



# City of Harrisonburg, Virginia

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## Chesapeake Bay TMDL Action Plan

Reporting Period: First TMDL Action Plan Report

Permit Number: VAR040075

In compliance with the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4)



# Chesapeake Bay TMDL Action Plan

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|------------------------------------|--|
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| <b>Duly Authorized Representatives</b> |  |
|--|--|
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### 2.a. (1) MS4 Program Review

**Description:** A review of the current MS4 program implemented as a requirement of this state permit including a review of the existing legal authorities and the operator's ability to ensure compliance with this special condition;

**Response:** A review has been completed and existing legal authorities are sufficient.

Existing Legal Authorities, <http://www.harrisonburgva.gov/code>

- Section 6-5 of the City Code establishes a Stormwater Utility Fee
- Section 7-6 of the City Code Illicit Discharges and Connections Ordinance
- Section 10-4 of the City Code describes the Erosion and Sediment Control Ordinance
- Design & Construction Standards Manual
- Section 10-7 of the City Code describes the Stormwater Management Ordinance
- References from above ordinances and documents to the “Virginia Erosion and Sediment Control Regulations” and the Virginia Erosion & Sediment Control Handbook
- Section 10-2 of the City Code describes the Subdivision Ordinance
- Section 10-3 of the City Code describes the Zoning Ordinance

### 2.a. (2) Legal Authority

**Description:** The identification of any new or modified legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements implemented or needing to be implemented to meet the requirements of this special condition;

**Response:** This is the first permit cycle Chesapeake Bay TMDL Action Plan submittal. All existing legal authorities are noted above. The City does not anticipate any new or modified legal authorities to be implemented in the future.

**2.a. (3) Means and Methods for New Sources**

**Description:** The means and methods that will be utilized to address discharges into the MS4 from new sources;

**Response:** The City of Harrisonburg addresses discharges into the MS4 from new discharges through its existing legal authorities and through its Illicit Discharge Detection & Elimination Program.

**2.a. (4) Estimate of Annual POC Loads 2009**

**Description:** An estimate of the annual POC loads discharged from the existing sources as of June 30, 2009, based on the 2009 progress run. The operator shall utilize the applicable versions of Tables 2 a-d in this section based on the river basin to which the MS4 discharges by multiplying the total existing acres served by the MS4 on June 30, 2009, and the 2009 Edge of Stream (EOS) loading rate.

**Response:** Using the best data available at the time, below is the City’s estimate of annual POC loads discharged. An explanation of how subsources were calculated is provided in Appendix A entitled *Explanation of Estimate Annual POC Loads 2009*. In future years, the City may update the estimate of annual POC loads when new aerial photography or improved data sources are available.

**Table 2b: Calculation Sheet for Estimating Existing Source Loads for the Potomac River Basin**

| Subsource                  | Pollutant              | Total Existing Acres Served by MS4 (06/30/09) | 2009 EOS Loading Rate (lbs/acre) | Estimated Total POC Load Base on 2009 Progress Run |
|----------------------------|------------------------|---|----------------------------------|--|
| Regulated Urban Impervious | Nitrogen               | 3010  | 16.86                            | 50,749   |
| Regulated Urban Pervious   |                        | 3547  | 10.07                            | 35,718   |
| Regulated Urban Impervious | Phosphorus             | 3010  | 1.62                             | 4,876  |
| Regulated Urban Pervious   |                        | 3547  | .41                              | 1,454  |
| Regulated Urban Impervious | Total Suspended Solids | 3010  | 1,171.32                         | 3,525,673  |
| Regulated Urban Pervious   |                        | 3547  | 175.8                            | 623,563  |

|              | Total MS4 (ac) |
|--------------|----------------|
| Impervious   | 3,010          |
| Pervious     | 3,547          |
| Forest       | 281            |
| <b>Total</b> | <b>6,839</b>   |

**2.a. (5) Total Required Pollutant Load Reductions**

**Description:** A determination of the total pollutant load reductions necessary to reduce the annual POC loads from existing sources utilizing the applicable versions of Tables 3 a-d in this section based on the river basin to which the MS4 discharges. This shall be calculated by multiplying the total existing acres served by the MS4 by the first permit cycle required reduction in loading rate. For the purposes of this determination, the operator shall utilize those existing acres identified by the 2000 U.S. Census Bureau urbanized area and served by the MS4.

