pike**	County	Zoning Admin.	Bldg. Insp.	Towaliga
	01 Concord	EPD	EPD	W. Cen. Dist.	
	02 Meansville	EPD	EPD	W. Cen. Dist.	
	03 Molena	EPD	EPD	W. Cen. Dist.	
	04 Williamson	EPD	EPD	W. Cen. Dist.	
	05 Zebulon	EPD	EPD	W. Cen. Dist.	
115	**POLK**	EPD	EPD	Mountain Dist.	Coosa River
	01 Aragon	EPD	EPD	Mountain Dist.	
	Braswell	**See**	**Paulding**		
	02 Cedartown	City	City Clerk	Bldg. Insp.	
	03 Rockmart	City	Bldg. Insp.	Bldg. Insp.	
	Taylorsville	**See**	**Bartow**		
116	**PULASKI**	County	Bldg. Insp.	Bldg. Insp.	Ocmulgee River
	01 Hawkinsville	City	Bldg. Insp.	Bldg. Insp.	
117	**PUTNAM**	County	Bldg. Insp.	Bldg, Insp.	Piedmont
	01 Eatonton	City	Bldg. Insp.	Bldg. Insp.	
118	**QUITMAN**	EPD	EPD	SW District	
	01 Georgetown	EPD	EPD	SW District	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
119	**RABUN**	County	Admin. Off.	Admin. Off.	Blue Ridge Mtn.
	01 Clayton	City	City	City	
	02 Dillard	EPD	EPD	Mountain Dist.	

	03 Mountain City	EPD	EPD	Mountain Dist.	
	04 Sky Valley	City	City	City	
	Tallulah Falls	**See**	**Habersham**		
	05 Tiger	EPD	EPD	Mountain Dist.	
120	**RANDOLPH**	EPD	EPD	SW District	Lwr. Chatt. River
	01 Coleman	EPD	EPD	SW District	
	02 Cuthbert	EPD	EPD	SW District	
	03 Shellman	EPD	EPD	SW District	
121	**RICHMOND**	County	Pl. Comm.	Eng. Dept.	Brier Creek
	01 Augusta	City	Pl. Comm.	Eng. Dept	
	02 Blythe	EPD	EPD	E. Cen. Dist.	
	03 Hephzibah	EPD	EPD	E. Cen. Dist.	
122	**ROCKDALE**	County	Dept. P&D	Dept. P&D	Rockdale County
	01 Conyers	City	P& D Dept.	P&D Dept.	
123	**SCHLEY**	EPD	EPD	W. Cen. Dist.	Lwr. Chatt. River
	01 Ellaville	EPD	EPD	W. Cen. Dist.	
124	**SCREVEN**	County	Zoning Off.	B&Z Admin.	Ogeechee River
	01 Hiltonia	EPD	EPD	E. Cen. Dist.	
	02 Newington	EPD	EPD	E. Cen. Dist.	
	03 Oliver	EPD	EPD	E. Cen. Dist.	
	04 Rocky Ford	EPD	EPD	E. Cen. Dist.	
	05 Sylvania	City	City	City Manager	
125	**SEMINOLE**	County	Co. Comm.	Soil Tech	Flint River
	01 Donalsonville	EPD	EPD	SW Region	
	02 Iron City	EPD	EPD	SW Region	
126	**SPALDING**	County	Bldg. Insp.	Bldg. Insp.	Towaliga
	01 Griffin	City	Bldg. Off.	Bldg. Off.	
	02 Orchard Hill	EPD	EPD	Mountain Dist.	
	03 Sunny Side	EPD	EPD	Mountain Dist.	
127	**STEPHENS**	EPD	EPD	NE District	Stephens County
	01 Avalon	EPD	EPD	NE District	
	02 Martin	EPD	EPD	NE District	
	03 Toccoa	City	City	City	
128	**STEWART**	County	Co. Comm.	Co. Comm.	Lwr. Chatt. River
	01 Lumpkin	EPD	EPD	SW District	
	02 Richland	EPD	EPD	SW District	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
129	**SUMTER**	County	Bldg. Insp.	Bldg. Insp.	Lwr. Chatt. River
	01 Americus	City	City	City	
	02 Andersonville	EPD	EPD	SW District	
	03 DeSoto	EPD	EPD	SW District	

