



WPC ISSUES

August 25, 2011

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- Earthen Impoundments
- 2010 Phase II MS4 Reissuance
- 2011 Construction Stormwater General Permit



Language Timeframe	Compliance Date	Submit to:	Report Contents	Evaluated by	Other Provisions
2010	6 months	WPC & SWM	Evaluation of all wastewater and solid waste disposal units; measures to reduce impact of failure; planned upgrades; specific risk assessment	Independ ent PE's or other qualified expert	
2011	18 months	WPC & SWM	Evaluation of any earthen basin or solid waste unit; measures to reduce impact of failure; planned upgrades	PE or other qualified expert	Evaluations for other programs satisfy requirement

TVA REQUIREMENTS

- Inspected in accordance with 'Federal Guidelines for Dam Safety'
- visually inspected daily by personnel trained in dam safety procedures
- inspected annually by a TN PE trained and experienced in dam safety inspection
- Special inspections by qualified personnel within 24 hrs (or as soon as safely possible) of a significant rain or seismic event
- Inspected daily for erosion, cracks or bulges, subsidence, seepage, wet or soft soil, changes in geometry, the depth of the impounded water, sediment or slurry, freeboard, changes in vegetation, outlet controls, drains etc.
- Annual/special inspections include the minimum requirements of daily inspections plus a review of daily inspection records, O & M history, instrumentation, design and construction.
- Corrective actions required within 24 hours of discovering a potential compromises
- Imminent impoundment failure conditions reported immediately to TDEC and the County Emergency Management Agency
- Annual report submitted to the division summarizing findings of all monitoring & inspections

MS4 PERMIT

- Issued on 8/31/10
- Became effective on 10/1/10
- Will expire on 9/1/15



MS4 Permit Improvement Guide



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF WATER

OFFICE OF WASTEWATER MANAGEMENT

WATER PERMITS DIVISION

APRIL 2010

EPA 833-R-10-001

Permit revision utilized:

- New EPA **MS4 Permit Improvement Guide**
- TDEC programmatic **experience** implementing and evaluating MS4 effectiveness
- Extensive **comments** and **suggested language** from many stakeholders, including TNSA



Phase II MS4 Reissuance

Six minimum control measures include:

A large, stylized number '6' is positioned on the left side of the slide. It has a dark purple fill with a lighter purple gradient and a light green shadow behind it.

PUBLIC EDUCATION AND OUTREACH

PUBLIC PARTICIPATION/INVOLVEMENT

ILLICIT DISCHARGE DETECTION/ELIMINATION

POLLUTION PREVENTION/GOOD HOUSEKEEPING

CONSTRUCTION SITE RUNOFF CONTROL

PERMANENT RUNOFF CONTROL



PERMANENT STORMWATER MANAGEMENT



- Ordinance must:
 - require structural/nonstructural bmps
 - establish, protect and maintain water quality buffers in areas of new development
 - Ensure long-term O&M of controls



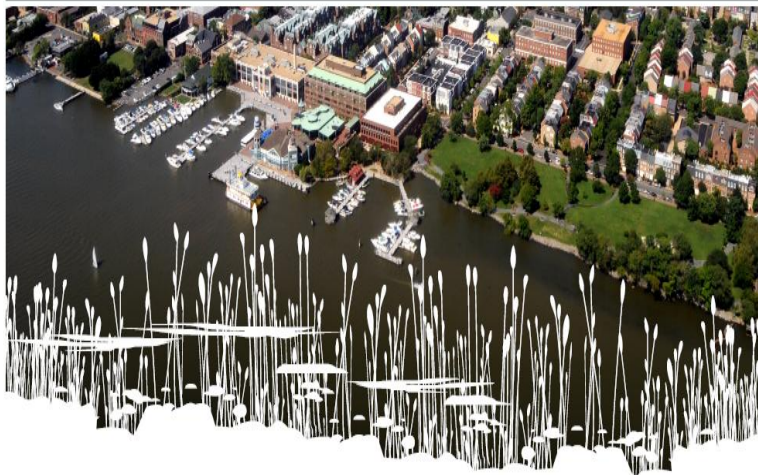
PERMANENT STORMWATER CONT.: CODES AND ORDINANCES REVIEW AND UPDATE



EPA Z31809001 | October 2009 | <http://www.epa.gov>

WATERQUALITY SCORECARD

Incorporating Green Infrastructure Practices at the Municipal, Neighborhood, and Site Scales



- Water quality scorecard must be completed within first year of permit coverage
- Developed to help MS4s evaluate, revise and create codes, ordinances, and incentives
- MS4s may choose a mixture of runoff and pollutant reduction practices



PERMANENT STORMWATER MANAGEMENT PERFORMANCE STANDARDS



Runoff reduction design for infiltration, evapotranspiration, and reuse of the **first inch** of every rainfall event

