Trainer Recertification
&
Local Issuing Authority Training
July 16, 2018

Georgia Soil & Water Conservation Commission
Education & Certification
AGENDA

Trainer Recertification

July 16, 2018

8:00 – 9:00  Trainer Responsibilities
9:00 – 10:00 NPDES Construction Stormwater General Permits with 2018 Reissuance Updates
10:00 – 10:15 Break
10:15 – 11:15 Getting Started in GEOS
11:15 – 12:00 2016 Manual for Erosion and Sediment Control and BMP Updates
12:00 – 1:00 Lunch
1:00 – 2:00 Checklist Procedures
2:00 – 2:15 Break
2:15 – 3:15 LIA Semi-annual Reporting
3:15 – 4:30 Conducting an Overview
4:30 Wrap-up/Questions
Back of Tab
Trainer Responsibilities

Scheduling and Holding Certification and Recertification Courses

- After the Course
- Citizenship Paperwork
- Third Party or Trainer Developed Courses
- FAQ
- Trainer Audits

Overview of Policies & Procedures

Scheduling a Course

- The approved trainer must notify the GSWCC of the scheduled course at least 15 days prior to the date of the course
- Trainers are required to use the electronic form entitled “Notification of Scheduled Education & Certification Courses for Approved Trainers”

The following information must be provided:
- Course Name
- Course Date
- Maximum # of Attendees
- Course Location
- Contact Information

The completed form (Excel Spreadsheet) should be filled out and submitted electronically to gaswcc.certification@gaswcc.ga.gov

Scheduling a Course

The following applies to Initial Courses as well as Recertification Courses:

- The approved trainer must notify the GSWCC of the scheduled course at least 15 days prior to the date of the course
- Trainers are required to use the electronic form entitled “Notification of Scheduled Education & Certification Courses for Approved Trainers”

The following information must be provided:
- Course Name
- Course Date
- Maximum # of Attendees
- Course Location
- Contact Information

The completed form (Excel Spreadsheet) should be filled out and submitted electronically to gaswcc.certification@gaswcc.ga.gov
Scheduling a Course

- Courses will be posted on the GSWCC website
- It is the responsibility of the trainer to check the website within 3 days of submittal of the course notification form to verify that the course has been posted
- If the course is not posted on the website, it is not in the system and exams will not be sent
During the Course
• Use approved PowerPoint presentations
• Provide course notebooks and #2 pencils
• Follow the course agenda provided in notebook
• Use “Exam Procedures” PowerPoint to ensure that all participants correctly understand how to complete the Application and Scantron forms

During the Exam
• Trainers are prohibited from:
  - Providing answers to or discussing exam questions
  - Reading the exam questions aloud
  - Altering score sheets
  - Allowing group testing

Initial Course Reminders
LOOK over exam materials turned in by course participants!
• Is DOB correct? (did they use 2018 as the year of birth?)
• Did participant bubble in an Exam Version?
• Is name listed correctly under “first” and “last” on the Scantron form
• Is the information on the application form legible? Did participant fill in full address (many people leave out City & Zip)
Recertification Course Reminders

• Double check the Scantron Roster form before submitting to GSWCC
  - Trainer ID
  - Course # (found on GSWCC website)
  - Date
  - Student ID number must be written and bubbled in on the form.
*Regardless of whether the trainer or the students fill out the form – DOUBLE CHECK to make sure all ID numbers are correct!!

DON'T FORGET CHANGE OF ADDRESS FORMS!!

Recertification FAQ

Q: Can I combine a GSWCC Level 1A & GSWCC Level 1B recertification course, so that each level can attend the course?
A: No, individuals with a Level 1A certification need to take a Level 1A recertification course AND individuals with a Level 1B certification need to take a Level 1B recertification course.

Q: May an individual sit through 4 hours of a certification course to receive recertification credit?
A: No, individuals seeking recertification credit must take a recertification course. GSWCC will not award recertification credit if an individual attends a full certification course.

Q: What recertification course does an individual with a Subcontractor certification need to take?
A: There is not a recertification course for a Subcontractor certification. Individuals with a Subcontractor certification must retake the Subcontractor Awareness seminar every 3 years.

Returning Exam Packages

• Exam Packages & Class Registration List must be sent with a tracking method such as UPS/FedEx/Certified Mail USPS
• The trainer may drop off the exam package at the GSWCC office in Athens, GA
• All Exam Packages must be postmarked or delivered within 48 hours of exam
Canceled Certification Course

- If a certification course is canceled, and the trainer has already received the exam packet, those exams must be sent back to GSWCC within 48 hours of the course being canceled
- Exams may not be held and used for another course
- If a trainer submits completed exams from a canceled course, the exams will not be scored

Canceled Recertification Course

- If a recertification course is canceled, the canceled course code cannot be used for another recertification course
- GSWCC will not accept recertification rosters from an unscheduled course

Citizenship Documentation

O.C.G.A. 50-36-1: Must verify the legal immigration status of any person 18 years or older who applies for state or local public benefits as defined in federal law under 8 U.S.C. Section 1621

As of July 2, 2013, U.S. citizens and legal residents only HAVE TO SUBMIT DOCUMENTATION ONCE. All Qualified Aliens will have to submit the documentation for each course they attend

Most participants in recertification courses have submitted documentation. However, trainers should double check the paperwork status on the GSWCC website
Citizenship Documentation

- All citizenship forms are available at www.gaswcc.georgia.gov under "Documents" as well as on the Education and Certification page.
- Trainers should have forms available if someone forgets to bring theirs.
- Trainers should remind the applicants of the requirements when they register for the course.
- Trainers are to collect from the applicant:
  - The checklist
  - The appropriate affidavit
    - Make sure the affidavit is notarized
  - A legible photocopy of secure and verifiable form of ID.

Required Documentation

(1) GSWCC Checklist for Verification of Lawful Presence Within the United States
Required Documentation

(2) Affidavit

- Legal U.S. Citizen
- Legal Permanent Resident
- Qualified Alien or Non-immigrant under the federal Immigration & Nationality Act

The affidavit must be notarized by a Notary Public

Required Documentation

- A legible photocopy of at least one secure and verifiable document must accompany the affidavit that is being submitted by an applicant. A “secure and verifiable document” is defined in O.C.G.A. § 50-36-2

Secure & Verifiable Documents

- Secure & Verifiable Documents include, but are not limited to:
  - State/Government issued Drivers License, ID Card
  - Military ID
  - Passport issued by US or foreign government
  - Certificate of Citizenship or Naturalization
- The Office of the Attorney General of the State of Georgia created a catch-all in the list of Secure & Verifiable documents requiring acceptance of documents for proof of or documentation of identity if so required by federal law
- Such documents are deemed “Secure & Verifiable Documents” by the Attorney General of the State of Georgia
Third Party or Trainer Developed Courses

- GSWCC will allow a GSWCC-approved Trainer to develop a training course that may be used to satisfy continuing education requirements
- All 3rd party courses must be taught by a GSWCC-approved Trainer.
- Only the approved trainers listed on the application will be allowed to teach the course
- Applications for a 3rd party course must be completed and submitted at least 45 days prior to the commencement of the course
- All applications are processed in the order in which they are received

Third Party or Trainer Developed Courses

- Those trainers that are interested in developing a recertification course must submit an Application for Continuing Education Course Approval
- Available at www.gaswcc.georgia.gov

Third Party or Trainer Developed Courses

- Applications will be evaluated on the basis of subject matter presented and time devoted to the topic(s)
- Discussions relating to all aspect of erosion and sediment control and land disturbing activities may be considered for approval of credit hours

- Examples
  - Monitoring/Sampling
  - NPDES General Permits
  - BMP Installation
  - Structural & Vegetative BMPs
  - ES&PC Plans
  - Site Inspections
Third Party or Trainer Developed Courses

- The GSWCC Education & Certification Program will
  - Review the course outline and the instructor’s qualifications and assign the appropriate credit hours
  - Education credit hour(s) will be assigned on a basis of 1.0 credit per hour of actual course instruction time with a maximum of 4.0 credit hours
  - Assign a course name/code that will be specific to that course

  - Examples of topics that will not be considered for credit include:
    - Business Management
    - Marketing Techniques
    - Public Relations
    - Sales Presentations

Trainer Course Audits

- Periodically GSWCC will arrive unannounced to audit a course:
  - A GSWCC representative will introduce themselves and observe the trainer and the course
  - If any violations are found, a formal report will be written. A copy will be sent to the trainer and placed in his/her trainer file.

