

Frederick County 2014 - 2015 Programmatic Two-Year Implementation Milestones and Interim Progress Reporting

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
Frederick County Government - WWTP				
July 1, 2012 to June 30, 2014	Ballenger-McKinney WWTP (MD0021822) ENR upgrade	WWTP ENR upgrade	Frederick County Government	Construction in progress
July 1, 2013 to June 30, 2014	White Rock WWTP (MD0025089) Replacement	WWTP Replacement	Frederick County Government	Design, permitting, and procurement complete with construction notice to proceed issued in May 2014.
July 1, 2013 to June 30, 2014	Mill Bottom WWTP (MD0065439) Upgrade	WWTP Upgrade	Frederick County Government	Notice to Proceed issued May 2014
July 1, 2013 to June 30, 2014	Reich's Ford Landfill Leachate Plant (MD0061093) System Consolidation	System Consolidation	Frederick County Government	NPDES discharge permit terminated July, 2013. System tied in to Ballenger-McKinney collection system where this flow will now receive ENR level treatment. Waste Load Allocations (WLA) for nitrogen and phosphorus from this facility to be transferred to Ballenger-McKinney WWTP when its permit is renewed in 2016.
July 1, 2013 to June 30,	Libertytown WWTP (MD0060577) System Consolidation	System Consolidation	Frederick County Government	NPDES discharge permit terminated March 31, 2014. System tied in to Ballenger-

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2014				McKinney collection system where this flow will now receive ENR level treatment. Waste Load Allocations July 1, 2013 to June 30, 2014 (WLA) for nitrogen and phosphorus from this facility to be transferred to Ballenger-McKinney WWTP when its permit is renewed in 2016.
July 1, 2012 to June 30, 2013	Sanitary Sewer Overflow (SSO) Reduction	<ul style="list-style-type: none"> • Sewage Pump Station Upgrades <ul style="list-style-type: none"> ○ College Run SPS Upgrade Study ○ Ceresville SPS Pump Analysis Study • Sewer Line Televised Inspection Program <ul style="list-style-type: none"> ○ All sewer lines 10" and larger • Sewer Line Cleaning <ul style="list-style-type: none"> ○ Main Lines ○ Laterals • Inflow and Infiltration Projects <ul style="list-style-type: none"> ○ Greenview and West New Market ○ Point of Rocks ○ Jefferson ○ Monocacy ○ Ballenger ○ Buckeystown ○ Linganore 		
July 1, 2013 to	Sanitary Sewer Overflow (SSO) Reduction	<ul style="list-style-type: none"> • Sewage Pump Station Upgrades <ul style="list-style-type: none"> ○ Limestone Lane SPS 		

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June 30, 2014		<ul style="list-style-type: none"> Replacement • Sewer Line Televised Inspection Program <ul style="list-style-type: none"> ○ Follow up to large diameter inspection program • Sewer Line and Manhole Replacements <ul style="list-style-type: none"> ○ Ballenger • Sewer Line Cleaning <ul style="list-style-type: none"> ○ Main Lines ○ Laterals • Inflow and Infiltration Projects <ul style="list-style-type: none"> ○ Crestview ○ Cloverhill ○ Discovery • Root Control Projects <ul style="list-style-type: none"> ○ White Rock ○ Countryside ○ Farmbrook • Smoke Testing <ul style="list-style-type: none"> ○ Discovery ○ Cloverhill 		
Frederick County Government - Septics				
2014-2015	Septic Denitrification	37 Septic upgrades	Canaan Valley Institute	CVI has received funds from the Bay Restoration Fund for the upgrade of 44 septic systems in Frederick County per the BRF January 2014 report.
Frederick County Government – Urban Stormwater – Project Development				
2014	County-owned Pond retrofits	Designs for 5 county-owned ponds treating an estimated 90 acres that would treat an estimated 30 impervious acres	Frederick County Government	Design funds available July 1, 2014. In Progress 40%. Project must “commence and