Projects that cannot meet 100% of the runoff reduction volume must treat the remainder with pollution reduction practices

Runoff reduction is preferred as it can achieve both volume control and pollutant removal



PERMANENT STORMWATER MANAGEMENT PERFORMANCE STANDARDS



■ OFF-SITE MITIGATION

- For projects that cannot meet 100% of the runoff reduction or pollutant removal requirements
- within the same 12-digit HUC
- minimum 1.5 times the amount of water not managed on site



Permit Focus: Construction Stormwater Control



- EPSCs required through ordinance or regulatory mechanism
- EPSC requirements shall be consistent with TDEC EPSC Handbook
- EPSC plans reviewed for completeness and effectiveness
- Perform site inspection and enforcement



PERMIT FOCUS: MINIMUM MONITORING REQUIREMENTS



- Monitoring based on stream impairment and pollutant type, including Siltation, Pathogens and Nutrients
- Requirements include analytical and visual stream survey and impairment inventory components
- Performed to assess MS4 program effectiveness and identify improvement opportunities



GI/LID MEASURES:

- Bioretention,
- Cluster Building
- Swales
- Permeable Pavement
- Vegetated Landscaping
- Wetlands
- GreenRoofs



GI/LID ECONOMIC CONSIDERATIONS

- The EPA report, *Reducing Costs through Low Impact Development Strategies and Practices*

(<http://www.epa.gov/owow/NPS/lid/costs07/>) :

17 projects for both new development in "greenfields" and retrofits/redevelopment

- National Green Values Calculator:

<http://greenvalues.cnt.org/national/calculator.php>

- WERF Calculator and version 2.0 spreadsheet:

<http://www.werf.org/livablecommunities/toolbox/model.htm>

http://www.werf.org/AM/Template.cfm?Section=Research_Profile&Template=/CustomSource/Research/PublicationProfile.cfm&id=SW2R08



PERMIT FOCUS: ENFORCEMENT RESPONSE PLAN



- MS4s must develop and implement an enforcement response plan (ERP)
- The plan must identify responses to violations and address repeat violations through progressive enforcement up to \$5,000 maximum penalty
- The MS4 must have the legal ability to employ enforcement responses



Permit Focus: Construction Stormwater Control



- EPSCs required through ordinance or regulatory mechanism
- EPSC requirements shall be consistent with TDEC EPSC Handbook
- EPSC plans reviewed for completeness and effectiveness
- Perform site inspection and enforcement



NEW CGP

- Issued on 5/23/11
- Became effective on 5/24/11
- Will expire on 5/23/16



NEW CGP – KEY CHANGES

- **Stormwater discharges associated with construction support activities**
- **Comprehensive Storm Water Pollution Prevention Plan (SWPPP)**
- **NOC may be delayed until adequate wastewater treatment and accompanying permits are addressed**
- **Site assessments be conducted within 1 month of construction start**



NEW CGP – KEY CHANGES

○ Steep slopes

- **Defined as a natural or created slope of 35% grade or greater**
- Designers of sites with steep slopes must engineer runoff non-erosively around or over a steep slope
- SWPPP should focus on erosion prevention on the slope(s)
- Shall be stabilized within 7 days of construction activity temporarily or permanently ceasing



NEW CGP – KEY CHANGES

- **Training and certification requirements**
 - Routine inspectors must have completed Tennessee’s “Fundamentals of Erosion Prevention and Sediment Control Level I” course – no equivalency
 - PEs or LAs must also have completed the Level II course in addition to being registered
- **Level I Workshop locations:**
 - Knoxville - October 4, 2011 - Rothchild's Catering and Convention Center
 - Nashville - October 20, 2011 - Willis Conference Center
- **Level II Workshop locations:**
 - Knoxville – December 14 - 15, 2011 - Willis Conference Center



NEW CGP – KEY CHANGES

- **Construction and development non-numeric effluent guidelines included**
 - Erosion Prevention and Sediment Controls
 - Buffer zone requirements
 - Soil Stabilization
 - Dewatering
 - Pollution Prevention Measures
 - Prohibited Discharges
 - Surface Outlets



NEW CGP – KEY CHANGES

○ Termination of Permit Coverage

- **The permittee must request termination when**
 - Site has been finally stabilized
 - Stormwater discharges from construction activities have permanently ceased
 - The permittee no longer meets the definition of operator



NEW CGP – OTHER CHANGES

- **Erosion prevention and sediment controls (EPSC) must be consistent with the EPSC handbook**
- **Allows the use of innovative or alternative BMPs, whose performance has been documented to be equivalent or superior to conventional BMPs**
- **Physical or chemical treatment must be in accordance with manufacturer's specifications**



QUESTIONS

