NPDES - Construction Permitting & Compliance

Technical Session
December 05, 2007

By
Srinivas Valavala, M.S.
Stormwater Manager
Richland County
Qualified Local Program (QLP)

Richland County is an official Delegated Qualified Local Program for Construction site stormwater runoff control and post-construction stormwater management in new development and re-development per SC Water Pollution Control Permits Regulation 61-9-122.44(s) since Sept 1, 2007.

SC DHEC Bureau of Water delegated the program to Richland County

Delegation is to
- Streamline program implementation
- Increase in administrative efficiency
- Achieve better co-ordination between State and Local Governments
- Localize and centralize the provisions to regulated Municipalities
- Strengthen local body programs
- Simplify reach of requirements for Construction site operators
- Tailor programs to meet local needs
Public Entities Involved

- **Delegator** – SCDHEC
- **Delegatee** - Richland County (RC) as a regulated Municipality
- **Co-permittees** - Town of Arcadia Lakes and City of Forest Acres are required for Phase II construction minimum measures. RC had agreements with them for performing their minimum measures and included them in our QLP.
- **Jurisdiction Limits** - To avoid any confusion over jurisdictional issue, RC recently entered into Inter-Governmental Local Agreement with Town of Irmo clarifying the responsibilities.
Phase I Minimum Control Measure:

*Construction Site Stormwater Runoff Control*

Regulated Phase I Richland County has program in place. QLP is enhancement to the existing program.

Added Phase II Minimum Control Measures to the program. Primary responsibility being pursuing the application process through RC itself (along for co-permittees).
Phase I Minimum Control Measure: 

Construction Site Stormwater Runoff Control Main Components

- Local ordinance specifying legal authority, BMP requirements, operation, maintenance sanctions, penalties for non-compliance
- Inventory of construction sites with relevant info and inspection tracking
- Plan review and approval process, procedures, guidance and checklists
- Inspections and enforcement mechanisms
- Prioritization of construction sites (e.g., by impacts, proximity to impaired water bodies etc.)
- Public Education (Seminars, Outreach etc)
- Training of staff (Plan review, CEPSCI etc)
- Training of construction operators, engineers, developers, contractors, plan preparers, construction site managers, construction workers
- Record Keeping of Plan review, inspections and enforcement
Phase II Minimum Control Measure:

*Construction Site Stormwater Runoff Control* (Source EPA)

Regulated Municipalities must:

- Develop a program to reduce pollutants in stormwater from construction activities that disturb > 1 acre*
- Have an ordinance, or other regulatory means, with penalties, that requires appropriate E&S controls and controls for other construction site wastes
- Have procedures for:
  - Site plan review to consider water impacts
  - Site inspection & enforcement of control BMPs
  - Receiving & considering public input
  - Determining appropriate BMPs for SWPPPs

*Includes smaller sites that are part of a larger, common plan of development*
Phase II Minimum Control Measure:

*Construction Site Stormwater Runoff Control* (Source EPA)

**RECOMMEND:**

- Procedures for site plan review should include review of individual pre-construction site plans
  - BMPs, water resource impacts can be addressed early
- Procedures for site inspections and enforcement can include steps to identify priority sites, based on the nature of the site, topography, soil characteristics, and receiving water quality
- Provide appropriate education and training for construction site operators
  - Reduces problems, improves compliance, establishes standard expectations ("predictability") regarding inspections, enforcement, etc.
NPDES QLP Permitting for Stormwater Discharges in Richland County

Who are required to apply?

- Development in un-incorporated areas of Richland County
- Development in City of Forest Acres and Town of Arcadia lakes (Co-permittees of RC)
- All construction sites or other activities (redevelopment etc) which disturbs one or more acres of land.
- Includes small sites that are part of larger or common plan of development which ultimately disturbs one or more acres. (e.g. half-acre lot in a 5 acre subdivision)
Who is Permit Applicant?