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				complete” for MS4 credit during permit cycle per new MDE “Accounting for Stormwater” guidance.
2014	Gov’s Stream Rest. Challenge	0.25 acre riparian buffer	Frederick County Government	Design completed with construction scheduled October 2014.
2015-2016	Point of Rocks SW Master Plan	A list of potential retrofitting opportunities within Catchment F of the Potomac Direct Watershed	Frederick County Government	In Progress 50%.
2015-2016	POR Stream Restoration	3960 lf of potential stream restoration	Frederick County Government	In budgeting phase
2015-2016	POR Pond Retrofit	51 ac treated estimate with 17 ac of potential impervious area	Frederick County Government	In budgeting phase
2014	Englandtowne Stream Restoration	500 lf of stream restoration	Frederick County Government	Project must “commence and complete” for MS4 credit during permit cycle per new MDE “Accounting for Stormwater” guidance.
2015-2016	Englandtowne Pond Retrofit	Retrofit of existing SWM pond Est 30 ac drainage treated with 10 ac impervious	Frederick County Government	Design funds approved in 14 with potential construction start in July 2015. Project must “commence and complete” for MS4 credit during permit cycle per new MDE “Accounting for Stormwater” guidance.
2014-2015	Urbana Pond Retrofits	9 dry pond, 7 wet pond retrofits with an estimated 180 ac drainage with 60 acres of impervious acres to be treated	Frederick County Government	In design. Construction funds available July 1, 2015. Project must “commence and complete” for MS4 credit during permit cycle per new MDE “Accounting for Stormwater” guidance.

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2015-2016	Little Hunting Creek SWMP	A list of potential retrofitting opportunities within the Little Hunting Creek Lower Mainstem of Hunting Creek Watershed with a potential 4500 lf of stream restoration	Frederick County Government	Funded; scoping
2015-2016	Ballenger Creek Middle Mainstem SWMP	A list of potential retrofitting opportunities	Frederick County Government	Funded; scoping
2015-2016	Bartonsville SWMP (Pinecliff)	A list of potential retrofitting opportunities	Frederick County Government	Funded; scoping
2015-2016	Upper Monocacy Watershed Assessment	A Report detailing the characterization of the Watershed	Frederick County Government	Funded; scoping
2015-2016	Lower Monocacy Watershed Assessment	A Report detailing the health and characterization of the Watershed	Frederick County Government	Funded; scoping
2014	TMDL Assessment	A countywide assessment report detailing (1) possible source control for flooding and erosion issues within the county to use for further investigation; (2) TMDL Allocation Analysis; (3) List of bmps that will meet TMDL Allocations; and (4) Detailed schedule for bmp implementation.	Frederick County Government	Funded; scoping
2014-2015	NFWF Innovative Nutrient and Sediment- Brook trout Restoration in the Upper Monocacy	7,391 linear feet (1.9 acres) of gravel road retrofitted with DSAr, 1,500 linear feet of stream restoration (15 acres, 100ft = 1 acre per MDE), 3-acre Riparian Buffer; 200 Rain Barrels Installed; 12,500 square feet of bioretention installed; 100 homes retrofitted with Stormwater BMPs, 22.9 acres under urban nutrient mgt, 35.5 acres under BMP implementation for stormwater runoff	Frederick County Government	Funded; scoping
Frederick County Government – Urban Stormwater – Program Development				
12/31/2015	Control non-point source pollution by implementation of low-cost residential best management practices (BMPs)	Eliminate water-body impairments in the Lower Monocacy watershed at the neighborhood catchment scale.	Frederick County Government	Residential stormwater audits are in progress

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	for stormwater, and landscape urban nutrient management practices that will help improve local water quality.	<p>Visit homes with contractor to develop a “Green Infrastructure Plan” (BRP) for 50 of 1640 homes in the Peter Pan Run drainage, including urban nutrient management and other homeowner-scale GI practices</p> <p>Implement neighborhood-scale BMPs using the third party contractor. Treat 9.18 acres to reduce pollutant loads by 28.7 pounds of nitrogen, and 1.98 pounds of phosphorus per year; and 718.1 pounds of nitrogen, and 49.5 pounds of phosphorus over 25 years.</p> <p>Conduct follow-up site visits, organize two Neighborhood Green workshops</p> <p>Redesign seven neighborhood ponds in the Peter Pan Run of Bush Creek in the Villages of Urbana to current standards by combining extended detention, wet pond, and/or constructed wetland storage to improve water quality.</p> <p>Develop a neighborhood walking tour of green infrastructure projects in concert with the Homeowners Association.</p> <p>Develop an automated reporting mechanism by modifying the www.frederickgreenchallenge.org site to track actions related to project implementation</p> <p>Modify tool to provide metrics for the reduction of pollutants that are regulated under the Chesapeake Bay TMDL and local</p>		