Trainer Course Audits

- If the GSWCC attempts to audit a course, and the course is not being held at the specified location and the trainer did not notify the GSWCC before the course, the course will be canceled and the exams will not be accepted

  - This applies to both open and closed courses
Replacement Cards

- Individuals must submit a written request for a replacement card along with a self addressed stamped envelope to:
  GSWCC
  4310 Lexington Rd
  Athens, GA  30605
- No charge for replacements

Questions??

GSWCC
Urban Program
4310 Lexington Rd.
Athens, GA 30605
(706) 552-4474
Insert Tab

NPDES
Back of Tab
What is NPDES?

National Pollutant Discharge Elimination System

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

The GA EPD has been “authorized” by the U.S. EPA to issue NPDES General Permits within the State
**3 NPDES General Permits**

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

- The Permits became effective on September 24, 2013
  - Revised July 1, 2016
  - Valid for 5 years (Expires July 31, 2018)

- Permits are available at:
  - www.epd.georgia.gov
  - www.gaswcc.georgia.gov

---

**Part I. Coverage Under The Permit**

- Permit Area
- Eligibility
- Definitions

---

**Coverage Under the Permit**

- **Permit Area**
  - These permits regulate point source discharges of storm water to the waters of the State of Georgia from construction activities

- **Eligibility**
  1. Construction activities that will result in land disturbance equal to or greater than one (1) acre
  2. Construction activities involving less than one (1) acre which are a part of a larger common development (i.e. greater than one (1) acre)
“Construction Activity”

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

“Stand Alone Construction” [GAR100001]

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

“Infrastructure Construction” [GAR100002]

- Construction activities that are not part of a common development that include the construction, installation, and maintenance of roadway and railway projects and conduits, pipes, pipelines, substations, cables, wires, trenches, vaults, manholes, and similar or related structures for the conveyance of natural gas, liquid petroleum products, electricity, telecommunications, water, storm water, or sewage
Infrastructure Eligibility

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

Part I.C.1(a)

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

Part I.C.1(c)
Infrastructure Eligibility

Coverage under this permit is not required for infrastructure road construction projects that consist solely of routine maintenance for the original purpose of the facility that is performed to maintain the original line and grade and vehicular capacity.

Must comply with the following conditions:

1. No mass grading
2. Stabilized by the end of each day
3. Duration of < 120 calendar days
4. Final Stabilization at the end of the project

“Common Development” (GAR100003)

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

Permittees

- “Primary Permittee”
  - The Owner or Operator or both of a tract of land for a construction project subject to the permit
- “Secondary Permittee”
  - An owner, individual builder, utility company, or utility contractor that conducts a construction activity within a common development with an existing primary permittee
- “Tertiary Permittee”
  - The Owner or Operator of remaining lot(s) within a common development conducting a construction activity where the primary permittee and all secondary permittees have submitted a Notice of Termination or where a primary permittee no longer exists
“Best Management Practices” (BMPs)

- Schedules of activities
- Prohibitions of practices
- Maintenance procedures
- Treatment requirements
- Operating procedures
- Practices to control spillage or leaks, sludge or waste disposal, or drainage from raw material storage
- Sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation

These practices are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion & Sediment Control in Georgia" (Manual) published by the Georgia Soil & Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia.

“Design Professional”

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

“A ‘Certified Person’ shall be on-site at all times when land-disturbing activities are being conducted.”
“Normal Business Hours”

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

Part II. Notice of Intent Requirements

Deadlines
Submittal
Fees

Deadlines – Initial NOI

□ For new construction sites, the permittee shall submit a Notice of Intent (NOI) at least 14 days prior to the commencement of construction activities
□ The “Initial Notification” should be checked
□ Applicable to primary, secondary, and tertiary permittees

Part II.A.1.
Deadlines – Re-issuance NOI

- After July 31, 2018, permittees with existing construction sites will be required to submit a re-issuance NOI for continued permit coverage within 90 days.
- No additional fees are required if they had already been paid.

Deadlines – Change of Information

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

Submittal

- All NOIs types for primary, secondary, and tertiary permittees are to be submitted by return receipt certified mail (or similar service) to both the:
  - GA EPD - District Office
  - Local Issuing Authority
- The permittee shall retain a copy of the proof of submittal at the construction site or be readily available at a designated alternative location.

Part I.A.2. 


Part I.C.
Tertiary Permittee Submittal Options

25

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

Option (2)
- If the permittee’s total land disturbance with the construction site is less than 5 acres and the total land disturbance within the individual lot(s) is less than 1 acre, the permittee may submit a single NOI and ES&PC Plan for a typical individual lot(s). A Notice of Termination is required for each individual lot

Tertiary Permittee Submittal Options

26

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

Utility Companies Submittal Options

27

- A Utility Company may submit an annual Blanket Notice of Intent covering all construction activities within common developments statewide on or before January 15th of the year in which coverage is desired
- A copy of the Blanket NOI shall be provided to the primary permittee not more than seven (7) days prior to the commencement of construction activities by the Utility Company at each site
The Primary Permittee is solely responsible for the payment of fees for all planned land disturbing activities, including all land disturbing activities within a Common Development that will be conducted by the Secondary Permittees and/or Tertiary Permittees.

NPDES General Permit Fees

- $40 per disturbed acre to GA EPD
- $80 per disturbed acre to LIA
- $40 per disturbed acre to GA EPD
- $80 per disturbed acre to GA EPD
- Project within certified LIA
- Project not within certified LIA
- Project exempt under GESA that disturbs ≥1 acre
Part III. Special Conditions

Biota Impaired Stream Segment
TMDL Implementation Plan

Criteria

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

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

Impaired Streams

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

**Additional Plan Requirements (a-u)**

a. During all construction activities as defined in this permit, double the width of the 25 feet undisturbed vegetated buffer along all Skaha waterways requiring a buffer and the 59 feet undisturbed vegetated buffer along all three waterways classified as "low streams" requiring a buffer. During construction activities, EPO will not grant variances to any such buffers that are increased in width pursuant to this section.

b. Increase all temporary sediment basins and reduced 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 reduced 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 by 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), if not submitted, 60 days prior to start of work.

e. Use concrete planter boxes (PMB) and/or mulch to stabilize all areas left disturbed for more than seven (7) calendar days in accordance with Part II.D.1. of the permit.

f. Conduct sediment sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part I.F.35.d of the permit.

---

**Additional Plan Requirements (a-u)**

b. Comply with the applicable end-of-plans criteria for the "BMP" above as provided for in C.C.A. 12-7.4.6(c)(1).

c. Reduce the total planned site disturbance to less than 15% impervious surfaces (including any Stakeholder buffer areas from each calculation). All calculations must be included in the Plan.

d. Limit the amount of disturbed area at any one time to no greater than 2% acres or 50% of the site planned area, whichever is less. All calculations must be included in the Plan.

e. Use "C-7" techniques available on the EPO website, www.epo.co.org (e.g., keep terraces, terraces), and/or EPA's model and practice construction storm water control (avoiding sheet flow) All calculations must be included in the Plan.

f. Add appropriate erosion control measures (e.g., compact and compact post-construction soil sampling 10 feet ahead of 5 feet) to document improved levels of soil retention after final stabilization of the construction site.

g. Use multi-tiered berms, in addition to a 36 inch (24 inch) fence, on the site perimeter whenever construction storm water (including sheet flow) may be discharged. Multi-tiered berms cannot be placed in waterways or areas of concentrated flow.

h. Apply the appropriate Georgia Department of Transportation approved erosion control or drainage standards to all slopes deeper than 3:1. All graphical illustrations must be included in the Plan.

---

**Additional Plan Requirements (a-u)**

Use appropriate erosion control methods and practices instead of controls in all construction storm water discharges designated for a 25 year, 24 hour rainfall event.

Use a minimum width of 25 feet buffer around all construction storm water discharges and storm discharges that feed into temporary sediment basins and reduced storm water management basins.

Use appropriate erosion control methods and practices instead of controls in all construction storm water discharges designated for a 25 year, 24 hour rainfall event.

Use applicable erosion control methods and practices instead of controls in all construction storm water discharges designated for a 25 year, 24 hour rainfall event.

Use applicable erosion control methods and practices instead of controls in all construction storm water discharges designated for a 25 year, 24 hour rainfall event.