	04 Leslie	EPD	EPD	SW District	
	05 Plains	City	City	Co. Inspector	
	Smithville	**See**	**Lee**		
130	**TALBOT**	EPD	EPD	W. Cen. Dist.	Pine Mountain
	01 Geneva	EPD	EPD	W. Cen. Dist.	
	02 Junction City	EPD	EPD	W. Cen. Dist.	
	Manchester	**See**	**Meriwether**		
	03 Talbotton	EPD	EPD	W. Cen. Dist.	
131	**TALIAFERRO**	EPD	EPD	NE District	Piedmont
	01 Crawfordville	EPD	EPD	NE District	
	02 Sharon	EPD	EPD	NE District	
132	**TATTNALL**	EPD	EPD	Coastal Dist.	Ogeechee River
	01 Cobbtown	EPD	EPD	Coastal Dist.	
	02 Collins	EPD	EPD	Coastal Dist.	
	03 Glennville	City	City Manager	City Mgr.	
	04 Manassas	EPD	EPD	Coastal Dist.	
	05 Reidsville	City	City	City Eng.	
133	**TAYLOR**	EPD	EPD	WC District	Ocmulgee River
	01 Butler	EPD	EPD	W. Cen. Dist.	
	02 Reynolds	EPD	EPD	W. Cen. Dist.	
134	**TELFAIR**	County	Co. Comm.	Co. Comm.	Altamaha
	01 Helena	EPD	EPD	SW District	
	02 Jacksonville	EPD	EPD	SW District	
	03 Lumber City	EPD	EPD	SW District	
	04 McRae	City	City Clerk	City	
	05 Milan	EPD	EPD	SW District	
	06 Scotland	EPD	EPD	SW District	
135	**TERRELL**	County	Co. Comm.	Zon. Admin.	Lwr. Chatt. River
	01 Bronwood	EPD	EPD	SW District	
	02 Dawson	EPD	EPD	SW District	
	03 Parrot	EPD	EPD	SW District	
	04 Sasser	EPD	EPD	SW District	
136	**THOMAS**	EPD	EPD	SW District	Mid. South Ga.
	01 Barwick	EPD	EPD	SW District	
	02 Boston	EPD	EPD	SW District	
	03 Coolidge	EPD	EPD	SW District	
	04 Meigs	EPD	EPD	SW District	
	05 Ocklocknee	EPD	EPD	SW District	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
	06 Pavo	EPD	EPD	SW District	
	07 Thomasville	City	Bldg. Dept.	Bldg. Dept.	
137	**TIFT**	County	Co. Engineer	Co. Engineer	Mid. South Ga.
	01 Omega	City	Co. Engineer	Co. Engineer	

	02 Tifton 03 Ty Ty	City City	City Eng. Co. Engineer	City Eng. Co. Engineer	
138	**TOOMBS** 01 Lyons 02 Santa Claus 03 Vidalia	County EPD EPD City	Co. Comm. EPD EPD Bldg. Insp.	Co. Comm. Coastal Dist. Coastal Dist Bldg. Insp.	Ohoopee River
139	**TOWNS** 01 Hiawassee 02 Young Harris	EPD EPD City	EPD EPD Mayor	Mountain Dist. Mountain Dist. Mayor	Blue Ridge Mtn.
140	**TREUTLEN** 01 Soperton	EPD EPD	EPD EPD	EC District E. Cen. Dist.	Ohoopee River
141	**TROUP** 01 Hogansville 02 LaGrange 03 West Point	County City City EPD	Bldg. Off. City Manager Com. Dev. EPD	Bldg. Insp. City Mgr. Com. Dev. W. Cen. Dist.	Roosevelt
142	**TURNER** 01 Ashburn 02 Rebecca 03 Sycamore	County City EPD EPD	Co. Comm. City EPD EPD	Road Supt. Zon. Admin. SW District SW District	Mid. South Ga.
143	**TWIGGS** **Allentown** 01 Danville 02 Jeffersonville	EPD **See** EPD EPD	EPD **Wilkinson** EPD EPD	W. Cen. Dist. W. Cent. Dist W. Cent. Dist.	Central Georgia
144	**UNION** 01 Blairsville	County EPD	Co. Comm. EPD	E&SC Insp. Mountain Dist.	Blue Ridge Mtn.
145	**UPSON** 01 Thomaston 02 Yatesville	County City EPD	Zon. Admin. Bldg. Off. EPD	Zon. Admin. Bldg. Off. W. Cen. Dist.	Towaliga
146	**WALKER** 01 Chickamauga **Ft. Oglethorpe** 02 LaFayette 03 Lookout Mtn. 04 Rossville	County City **See** EPD EPD City	Co. Pl. Com. Utilities Mgr. **Catoosa** EPD EPD City Clerk	Co. Pl. Com Utilities Mgr. Mountain Dist. Mountain Dist. City Clerk	Coosa River
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
147	**WALTON** 01 Between 02 Good Hope 03 Jersey 04 Loganville 05 Monroe	County City City EPD City City	Code E.O. City City EPD Pl.& Dev. Code E.O.	Code E.O. City NE District Code E.O. Code E.O.	Walton County