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		TMDLs.		
2015	Database Assessment and Needs	Recommendations for stormwater and BMP database improvements that include TMDL tracking.	Frederick County Government	In Progress: 25%
2015	Website Upgrade	A planned upgrade of the public communications for sustainability and watershed issues	Frederick County Government	Proposed for after January 2015
2015	Maintenance Needs and Assessment	Recommendations for maintenance process improvements for county-owned SW facilities.	Frederick County Government	In Progress: 50%
2014-2015	Monocacy and Catoctin Watershed Alliance Coordination	Quarterly newsletters and bimonthly meetings to coordinate outreach and projects that improve water quality and habitat	Frederick County Government	Ongoing
12/31/2015	NFWF Innovative Nutrient and Sediment Grant- Education of homeowners	Educate at least 100 homeowners about urban stormwater management	Frederick County Government	Ongoing and on schedule
Frederick County Government – Urban Stormwater – Funding				
	Operational Budget	FY' 14 Budget of \$1,057,732 for Watershed Management in OSER plus estimated \$1,496,311 from other divisions for operating tasks like sediment and erosion control, street sweeping, etc. FY' 15 Budget of \$1,257,732 for Watershed Management plus estimated \$1,496,311 from other divisions. Estimates for other divisions to be estimated in early 2015.	Frederick County Government	Approved
	Capital Budget	FY' 14 Budget of \$1,005,093 for Watershed Management in OSER, FY' 15 budget of \$2,595,847.	Frederick County Government	Approved
	Other Financing	Stormwater Remediation Fee in place by July 1, 2013. A flat fee of one penny is charged to an estimated 48,781 eligible	Frederick County Government	In place

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		properties on the property tax bill.		
	Grants	\$445,882 NFWF Innovative Nutrient and Sediment Grant	Frederick County Government	Underway
City of Frederick – Urban Stormwater – Project Development				
2014-2015	Planting Forest Buffer	52 acres of trees planted through DNR Grant (2.9 miles of stream with forest 100 ft. buffering)	City of Frederick	Gov. O'Malley's Stream Restoration Challenge, DNR Grant Approx. 13% completed
2014-2015	Stormwater retrofits in redevelopment projects	116.4 acres treated with stormwater retrofits	City of Frederick	Approved Site Plans approx. 2010 -2014
2015	Stormwater retrofit – Culler Lake	55 ac drainage area (Impervious area = 18 ac)	City of Frederick	Seeking additional funding. Ex. Lake sediment removal & new SWM facilities to be completed in 2015
Annual	Street Sweeping	8500 miles of street per year	City of Frederick	Lower numbers due to harsh winters in FY14.
Annual	Leaf Collection	300 miles of streets (3mo.)	City of Frederick	
Annual	Channel Restoration	650 tons of sediment removed	City of Frederick	Inlet cleaning, swales, culverts, and center channel of Carroll Creek at Bentz St.
As completed by developer	Stormwater BMPs	General SWM reporting	City of Frederick	Submitted to MDE by NOCC form
Quarterly	Stormwater fee		City of Frederick	2014 SWM fee ordinance, revised fee based on impervious area. Fee may be used for future SWM retrofits.
City of Frederick – Urban Stormwater - Programs				
Annual	Utility bill mailers on flood		City of Frederick	Topics on stream dumping,

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	hazard			flooding topics, stormwater topics
2016	Watershed Management Plan - Identification of stream impairments & SWM retrofits	Satisfying NPDES permit requirements		Tuscarora, Rock, Carroll Creek watershed basins
City of Frederick – Gas House Pike WWTP – Enhanced Nutrient Removal Upgrade Project (ENR)				
Dec 2016	Substantial Completion of Upgrade Project	Project Completion Nitrogen: before ENR 316,586 #/yr after ENR 97,411 #/yr net removed 219,175 #/yr or 69% Phosphorus: before ENR 48,705 #/yr after ENR 7,305 #/yr net removed 41,400 #/yr or 85%	City of Frederick	Design Complete; Construction Contract to be awarded Sept, 2014.
Potomac Conservancy – Urban Stormwater – Project Planning				
2014-2015	Restore Beaver Dam Creek by working with individual landowners to implement in-stream and riparian buffer restoration	Restoration on up to 14 large agricultural properties along the length of the Creek	Potomac Conservancy	Grant funding has been secured for designs and restoration on one property to be completed by Spring 2015. Landowners have expressed interest on the adjoining property and funds are being sought. Outreach efforts will target the remaining 12 property owners along the creek.