**Response:** Using the best data available at the time, below is the City’s estimate of Total POC Reductions required during 2013-2018 permit cycle. In future years, the City may update the estimate of annual POC loads when new aerial photography or improved data sources are available.

**Table 3b: Calculation Sheet for Determining Total POC Reductions Required During the 2013-2018 Cycle for the Potomac River Basin**

| Subsource                  | Pollutant              | Total Existing Acres Served by MS4 (06/30/09) | First Permit Cycle Required Reduction in Loading Rate (lbs/acre) | Total Reduction Required First Permit Cycle (lbs) |
|----------------------------|------------------------|---|--|---|
| Regulated Urban Impervious | Nitrogen               | 3010  | .08  | 241   |
| Regulated Urban Pervious   |                        | 3547  | .03  | 106   |
| Regulated Urban Impervious | Phosphorus             | 3010  | .01  | 30  |
| Regulated Urban Pervious   |                        | 3547  | .001   | 4   |
| Regulated Urban Impervious | Total Suspended Solids | 3010  | 11.71  | 35,247  |
| Regulated Urban Pervious   |                        | 3547  | .77  | 2,731   |

**2.a. (6) Means and Methods to Meet Required Reductions**

**Description:** The means and methods, such as management practices and retrofit programs that will be utilized to meet the required reductions included in subdivision 2 a (5) of this subsection, and a schedule to achieve those reductions. The schedule should include annual benchmarks to demonstrate the ongoing progress in meeting those reductions;

**Response:** The following practices are planned by the City to meet required reductions by June 30, 2018. This TMDL Action Plan will use the adaptive management approach so that if better practices are identified, the City may substitute alternative practices to meet requirements. Any substitutions will be reported to DEQ in future annual reports and this TMDL Action Plan will be updated as necessary.

**Temporary Reduction Practices**

No temporary water quality trading credits or offsets have been purchased or are planned to be purchased by the City of Harrisonburg to comply with these special conditions.

**Permanent Reduction Practices: First Permit Cycle (2013-2018)**

| <b>Street Sweeping</b>                                   | <b>TP</b>                      | <b>TN</b>                        | <b>TSS</b>                          |
|--|--------------------------------|----------------------------------|-------------------------------------|
| Street Sweeping Mass Reduced per pound of sediment swept | .001                           | .0025                            | .3                                  |
| Annual pounds of swept material                          | 1,163,860 lbs/ year            |                                  |                                     |
| City of Harrisonburg Street Sweeping Program             | <b>814.70 lbs<br/>TP/ year</b> | <b>2,036.76 lbs<br/>TN/ year</b> | <b>244,410.60 lbs<br/>TSS/ year</b> |

| <b>Homeowner BMPs</b>                             | <b>TP</b>   | <b>TN</b>    | <b>TSS</b> |
|---|-------------|--------------|------------|
| City of Harrisonburg Homeowner BMP Credit Program | <b>4.96</b> | <b>71.37</b> | <b>0</b>   |

**PROJECT INFORMATION**

**Street Sweeping**

The City of Harrisonburg’s urban streets and infrastructure include a significant number of storm water pipes and drop-inlets that take road sediment and debris directly into local waterways. For this reason, an active street sweeping program plays an important role in minimizing the amount of pollutants going into local waterways. Presently, the City regularly operates two regenerative air street sweepers. The collected street sweepings are disposed of at the Rockingham County landfill. Load reduction calculations for street sweeping in the City of Harrisonburg were performed according to the mass loading approach as outlined in Appendix V.G. in the Chesapeake Bay TMDL Special Condition Guidance. An explanation of how total BMP reductions were calculated is provided in Appendix B entitled: *Calculation of Annual Street Sweeping Pollutant Removal*.