---
Exclusions

- These impaired stream requirements are not applicable to the following:
  - Tertiary permittees with a Plan(s) for a typical individual lot(s), if the total land disturbance within the construction site is less than five (5) acres and the total land disturbance within each lot is less than one (1) acre
  - Those discharges located within one (1) linear mile, but are not located within the watershed of any portion of that impaired stream segment

Resource Information

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

305(b)/303(d) Impaired Waters Map
Stream Buffer Exemptions

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

Part IV(i)
Stream Buffer Exemptions

43

Applicable to only Lake Oconee & Sinclair

Seawall

Stream Buffer Exemptions

44

- Public Drinking Water System Reservoirs

Stream Buffer Exemptions

45

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

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

Part IV.(i)(1)
Stream Buffer Exemptions

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

Coastal Marshlands Exemptions

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

Coastal Marshlands Exemptions

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

- A site-specific Erosion, Sedimentation and Pollution Control Plan shall be designed, installed, and maintained for the entire construction activity.
- The ES&PC Plan must be prepared by a certified “design professional” as defined by the permit.

Signature

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

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.
- Amendments must be certified by the “design professional.”
- Hydraulic Component:
  - BMPs where the design is based upon rainfall intensity, duration and return frequency of storms.
50+ Acre Sites

For sites that are equal to or greater than 50 acres disturbed, regardless of the existence of a LIA, the following is required:
- A single copy of the Plan shall be submitted to the appropriate GA EPD District Office
- A written authorization from the appropriate EPD District Office

Part IV.A.4.b.

50+ Acre Sites

53

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

Part IV.D.3.

50+ Acre Sites

54

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

Part IV.D.3.
7-Day Letter

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

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

Part IV.A.5.

---

7-Day Letter

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

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

Part IV.A.5.

---

Contents of the Plan

The ES&PC Plan shall include “BMPs”, including sound conservation and engineering practices, which are consistent with, and no less stringent than the “Manual”.

Part IV.D.
# Permittee Inspections

<table>
<thead>
<tr>
<th>Daily</th>
<th>Weekly &amp; After ≥ 0.5&quot; Rainfall</th>
<th>Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum storage areas</td>
<td>Disturbed areas</td>
<td>Areas of the site that have undergone “final stabilization”</td>
</tr>
<tr>
<td>Locations where vehicles enter and exit the site</td>
<td>Areas used for storage of materials that are exposed to precipitation</td>
<td>Discharge Points</td>
</tr>
<tr>
<td>Measure rainfall every 24 hours except any non-working Saturday, Sunday and Federal Holiday until a NOT is filed</td>
<td>Structural control measures (BMPs)</td>
<td></td>
</tr>
<tr>
<td>(N/A for Secondary Permittee)</td>
<td>Discharge points</td>
<td></td>
</tr>
</tbody>
</table>

For infrastructure construction projects, these inspections are required every 14 days and after ≥ 0.5" rainfall.

---

## Rainfall Log

**Daily Rainfall Log**

<table>
<thead>
<tr>
<th>Daily Rainfall Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**SAMPLE**

---

## Secondary Permittee Daily Inspections

- **Utility Companies & Contractors**
  - 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.

Part IV.D.4.b.(2)
 Permittee Inspection Results

If BMP deficiencies are identified during an inspection, the BMP deficiencies should be documented and corrected as soon as practical.

- If corrective action requires a revision to the Plan, the Plan must be revised within 7 calendar days of the inspection.
- Any Plan revisions must be implemented within 7 calendar days of the inspection.

Part IV.D.4.c.(5)

 Permittee Inspection Results

If BMP deficiencies are identified during a Secondary Permittee inspection, the Secondary Permittee must notify the Primary Permittee of any suspected BMP design deficiencies within 24 hours.

- Primary Permittee must evaluate any suspected BMP design deficiencies within 48 hours of notice.
- Any Plan revisions affecting their site(s) must be implemented by the Secondary Permittee within 48 hours of notice.

Part IV.D.4.c.(5)

 Permittee Inspection Reports

1. Name(s) of certified personnel
2. Signature of certified personnel
3. Phase(s) of each inspection
4. Observations relating to the implementation of the Plan
5. Corrective actions
6. Incidents of non-compliance
7. Where reports do not identify any incidents of non-compliance, the report must contain a certification statement that the site is in compliance with the ES&PC Plan and the Permit.

- All inspection reports must be retained at the site (or readily available at a designated alternative location).
- All permit violations (Part V.A.2) must be documented in the site records within 7 days of discovery and a report of these violations must be submitted to the appropriate GA EPD District Office within 14 days of discovery.

Part IV.D.4.c.(6)
Sampling Requirements

- These permits require the sampling of nephelometric turbidity in receiving water(s), outfalls, or combination thereof

- Applicable to
  - Primary permittees – Total planned disturbance equal to or greater than one (1) acre
  - Secondary permittees – N/A
  - Tertiary permittees – Total planned disturbance equal to or greater than five (5) acres

Nephelometric Turbidity Units

- 10 NTU
- 1000 NTU
Nephelometric Turbidity Units

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

Sampling Methodology

- The analytical method included on the ES&PC Plan must include quality control/quality assurance procedures
- The narrative on the ES&PC Plan must include a precise sampling methodology for each sampling location
- All sampling shall be collected by “grab samples” and analyzed in accordance with the methodology and test procedures established by 40 CFR Part 136 & “NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-011”

Sampling

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

Outfall Sampling Methodology

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

Receiving Waters Methodology

- The increase in turbidity from the Upstream sample to the Downstream sample shall not be more than:
  - ≤ 10 NTUs (Cold Water)
  - ≤ 25 NTUs (Warm Water)

Appendix B Rationale

 Sampling Points - Outfall
Sampling Points – Receiving Waters

- Downstream Sampling Point
- Upstream Sampling Point
- Limits of disturbance

Sampling Points – Combination

- Downstream Sampling Point
- Upstream Sampling Point
- Outfall Sampling Point
- Limits of disturbance

Sampling Frequency

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

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

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

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

Sampling Frequency

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

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

Reporting of Results

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

Part IV.E.2.(a-i)
Reporting of Results

- The permittee is required to submit sampling results to the GA EPD District Office by the 15th day of the month following the sampling event.
- Reports should be submitted by return receipt certified mail (or similar service).

Sample

Retention of Records

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

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

## Part VI. Termination of Coverage

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

### Contents

### Submittal

## Notice of Termination

### Eligibility
- All planned construction activities have been completed.
- Where the entire site has undergone final stabilization.
- All storm water discharges have ceased.
- The site is in compliance with the permit.
- All temporary BMPs have been removed.
“Final Stabilization”

- All soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the “Manual” (excluding a crop of annual vegetation and seeding of target perennials appropriate for the regions)

Termination Eligibility

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

Termination Eligibility

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

88

- The project site name and location – must correspond to NOI
- The owner/operator’s legal name, address, telephone, and email
- Indication whether permittee is primary, secondary, or tertiary
- The name of the receiving water(s)
- Copies of all sampling reports
- Copy of NOI
- Signed Certification Statement

Submittal

89

- All Notices of Termination shall be submitted by return receipt mail to the appropriate GA EPD District Office AND Local Issuing Authority (LIA) in jurisdictions authorized to issue Land Disturbing Activity (LDA) permits

NPDES Construction Storm Water General Permits 2018 Updates

90

- GAR100001 – Stand Alone Construction
- GAR100002 – Infrastructure Construction
- GAR100003 – Common Development Construction
- Current Permits – Expire on July 31, 2018
- Revised Permits become effective August 1, 2018
  - Expire 5 years
- Signed Permits are available on GAEPD website: https://epd.georgia.gov/npdes-construction-storm-water-general-permits
Permit Process

Stakeholder Draft Permits
September 15, 2017

Stakeholder Comments Due
November 1, 2017

Stakeholder Public Meetings
October 24, 2017
October 25, 2017

Draft Permits & Public Notices
Issued
December 15, 2017

Public Comment Period

Public Comment Period

Permit Process

Public Meeting & Hearing
January 31, 2018

End of EPA Comment Period
March 15, 2018

Permits Effective Date
August 1, 2018

Public Comments Due
February 1, 2018

Permits Released
May 2018

Significant Changes – All Permits
Definition change

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

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

Part I.B. defn.
Significant Changes – All Permits

94

- Electronic Submittal & Reporting Rule Changes – Multiple Parts of each Permit
- Removed paragraph allowing 21 days to stabilize for temporarily ceased construction activities – Part IV.D.3.a.(1).(b).

Significant Changes – All Permits

95

- Covering of Waste Materials in accordance with 40 CFR Section 450.21(d)(2) – Part IV.D.3.c.(2)

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

Significant Changes – All Permits

96

- Removed BMPs for impaired waters that are no longer above and beyond – Part III.C.2.
  - Removed m. “Apply appropriate GDOT 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.”
  - Changed “anionic PAM” to “flocculants and coagulants” and “matting or blankets” to “slope stabilization”
- Revised and added new BMPs for Impaired Waters – Part III.C.2.a.-v.2
  - Sign and Online ES&PC Plan Available on website provided by the permittee
  - Additional Inspections during ES&PC Plan Phases
  - Installation of Post Construction BMPs with 80% TSS removal rates
Significant Changes – All Permits

Revised Inspection Requirements for Rainfall Monitoring – Part IV.D.4.a.(2)

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

Significant Changes – All Permits

Added Language for BMP Deficiencies or Failures – Part III.D.

