



Annette Lucas, PE  
Sediment and Erosion Control Workshop  
December 10, 2015  
*Department of Environmental Quality*



## Legislative Mandates

- **MDC & Fast Track:** § 143-214.7B requires DENR to work with stakeholders to develop Minimum Design Criteria and a Fast-Track Permitting Process.
- **Rules Review & Re-Adoption:** § 150B-21.3A directs state agencies to review and update their rules every 10 years.



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3

## Stakeholders Represented

Engineering/design community (8)  
 Home Builder's Association (1)  
 Construction (1)  
 Local government (4)  
 Environmental Group (2)  
 Landscape Architect (1)  
 Academia (2)  
 Soil Scientist (1)  
 DOT (1)  
 DWR & DEMLR (4)

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4

## *Guiding Principles*

It's fine not to like it, just have a better (reasonable) idea.

Make decisions via consensus as much as possible.



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5

## *MDC are focused on water quality & long-term performance*

### **Pre:**

Infiltration systems shall be at least 5 feet from structures.

### **Post:**

The designer should consider the impacts of seepage on nearby structures.  
(recommendation)

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6

## *Lessons learned....*

- Including everyone in the discussion up front results in a different and often better final product.
- MDC stated objectives rather than arbitrary standards.
- In the end, we bonded as a group despite our differences.

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7

## *Current Organization* *02H .1000 Section*

|       |  |
|-------|--|
| .1001 | Stormwater Management Policy                         |
| .1002 | Definitions  |
| .1003 | Stormwater Management: Coverage: Application: Fees   |
| .1005 | Stormwater Requirements: Coastal Counties            |
| .1006 | Stormwater Requirements: High Quality Waters         |
| .1007 | Stormwater Requirements: Outstanding Resource Waters |
| .1008 | Design of Stormwater Management Measures             |
| .1009 | Staff Review and Permit Preparation                  |
| .1010 | Final Action on Permit Applications to the Division  |
| .1011 | Modification and Revocation of Permits               |
| .1012 | Delegation of Authority                              |
| .1013 | General Permits                                      |
| .1014 | Stormwater Management for Urbanizing Areas           |
| .1015 | Urbanizing Areas Definitions                         |
| .1016 | Development in Urbanizing Areas                      |
| .1017 | Post-Construction Practices                          |
| .1020 | Universal Stormwater Management Program              |

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8

## *Proposed Organization*

### *02H .1000 Section*

|             |   |
|-------------|---|
| .1001       | Post-Construction Stormwater Management                   |
| .1002       | Definitions   |
| .1003       | MDC for All Subject Projects                              |
| .1016       | Development in Urbanizing Areas: Applicability            |
| .1017       | NPDES and Urbanizing Areas: Post-Construction             |
| .1018       | Urbanizing Areas: Delegation                              |
| .1019       | Coastal Counties: MDC                                     |
| .1020       | Universal Stormwater Management Program                   |
| .1021       | Non-Coastal County HQW and ORW: MDC                       |
| .1040       | Permit Administration                                     |
| .1041       | General Permits   |
| .1042       | Standard Permitting Process                               |
| .1043       | Fast Track Permitting Process: Authorization to Construct |
| .1044       | Fast Track Permitting Process: Final Permit               |
| .1045       | Permit Transfers and Renewals                             |
| .1050       | MDC for all Stormwater Control Measures                   |
| .1051-.1062 | MDC for Individual SCMs                                   |

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9

## *Some Changes in 02H .0100*

- .0126 Stormwater Discharges
- .0150 Definitions
- .0151 Designation and Petition Process
- .0152 Development in Urbanized Areas – REPEAL (.1016)
- .0153 Program Implementation
- .0154 Post-Construction Practices – REPEAL (.1017)

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10

## *Proposed for Repeal* *(Content Moved Elsewhere)*

- .1005 Stormwater Requirements: Coastal Counties
- .1006 Stormwater Requirements: HQW
- .1007 Stormwater Requirements: ORW
- .1008 Design of Stormwater Management Measures
- .1009 Staff Review and Permit Preparation
- .1010 Final Action on Permit Applications
- .1011 Modification and Revocation of Permits
- .1012 Delegation of Authority
- .1013 General Permits
- .1014 Stormwater Management for Urbanizing Areas
- .1015 Development in Urbanizing Areas

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11

## *Framework Rules*

- .1001 Post-Construction Stormwater Management
- .1002 Definitions

- New definitions for MDC, SCM & project.
- Definitions linked to statute for built-upon area, development & redevelopment.