**Homeowner BMP Credit Program**

The City of Harrisonburg’s Residential BMP Credit Program is a component of the greater Stormwater Utility Fee Program. The Property owner can apply for BMPs that they have newly installed or are pre-existing on their site if the BMPs comply with the specifications and requirements set forth in the Residential Credit Manual. A maintenance agreement, square footage calculations, photos of relevant BMPs, and nutrient management commitments are all a part of the application package, which is signed and approved by the property owner and City of Harrisonburg administrative staff. The TP and TN removal rates are those provided in the Chesapeake Bay Program's Urban Stormwater Workgroup memo "Background on the Crediting Protocols for Nutrient Reduction Associated with the Installation of Homeowner BMPs," January 4, 2014. A spreadsheet of how total BMP reductions were calculated is

provided in Appendix C entitled: *Sample Calculation of Homeowner BMP Pollutant Removal*. A document of how the non-compliance factor was determined and an outline of the residential inspection program is provided in Appendix D entitled: *Homeowner BMP Inspection Program & Non-Compliance Determination*. Other BMPs available to residential property owners for credit in the City of Harrisonburg have not been included in this document if suitable removal rate information is not available, unknown, or not approved by the Chesapeake Bay Program.

**2.a. (7) Means and Methods to Offset Increased Loads from New Sources (July 1, 2009 – June 30, 2014)**

**Description:** The means and methods to offset the increased loads from new sources initiating construction between July 1, 2009, and June 30, 2014, that disturb one acre or greater as a result of the utilization of an average land cover condition greater than 16% impervious cover for the design of post-development stormwater management facilities. The operator shall utilize Table 4 to develop the equivalent pollutant load for nitrogen and total suspended solids. The operator shall offset 5.0% of the calculated increased load from these new sources during the permit cycle.

**Response:** The City of Harrisonburg does not utilize an average land cover condition greater than 16% in the design of post-development stormwater management facilities and therefore section a.(7) is not applicable.

**2.a. (8) Means and Methods to Offset Increase in POCs from Grandfathered Projects**

**Description:** The means and methods to offset the increased loads from projects as grandfathered in accordance with [9VAC25-870-48](#), that disturb one acre or greater that begin construction after July 1, 2014, where the project utilizes an average land cover condition greater than 16% impervious cover in the design of post-development stormwater management facilities. The operator shall utilize Table 4 to develop the equivalent pollutant load for nitrogen and total suspended solids.

**Response:** The City of Harrisonburg does not utilize an average land cover condition greater than 16% in the design of post-development stormwater management facilities and therefore section a.(8) is not applicable.

**2.a. (9) Address modifications to TMDL or watershed implementation plan that occurs during the term of this state permit as part of reapplication.**

**Description:** The operator shall address any modification to the TMDL or watershed implementation plan that occurs during the term of this state permit as part of its permit reapplication and not during the term of this state permit.

**Response:** The City of Harrisonburg will address this at the time of permit reapplication.

**2.a. (10) List of Future Projects that Qualify as Grandfathered**

**Description:** A list of future projects and associated acreage that qualify as grandfathered in accordance with [9VAC25-870-48](#);

**Response:** The City of Harrisonburg does not utilize an average land cover condition greater than 16% in the design of post-development stormwater management facilities and therefore section a.(10) is not applicable.