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

1. When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be repaired within two (2) business days from the time of discovery;

2. When the repair requires a new or replacement BMP or significant repair, the installation of the new or modified BMP must be completed and the BMP must be operational by no later than seven (7) days from the time of discovery. If it is infeasible to complete the installation or repair within seven (7) days, the permittee must document why it is infeasible to complete the installation or repair within the seven (7) day timeframe and document the schedule for installing or repairing the BMPs and making the BMPs operational as soon as feasible after the seven (7) day timeframe.

Significant Changes – All Permits

Revised Continuing Obligations of Permittees – Part I.E.

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

Minor administrative changes (i.e. removed hyperlinks and redundant language)
Significant Changes – Infrastructure

00

GAR100002 – Infrastructure Permit
☐ Added Cable Barrier Exemption
☐ Added Fiber Optic Installation Exemption
☐ Revised Definition of Phase or Phased

Cable Barrier Exemption

01

Part 1.C.1.f. coverage under this permit is not required for discharge of storm water associated with infrastructure road construction projects that consist solely of the installation of cable barriers and guard rail for an existing facility within the existing rights-of-way. The construction activity shall, as a minimum, implement and maintain best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the “Manual for Erosion and Sediment Control in Georgia” (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity is being conducted. In order to be eligible for this exemption the project must comply with the following conditions: (1) no mass grading shall occur on the project, (2) the project shall be stabilized by the end of each day with temporary or permanent stabilization measures, (3) final stabilization must be implemented at the end of the project.

Fiber Optic Installation Exemption

02

Part 1.C.1.g. coverage under this permit is not required for discharge of storm water associated with infrastructure construction projects that consist of the installation of buried utility lines and comply with the following conditions: (1) solely installed via vibratory plow, (2) the conduit does not exceed 4 inches in diameter, and (3) occurs within an existing stabilized right-of-way. The construction activity shall, as a minimum, implement and maintain best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the “Manual for Erosion and Sediment Control in Georgia” (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity is being conducted. In order to be eligible for this exemption the project must comply with the following conditions: (1) no mass grading shall occur on the project, (2) no tree clearing, (3) no change in grade, (4) the project shall be stabilized by the end of each day with temporary or permanent stabilization measures, and (5) final stabilization must be implemented at the end of the project.
Revised Definition of Phase or Phased

Phase” or “Phased” means sub-parts, sections or segments of infrastructure construction projects sites where the sub-part, section or segment is constructed and stabilized prior to completing the entire construction site.

Summary

NPDES Permits govern land disturbance of one (1) acre or more and individual lots within a common development.

Notice of Intent has to be submitted fourteen (14) days prior to the commencement of construction activities.

All ES&PC Plan contents can be found in Part IV. of the permits.

Notice of Termination can only be filed once the site has reached final stabilization.

Questions?

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

GEOS
Back of Tab
Getting Started in GEOS

Presented by Jessica Jones, Licensing Technician, NE District Office, Georgia EPD

INTRODUCTION

• GEOS – Georgia EPD Online System
• How to get there
  • epd.georgia.gov
  • “GEOS Guidance”
• What to do before creating a submittal
  • Responsible Official (RO) vs Preparer
  • If you are a Preparer, RO must create an account in GEOS as well
• Create your account
  • “Storm Water Construction”

IMPORTANT POINTS

• 50+ Acres
• Submittal ID
• 14-day Clock
• RO vs Preparer
• Track Submittals
• Edit Pending
  • If it was not submitted, it will not receive coverage
• Submittal receipt
• LIAs
ADDITIONAL FUNCTIONS

- Public Portal
- Sampling Reports
- Manage Certification
  - Modify/Terminate/Reissue Coverage
- Contact EPD
- LIA Map
- Manage Consultants/Preparers
  - Delete/Add/Associate to Facilities
- Older Submittals

WHAT HAPPENS NEXT

- Partial vs Complete Submittal
- GEOS Automated Emails
- Agency Review
  - Location Map
  - ES&PC Plans when applicable
  - Fees when applicable

RESOURCES

- District Offices
  - 7 office locations
- EPD Website
- GEOS Site
- Instructions
- Submittal video
- Training
Questions?
Insert Tab

2016 Manual Update
Back of Tab
2016 UPDATES

Manual For Erosion and Sediment Control in Georgia

Chapter 1 - The Erosion and Sedimentation Act of 1975
- Minor revisions were made to content
- Existing pictures were replaced with new ones

Chapter 2 – Sediment and Erosion Control Processes, Principles and Practices
- Minor revisions were made to content
- Updated to include new Best Management Practices
- Existing pictures were replaced with new ones

Chapter 3 - Planning and Plans
- Minor revisions were made to existing content
- Added two new sections:
  - "Coordination of Erosion and Sediment Control with Post-Construction Stormwater Management"
  - "Low Impact Development"
- The Erosion and Sedimentation and Pollution Control Plan has been updated to reflect requirements of O.C.G.A 12-7-1 and the NPDES Permits
Manual For Erosion and Sediment Control in Georgia

Chapter 4 - Local Programs: Principles and Processes
- Minor revisions were made to existing content

Chapter 5 - Sources of Assistance and Resource Information
- Contact information and maps have been updated

Chapter 6 - BMP Standards & Specifications
- Revised existing BMPs
- Added new structural and vegetative BMPs
- Remove/addition mandatory and advisory conditions (should vs. shall) for BMP criteria

Appendix A-2: Joining the Equivalent BMP List: Background and Purpose
- The allowance of the efficient addition of proven BMPs that are at least as stringent as the Manual for Erosion and Sediment Control recognizes the dynamic growth and technological advancements in the area of BMP development.
- 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).
- The 2016 Manual includes a new process, found in Appendix A-2, in which new BMPs can be submitted to the GSWCC for inclusion on the Equivalent Best Management Practice List. This list is compiled from BMPs which have been previously approved by GSWCC and the GADOT prior to January 1st, 2016.
Appendix A-2: Joining the Equivalent BMP List: Alternative BMP Guidance

1. One page summary detailing why the alternative BMP is equivalent or superior to the conventional BMPs found in the 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.

Equivalent BMP Application Pre-notice

For a BMP to be considered for inclusion on the Equivalent BMP List, a Design Professional must have successfully completed the current process for Alternative BMPs as outlined by the GSWCC Guidance on at least 3 completed projects where EPD Notice of Termination Form has been filed.

Geographic dispersion of the project sites is encouraged.

The following materials should be submitted to the GSWCC:
- An Application to be on the Equivalent BMP List and a sample of the BMP.
- Three sets -- one for each time the Alternative BMP was used in three separate projects -- of the required documentation to use the Alternative BMP, based on the current approval process as outlined by GSWCC Guidance. Evidence of repeatable bench and field testing must be included as part of this documentation. Only approved ASTM standards or Overview Council-approved standards will be accepted for repeatable bench testing; working test methods will not be accepted.
- Three sets -- one for each time the Alternative BMP was used in three separate projects -- of the Notice of Termination Form for each project involving the Alternative BMP.
- A Certification Form signed by two individuals -- a Level II certified Design Professional and a Level 1A or Level 1B certified personnel -- who evaluated the BMP’s performance in the field stating that the Alternative BMP performed as expected throughout the life of each of the three projects.
- Three sets of installation photos -- one for each time the Alternative BMP was used -- of the Alternative BMP utilized in the three projects.
- Three sets of after-storm event photos -- one for each time the Alternative BMP was used -- of the Alternative BMP utilized in the three projects.
- Any post-storm event inspection records as well as inspection and enforcement records made by any federal, state, or local regulatory agency related to the specific BMP on the project.
Appendix A-2: Joining the Equivalent BMP List: Application and Removal Process

- Any individual, local government, or agency may submit to the GSWCC a request that a BMP be removed from the Equivalent BMP List.
- The request for removal is encouraged to focus on complaints independent of issues of ordinary installation and maintenance of the BMP.
- An applicant with a BMP removed from the Equivalent BMP List may seek review of the GSWCC’s determination from the GSWCC State Board.
- An Alternative BMP removed from the Equivalent BMP List may be returned to the list if an applicant successfully completes the Procedure for Applying for the Equivalent BMP List again.
Appendix A-2: Joining the Equivalent BMP List: Transition Period

- The Equivalent BMP List became effective January 1, 2016.
- Applications for BMPs to be included on the Equivalent BMP list will be based on NOI'S submitted on or after January 1, 2016.
- GSWCC’s approval of a BMP, however, does not ensure GDOT's adoption of that item into their QPL, design policies, or procedures.
- As of January 1, 2016, any product that seeks to be on the GDOT QPL List must first go through the Equivalent BMP process.
- The first update to the Equivalent BMP list occurred after March 31, 2016.