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12



## Program Rules

- .1003 Requirements for All Subject Projects
- .1016 Development in Urbanizing Areas: Applicability
- .1017 NPDES and Urbanizing Areas: Post-Construction
- .1018 Urbanizing Areas: Delegation
- .1019 Coastal Counties
- .1020 Universal Stormwater Management Program
- .1021 Non-Coastal County HQW and ORW



- Rule .1003 provides a “skeleton” for high & low density, setbacks & conveyances.
- Rules .1016 through .1021 “flesh out” specific requirements for SW programs.

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13

## .1003 Requirements for All Subject Projects

$$\text{Density} = \frac{\text{BUA}}{\text{Project Area}}$$

$$\text{Density} = \frac{\text{BUA} - \text{existing BUA}}{\text{Project Area} - \text{existing BUA}}$$

**Project area excludes:**

- Areas below the Normal High Water (NHW); and
- Coastal wetlands.



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14

*.1003 Requirements for All Subject Projects*

Encourages disconnection instead of swales



Whenever possible...



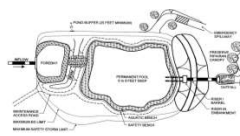
Last resort.

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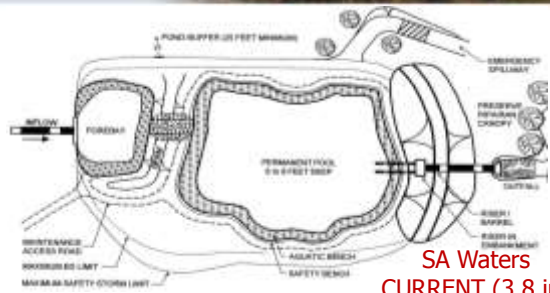


15

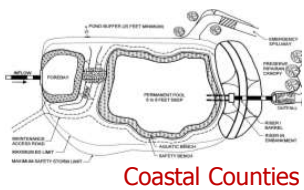
*.1019 Coastal Counties*



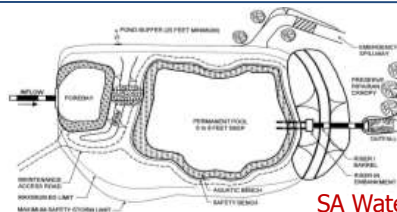
Coastal Counties  
CURRENT (1.5 in)



SA Waters  
CURRENT (3.8 in)



Coastal Counties  
PROPOSED (1.8 in)



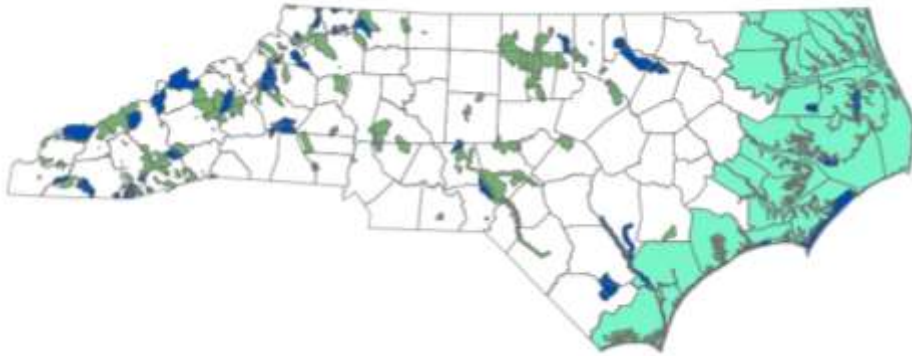
SA Waters  
PROPOSED (2.5 in)