- Construction Site Operator
- Site “operator” is commonly defined as:
  - Person with control over plans and specifications
  - Person with day-to-day control of site activities
  - Usually the owner, developer, or contractor
NPDES QLP Permitting for Stormwater Discharges in Richland County

Why to apply?
- It is LAW…
- To comply with the requirements in NPDES stormwater permits
- To protect water quality
- To avoid enforcement
Regulations and Guidelines

- SCDHEC NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities (SCR100000&SCR030000)
- Specific design criteria, technical standards and specifications contained in SC Reg. 72-300 et.seq.
- SC Stormwater Management and Sediment Reduction Regulations.
- Compliance with State/National Rules
- Other Incorporated Criteria, Standards, and Specs

Delegated QLP program Regulations
- RC Design Standards/Specifications (roads, stormwater etc)
- RC Land development code
- RC Ordinances
- RC BMP Manual
- Require SWPPPs, BMP implementation, inspections, enforcement, etc.
- Coordinate oversight with state NPDES agency
- Compliance with Local Regulations
Reason for Guidelines

- Phase I and II communities are encouraged to work together to make use of QLP
- To control Sediment transfer which is one of the most prevalent culprit in water quality
- To control other construction wastes like cement, paint, fuel, oil, etc...
- To control flooding & ensure stormwater regulations pre-construction runoff = post-construction runoff
- To ensure water quality

Stream Stress…

Causes flooding and deteriorates water quality

Photo Copyright 1999, Center for Watershed Protection
Reason for Guidelines

To Control Pollutants (like below) from entering streams

- Sediments
- Nutrients (nitrogen, phosphorous, etc.)
- Pathogens (bacteria, viruses, etc.)
- Oxygen-Demanding Substances (plant debris, animal wastes, etc.)
- Petroleum Hydrocarbons (oil, grease, solvents, etc.)
- Heavy Metals (lead, zinc, cadmium, copper, etc.)
- Toxic Pollutants
- Floatables (litter, yard wastes, etc.)
- Synthetic Organics (pesticides, herbicides etc.)
- Physical Parameters (salinity, elevated temperature, pH etc.)
How to Apply

- **Notice of Intent for Land Disturbance Permit Application**
  - NOI for Stormwater Discharges from Large and Small Construction Activities

- **Plan Review**
  - Stormwater Management and Sediment and Erosion Control Plan Review Checklist for Design Professionals

- **Inspections by Site Operators**
  - NPDES Stormwater Construction Compliance Inspection Report for Contractors
  - NPDES Stormwater Construction Monthly Report

- **Inspections by RC Inspectors**
  - NPDES Stormwater Construction Compliance Inspection Report for RC Inspectors
  - QA/QC of RC Inspector by Management

- **Notice of Termination (NOT)**
  - NOT for Stormwater Discharges from Large and Small Construction Activities

Refer Flow chart for Process Flow

* All forms/checklists are available on RC website
More details can be found on below Richland County website at

http://richlandonline.com/departments/public
works/NPDES_Construction.asp
Whom To Apply

Richland County Single Window Procedure

- If applying within un-incorporated RC apply directly to:
  Jennie Sherry Linder
  Land Development Administrator
  Planning and Zoning Department
  1st Floor, 2020 Hampton Street
  Columbia, SC 29203

- If for Co-Permittees and just for LDA apply to Engineering Division within DPW to:
  Howard Boyd, PE
  Richland County Engineer
  Richland County Dept of Public Works
  400 Powell Road
  Columbia, SC 29203
Notice of Intent

- Revised Notice of Intent for Land Disturbance Permit Application

- Use distributed form from here on…

- Richland County has 12 Sampling Monitoring Stations. Our intention is to incorporate those stations into the NOI in future for the site operators to be aware of the proximity.
Plan Review

- Follow the guidelines and checklist
- Use distributed plan review check list from here on...
- Many of the items listed in the checklist may/may not apply to every request. Review engineer has the final decision and it is the responsibility of the applicant to incorporate all the requirements
- Include Stormwater Pollution Prevention Plans as needed with necessary elements
Stormwater Pollution Prevention Plan (SWPPP) is also sometimes called:

- Construction Best Practices Plan
- Sediment and Stormwater Plan
- Construction Site Best Management Practices Plan
- Sediment and Erosion Control Plans
- Stormwater Management Plan
- Best Management Practices Plan etc.
- Erosion, Sedimentation, and Pollution Prevention Plan