Chapter 6 – BMP Standards and Specifications for Land Disturbing Activities

Revised BMPs

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

Chapter 6 - Revised BMP

Matting and Blanket (Mb) – No longer a stand alone BMP, it is now called Slope Stabilization (Ss)
- This BMP now incorporates:
  - Hydraulic erosion control products (HECP)
  - Rolled erosion control products (RECP)
Tackifiers and Binders (Tb) was changed to Tackifiers (Tac).

Tackifiers are used as a tie-down for soil, compost, seed, straw, hay or mulch. Tackifiers hydrate in water and

Only anionic forms shall be used.

There are five types of Tackifiers. These blends take into account different blends of synthetic and/or organic polymers.

For general use, the tackifier must meet the specifications in the Manual. To be used in other BMP applications, such as Slope Stabilization or Channel Stabilization, please refer to that BMP for specifications.

Guar is an annual legume. It is an organic tackifier.

Sediment Barriers (Sd1)

- The 2016 Manual clarifies the use of Type A, B, C Silt Fences in Non-Sensitive and Sensitive Areas.
- Type C will be classified as Sensitive and Type A and B as Non-Sensitive.
- Type C definition was amended to include wire, or equivalent, reinforcement.
- The 2016 Manual clarifies that mulch berms and compost socks are types of sediment barriers.
Chapter 6 - Revised BMP

19

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

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

Chapter 6 - Revised BMP

20

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

Chapter 6 - Revised BMP

21

- Construction Exit (Co)
  - Pad Length – The gravel pad shall have a minimum length of 50 feet. When the construction is less than 50 feet from the paved access, the length shall be from the edge of existing pavement to the permitted building being constructed.
Chapter 6 - Revised BMP

Practices will be categorized as follows:

- Stone Check Dams (Cd-S)
- Straw-Bale Check Dams (Cd-Hb)
- Compost Filter Sock (Cd-Fs)

Most notable change in check dams is the installation of the straw bale check dam.
Chapter 6 - Revised BMP

Channel Stabilization (Ch)
- Products will be categorized as follows:
  - Category 1 (0-5 ft/sec) Vegetated Lining with Blankets
  - Category 2 (5-10 ft/sec) Vegetated Lining with TRM or Rip Rap Lining
  - Category 3 (> 10 ft/sec) Concrete Lining

Temporary Downdrain Structure (Dn1)
- For slopes steeper than 2:1, slope drains should be placed diagonally across the slope, extending the drain beyond the toe of the slope. Curve the outlet uphill and adequately protect the outlet from erosion.
Chapter 6 - Revised BMP

28

**Retrofit (Rt)**
- “A device or structure placed in front of a permanent stormwater detention pond outlet or roadway drainage structure to serve as temporary sediment filter.”

**Silt Control Gate (Rt-Sg)**
- May be used for temporary sediment storage on linear construction projects including roadway construction or maintenance, and utility line installation.
- Drainage area shall not exceed 50 acres.

Chapter 6 - Revised BMP

29

An approved Silt Fence has not been attached to the structure.

Chapter 6 - Revised BMP

30

**Temporary Stream Crossing (Sr)**
- Revised language

“Temporary stream crossings should not be used on streams with drainage areas greater than one square mile (640 acres), unless specifically designed to accommodate the additional drainage area by the design professional.”
Chapter 6 – BMP Standards and Specifications for Land Disturbing Activities

New BMPs

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

Chapter 6 New BMPs

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

Flocculants and Coagulants (Fl-Co)
Chapter 6 New BMPs

Floating Surface Skimmer (Sk):

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

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

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

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

There is no expectation for all manufacturers for skimmers, they please utilizing a trade name is the accepted amount. Their name would be the manufacturer.
Chapter 6 New BMPs

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

Chapter 6 New BMPs

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

* shown in ft.
Chapter 6 New BMPs

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

\[ V = 0.4 \times A \times D \]

1. Temporary Sediment Trap - Overflow (Sd4-A)
- An overflow temporary sediment trap is limited to small areas less than 1 acre.
- The maximum life span of an overflow trap is 6 months.
- Silt fence, straw bale barriers or grass filter strips are used to “polish” the overflow water as it leaves the sediment trap.

Sd4-A Detail
Chapter 6 New BMPs

2. Temporary Sediment Trap – Combination Outlet (Sd4-B)
   - The combination outlet uses straw bales and silt fence to dewater the sediment trap.
   - Proper installation and staking of the straw bales, and wire backing on the silt fence are required for the materials to resist 1 foot or more of ponded water.
   - The combination straw bale and silt fence outlet is limited to 1 acre total drainage area, and has a life span of less than 1 year.

3. Temporary Sediment Trap – Rock Outlet (Sd4-C)
   - The rock outlet relies on filtering through layers of aggregate, rock or riprap material to dewater the sediment trap.
   - It is the most sturdy of the sediment trap designs and generally requires less maintenance.
   - It can be used for drainage area up to 5 acres and has a life span of 1 year.
Turbidity Curtain (Tc)
- A floating or staked barrier installed within the water. It may also be referred to as a floating boom, silt barrier or silt curtain.
- Not to be used as sediment storage.
- Turbidity Curtain is installed to minimize turbidity and silt migration from work occurring within the water or as a supplement to perimeter control BMPs at the water’s edge.
- Silt or turbidity is confined to the area within the boundary created by the installation, such that suspended particles drop out of the water column over time.
Chapter 6 New BMPs

Floating Turbidity Curtains Tc-F

Staked Turbidity Curtains Tc-S

Chapter 6 New BMPs

To protect desirable trees from injury during construction activity.

Tree Protection Zones:
(1) Measure the diameter of the tree trunk in inches at 4.5 feet from the ground. This is called the Diameter Breast Height or DBH.
(2) Multiply this value by 1.5. This result is the diameter of the root protection zone in feet. This is also considered the critical rooting distance.

“Tree Protection (Tr)”

“If it’s green, it’s clean”

BMPs are used in series to provide a defense against erosion on land disturbance sites using both vegetative and structural measures.
Back of Tab
#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.

NPDES Construction Stormwater General permits were revised May 2018 and will become effective August 1, 2018

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. The Level II certification must be issued to the Design Professional whose signature and seal are on the Plan.
#3

4

- 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.

#4

5

- 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
555-555-5555

#5

6

- Provide the name, address, email address, and phone number of primary permittee or tertiary permittee.
- May be shown on cover sheet, ES&PC Plan, or under ES&PC notes.
#6
- Note total and disturbed acreage of the project or phase under construction.
- Must be shown on ES&PC Plan or under ES&PC notes.

**OVERALL SITE AREA:** 43.8 ACRES  
**TOTAL DISTURBED AREA:** 9.7 ACRES

#7
- Provide the GPS location of the Construction Exit for the site. Give the Latitude and Longitude in decimal degrees.
- GPS location of the Construction Exit must be shown on cover sheet and may also be shown on ES&PC Plan sheets and ES&PC notes. It must match the NOI.

![Co CONSTRUCTION EXIT/ENTRANCE  33.1882° N  84.8602° W](image)

#8
- Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
- The initial Plan date should be shown on all pages. With each resubmittal the revision date and the entity requesting revisions should be shown on cover sheet and each sheet that has been revised.

**ISSUE DATE** 14 MAR 2014

<table>
<thead>
<tr>
<th>REVISIONS:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE DATE</td>
<td></td>
</tr>
<tr>
<td>14 MAR 2014</td>
<td></td>
</tr>
</tbody>
</table>
#9

- Description of the nature of construction activity.
- Provide a description of the existing site and a description of the proposed project. These must be shown on ES&PC Plan or under ES&PC notes.

The site is currently developed and has one structure on the property. The proposed construction consists of an access drive and grading for a future expansion. The proposed construction will also include landscaping, and a stormwater conveyance system.

#10

- Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
- Site location must be delineated showing surrounding area roads and highways. If the project is being done in phases, each individual phase must be delineated and labeled. This information is important for Plan reviewers if a site visit is needed, or if the site needs to be located on another map.