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16



*.1019 Coastal Counties*



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*.1019 Coastal Counties*

Updates treatment volume in Coastal Counties

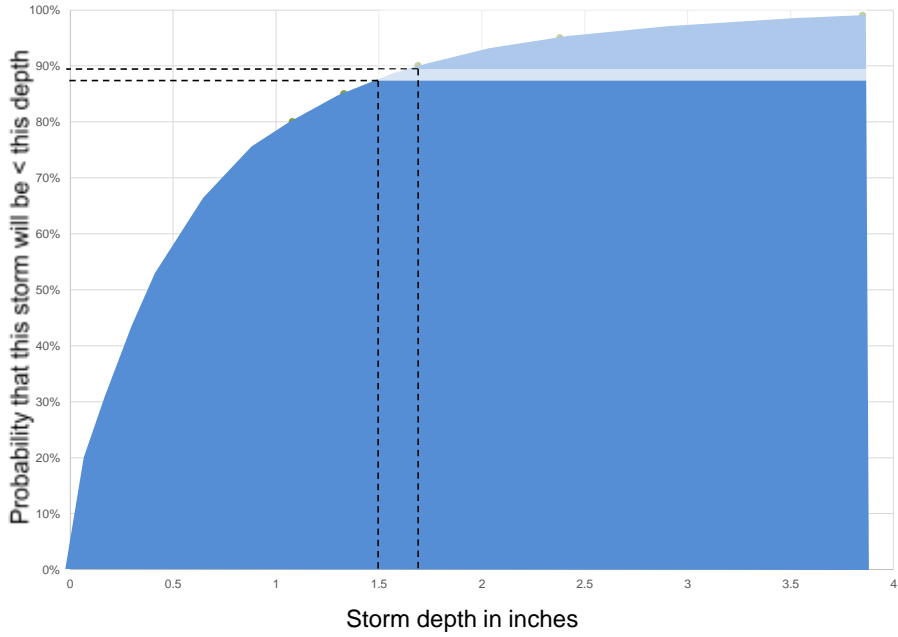
|                         | <b>P-90 storm (inches)</b> | <b>P-95 storm (inches)</b> | <b>1-year, 24-hour storm (inches)</b> |
|-------------------------|----------------------------|----------------------------|---------------------------------------|
| <b>Cape Hatteras</b>    | 1.76                       | 2.40                       | 3.99                                  |
| <b>Kill Devil Hills</b> | 1.48                       | 2.09                       | 3.31                                  |
| <b>Manteo</b>           | 1.58                       | 2.15                       | 3.42                                  |
| <b>Wilmington</b>       | 1.74                       | 2.45                       | 3.85                                  |

|                      | <b>Current</b>        | <b>Proposed</b> |
|----------------------|-----------------------|-----------------|
| <b>SA Waters</b>     | 1-year, 24-hour storm | P-95 storm      |
| <b>Non-SA Waters</b> | 1.5 inch storm        | P-90 storm      |

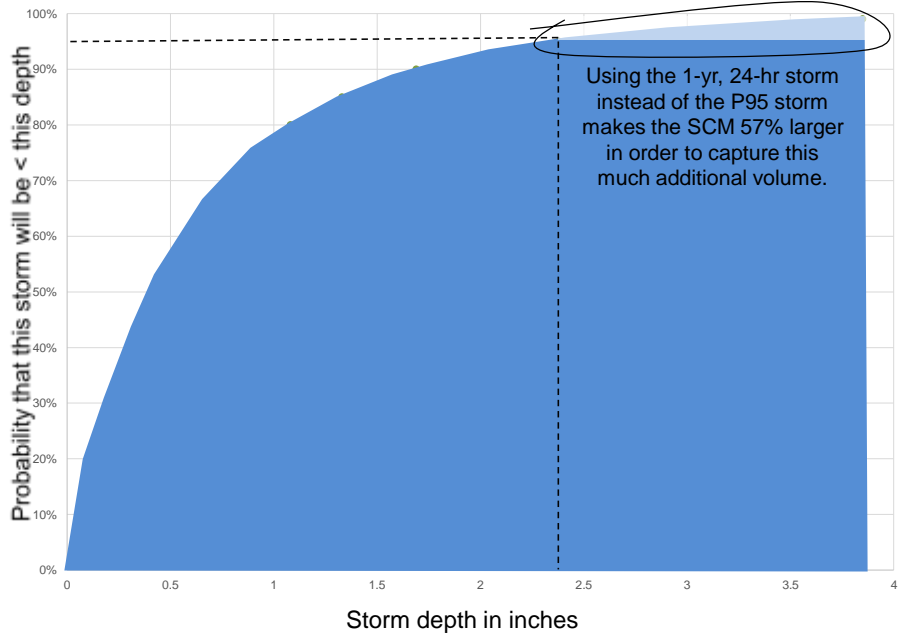
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Storm Probability Curve for Wilmington, NC



