

**Harford County 2016 - 2017 Programmatic Two-Year Milestones
(Amended January 29, 2018)**

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
SEPTIC SYSTEMS				
On-going	Continue to use BRF money to upgrade existing septic systems with Best Available Technology or public sewer connections.	It is anticipated that 100 existing septic systems will be upgraded or connected to public sewer per year.	Harford County Health Dept. (HD)	During 2016-2017, 39 BAT units were installed to upgrade/repair existing septic systems. In addition, 12 properties connected to public sewer using Bay Restoration Fund (BRF). It should also be noted that 58 BAT units were installed for new construction. (109 total systems)
On-going	HD will continue to work with the Harford County Department of Public Works (DPW) to identify properties that have direct sewer connection capability within the County's Development Envelope	List of properties	HD & DPW – Water & Sewer	During 2016-2017, meetings were conducted to develop strategies for identifying properties with direct sewer connection. Follow-up meetings were needed to establish the list of properties and proceed with outreach. We continued to develop strategies for identifying properties with direct sewer connection. We identified 12 properties on Freys Road and began the petition process. The petition went before the County Council January 2018.
2016/2017	Provide information to property owners identified above regarding the possibility of receiving funding to connect to public sewer	Outreach	HD	Outreach to the properties on the list occurred, and the HD worked with DPW and MDE to inform property owners of financial assistance with BRF.
On-going	Maintain up-to-date spreadsheet of all properties with BAT units	Spreadsheet	HD	The HCHD and MDE's BAT database continues to be updated.
Annually	Ensure connections to public sewer are reported to MDE for	Reporting to MDE	HD, DPW –	HCHD reports through BRF and updating MDE's BAT database. DPW- W&S reports

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	WIP credit		W&S, P&Z	12 septic abandonments for 2016-2017.
URBAN STORMWATER				
On-going	Continue to negotiate the conditions of the MS4 Permit with MDE	MS4 Permit	DPW	Quarterly meetings with MDE were established for all Phase I jurisdictions coordinated through Washington Council of Governments and MD Associations of Counties.
2017	Continue to coordinate with MDE for nutrient trading for MDE	Coordination	DPW	Topic discussed with MDE at the above meetings. MDE issued tentative regulations in the MD Register in Dec 2017.
Ongoing	Continue local Historical BMP Clean-up	BMP Clean-up	DPW	Completed for the 30+ BMPs that provide water quality management.
2017	Associate BMP approval information with maintenance information		DPW	Completed for inspections for FY2016
2017	Migrate MS4 data into the MDE geodatabase format	Coordination	DPW	Submitted all data not previously reported in the FY2017 Annual Report.
2017	Complete watershed restoration plans for Bynum Run, Swan Creek and Bay TMDLs	Plans	DPW	Completed
2017	Illicit Discharge Detection and Elimination Program (IDDE)	Pre-screen 200 outfalls / year for increased hotspot identification and corrections	DPW	Completed
BUFFER PLANTINGS/REFORESTATION				
2016/2017	Review existing programs/regulations to explore options for increasing the amount of forest cover/buffer plantings	Options for amending programs/regulations	P&Z	Began developing a County program (P&Z and DPW) to help fund conservation landscaping projects in 2017. The County is developing a Green Infrastructure Plan that will identify appropriate areas for increasing forest cover and buffer plantings.

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2016/2017	Pursue implementation of the Urban Tree Canopy Study strategies		P&Z	Began developing a County program (P&Z and DPW) to help fund conservation landscaping projects in 2017. The County is developing a Green Infrastructure Plan that will identify a GI network to help focus plantings of trees in urbanized areas.
2017	Begin developing a Green Infrastructure Plan that will help prioritize funding for planting projects	Plan	P&Z	Hosted a community workshop that led to the creation of a vision plan for GI in Harford County in June. Began work with the Conservation Fund to initiate a GI Plan. The County was awarded a grant through DNR to develop a Green Infrastructure Plan. The County is working with The Conservation Fund and other partners. The development of the GI network and other goals of the County will help prioritize planting projects throughout the County.
2016/2017	Explore programs and develop policies that increase reforestation/tree plantings on private property	Plantings on private land	P&Z	Began developing a County program (P&Z and DPW) to help fund conservation landscaping projects in 2017. Sites can be public, private, or HOA open space. GI Plan is being developed with implementation strategies to increase plantings on private lands.
2016/2017	Work with Homeowner's Associations throughout the County to promote forest plantings	Plantings on HOA land	P&Z	Began developing a County program (P&Z and DPW) to help fund conservation landscaping projects in 2017. Sites can be public, private, or HOA open space. GI Plan is being developed with implementation strategies to increase plantings on HOA lands.
Annual	Continue to host the annual Arbor Day celebrations to help increase tree canopy & promote	Arbor Day tree planting	P&Z	Over 500 native trees and 100 native shrubs were planted (over 2 acres) with over 550 people in attendance. Free native trees were