#11

- Identify the project receiving waters and describe all sensitive 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.
#12

- Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on page 23 of the permit.
- The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes:
  
  "I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

#13

- Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on page 22 of the permit.
- The following statement and the signature of the design professional must be shown on the ES&PC Plan or under ES&PC notes:

  "I certify that the permittee's Erosion, Sedimentation, and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100003."

#14

- Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."
- The Plan must include a statement indicating that the primary permittee must retain the design professional who prepared the Plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after their installation and to report the results of the inspection to the primary permittee within two (2) business days of the inspection report from the design professional unless otherwise indicated by the conditions set forth in the permit.

---

**Design Professional 7-Day Inspection Certification**

Date of Inspection: ____________________

Certified the site was in compliance with the design professional requirements.

[Signature]

Design Professional: ____________________

Date: ____________________

The deficiencies must be addressed within 10 days of receipt of the inspection report from the design professional unless otherwise indicated by the design professional unless otherwise indicated by the conditions set forth in the permit.
Clearly note the statement that “Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland-upland interface without first acquiring the necessary variances and permits.”

See Part IV. (i) - (iv) on pages 23-26 of the permit and show under ES&PC notes.

Provide a description of any buffer encroachments and indicate whether a buffer variance is required.

When the project requires an approved buffer variance from the GA EPD, an indication shall be shown on the ES&PC Plan. A description of the encroachment activity must be shown on the ES&PC Plan or under ES&PC notes.

Clearly note the statement that “Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.”

See Part IV. C. on page 29 of the permit. This can be clarified in a narrative and shown under ES&PC notes. Revisions or amendments should be submitted to the Local Issuing Authority for review.
#18

- Clearly note the statement that “Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit.”

- The Plan must include a description of how waste materials, including waste building materials, construction and demolition debris, concrete washout, excavated sediment, etc., will be properly disposed of. Any disposal of solid waste to waters of the State is prohibited unless authorized by a Section 404 permit.

#19

- Clearly note the statement that “The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities.”

- Must be shown on ES&PC Plan or under ES&PC notes.

#20

- Clearly note the statement that “Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.”

- Must be shown on ES&PC Plan or under ES&PC notes.
#21
- Clearly note the statement that “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.

#22
- Indication that the applicable portion of the primary permittee 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.

#23
- Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the Permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.
If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 23 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.

- List of TMDL Implementation Plans can be viewed on the GAEPD website, www.gaepd.org
- The TMDL Implementation Plan for sediment should be delineated on the ES&PC Plan.

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 for the concrete wash-down of tools, concrete mixer chutes, hoppers, and the rear of the vehicles on the project site delineate the location of the area provided for washing and provide detail of BMPs that will be used. If the project does not allow for the concrete wash-down on the project site, note that on the Plan.

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.
#27 (New checklist Item)

- Description of practices to provide cover for building materials and building products on site.
  - The Plan must contain a description of measures, such as plastic sheeting or temporary roofs, to cover building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials in order to minimize exposure to precipitation and to stormwater.

#28

- Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed.
  - The Plan must contain a description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. These may include storm water detention and retention structures, use of vegetated swales and natural depressions for flow attenuation or a combination of these practices (sequential systems). The Plan must also include a technical explanation of the basis used to select these practices where flows will exceed pre-development levels. The Plan must indicate that velocity dissipation devices will be placed at discharge locations and along the length of any outflow channel in order to provide a non-erosive flow so that the natural physical and biological characteristics and functions of the water course are maintained and protected. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act.
  - Note: The permittee is only responsible for the installation and maintenance of storm water management devices prior to final stabilization of the site and not the operation and maintenance of such structures after construction activities have been completed.

#29

- Description of the practices that will be used to reduce the pollutants in storm water discharges.
  - The Plan must identify all potential sources of storm water pollution expected to be present on the site and provide a narrative explaining how the pollutants will be minimized in the storm water discharges.
#30

- Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e. initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

- Activity schedule must be site specific. The narrative description and timeline for each phase of construction may be shown on ES&PC Plan sheet or under ES&PC notes.

#31

- Provide complete requirements of Inspections and record keeping by the primary permittee or tertiary permittee.

- The Plan must include all of the Inspections and record keeping requirements of the primary permittee as stated in Part IV.D.4.a. – c. on pages 34-40 of the Permit. The complete Inspection and record keeping requirements shall be shown on the Plan under ES&PC notes.
### #32

- **Provide complete requirements of Sampling Frequency and Reporting of sampling results.**
- **See Section IV.D.6.d on pages 43-44 Sampling Frequency and Section IV.E page 44-45 Reporting in the permit. Complete sampling frequency and reporting requirements are to be shown on the Plan under ES&PC notes.**

### #33

- **Provide complete details for Retention of Records as per Section IV.F of the permit.**
- **See Section IV.F page 45 Retention of Records in the permit. Complete details of Retention of Records are to be shown on the Plan under ES&PC notes.**

---

1. **Retention of Records**
   - The program operator must keep all records of the stormwater the required in accordance with the EPA's regulations. These records must be maintained for at least 3 years after the sampling is completed.
   - All records must be maintained in a secure location and made available for inspection by regulatory agencies on demand.
   - The records must include a detailed description of the sampling process, including the type of equipment used, the location of the sampling site, the date of sampling, and the results of the analysis.

---

Note: Additional details and requirements may apply depending on specific local regulations and permits.
#34

- Description of analytical methods to be used to collect and analyze the samples from each location.
- This narrative must be shown on the Plan under ES&PC notes and shall include quality control/assurance procedures and precise sampling methodology for each sampling location.

#35

- Appendix B rationale for NTU values at all outfall sampling points where applicable.
- When the permittee has determined that some or all outfalls will be monitored, a rationale must be shown on the Plan under ES&PC notes which includes the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e. trout stream or supporting warm water fisheries).

#36

- 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 location 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.
A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase.

The Plan must be shown in a minimum of three phases with each phase shown on a separate sheet. Initial phase of the Plan must include the required sediment storage, 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, temporary access roads, 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 protection, additional silt fence as needed, any revised sediment storage needed or drainage basins are altered, outlet protection, inlet protection if applicable, existing or new storm drains, diversions, temporary access roads, etc. Final phase of the Plan should show the 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, 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. The Plan will include appropriate staging and access requirements for construction equipment.

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, which may include, but are not limited to, state water's buffers (which a double row of Type S sediment barriers must be shown adjacent to wetlands, ten with an extreme grade, etc.).

The graphic scale and north arrow must be clearly shown on all phases of the ES&PC Plan sheets.
#40

- Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

<table>
<thead>
<tr>
<th>Map Scale</th>
<th>Ground Slope</th>
<th>Contour Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 in. = 50 ft</td>
<td>Flat 0-2%</td>
<td>1 or 2</td>
</tr>
<tr>
<td>larger scale</td>
<td>Rating 2-8%</td>
<td>2.5 or 10</td>
</tr>
<tr>
<td>Step 3%+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- The initial, intermediate, and final phase sheets of the Plan must show the proposed grade in bold contour lines with the above intervals overlaying the original contour lines. Elevations of both the existing and proposed contour lines must be shown.

#41

- Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the GSWCC).
- Please refer to the Alternative BMP Guidance Document found at www.gswcc.org

#42

- Use of alternative BMP for application to the Equivalent BMP List.
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 areas of impact.

- The State Law of Georgia mandates these minimum undisturbed buffers, but the Local Issuing Authority 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.

Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site. All state waters and wetlands 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.

- If the Local Issuing Authority requires an undisturbed buffer of wetlands, delineate required buffer.

Delineation and acreage of contributing drainage basins on the project site.

- All existing drainage basins on the project site and their acreage must be delineated on the existing conditions and/or on the initial phase of the Plan. As the basins are altered or new ones created during intermediate and final phases, the new basins and their acreage must be delineated throughout each phase of the Plan.
#46

- Provide hydrology study and maps of drainage basins for both pre and post developed conditions.
- Hydrology study and drainage maps should be separate from the Plan. Maps should include each individual basin draining to, through and from the project site, with each one delineated, labeled and showing its total acreage.

---

#47

- An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
- The Plan must provide both pre and post construction estimates of the runoff coefficient or peak discharge flow for the site. This can be in the form of a hydrologic study so long as that study is made a part of the Plan and accompanies the Plan. A complete hydrologic study is not required element of the Plan, only the pre and post construction estimates of the runoff coefficient or peak discharge flow for the site.

---

#48

- Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
- The storm-drain pipe and weir velocities must show the flow characteristics of the pipe at full flow including pipe diameter, flow rate (cfs), velocity (fps), and tailwater conditions. This information should be shown in a chart on the storm-drain profile sheet, ES&PC intermediate phase sheet or 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 on a chart on ES&PC intermediate and/or final phase sheet or ES&PC detail sheet with outlet protection. Velocity dissipation devices shall be placed at all discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological functions and characteristics are maintained and protected.