**2.a. (11) Estimate of the Expected Cost**

| Practice Name/ Description   | Annual Estimated Cost |
|------------------------------|-----------------------|
| Street Sweeping Program      | \$174,000             |
| Homeowner BMP Credit Program | \$30,200              |

**2.a. (12) Public Comment for TMDL Action Plan**

**Response:** An opportunity for receipt and consideration of public comment regarding the draft Chesapeake Bay TMDL Action Plan was provided through the following mediums:

The Chesapeake Bay TMDL Action Plan draft was posted on the City of Harrisonburg website (<http://www.harrisonburgva.gov/MS4-permit-program>) on June 26, 2015 and advertised through the website, social media, and advertisement in local newspaper. Written public comments were accepted through July 22, 2015 through Be Heard Harrisonburg (website), e-mail, or letter to 320 East Mosby Road Harrisonburg, VA 22801. No public comments were received.

**3. a. Nutrient Management Plans**

**Description:** Implementation of nutrient management plans in accordance with the schedule identified in the minimum control measure in Section II related to pollution prevention/good housekeeping for municipal operations;

**Response:** See MS4 Program Plan and MS4 Annual Reports for regular updates on municipally-owned properties that require nutrient management plans.

**3. b. Construction Site Stormwater Runoff Control**

**Description:** Implementation of the minimum control measure in Section II related to construction site stormwater runoff control in accordance with this state permit shall address discharges from transitional sources;

**Response:** See MS4 Program Plan and MS4 Annual Reports.

**3. c. Post-Construction Stormwater Management Facilities**

**Description:** Implementation of the means and methods to address discharges from new sources in accordance with the minimum control measure in Section II related to post-construction stormwater management in new development and development of prior developed lands and in order to offset 5.0% of the total increase in POC loads between July 1, 2009, and June 30, 2014. Increases in the POC load from grandfathered projects initiating construction after July 1, 2014, must be offset prior to completion of the project.



**Response:** See MS4 Program Plan and MS4 Annual Reports.

**3. d. Reduce POC Loads from Existing Sources**

**Description:** Implementation of means and methods sufficient to meet the required reductions of POC loads from existing sources in accordance with the Chesapeake Bay TMDL Action Plan.

**Response:** See 2.a.(6) Means and Methods to Meet Required Reductions, above.

## Appendix A. Explanation of Estimate of Annual POC Loads 2009

The Chesapeake Bay TMDL pollutant removal estimates provided with the Chesapeake Bay TMDL Action Plan dated June 30, 2015 is based on the:

- **Impervious area delineation of parcels and railroad right-of-way.** This was completed using 2011 aerial photography and ArcGIS.
- **An estimate of the public right-of-way impervious area.** The estimate of public right-of-way impervious area within the MS4 boundary was calculated by subtracting an inward buffer of 5-feet from the ROW polygon's area.
- **A delineation of forested areas within the City's MS4 area.** This was completed by scanning 2011 aerial photography to delineate 'forested' areas based on the March, 2015 Chesapeake Bay TMDL draft guidance. In the final revised guidance released by VA DEQ in May 2015, the size threshold for forested areas has been reduced. The City will update the forest area mapping with the next annual report.
- **Delineation of MS4 Service Area.** This delineation was completed by mapping city-owned outfalls and the drainage areas entering them.

The Chesapeake Bay TMDL pollutant removal estimates does not include VDOT or James Madison University which have MS4 permits. Properties that have VPDES Industrial Stormwater permits have not been removed at this time, and will be considered in the future.

In future years, the City may update the estimate of annual POC loads when new aerial photography or other improved data sources are available.

Refer to the spreadsheet entitled "Harrisonburg – TMDL Pollutant Removal Estimates 2015.xlsx" for calculations.

## Appendix B. Calculation of Annual Street Sweeping Pollutant Removal

Annual Billing Statement:

312.55 tons from Sweeper 24 - 7/01/2013-6/30/2014

269.38 tons from Sweeper 25 - 7/01/2013-6/30/2014

*Annual Total: 581.93 tons*

### Total Nitrogen

$581.93 \times 2,000 = 1,163,860$  lbs

$1,163,860$  lbs  $\times .7$  (Dry Weight Factor) =  $814,702$  lbs

$814,702 \times .0025$  (Pounds of dry weight sweeping solids) = **2,036.755 lbs TN/ year**

