

Lawrence J. Hogan, Jr., Governor  
Boyd K. Rutherford, Lt. Governor



Pete K. Rahn, Acting Secretary  
Melinda B. Peters, Administrator

January 31, 2015

Subject: Maryland State Highway Administration  
Chesapeake Bay TMDL Final 2015  
Milestone Report

Mr. Tom Thornton  
TMDL Technical Review Coordinator  
Maryland Department of the Environment  
1800 Washington Boulevard, Suite 540  
Baltimore, MD 21230-1718

Dear Mr. Thornton:

In accordance with the document entitled “*Local 2014-2015 Two-Year Milestone Guidance*”, the Maryland State Highway Administration (SHA) is pleased to submit our 2015 Interim Milestone Progress Report. This report provides a brief overview of where SHA stands in meeting BMP and Programmatic milestone goals, as outlined in the *MDE WIP II Appendix E, Maryland State Highway Administration Bay TMDL WIP II Narrative* and the *Maryland State Highway Administration 2015 Chesapeake Bay TMDL BMP Implementation Milestones*.

If you have any questions or need any additional information regarding this information, please contact Ms. Karen Coffman at 410-545-8407 ([kcoffman@sha.state.md.us](mailto:kcoffman@sha.state.md.us)) or me at 410-545-8644 ([rshreeve@sha.state.md.us](mailto:rshreeve@sha.state.md.us)).

Sincerely

A handwritten signature in blue ink, appearing to read 'Robert Shreeve', is written over a faint, larger version of the signature.

Robert Shreeve, Deputy Director  
Office of Environmental Design

cc: Karen Coffman

My telephone number/toll-free number is 410-545-8640

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Outlined in this document is the Maryland State Highway Administration's (SHA) 2015 Bay TMDL Milestone Interim Report, which includes both BMP Implementation Milestones and Programmatic Milestones. These milestones were originally outlined in the *MDE WIP II Appendix E, Maryland State Highway Administration Bay TMDL WIP II Narrative* (available on the MDE website). BMP Implementation Milestones have since been refined and are outlined in the *Maryland State Highway Administration 2015 Chesapeake Bay TMDL BMP Implementation Milestones*, which was submitted to MDE on January 31, 2014.

### ***I. 2015 BMP Implementation Milestone Progress***

Outlined below are SHA's 2014-2015 BMP Implementation Milestones, as reported to MDE in January 2014.

- 62 Drainage Area Acres of Bioretention
- 580 Drainage Area Acres of Bioswales
- 7,809,799 lbs Removed Annually from Catch Basin Cleaning
- 20 Acres of Impervious Surface Reduction
- 2,147 Drainage Area Acres of MS4 Retrofits
- 25.44 Drainage Area Acres of Regenerative Stormwater Conveyance
- 345 Acres Swept Annually from Street Sweeping
- 29,585 Linear Feet of Stream Restoration
- 588 Acres of Tree Plantings
- 111 Drainage Area Acres of Vegetated Open Channels

Highlighted in ***Table 1*** is a summary comparing SHA's 2015 BMP Implementation Milestone Goals and SHA's 2015 Anticipated Progress by June 30, 2015. SHA anticipates successfully meeting or exceeding the goals set for stream restoration, regenerative stormwater conveyance, street sweeping, and vegetated open channels. Although it is anticipated that goals for Bioretention, Bioswales, Impervious Surface Reduction, MS4 Retrofits, Catch Basin Cleaning and Urban Tree Plantings won't be met, SHA is still in the process of moving these initiatives forward.

Over the past two years we have worked to identify areas within the SHA right-of-way that are restoration candidates for new stormwater facilities, tree plantings, MS4 retrofits and impervious surface removal. Implementation of the 2015 target BMPs was delayed somewhat as we identified sites that are suitable for these BMPs.

*Table 1: Anticipated Progress toward Meeting 2015 BMP Goals*

<i>Target Strategy</i>	<i>2015 Goal</i>	<i>2015 Anticipated Progress</i>	<i>Progress to Goal</i>
Bioretention (DA AC)	62	29	46%
Bioswales (DA AC)	580	267	46%
Catch Basin Cleaning (LBS Annually)	7,809,799	6,270,606	80%
Impervious Surface Reduction (DA AC)	20	1	4%
MS4 Retrofits (DA AC)	2,147	502	23%
Regenerative Stormwater Conveyance (LF)	25	25	100%
Street Sweeping (AC)	345	1,425	413%
Urban Stream Restoration (LF)	29,585	42,946	145%
Urban Tree Planting (AC)	588	483	82%
Identification of Existing Vegetated Open Channels (DA AC)	111	110	99%

During this timeframe SHA has accelerated the identification of existing Vegetated Grass Channels within the right-of-way, prior to pursuing any additional Bioswale projects. See Programmatic Milestones below for more details on SHA’s Vegetated Grass Channel efforts.

The decrease in catch basin cleaning is a result of the record breaking number of winter events experienced last year. The same workforce used for inlet cleaning is responsible for responding to winter weather events and the harsh winter, frequency of weather events, and longer than average winter season affected these routine maintenance efforts.

**II. 2015 Programmatic Milestone Progress**

SHA’s 2015 Programmatic Milestones are summarized below in **Table 2**.