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	environmental stewardship			given to volunteers.
GENERAL				
On-going	Coordinate with the State on any new Programs/Regulations to promote WIP implementation developed during the 2016-2017 timeframe	Coordination	P&Z	The County has continued to coordinate with the State on WIP developments by attending workshops and webinars on WIP related activities.
TOWN OF BEL AIR				
2016/2017	Investigate budget needs to meet the requirements of the MS4 Phase II permit and develop strategies for funding gaps	Funding in designated fiscal year	Bel Air	\$112,890.42 was funded in 2016 by the Town for Design and permitting. Received \$411,595 funding from Chesapeake & Atlantic Coastal Bay Trust Fund Nonpoint Pollution and Reduction Grant to complete construction in 2017. The Plumtree Run Phase I (Atwood Rd section was completed.)
2017	Complete a comprehensive Stormwater Management Plan for the Town (Complete a comprehensive study to identify, map, and analyze the Town's current Storm Water Collection System as well as benchmark the existing impervious surface area).	Plan	Bel Air	Mapping of outfalls and stormdrain system completed. Updating BMP information for collective database. Budgeted \$55,000 in FY 2018 to analyze Town boundaries for calculation of Town existing impervious area.
On-going	Review canopy coverage and the establishment of a coverage minimum for future tree stand development	Plan – posted on website	Town's Tree Committee	In an effort to maintain or increase the Town 37% canopy coverage the Town has planted 200 whips and 25 containers trees for reforestation of the Rockfield Park area. In addition, since 2014 the Town has given out 300 whips at the local farmers market per year for local residents to plant.

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On-going	Private Water Conservation for residents & businesses	\$3,000 in funding-part of FY15 (to be carried over)	Bel Air	Rebate incentives for rain barrels and composting bins & recognition for urban wildlife habitat restoration complete in 2015 and continue in an ongoing manner each year.
CITY OF HAVRE DE GRACE				
Dec 2017	GIS mapping of SWM infrastructure for our Illicit Discharge and Detection Elimination (IDDE) Program.	Mapping is completed	City	All stormwater outfalls have been mapped, inspected, photographed and the data entered into a searchable, record, imagery application, Beehive. -Complete
Dec 2017	Establish an inspection program for IDDE		City	Established - Complete
Dec. 2017	Expand GIS workstations to employees across all City Depts for MS4 Permit compliance.	Hardware, Software, and Training Implementation	City	GIS devices and workstations in Department of Public Works for mapping/updating/searching database. Stormwater outfalls 100% complete, inlets and manholes 50% complete and Water valves and hydrants 20% complete to date. Stormwater outfalls have been inventoried and are in a database for employees to track maintenance. Identifying City sanitary sewers for entering into Beehive for maintenance tracking and preventing sanitary sewers overflows.
Dec. 2018	Investigate budget needs to meet the requirements of the next MS4 Phase II permit and develop strategies for funding gaps	Additional funds	City	No change. MS4 permit renewal has not been initiated at this time. Therefore, any new requirements and budgeting for them remain TBD.
On-going	Develop a multi-year capital improvements program (CIP) for determining priority projects to meet current and future water quality targets.	Project list.	City	This CIP would determine best use of known funds and potential grant funds for projects with greatest cost/benefit for meeting water quality targets within the older portions of the City. Capital improvement projects have been

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				identified for work to be performed over the next several years. The project list is being considered by appropriate City Departments and is ongoing.
On-going	Use of the new 2009 Stormwater Management regulations for all new projects; adopted by local ordinance in 2010.	Development project review.	City	On-going
On-going	Inspect BMPs and Outfalls to ensure that they are maintained by the property owner.		City	All stormwater ponds, related BMPs and outfalls have been inspected at this point. Records are being kept up-to-date and maintenance either performed or notifications going out.
On-going	Pursue funding to design and implement stormwater BMPs on City owned property.	Restoration designs/pond retrofits	City	Two parks and WTP stormwater designs completed. Concord Point Park Pond retrofit to start construction Jan. 2018. Bradford Green pond retrofit in design phase. Lilly Run PH I Wetland Enhancement 100% designed. Permits forthcoming.
CITY OF ABERDEEN				
November 2016	Tree planting in reforestation area in the Fields at Rock Glenn subdivision		City	The City utilized forest conservation funds for the reforestation project. (Project completed)
January 2017	GIS mapping of SWM infrastructure		City	The City will begin the mapping in the summer of 2016 and complete the project by January 2017- The project is delayed; Scheduled for Fall of 2018.
January 2017	Evaluate and measure SWM infrastructure for the MS4 Permit		City	The City contracted with engineering firm to conduct an analysis of our current MS4 permit and develop a 5-year implementation plan. The City approved a budget amendment to begin the implementation of the plan, which