### Total Phosphorus

$581.93 \times 2,000 = 1,163,860$  lbs

$1,163,860$  lbs  $\times .7$  (Dry Weight Factor) =  $814,702$  lbs

$814,702 \times .001$  (Pounds of dry weight sweeping solids) = **814.702 lbs TP/ year**

### Total Suspended Solids

$581.93 \times 2,000 = 1,163,860$  lbs

$1,163,860$  lbs  $\times .7$  (Dry Weight Factor) =  $814,702$  lbs

$814,702 \times .3$  (250 Micron Correction) = **244,410.6 lbs TSS/ year**

## Appendix C. Sample Calculation of Residential Credit Pollutant Reduction

### Sample Property A

Roof area draining to disconnected downspouts: **1,600 sq. ft.**

Roof area draining to rain barrel: **660 sq. ft.**

Lawn area managed under Homeowner Nutrient Management Agreement: **10,111 sq. ft.**

### Nitrogen Load Reduced

#### **Roof Drain Disconnection**

Nutrient Loading: 16.68

Removal Rate: 0.45

Compliance Factor: 100%

lbs TN/yr = [(Acres of Impervious Area \* Nutrient Loading) \* Removal Rate] \* Compliance Factor

lbs TN/yr = [(1600 sq. ft. / 43560 acre) \* 16.68] \* 0.45 \* 1.00

lbs TN/yr = 0.28 lbs

#### **Rain Barrel**

Nutrient Loading: 16.68

Removal Rate: 0.28

Compliance Factor: 100%

lbs TN/yr = [(Acres of Impervious Area \* Nutrient Loading) \* Removal Rate] \* Compliance Factor

lbs TN/yr = [(660 sq. ft. / 43560 acre) \* 16.68] \* 0.28 \* 1.00

lbs TN/yr = 0.07

#### **Nutrient Management**

Nutrient Loading: 10.07

Removal Rate: 0.06

Compliance Factor: 75%

lbs TN/yr = [(Acres of Pervious Area \* Nutrient Loading) \* Removal Rate] \* Compliance Factor

lbs TN/yr = [(10,111 sq. ft. / 43560 acre) \* 10.07] \* 0.06 \* 0.75

lbs TN/yr = 0.11

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### **Total Nitrogen Load Reduced**

lbs TN/yr = Roof Drain Disconnection + Rain Barrel + Nutrient Management

lbs TN/yr = 0.28 lbs TN/yr + 0.07 lbs TN/yr + 0.11 lbs TN/yr

lbs TN/yr = 0.46

### Phosphorus Load Reduced

#### **Roof Drain Disconnection**

Nutrient Loading: 1.62

Removal Rate: 0.52

Compliance Factor: 100%

lbs TP/yr = [(Acres of Impervious Area \* Nutrient Loading ) \* Removal Rate] \* Compliance Factor  
lbs TP/yr = [(1600 sq. ft. / 43560 acre) \* 1.62]\*0.52]\*1.00  
lbs TP/yr = 0.03 lbs

#### **Rain Barrel**

Nutrient Loading: 1.62  
Removal Rate: 0.33  
Compliance Factor: 100%

lbs TP/yr = [(Acres of Impervious Area \* Nutrient Loading ) \* Removal Rate] \* Compliance Factor  
lbs TP/yr = [(660 sq. ft. / 43560 acre) \* 1.62]\*0.33]\*1.00  
lbs TP/yr = 0.01

#### **Nutrient Management**

Nutrient Loading: 0.41  
Removal Rate: 0.03  
Compliance Factor: 75%

lbs TP/yr = [(Acres of Pervious Area \* Nutrient Loading ) \* Removal Rate] \* Compliance Factor  
lbs TP/yr = [(10,111 sq. ft. / 43560 acre) \* 0.41]\*0.03]\*0.75  
lbs TP/yr = 0.00

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#### **Total Phosphorous Load Reduced**

lbs TP/yr = Roof Drain Disconnection + Rain Barrel + Nutrient Management  
lbs TP/yr = 0.03 lbs TP/yr + 0.01 lbs TP/yr + 0.00 lbs TP/yr  
lbs TP/yr = 0.04

Refer to spreadsheet entitled "Harrisonburg - Homeowner BMP Pollutant Removal Estimates.xlsx" for more detailed calculations.