Storm Probability Curve for Wilmington, NC



## *Permit Administration Rules*

- .1040 Permit Administration
- .1041 General Permits
- .1042 Standard Permitting Process
- .1043 Fast Track Permitting Process: Authorization to Construct
- .1044 Fast Track Permitting Process: Final Permit
- .1045 Permit Transfers and Renewals

- Organized!
- Lists of submittal requirements.
- Fast-track process codified in 2 rules.
- Codified policies for transfers & renewals.

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21

## *Fast-Track: The MDC Team's Approach*

Instead of reviewing plans at initial application,  
review as-builts for compliance with MDC.



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22

## *Regular/Express versus Fast-Track*

|                              | Regular/Express | Fast-Track    |
|------------------------------|-----------------|---------------|
| Who may submit               | Licensed prof.  | PE            |
| # of submittals/permits      | 1               | 2             |
| Time for initial permit      | Up to 90 days   | Up to 30 days |
| Vary from MDC?               | Yes             | No            |
| Engineer of record required? | No              | Yes           |
| Yardstick for compliance     | Approved plans  | MDC           |

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23

## *MDC Rules*

.1050 MDC for all Stormwater Control Measures  
.1051-.1062 MDC for Individual SCMs



- Any SCM for flood control
- Infiltration devices allowed everywhere in NC
- No more level spreaders downslope of SCMs

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24

**.1050 General MDC  
(2) Seasonal High Water Table**



That outlet not more than 6" below the SHWT elevation unless it is shown that the device will not dewater streams/ wetlands and that the treatment volume of the SCM will not be compromised.

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25

**.1050 General MDC  
(5) Erosion Protection**

Inlet(s) and outlet shall be protected from erosion.



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26

**.1050 General MDC  
(6) Excess Flows**

Include an overflow device for volumes in excess of the treatment volume or the peak attenuation volume.

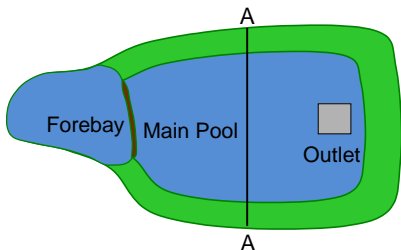


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27

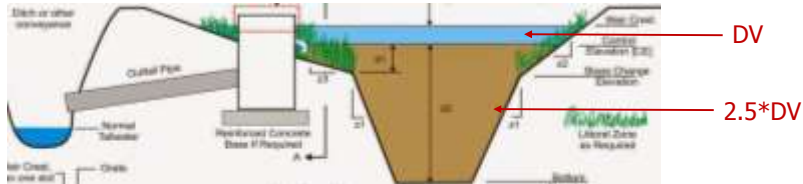
**.1053 MDC for Wet Ponds**



Exclude shelf from average depth calcs.



Vegetated shelf reduced to 6 feet.



Hydraulic Retention Time Method

28



***.1053 MDC for Wet Ponds***



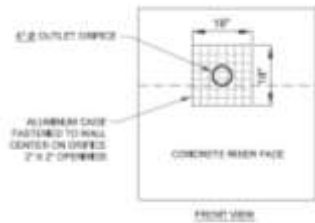
Forebay 15-20% of main pool.



Fountains shall not resuspend sediment or erode side slopes.



Updated vegetation specs.



A trash rack is required.

29

***.1052 MDC for Infiltration Systems***



Shall dewater within 72 hours based on a soil investigation.