**Table 2: SHA’s 2014-2015 Programmatic Two-Year Milestones**

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
Urban Stormwater				
June 30, 2015	As funding becomes available, activate next increment of the implementation plan.	Various Implementation Plans	SHA	On June 30, 2014 the MDE issued SHA a Draft NPDES MS4 Discharge Permit, with the intent to issue a Final Permit in June 2015. Tentative Determination (initiating 30 day public comment period) was issued 12/30/2014. A public hearing is scheduled for 2/26/2015. As a result, SHA continues to advance restoration efforts and the next increment of the implementation plan will focus on developing plans that achieve 20% impervious restoration requirements by 2020.
June 30, 2015	Explore partnering or MOAs with interested public agencies for right-of-way dedication for implementation or other partnership opportunities.	Various Partnering Agreements	SHA	<p>Over the past few years, SHA has developed a relationship with all 11 MS4 Counties and coordinates with them regularly. The focus of these coordination efforts includes: prioritization of restoration efforts; future development/re-development for planning purposes; potential restoration projects and possible partnering opportunities; credit accounting for impervious surfaces and data sharing. In addition, SHA has also coordinated with other organizations, as needed, including: the Severn River Association and the Severn River Commission in Anne Arundel County, the Sustainability Commission in Frederick County and the Environmental Advisory Board in Harford County.</p> <p>SHA is also in the process of establishing partnerships and initiating conversations with a number of agencies to advance mutually beneficial restoration efforts. These include the Maryland Environmental Trust (MET); Journey Through Hallow Ground; the Department of Natural Resources, and the US Fish and Wildlife Services, among others. When appropriate Memorandum of Agreements will be drafted and executed to document the terms of the partnership. Over the past few years the following MOAs have been executed:</p> <ul style="list-style-type: none"> <li>• The MD Department of Natural Resources grant agreement was executed on June 16, 2014 to implement non-point source pollution control projects.</li> <li>• The Maryland Correction Enterprises (MCE) agreement was executed on June 4, 2014 and will be used for tree planting implementation.</li> </ul>

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Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
June 30, 2015	Evaluate existing open section roadways within MS4 Phase I areas according to above protocol and provide documentation to MDE of available credit.	Existing Grass Channel Locations and Potential Candidate Locations for Grass Channel Rehabilitation	SHA	<p>SHA has accelerated the identification of existing vegetated grass channels that meet MDE WQ criteria within the right-of-way, and will integrate future bioswale projects into grassed channel retrofits as appropriate. To facilitate identification of these existing channels a standardized three-tier, MDE approved protocol was developed that consists of a desktop evaluation, field assessment and engineering analysis to confirm locations. This protocol is being implemented on a county-wide level for the 11 MS4 counties.</p> <p>The first phase was initiated in September of 2014 and evaluated Anne Arundel, Baltimore, Harford, Washington, and Montgomery Counties and is expected to be complete in January 2016. In February 2015, the second phase will begin and will evaluate the remaining counties including: Carroll, Cecil, Charles, Frederick, Howard, and Prince George's. The results of these inventories will be available by July 2016 and will identify existing grass channels that meet the protocol along with candidate locations appropriate for rehabilitation.</p>
June 30, 2015	Completion of outfall inspections within MS4 Phase II counties.	Inspection Records and Potential Retrofit Opportunities	SHA	<p>The verification and inspection of all major and minor outfalls within SHA Right-of-Way for Phase II Counties and Jurisdictions was completed over the past few years.</p> <ul style="list-style-type: none"> <li>• <u>Cambridge, Cumberland and Salisbury Cities</u> –This original inventory work was completed in 2014.</li> <li>• <u>Cecil County</u> – The GIS inventory of SHA storm drain, BMP and outfall information, and inspections in Cecil County was completed in 2008. Outfall inspections within this county were complete October 2014.</li> <li>• <u>Washington County</u> –The GIS inventory of SHA storm drain, BMP and outfall data and inspections in Washington County was completed in April 2012.</li> </ul>

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<i>Target Date</i>	<i>Milestone</i>	<i>Deliverable</i>	<i>Lead Agency</i>	<i>Comments/Status Updates</i>
June 30, 2015	Work with FHWA and others on Watershed Resource Registry (WRR) efforts to identify watershed-scale opportunities for stormwater management.	Potential SWM Restoration Opportunities	SHA	<p>SHA continues to work with the FHWA and other agency partners on the Watershed Resources Registry (WRR), which is a web-based application that prioritizes natural resource opportunities for restoration or preservation using a watershed based approach.</p> <p>Currently, SHA is conducting field verification studies to validate the results of the WRR prioritization that resulted from the initial modeling efforts. The field verification teams will confirm a number of attributes associated with specific sites to determine if the modeling results hold true. Once complete the results will be incorporated into the current model. As this information is validated and incorporated into the model, SHA can utilize this tool to augment current efforts to identify stormwater opportunities where needs are the greatest. Specifically, this would be valuable for identifying restoration opportunities within local watersheds where SHA has significant WLAs.</p>
June 30, 2015	Assess the SHA implementation plan effectiveness and make necessary changes and/or adjustments.	Refinements to Processes and Staff Structure as Requirements are Achieved	SHA	<p>SHA is in the process of implementing a project management structure to facilitate design, advertisement and construction of BMPs to meet 20% impervious restoration by 2020. In addition, SHA has shifted modeling focus to assess nutrient and sediment reductions from restoration efforts at the local watershed level to meet SHA WLAs.. SHA will continue to model progress and restoration needs required by the NPDES MS4 Permit and will continue to align the appropriate staff and funding.</p>