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				will validate the SWM mapping in GIS
On-going	Maintain a complete data base of BMPs within the City and update them frequently, transfer data into GIS mapping		City	Engineering consultant is to assist the City in developing a database to track BMPs. The base mapping should be complete in Fall of 2018.
2016/17	Seek grant funding to complete retrofits and implement BMPs that will reduce N, P and sediment loadings.		City	This milestone is on hold until the City develops the data needed to determine best course of action.
2016/17	Seek design and construction assistance (grant funding) for a completed conceptual design for SWM (water quality) in the City's well field for the reduction of N, P, and TSS.		City	This milestone is on hold until the City develops the data needed to determine best course of action.
On-going	Identify various water quality initiatives throughout the City that can be utilized by developers to offset stormwater management requirements		City	This milestone is on hold.

2016 – 2017 TWO-YEAR MILESTONES – HARFORD COUNTY

PROGRAMMATIC BMP MILESTONES

WASTEWATER TREATMENT PLANTS

- Construction of the ENR Sod Run WWTP (20.0 MGD capacity) is complete. County will continue performing ENR standards as required.

SEPTIC SYSTEMS

- Harford County will continue to use Bay Restoration Fund money to upgrade existing septic systems with Best Available Technology or public sewer connections. We anticipate 50 existing septic systems to upgrade with BAT, or connect to public sewer per year.
- On November 24, 2016, COMAR 26.04.02.07, Best Available Technology for Removal of Nitrogen (BAT,) was revised. The major change is that BAT is not required outside of the Chesapeake Bay Critical Area. However, this regulation does not pre-empt a local jurisdiction's authority to require a BAT system outside the Critical Area in order to protect public health or waters of the State. The county code has been revised to include a statement allowing the Health Department to require BAT outside the Chesapeake Bay Critical Area should circumstances affecting public health be involved.
- Septic repairs/upgrades and public sewer connections will continue to be a high priority. In 2017, 18 properties upgraded to BAT or public sewer connections. We expect to exceed that number in 2018, by using BRF to offset the cost of these improvements. Our goal is to upgrade 50 properties in 2018.

URBAN STORMWATER:

Implementation (Jul 2015 – Jun 2017) FY16 & FY17

- Complete two (2) watershed Assessments
 - Master Plan (Complete Dec 2017)
 - Deer Creek WRAS updates (95% complete)
 - Upper Bynum Run (75% complete)
 - Upper Farnandis Branch (75% complete)
 - Taylor Creek (Initiated Dec 2017)
 - Emmord Branch (Initiated Dec 2017)

- Complete planning for five (5) projects
 - Foster Branch at Still Meadow Stream Restoration (Design 30% complete)
 - Bear Cabin Branch at Chestnut Hill Stream Restoration (Under construction)
 - Woodland Run Stream Restoration (Scope of work pending Jun 2018)
 - Foster Branch at Route 40 Stream Restoration (Forwarded to SHA for consideration)
 - Plumtree Run at West Gate Stream Restoration (Planning still underway)

- Complete Construct restoration designs for twelve (12) projects
 - Abingdon Library SWM Retrofit (Complete)
 - Church Creek Elementary SWM Retrofit and Stream Restoration (95% complete)
 - Jarrettsville Highway Shop SWM Retrofit (Design / build scope of work pending Feb 2018)
 - Ring Factory Elementary SWM Retrofit and Stream Restoration (Complete)
 - Country Walk 1B SWM Retrofit (Complete)
 - Sunnyview Stream Restoration (Design update scope of work pending Mar 2018)
 - Willoughby Beach Extended SWM Retrofit and Stream Restoration (Complete)
 - Foster Branch at Dembytown Stream Restoration (Complete)
 - Heavenly Stream and Wetland Restoration (75% complete)
 - Leight Center Parking Lot Green Infrastructure (Complete)
 - Plumtree Run at Barrington SWM Retrofit and Stream Restoration (Complete)
 - Northwest Branch Declaration Run SWM Retrofit and Stream Restoration (30% complete)