No longer require a flow splitting device.

30



## Rule-Making Schedule

- ✓ Nov 12, 2015 WQC approves rule text
- ✓ Nov-Dec 2015 DEMLR develops fiscal analysis
- Jan 14, 2016 EMC approves rules & fiscal analysis
- Jan 20, 2016 DEMLR files rules & fiscal analysis in Register
- Feb 17, 2016 Comment period begins
- Apr 17, 2016 Comment period ends
- Jul 13, 2016 EMC adopts rules

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33



- It will be technical guidance only, not required.
- Designers can use the manual or meet the MDC in another way.



34

# Want to find out more?

Visit the Stormwater Rules Re-Adoption web site:

<http://portal.ncdenr.org/web/lr/rule-readoption>



**Stormwater Rules Review and Re-adoption**

**Revisiting Existing Rules**  
DENR staff is working with stakeholders to draft new stormwater rules that reflect the new "Minimum Design Criteria" and "Pollution Prevention Program" required by U.S. EPA. At the same time, we're also updating all of the stormwater rules in accordance with U.S. EPA's 2010 rule which directs state agencies to review and Update their rules every 10 years.

The proposed stormwater rules have been organized and, in some cases, prioritized. Some of the benefits of the new regulations and rule changes include:

- Decreasing residential flow rates to reduce
- Clarifying existing requirements
- Incorporating current technology and design standards
- Improving coordination between the program and
- Clarifying policies that are already requirements.

**Public Comments**  
DENR received comments on the draft rules in 2014. All comments will be considered. However, only comments that are received during the formal comment period will be included in the official record of proceedings.









**How will Clean Water be changing?**  
Use the rules provided in the Index of Existing Stormwater Rules and the Index of Proposed Stormwater Rules to easily navigate between the existing rules and the proposed rules. Existing rules are either being amended or repealed. In addition, some new rules are being created.

**Index of Existing Stormwater Rules**

- Training Rule Title - Title of existing rules as they currently appear in the 10 Administrative Code
- Treatment Action - Amend, Repeat, or Repeal
- Rules Guidance - Information to help connect the rules between the existing and proposed rules.

**Index of Proposed Stormwater Rules**  
The table of rules, some of the proposed rules have been that are under-revising are as follows:

- Treatment Rule (TR) - Rule language proposed for addition. There is no existing rule that is similar to the Stormwater Pollution Prevention Act (SWPPA). This is the version that will be submitted to the Rules Review Commission.

|   |   |   |       |  |
|---|---|---|-------|--|
|  2H 3043 | Fast Track Permitting Process: Authorization to Construct | - | Adopt | <ul style="list-style-type: none"> <li>Based on MDC Team deliberations.</li> <li>Creates Step #1 of the fast-track permitting process.</li> </ul>                |
|  2H 3044 | Fast Track Permitting Process: Final Permit               | - | Adopt | <ul style="list-style-type: none"> <li>Based on MDC Team deliberations.</li> <li>Creates Step #2 of the fast-track permitting process.</li> </ul>                |
|  2H 3045 | Permit Transfers and Renewals                             | - | Adopt | <ul style="list-style-type: none"> <li>Codifies policies for permit transfers and renewals.</li> </ul>   |
|  2H 3050 | MDC for all Stormwater Control Measures                   | - | Adopt | <ul style="list-style-type: none"> <li>Based on MDC Team deliberations.</li> <li>Organizes MDCs that apply to all SCMs in one rule.</li> </ul>                   |
|  2H 3052 | MDC for Infiltration Systems                              | - | Adopt | <ul style="list-style-type: none"> <li>Based on MDC Team deliberations.</li> <li>Updates and organizes current design standards for this type of SCM.</li> </ul> |
|  2H 3052 | MDC for Bioretention Cells                                | - | Adopt | <ul style="list-style-type: none"> <li>Based on MDC Team deliberations.</li> <li>Updates and organizes current design standards for this type of SCM.</li> </ul> |
|  2H 3053 | MDC for Wet Ponds   | - | Adopt | <ul style="list-style-type: none"> <li>Based on MDC Team deliberations.</li> <li>Updates and organizes current design standards for this type of SCM.</li> </ul> |
|  2H 3054 | MDC for Stormwater Wetlands                               | - | Adopt | <ul style="list-style-type: none"> <li>Based on MDC Team deliberations.</li> <li>Updates and organizes current design standards for this type of SCM.</li> </ul> |