SWPPP should
- Identify potential sources of sediment and stormwater pollution at the construction site
- Describe practices to reduce pollutant runoff from the site and
- Identify procedures the operator will implement to comply with the terms and conditions of the NPDES permit
Typical SWPPP includes

- Cover/title page
- Project and SWPPP contact information
- Existing site condition/maps and descriptions
- Construction Plans including sediment and control plans
- Identification of potential pollutant sources
- Description of controls to reduce pollutants
- Maintenance/inspection procedures
- Records of inspections and follow-up maintenance of BMPs
- SWPPP updates and amendments
- Spill Prevention and Response
- Good Housekeeping
- SWPPP certification
- Follow Guidelines, Codes, Ordinances and permit requirements
Fees

- DHEC Fee $125
- Richland County Fee
  - Inspections Fee $350
  - Additional fees required for additional labor required to review, inspect and enforce these new requirements full-fledged (Keep Fingers Crossed)
- Lexington County (Printed copy $5) *(Source: LC website)*
  - Subdivision Plan Review (includes 1st review & 1st re-submittal, including as-buils) $500 plus $10 per lot
  - Stormwater (Sediment & Erosion) Permit $500
  - Additional Plan Revisions $500
  - Subdivision Construction Inspections $1,000 plus $10 per lot
  - Re-inspection (all after 2nd inspection) $200
  - Commercial Project Review (includes 1st review & 1st re-submittal, including as-buils) $500 plus $100 per acre
  - Land Disturbance Permit (Level II) $250
  - Additional Plan Revisions $250
  - Commercial Project Inspections $1,000 plus $100 per acre
  - Re-inspection (all after 2nd inspection) $200
Inspections and NOT will be discussed in detail in next Compliance section.
Compliance

- Stormwater Management within DPW is watchdog
Compliance

Two Fold Compliance from SH2O MGMT View

1. Compliance of Richland County w.r.t State requirements and QA/QC of the program
2. Compliance of Construction Site Operators - Random inspections of Construction sites for their compliance with Permitting authority. Permitting Authority does these inspections while Stormwater management QA/QC them.

Idea/Goal of QLP is compliance with local rules => compliance with state/national NPDES permit

Hence, future changes to the Ordinances/codes will be in this direction so that Site Operators can follow single “Local” rules...
Compliance of RC

- QLP developed, implementation in process.
- Ordinance in-place. NPDES General language adopted in Chapter 26. Upcoming Land development code revision, Ordinance revision (draft completed) to have explicit language for all NPDES programs
- Procedures/Checklists/Form Letters in-place
  - Plan review
  - Site inspections (both by Site Operators and RC inspectors)
  - Enforcement
  - BMP Manual
- Ongoing Education Component of the Program
- Ongoing Training Component of the Program
Compliance of Construction Site Operators - Inspections

- Richland County’s water quality compliance is dependent on construction site operators compliance
- Win-Win scenario
- Going towards tougher regulations, codes and streamlined inspections with better documentation and enforcement
Responsibilities of Construction
Site Operator

- Comply CGP requirements in SWPPP
- Comply with any additional requirements of Richland County in SWPPP
- Submit SWPPP, sediment and erosion control plans to Richland County for review and approval
- Submit NOI along with fees to Richland County
- Any sub-contractor or builder involved in land disturbance must sign NOI as co-permittee
- Start construction only after CGP coverage
- Attend Pre-construction meeting
  - DHEC Approval Letter
  - RC Planning approval letter
Responsibilities of Construction Site Operator

- Sign document at pre-construction meeting
- Implement provisions of SWPPP
- Submit monthly reports to SCDHEC and RC if disturbance > 10 acres (Use distributed form from here on…)
- Submit pre-construction attended signed proof document along with first monthly report
- Mail monthly report forms to:

  Angela D. Kennedy
  Bureau of Water
  2600 Bull Street
  Columbia, SC 29201

  Howard Boyd, PE
  Richland County Engineer
  Richland County Dept of Public Works
  400 Powell Road
  Columbia, SC 29203

You can Email inspection reports to County at constructionreports@rcgov.us.
Responsibilities of Construction Site Operator