- Complete restoration construction for 9 projects
 - Lower Wheel Creek SWM Retrofit and Stream Restoration (Complete Mar 2017)
 - Abingdon Library SWM Retrofit (Complete July 2017)
 - Jarrettsville Highway Shop SWM Retrofit (Design / build scope of work pending Feb 2018)
 - Ring Factory Elementary SWM Retrofit and Stream Restoration (Construction start Dec 2017)
 - Country Walk 1A SWM Retrofit (Complete 2016)
 - Country Walk 1B SWM Retrofit (Complete Apr 2017)
 - Sunnyview Stream Restoration (Design update scope of work pending Mar 2018)
 - Foster Branch at Dembytown Stream Restoration (Complete Mar 2017)
 - Leight Center Parking Lot Green Infrastructure (Complete Nov 2017)

Implement an Illicit Discharge Detection and Elimination (IDDE) Program

- Begin preliminary screening inspecting outfalls. Expect to pre-screen 200 outfalls per year. (442 outfalls were pre-screened in FY 2016-2017)

BUFFER PLANTINGS/REFORESTATION:

- Pursue additional forest/urban tree canopy plantings as opportunities and funding arise.
- Pursue the development of a Green Infrastructure Plan that will be the foundation of deciding priority areas for planting projects.
- Continue to coordinate with State agencies to increase and / or improve private property riparian buffer and reforestation efforts.

GENERAL

Pursue implementation of non-point source nutrient/sediment reduction strategies identified in the Deer Creek and Bush River Watershed Management Plans, as well as other subwatershed action plans.

CITY OF ABERDEEN

*The City of Aberdeen has elected to remove all comments / updates on the Milestones since they are not required under their current permit.

TOWN OF BEL AIR:

- Forest Conservation/Tree City USA – Continue street tree plantings with no net loss policy (Street Tree initiative will be addressed through Tree City USA – Urban Tree Canopy initiative) In an effort to maintain or increase the Town 37% canopy coverage the Town has planted 200 whips and 25 containers trees for reforestation of the Rockfield Park area. In addition, since 2014 the Town has given out 300 whip at the local farmers market per year for local residents to plant.
- Initiate in-street stormwater bioretention projects as part of pedestrian walkway improvement projects
Initiated 30% design of Thomas Street Pedestrian walking path with on-street grass channel swales.

- Partner with Harford County to plan and construct several watershed restoration projects on Plumtree Run. In 2017, Plumtree Run Stream Restoration along Atwood Road section was completed restoring approximately 1240lf of stream bank.
- Town capital improvement projects will require pervious paving and reduction in overall paving wherever possible Completion of the Pennsylvania Parking Lot path way this project reduce imperious area by 4,125sqft.
- Street sweeping April through October – monthly (weekly in downtown district) Approximately 1,000 Miles of streets are swept yearly in Town. In 2017, the Town sweeping program removed approximately 108.15 tons of sweeping from Town streets.
- Loose leaf pick-up October through December; year-round bagged yard waste pick-up. During 2016-2017, the Town collected 1,084 tons of loose leaves.

CITY OF HAVRE DE GRACE

- Install bio-swales, raingardens, and green infrastructure where appropriate.
- Lilly Run – complete 100% engineering designs and required permits for SWM facility, flood mitigation and bio-swales. Lilly Run Phase I Wetland Enhancement Conceptual and Partial Design is complete. Final design is in progress. Since a major portion of Lily Run flows through Harford County school system property, there’s been some discussion that this remediation could be included in the new high school/middle school project.
- Mitigate Franklin Street sheet flow at river front with bioretention/rain garden. The Franklin Street sheet flow will be treated by the micro-scale practice in Final Design phase at the Water Treatment Plant.

Design and cost estimate Critical Area Tax Fund and grant funds to be used to fund three City Critical Area projects:

- David R. Craig Park SWM Retrofit (Complete)
- Concord Point Waterfront Park Pond Retrofit (Complete)
- Water Treatment Plant SWM Retrofit (Complete)
- Concord Point (formerly Heritage) Waterfront Park – newly purchased waterfront park to contain Critical Area buffers and bioretention facilities. Park completed with required planting mitigation in the fall of 2015.

- Tree/vegetation planting and explore pervious walkways at the newly resurfaced Old Bay Lane
No funds allocated for this project in FY 16 budget. Pointing to FY 17 budget currently being drafted.
- Complete Planning for one (1) pond retrofit to include wildlife habitat that will serve as a living classroom
Bradford Square SWM Pond
- Complete studies, evaluate and plan for public use and Stormwater treatment at the City owned Water Street properties.