## Appendix D: Homeowner BMP Inspection Program & Non-Compliance Determination

| Year 1                           | Year 2.5            | Year 5                              |
|----------------------------------|---------------------|-------------------------------------|
| Application Verification Process | On-Site Inspections | Re-Application Verification Process |

### Year 1

As a part of the application package, residential property owners take multiple steps to validate that their BMPs exist and function properly at the time of submittal. The application package is reviewed and verified by Public Works staff. Site visits and desktop analysis using Google Earth features are both utilized on an as-needed basis to ensure application information is accurate.

#### Validation Steps Taken by Applicants at the Time of Initial Application:

- Pictures must be taken of Rain Barrels and Downspout Disconnections no more than 60 days prior to application submittal.
- Application must be filled out and signed.
  - Signature of Agreement; *I hereby certify the above information to be true and correct to the best of my knowledge. I agree that pollutant credits approved by the City of Harrisonburg as Stormwater Utility Fee Credits will no longer be available for any other use, including Virginia Stormwater Management Program requirements.*
- Lawncare Agreement must be filled out and signed.
  - Signature of Agreement; *Upon signing this document, I agree to follow the selected responsible lawn care maintenance items for the extent of the Agreement and for the total land area listed in this Agreement.*
- Maintenance Agreement must be filled out and signed.
  - (Maintenance Agreement Language) Commitment to Operation and Maintenance of Facility; The Property Owner(s), including any homeowners association, shall adequately operate, inspect, and maintain the stormwater management BMP facilities in accordance with the specific operation, inspection, and maintenance requirements set forth in the attachment to the maintenance agreement.
  - Signature of Agreement; *Upon signing this document, The City and the Property Owner(s) agree to the terms and conditions as outlined above and as described in the appropriate Stormwater Utility Fee Credit Manual for Non-Residential or Residential effective on the date signed.*

Maintenance Schedule and Guidelines are available for all BMPs to property owners on the stormwater utility fee website. These fact sheets include a schedule of maintenance tasks associated with each practice. A maintenance record is also available for the homeowner to log any maintenance activities. This maintenance record is required for submittal as part of the five year re-application.

### Year 2.5

The City of Harrisonburg will spot-inspect 20% of the residential properties by year 2.5. Letters will be sent to the pool of properties notifying property owners of their upcoming inspection (or phone calls/emails), as is required in the signed maintenance agreement. Staff will have a right to enter the property as is outlined in the maintenance agreement. An inspection report will be completed by staff and kept on file with the credit application information (see attachment). If inspection violations/issues are

noted, a formal letter will be sent to the property owner. If violations are not corrected within 90 days after notification is sent, the approved credits for the insufficient BMP will be removed.

|                              |                           |                      |
|------------------------------|---------------------------|----------------------|
| 2015 Credit Application Pool | 164 Approved Applications | 33 Inspections (20%) |
| 2016 Credit Application Pool | 147 Approved Applications | 29 Inspections (20%) |

**Year 5**

The Stormwater Utility Fee Credit Program allows applicants credit for five years from the date of application approval.

Validation Steps Taken by Applicants at the Time of Re-Application:

- Pictures must be taken of Rain Barrels and Downspout Disconnections within 60 days of re-application.
- Re-Application must be filled out and signed.
  - Signature of Agreement; *I hereby certify the above information to be true and correct to the best of my knowledge. I agree that the BMPs approved by the City of Harrisonburg as Stormwater Utility Fee Credits are maintained properly and functioning as designed.*
- *Maintenance Record filled out and submitted (in compliance with maintenance agreement)*
  - (Maintenance Agreement Language) Required Documentation; The Property Owner(s) shall document any maintenance, landscaping, and repairs performed to the on-site stormwater management BMP facilities on the City’s Maintenance Record form and provide a copy of said Maintenance Record to the City or its representatives upon request. Regular inspection by the Property Owner(s) is encouraged, but submittal of inspection forms to the City is not required.