## Two QUICK Final Public Service Announcements



# #1:

## DEMLR would appreciate your comments on the proposed rules.



NCDEMR  
Division of Energy, Mineral and Land Resources

### Stormwater Rules Review and Redaction

DEMLR staff is working with stakeholders to draft new stormwater rules that reflect the new "Minimum Design Criteria" and Four-Track Permitting Process required by S.L. 2012-02. At the same time, we're also updating all of the stormwater rules in accordance with S.L. 2012-03 to reflect already state agencies to review and Update their rules every 10 years.

The proposed stormwater rules have been reorganized and, in some cases, prioritized. Some of the benefits of the new organization and rule number include:

- Decreasing overall rule rule to rule
- Clarifying routine requirements
- Incorporating current technology and design standards
- Improving consistency between the program and
- Clarifying rules that are already requirements.

**How will I know what's changing?**

Use the rules provided in the Index of Existing Stormwater Rules and the Index of Proposed Stormwater Rules to easily navigate between the existing rules and the proposed rules. Existing rules are either being amended or repealed. In addition, some new rules are being created.

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**Index of Proposed Stormwater Rules**

The table of rules, some of the proposed rules have been that are under-revising are as follows:

- Treatment Rule (TR) - Rule language proposed for addition. Items preceded immediately with 2012(02) or 2012(03) as required in the Administrative Procedure Act (APA). This is the version that will be submitted to the Rules Review Commission.

**Submitting Comments**  
(Comments must be submitted to DEMLR)

Public Comment Period:  
From: 11/20/14 - to: 1/1/2015

DEMLR Director of Rule Package:  
July 15, 2014

**Public Comments**

DEMLR welcomes comments on the draft rules at any time. All comments will be considered. However, only comments that are received during the formal comment period will be included in the final version of proceedings.

**SUBMIT A COMMENT**



## #2: Sign up for the DEMLR stormwater list serve.



NC DENR  
Division of Energy, Mineral and Land Resources

Back to Stormwater Permitting Homepage

### DENR Stormwater BMP Manual & BMP Forms

- BMP Reviewer Certification Program
- Low Impact Development & Storm EQ
- Maximum Design Criteria Team
- Technical Review Workgroup & Products

Check out the new O&M EQ form, which allows you to create one Operation and Maintenance Agreement for an entire site. For your convenience, only the cover page has to be signed and notarized.

Select from the menu on the left the BMP Chapter, BMP Supplement Form or O&M Agreement that you want to view. All other forms and documents related to State Stormwater and Post-Construction can be found [HERE](#).

Sign up to receive BMP Manual email updates. [CLICK HERE](#)

Comment on the BMP Manual & Related Forms

**BMP Manual Errata Sheet**  
Revised 12/15/12

**BMP Manual Chapters**

- 1 - Introduction + 7/12/07
- 2 - NC Stormwater Requirements + 4/9/09
- 3 - Stormwater Calculations + 4/16/09
- 4 - Selecting the Right BMP + 12/3/12
- 5 - Common BMP Elements + 7/16/09
- 6 - Landscape & Soil Specs. + 4/17/09
- 7 - BMP Hierarchies + 9/28/07
- 8 - Level Spreader & Veg. Filter Strip + 3/17/10
- 9 - Stormwater Wetland + 7/10/09
- 10 - Wet Detention Basin + 4/16/09
- 11 - Sand Filter + 8/20/09
- 12 - Bio-retention + 7/26/09
- 13 - Public Agency BMP Toolbox + 4/16/14
- 14 - Gravel Swale + 4/8/08
- 15 - Restored Riparian Buffer + 9/28/07
- 16 - Infiltration Devices + 7/23/09
- 17 - Dry Detention Basin + 8/11/09
- 18 - Permeable Pavement + 10/16/12

*Thank you!*



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