---
#49
- Soil series for the project site and their delineation.
  - Soil series delineations are required for the Plan review and can be found on the NRCS website. 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.

<table>
<thead>
<tr>
<th>Soil Series</th>
<th>Texture</th>
<th>Slope</th>
<th>Soils Surveyed</th>
<th>Delineated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil A</td>
<td>Clay</td>
<td>Steep</td>
<td>Level Three</td>
<td>Yes</td>
</tr>
<tr>
<td>Soil B</td>
<td>Sand</td>
<td>Flat</td>
<td>Level Four</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#50
- The limits of disturbance for each phase of construction.
  - The limits of disturbance for the initial phase should delineate only the area required to be disturbed for the installation of perimeter control and initial sediment storage. The intermediate phase should delineate the entire area to be disturbed for that phase, such as grading, drainage, utilities installed, etc. The final phase should delineate any additional areas to be disturbed such as individual lots, etc.

#51
- Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permits are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
For each common drainage location, a temporary (or permanent) sediment basin (Sd3, Sd4, Rt, or excavated Sd2) providing at least 67 cubic yards of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 67 cubic yards of storage per acre does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed and the sediment basin. Sediment basins may not be appropriate for some common drainage locations and a written justification explaining the decision not to use sediment basins must be included in the Plan. Worksheets from the Manual must be completed and shown on the Plan or attached to the Plan for each temporary sediment basin designed for the project. All cross sections and details required per the Manual for Sd3’s must be shown on the ES&PC detail section of the Plan. Completed worksheets from the Manual must be shown on the Plan for each retrofit and excavated inlet sediment trap. When the design professional chooses to use equivalent controls the calculations used to obtain the required 67 cubic yards per acre drained must be included in the Plan. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.

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.

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 BMP’s 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 BMP’s that must be included on the ES&PC Plan or detail sheet.
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.

Questions?
GSWCC
Urban Program
4310 Lexington Road
Athens, GA 30605
(706) 552-4474
Insert Tab

Semi-Annual Report
Back of Tab
Semi-Annual Reporting

HB 463 specifies the Georgia Soil and Water Conservation Commission (GSWCC) is charged with conducting semi-annual overviews of all Local Issuing Authorities (LIA).

To comply with this mandate, GSWCC has developed the semi-annual report form that must be completed by all LIAs.

The reports will be reviewed to determine if a more in-depth overview is required.

If it is deemed necessary to conduct a more in-depth overview, you will be contacted by the GSWCC Urban Water Resources Program.

Semi-Annual Reporting

- Semi-annual reports must be submitted according to the following timeline:
  - Reporting Period 1 (July 1 - December 31) Submitted by January 31
  - Reporting Period 2 (January 1 – June 30) Submitted by July 31
Semi Annual Reporting

4

- Plan Review Summary:
  - This part is to be completed only by the Local Issuing Authorities that have a Memorandum of Agreement (MOA) with their District allowing them to review and approve their own ES&PC Plans. If the Local Issuing Authority does not have an MOA with its District, omit this section and skip down to Permitting Summary.

5

- ES&PC Plan Reviewers
  - Total Number of ES&PC Plan Reviewers Employed by the LIA
  - Total Number of ES&PC Plan Reviewers Employed by the LIA that are GSWCC Level II Certified
  - Total number of ES&PC Plan Reviewers employed the Local Issuing Authority that have passed a GSWCC Approved Level II Certification Class.

6

- ES&PC Plans Reviewed
  - Total Number of ES&PC Plans Reviewed for Initial Submittals:
    - This total is for the number of plans that have been reviewed for the first submittal only. Do not include plans that have been reviewed after revisions have been made to the original plan that had been submitted.
  - Average Turnaround Time for Review of Initial ES&PC Plans:
    - This shall be the average number of calendar days taken by the Local Issuing Authority to review the total number of plans reviewed on the initial submittal.
### Semi Annual Reporting

#### Plan Review

1. **Total Number of ES&PC Plans Reviewed that Were Revised and Re-submitted:**
   - This is for the total number of reviews completed of plans that have been revised and resubmitted. Each review should be counted regardless of how many times a project plan has been revised and re-submitted.

2. **Average Turnaround Time for Review of Revised Plans That Were Re-submitted:**
   - This shall be the average number of days taken by the Local Issuing Authority to review the total number of revised plans that were re-submitted for review.

3. **Total Number of ES&PC Plans That Were Denied and Sent Back for Revision:**
   - This shall include the plans denied on the initial review as well as the total number of plans denied after revisions.

4. **Total Number of ES&PC Plans Approved:**
   - Include plans approved on initial submittal and re-submittals.

---

#### Permitting Summary

**Permits Issued**

1. **Total Number of Land Disturbance Activity Permits Issued by the LIA for Primary Permittees of Infrastructure Construction Projects:**
   - Includes the construction, installation and maintenance of roadway projects and conduits, pipes, pipelines, substations, cables, wires, trenches, vaults, manholes and similar or related structures or devices for the conveyance of natural gas, liquid petroleum products, electricity, telecommunications, water or sewage that are not part of a common development.
   - A Primary Permittee is the Owner or the Operator or both of a tract of land for a construction project subject to the NPDES Permit.

2. **Total Number of Land Disturbance Activity Permits Issued by the LIA for Primary Permittees of Stand Alone Construction Projects:**
   - Construction activities that are not part of a common development where the primary permittee chooses not to use secondary permittees. These may include schools, churches, restaurants, etc. where the primary permittee may use subcontractors, but no secondary permits.

3. **Total Number of Land Disturbance Activity Permits Issued by the LIA for Secondary Permittees of Common Development Construction Projects:**
   - A secondary permittee is an owner, individual builder, utility company, or utility contractor that conducts a construction activity within a common development.

4. **Total Number of Land Disturbance Activity Permits Issued by the LIA for Tertiary Permittees of Common Development Construction Projects:**
   - A tertiary permittee is either the Owner or Operator of the remaining lots within a common development conducting construction activity where the primary permittee and all secondary have submitted a Notice of Termination.

5. **Total Number of Land Disturbance Activity Permits Issued by the LIA:**
   - Total of all LDA permits issued.
Semi Annual Reporting
Permitting Summary

Acres Disturbed

- Total Number of Disturbed Acres Permitted Within the LIA’s Jurisdiction: Total disturbed acreage for all projects permitted by the LIA.

Semi Annual Reporting
Inspection Summary

Inspectors

- Total Number of ES&PC Inspectors Employed by the LIA:
  - Total of all inspectors employed by the LIA who are responsible for inspections of ES&PC compliance.

- Total Number of ES&PC Inspectors Employed by the LIA That are GSWCC Level 1B Certified:
  - Total of all inspectors employed by the LIA who are responsible for inspections of ES&PC compliance that have successfully completed a GSWCC Level 1B certification course.

Semi Annual Reporting
Inspection Summary

Site Inspections

- Total Number of ES&PC Inspections Performed on Permitted Infrastructure Projects:
  - Includes the construction, installation and maintenance of roadway projects and conduits, pipes, pipelines, substation, cables, wires, trenches, vaults, manholes, and similar or related structures or devices for the conveyance of natural gas, liquid petroleum products, electricity, telecommunications, water, or sewage that are not part of a common development.

- Total Number of ES&PC Inspections Performed on Stand Alone Projects:
  - Construction activities that are not part of a common development where the primary permittee chooses not to use secondary permittees.

- Total Number of ES&PC Inspections Performed on Permitted Common Developments for the Primary Permittee:
  - 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. The primary permittee is the owner or operator or both of the common development.
Semi Annual Reporting
Inspection Summary

13

- Total Number of ES&PC Inspections Performed on Permitted Common Developments for a Secondary Permittee:
  - 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. The secondary permittee is an owner, individual builder, utility company, or utility contractor that conducts a construction activity within a common development.

- Total Number of ES&PC Inspections Performed on Permitted Common Developments for a Tertiary Permittee:
  - 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. A Tertiary permittee is either the Owner or Operator of a remaining lot(s) within a common development conducting construction activity where the primary permittee and all secondary have submitted a Notice of Termination.

- Total Number of ES&PC Inspections Performed on Permitted Projects by the LIA:
  - Total number of all inspections completed by the LIA.

Semi Annual Reporting
Enforcement Summary

14

Non-Compliance

- Total Number of ES&PC Inspections Resulting in a Notice of Violation or Notice to Comply:
  - Total of all site inspections which resulted in a notice of violation or a notice to comply, including stand alone, infrastructure, and common development construction projects.