**Non-Compliance Factor**

With the intensive verification processes in place for rain barrels and downspout disconnections, a 100% compliance factor was used in calculating TMDL Action Plan credits. It may be necessary to adjust this number according to the inspection results after year 2.5. Any changes will be included in the TMDL Action Plan update.

In determining a compliance factor for nutrient management plans, it was decided that a 75% non-compliance factor was suitable to account for those that do not adhere to the provisions set forth in the Nutrient Management and Lawncare Agreement. It is difficult to compare a non-compliance factor for agricultural-based activities vs. homeowner-based activities.

It may be necessary to adjust this number according to the inspection results after year 2.5. Any changes will be included in the TMDL Action Plan update.

## Residential BMP Inspection Form

Location \_\_\_\_\_

Inspection Notification Date \_\_\_\_\_

Date \_\_\_\_\_

Inspector(s) \_\_\_\_\_

### BMP Inspection Form: Rain Barrels

| Required Inspection Items  | Corrective Action Applicable? | Notes |
|--|-------------------------------|-------|
| Diverter or connection from downspout  | YES / NO                      |       |
| Spigot or hose drains the barrel   | YES / NO                      |       |
| Overflow area routes extreme flows out into the lawn or into the next treatment practice of the stormwater conveyance system (ex: overflow pipe, overflow filter path, or overflow into a rain garden) | YES / NO                      |       |
| Overflows empty into pervious areas, and do not empty where flow will travel onto sidewalks, driveways, or other impervious areas  | YES / NO                      |       |
| Overflows do not impact neighboring properties, flow onto steep slopes or flow near retaining walls  | YES / NO                      |       |
| Overflow controls included   | YES / NO                      |       |
| Mosquito prevention included   | YES / NO                      |       |

### BMP Inspection Form: Downspouts

| Required Inspection Items  | Corrective Action Applicable | Notes |
|--|------------------------------|-------|
| Disconnections empty into pervious areas   | YES / NO                     |       |
| Disconnections do not empty where flow will travel onto sidewalks, driveways, or other impervious areas  | YES / NO                     |       |
| Disconnections do not impact neighboring properties, flow onto steep slopes or flow near retaining walls | YES / NO                     |       |

### BMP Inspection Form: Homeowner Nutrient Management and Lawncare Agreement

| Required Inspection Items  | Corrective Action Applicable | Notes |
|--|------------------------------|-------|
| Dense cover of grass or conservation landscaping                     | YES / NO                     |       |
| Check which BMP homeowner selected on application (1 total)          |                              |       |
| No fertilizer applied  | YES / NO                     |       |
| Reduced fertilizer application amounts (1/3 to 1/2 recommended rate) | YES / NO                     |       |
| Fertilizer application split into 3-4 doses                          | YES / NO                     |       |



|  |   |          |  |
|--|---|----------|--|
|  |   |          |  |
|  | Fertilizer applied based on soil samples  | YES / NO |  |
| Check which BMPs homeowner selected on application (2 total) |   |          |  |
|  | Fertilizer not applied during spring green-up or on dormant grass                                   | YES / NO |  |
|  | Slow release N fertilizer used  | YES / NO |  |
|  | Fertilizer swept off of paved surfaces  | YES / NO |  |
|  | Fertilizer not applied within 15 – 20 ft of water features, this area managed as buffer             | YES / NO |  |
|  | Evidence that lawn clippings and mulched leaves kept on lawn / kept out of streets and storm drains | YES / NO |  |
| Grass height 3 inches or taller                              |   | YES / NO |  |