	06 Social Circle	City	Bldg. Insp.	Bldg. Insp.	
	07 Walnut Grove	City	Code E.O.	Code E.O.	
148	**WARE**	County	Pl. Director	Pl. Director	Satilla River
	01 Waycross	City	City Eng.	City Eng.	
149	**WARREN**	County	B. of Comm.	Co. Engineer	Warren Co.
	01 Camak	EPD	EPD	E. Cen. Dist.	
	02 Norwood	EPD	EPD	E. Cen. Dist.	
	03 Warrenton	City	City Clerk	City	
150	**WASHINGTON**	EPD	EPD	EC District	Central Georgia
	01 Davisboro	EPD	EPD	E. Cen. Dist.	
	02 Deepstep	EPD	EPD	E. Cen. Dist.	
	03 Harrison	EPD	EPD	E. Cen. Dist.	
	04 Oconee	EPD	EPD	E. Cen. Dist.	
	05 Riddleville	EPD	EPD	E. Cen. Dist.	
	06 Sandersville	City	City	City	
	07 Tennille	City	City	City	
151	**WAYNE**	EPD	EPD	Coastal District	
	01 Jesup	EPD	EPD	Coastal Dist.	
	02 Odum	EPD	EPD	Coastal Dist.	
	03 Screven	EPD	EPD	Coastal Dist.	
152	**WEBSTER**	County	Co. Comm.	Co. Comm.	Lwr. Chatt. R.
	01 Preston	EPD	EPD	SW District	
	02 Weston	EPD	EPD	SW District	
153	**WHEELER**	EPD	EPD	E. Cen. Dist.	
	01 Alamo	EPD	EPD	E. Cen. Dist.	
	02 Glenwood	EPD	EPD	E. Cen. Dist.	
	Scotland	See	Telfair		
154	**WHITE**	County	Pl. Comm.	Co. Comm.	Upr. Chatt. R.
	01 Cleveland	City	Comp. Off.	Comp. Off.	
	02 Helen	EPD	EPD	Mountain Dist.	
155	**WHIFIELD**	County	Bldg. Insp.	Bldg. Insp.	Limestone Valley
	01 Cohutta	EPD	EPD	Mountain Dist.	
	02 Dalton	City	Bldg. Insp.	Bldg. Insp.	
	03 Tunnel Hill	City	City/County	City/County	
	04 Varnell	City	City/County	City/County	
No.	**Jurisdiction**	**Issuing Authority**	**Permits**	**Compliance**	**SWCD**
156	**WILCOX**	EPD	EPD	SW District	Ocmulgee R.
	01 Abbeville	EPD	EPD	SW District	
	02 Pineview	EPD	EPD	SW District	
	03 Pitts	EPD	EPD	SW District	
	04 Rochelle	EPD	EPD	SW District	
157	**WILKES**	County	Tax Assr.	Tax Assr.	Broad River

	01 Rayle	EPD	EPD	NE District	
	02 Tignall	EPD	EPD	NE District	
	03 Washington	City	Bldg. Off.	Bldg. Off.	
158	**WILKINSON**	EPD	EPD	E. Cen. Dist.	Central Georgia
	01 Allentown	EPD	EPD	E. Cen. Dist.	
	Danville	**See**	**Twiggs**		
	02 Gordon	EPD	EPD	E. Cen. Dist.	
	03 Irwinton	EPD	EPD	E. Cen. Dist.	
	04 Ivey	EPD	EPD	E. Cen. Dist.	
	05 McIntyre	EPD	EPD	E. Cen. Dist.	
	06 Toomsboro	EPD	EPD	E. Cen. Dist.	
159	**WORTH**	EPD	EPD	SW District	Mid. S. Georgia
	01 Poulan	EPD	EPD	SW District	
	02 Sumner	EPD	EPD	SW District	
	03 Sylvester	City	Bldg. Insp.	Bldg. Insp.	
	04 Warwick	EPD	EPD	SW District	

Mountain Dist. – EPD Mountain District Office
NE District – EPD Northeast District Office
W. Cen. Dist. – EPD West Central District Office
E. Cen. Dist. – EPD East Central District Office
SW District – EPD South West District Office
Coastal Dist. – EPD Coastal District Office