- Total Number of ES&PC Inspections Resulting in a Stop-Work Order:
  - Total of all site inspections which resulted in a stop-work order, including stand alone, infrastructure, and common development construction projects.

- Total number of Land Disturbance Activities Issued a Citation for ES&PC Non-compliance:
  - Total of all site inspections which resulted in a citation, including stand alone, infrastructure, and common development construction projects.

- Total Amount of Fines Collected for ES&PC Non-compliance:
  - Includes stand alone, infrastructure, and common development construction projects.

Semi Annual Reporting
Complaint Summary

15

Complaints Received by the LIA

- Total Number of ES&PC Complaints Received by the LIA: For all land disturbing activities including stand alone, infrastructure, and common development construction projects.

- Total Number of ES&PC Complaints Received by the LIA That were Resolved: For all land disturbing activities including stand alone, infrastructure, and common development construction projects.

- Average Amount of Time Taken by the LIA to Resolve ES&PC Complaints: For all land disturbing activities including stand alone, infrastructure, and common development construction projects.

- Total Number of ES&PC Complaints Referred to EPD That the LIA was Not Able to Resolve: For all land disturbing activities including stand alone, infrastructure, and common development construction projects.
Insert Tab

Overview
Back of Tab
CONDUCTING AN E&SC
OVERVIEW

What is an Overview & How is it done?

LIA Oversight

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

O.C.G.A. 12-7-8(b)(2)
Performance Measures 500 points

Administrative 200 points

Program Administration and Record Keeping 30 points

- Availability and quality of logs: Permits, Complaints, Inspections, and Enforcement (16 pts)
- Issuing Authority does not issue permit until all variances, permits and approvals, including NOI, are obtained (6 pts)
- Issuing Authority informs permittee of Local Ordinances (4 pts)
- ES&PC Ordinance is current with state minimum requirements (4 pts)
Qualification and Training  

7

- Percentage of all ES&PC Inspectors that are GSWCC Level 1B Certified
  - 100% = 30 pts
  - 75-99% = 24 pts
  - 50-74% = 18 pts
  - 25-49% = 12 pts
  - <25% = 6 pts

Example: 8 of 11 inspectors are 1B Certified 8/11 = 73% 18 points

Complaint Resolution  

8

- Promptness of response
  - < 8 hrs = 15 pts
  - 8-12 hrs = 12 pts
  - 12-24 hrs = 9 pts
  - 24-48 hrs = 6 pts
  - > 48 hrs = 3 pts

- Promptness of complaint resolution
  - < 24 hrs = 15 pts
  - 2-5 days = 12 pts
  - 5-10 days = 9 pts
  - > 10 days = 6 pts

Inspection Frequency and Level of Enforcement  

9

- Ratio of sites to inspector
  - <20 = 15 pts
  - 20-30 = 12 pts
  - 30-40 = 9 pts
  - > 40 = 6 pts

- Ratio of disturbed acreage to inspector
  - <20 = 15 pts
  - 20-30 = 12 pts
  - 30-40 = 9 pts
  - > 40 = 6 pts

- Frequency of each site inspection (At least once a week and after every rainfall event = 30 pts)
Reporting                          50 points

10
- Semi-annual reports submitted to GSWCC on schedule (25 pts)
- Monthly performance reports submitted to the District at the regularly scheduled meetings during the last twelve months (25 pts)

Site Conditions                          300 points
Site is permitted with permit properly displayed on site 40 pts

- Valid permit is displayed on site (40 pts)
- No valid permit (0 pts)

Approved set of stamped plans on site 40 pts

- Approved set of stamped plans on site (40 pts)
- Plans not on site upon arrival, but contractor brings approved plans to site in a timely manner (40 pts)
- Plans on site - but not approved (0 pts)
- No approved stamped plans (0 pts)

Project site matches the approved plans 30 pts

- Site 100% matches the plan (30 pts)
- Site somewhat matches the plan (range between 0-30 pts)
- Plan nowhere close - am I looking at the right plan? (0 pts)
Proper installation of BMP’s 10 pts

16

☐ Count up all the BMP’s installed in the field and divide by number installed correctly.
   ☐ Example
     □ 13 BMP’s were found in the field during the overview
     □ 8 were installed correctly.

This would mean 62% of the BMP’s were installed per the details, so this site would be awarded 6 points.

Proper maintenance of BMP’s 10 pts

17

☐ Again, count up all the BMP’s you saw, same number as last section and divide by the number that do not need maintenance.
   ☐ Example
     □ 13 BMP’s installed, 3 do not need maintenance; therefore 23% of site has been properly maintained. This site would receive 2 pts for this section.

State waters buffer encroachment without proper variance 40 pts

18

☐ No buffer encroachment, or buffer encroachment with proper variance or exemption (40 pts)
☐ Buffer encroachment with enforcement actions taken (20 pts)
☐ Buffer encroachment no actions taken as of day of overview (0 pts)
Amount of erosion on site 10 pts

- Easiest to think about in smaller areas
- Break it down by the drainage basins for the specific phase and give average of that area that does not have erosion problems.
- Example
  - drainage basin A is about 80% fine
  - drainage basin B is about 90% fine
  - drainage basin C has not started yet and is 100%

Amount of sediment leaving site 40 pts

- Is sediment leaving site?
- Where to?
- How much?

Site is in compliance with State General Permit 40 pts

- Is the site in compliance with the appropriate permit? Example: Advanced Auto Parts – Stand Alone
- Is the proper documentation on site? i.e. Inspection records, NOI’s, site compliance, BMP compliance, Citations, Statewaters, Initial BMP letter within 7 days of completion, waste disposal and sanitary sewer, or septic tank regs. etc.
Required enforcement action taken 40 pts

☐ When violations are found, is the LIA taking the appropriate actions? Written warnings, stop work orders, fines?
  ☐ Example: Site has buffer encroachment
    ☐ Is this the first time LIA has seen it?
    ☐ Has there been a stop work order posted?
    ☐ Has remediation taken place?

SITE 1

Permit and Approved Plans on Site 24

☐ Permit on site ✔
☐ Approved set of stamped plans on site ✔
☐ Inspection records
☐ 7-day letter signed
Observations

25
- Concrete washout area noted on plan was missing from site – evidence of washout occurring around site

26
- Maintenance of silt fence needed - not maintaining 80% of height & clean-out at half-full

27
- Rills indicate a need for temporary stabilization
Observations
28
- Construction exit should be refreshed

Observations
29
- Appearance of sediment leaving site (enforcement action taken by LIA prior to site visit)

What is your score for this site?
30

<table>
<thead>
<tr>
<th>No.</th>
<th>Item Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Site is maintained with minimal debris in view</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Proper installation of BMPs</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Proper maintenance of BMPs</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Site specific BMPs in good working condition</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Control of erosion on site</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Amount of sediment being site</td>
<td>35</td>
</tr>
<tr>
<td>7</td>
<td>Site-specific BMPs in place, surrounded</td>
<td>40</td>
</tr>
<tr>
<td>8</td>
<td>Requested enforcement action taken</td>
<td>40</td>
</tr>
</tbody>
</table>

Total = 287
**SITE 2**

**Permit and Approved Plans on Site**
- Permit on site: X
- Approved set of stamped plans on site: ✓
- Inspection records
- 7-day letter signed

**Observations**
- RECP installed incorrectly

**Sediment pond**
Observations

34
- This Cd-Hb has erosion occurring underneath – needs to be properly installed with splash pad and be maintained
- Missing several Cd-Hb according to ES&PC Plan

35
- Silt fence not trenched in - not properly installed
- Double row Sd1-S silt fence should be installed along state waters per ES&PC Plan
- Silt fence is encroaching on 25’ buffer – needs to follow contour as per ES&PC Plan

What is your score for this site?

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cd-Hb</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Silt fence</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Project site enclosure</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Project site buffer</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Project site ES&amp;PC Plan</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Silt fence buffer</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>Project site ES&amp;PC Plan</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Project site ES&amp;PC Plan</td>
<td>40</td>
</tr>
<tr>
<td>9</td>
<td>Project site ES&amp;PC Plan</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>Project site ES&amp;PC Plan</td>
<td>20</td>
</tr>
</tbody>
</table>

Total = 183
Final Score = 409

Admin Score = 174

Average Site Conditions Score
Site 1: 287
Site 2: 183

\[
\frac{287 + 183}{2} = 235
\]

Take aways...

- Is the site in compliance?
- Is the LIA fulfilling its duties in and out of the office?
- Was the site evaluated fairly and consistently?
- Has the approved plan been implemented properly?
- Are initial sediment storage and perimeter BMPs in place?
Questions?

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

GSWCC