- Perform onsite sediment and erosion control inspections every 7 days or 14 days and within 24 hours of rainfall event. *(Use distributed form from here on…)*
- Document, Document, and Document…
- If no construction activity for > 14 days, the site should be temporarily stabilized
- Notice of Termination (NoT) can be submitted when 70% of disturbed site is stabilized if regulations followed as per standards.
- Forms available on Richland County website and County is going for digital submission soon…
Documents to Retain Onsite for Stormwater Inspector to See while Inspection

From date of construction to date of final stabilization, the following documents should be retained onsite:

- Copy of SWPPPs
- Copy of Permit
- NOI
- CGP letter from DHEC

Recommended to have sediment & control plans.
Responsibilities of Richland County

- To review SWPPPs and approve sediment and erosion control plans
  
  **Attention Folks!!!!!!! Plan Reviewer Position is Vacant**

- Process the paperwork (NOI, plans, SWPPPs etc.) submitted by Site Operator and apply to SCDHEC for CGP coverage within 30 days from day of request letter from Planning. Opt for additional time due to lack of enough information

- To organize pre-construction meeting with site operator and discuss RC expectations

- To Inspect construction sites to ensure compliance

- To ensure corrective actions taken to protect water quality
Responsibilities of SCDHEC

- Seven (7) day guaranteed turn around from DHEC to RC (since delegated review)
- Can opt to review the project and ask for additional 20 calendar days
- Can opt for additional time due to lack of enough information
Improvements to QLP Program

QLP is an initial step. Some improvements in development stage are:

- Inspections without enforcement does not work. In-process of improving citations
- Enforcement Response Guidelines to include/define violation fees, time frames of corrective actions to ensure consistency of code officers actions
- QA/QC of sites as well as inspectors
- Field to Office interface GPS units for better tracking of violators.
- Onsite citations
- Prioritization of Inspections
- Streamline Fee structure
- Program is in inception stage and there will be lessons to learn. Improve Forms, internal procedures based on implementation (keep those work and alter those does not)

Now don’t lobby to get rid of me...
Clean water is crucial to the continued vitality of our community. Whether for recreational purposes, commercial fishing, habitat preservation, or community aesthetics, our community deserves — and demands — clean water.

Polluted runoff is a threat. If left unchecked, it WILL negatively impact our community through: Water quality threat, Resource impacts, Public health impacts, Economic impacts or more likely a combination of all having domino effect.

If you find a problem, call Richland County watchdog…Stormwater Management Division within Department of Public Works.
Local Richland County Stormwater Watchdog

Ombudsman 929-6000

Stormwater Hotline 576-2400

Visit us at www.richlandonline.com

Ask Stormwater Guru @
http://richlandonline.com/departments/publicworks/storm.asp
Some Other Stuff We Do…
Stormwater Sampling

- Outfall selection
- Update Outfall inventory as development increases
- Rotate sampling stations based on sampling results

- Stormwater Sampling
  - Odor, scum, sheen, color
  - Indicator compounds: Cl, N, Cu, Detergents, Phenols, pH, temp etc.

- Watershed Characterization
- Pollutant Source Priority
- Implement Management Plan
- Impaired water body Monitoring
- Sediment & Benthic Community Monitoring
Outfall Inventory and Proactive Inspections
Stormwater Field Testing
Illegal Dumping Tracking
Road Runoff Management Program

Pesticide, Herbicide and Fertilizers Control Program

Industrial & High Risk runoff Control Program

Other MS4 Components…
Public Education & Awareness

Negotiations Underway for Carolina Clear Program
Let's heed to his words...

The Dripster says:

Stormwater…

Let's Keep Clean!!!
Spread the Word...

Did I mention????

Richland County Plan reviewer position is **vacant**.

We need him desperately wherever he/she is!!!!!!!!!!!!

I reiterate, We are not that bad to work with...
Spread the Word…

Richland County Industrial operators Conference

When: Jan 23, 2008
Time: 8:30 a.m. to 12:30 p.m.
Where: Midlands Tech College, Northeast Campus

Who Should Attend: Industrial Facility managers/Operators, Environmental Health managers
Questions ???

Stormwater Management Motto:

*Individual commitment to a group effort -- that is what makes a team work, a company work, a society work, a civilization work.*

Vince Lombardi