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Frederick County 2014-2015 BMP Implementation Milestones and Interim Milestone Progress Reporting

Action	Proposed Restoration Rates (2-years)	Actual Rate for 2014-2015	% Progress
Bioretention/raingardens	2 ac	.26 ac	11%
Bioswale	9 ac	2 ac	22%
Dry Detention Ponds and Hydrodynamic Structures	9 ac		Captured in stormwater retrofit goal
Impervious Urban Surface Reduction	88 ac		No program
MS4 Permit - Stormwater Retrofit	7 ac	270 ac	3857% Exceeds goal
Urban Filtering Practices	1165 ac		Captured in Bioretention goal
Urban Forest Buffers	114 ac	118.45 ac	104% Exceeds goal
Urban Tree Planting; Urban Tree Canopy	53 ac	21.37 ac	40%
Vegetated Open Channel - Urban	134 ac		
Wet Ponds and Wetlands	0 ac		
Urban Nutrient Management	3699 ac/yr	22.9 ac	Note MD will not count UNM towards Bay restoration.
Street Sweeping Pounds	120225 lbs/yr	273905 lbs/yr	228% Exceeds goal
Urban Stream Restoration / Shoreline Erosion Control	756 lf	650 lf	86%
Septic Denitrification outside of the Critical Area, not within 1000 ft of a perennial stream	0 Systems	37 systems	Exceeds goal
Septic Denitrification Within 1000 ft of a perennial stream	0 Systems		
Municipal Wastewater	60,000 lbs N reduced, 3,000 lbs P		

Gravel Road Retrofit	0 lf	7391 lf	Exceeds goal
Rain Barrels	0 Barrels	200 Barrels	Exceeds goal

Frederick County 2012-2013 BMP Implementation Milestones and Interim Milestone Progress Reporting

Action	Proposed Restoration Rates (2-years)	Actual Rate for 2012-2013	% Progress
Bioretention/raingardens	2 ac	16 ac	800% Exceeds goal
Bioswale	9 ac	3.42 ac	38%
Dry Detention Ponds and Hydrodynamic Structures	9 ac	25.16 ac	280% Exceeds goal
Impervious Urban Surface Reduction	88 ac		No program
MS4 Permit - Stormwater Retrofit	7 ac		Program in development
Urban Filtering Practices	1165 ac	1.67 ac	
Urban Forest Buffers	114 ac	116.79 ac	102% Exceeds goal
Urban Tree Planting; Urban Tree Canopy	53 ac	47.10 ac	89%
Vegetated Open Channel - Urban	134 ac		
Wet Ponds and Wetlands	0 ac	50.5 ac	Exceeds goal
Forest Conservation	52 ac/yr		
Urban Nutrient Management	3699 ac/yr	31 soil tests and pledges not to overfertilize	Note MD will not count UNM towards Bay restoration.
Street Sweeping Pounds	120225 lbs/yr	404930.53 lbs	337% Exceeds goal
Urban Stream Restoration / Shoreline Erosion Control	756 lf	1000 lf	
Septic Denitrification outside of the Critical Area, not within 1000 ft of a perennial stream	0 Systems	44 systems	Exceeds goal

Septic Denitrification Within 1000 ft of a perennial stream	0 Systems		
Municipal Wastewater	60,000 lbs N reduced, 3,000 lbs P reduced	Brunswick WWTP is running at 0.559 MGD, 80% of design capacity, and should be allowed to trade its excess capacity in time.	

2012-2013 BMP milestones capture projects from FY2010-2012 that were not previously reported. 2014-2015 BMP milestones capture projects from FY2013-2014 that were not previously reported. Data from 2013 NPDES MS4 Annual Report; January 2014 Bay Restoration Fund Annual Report; submissions from City of Frederick, Potomac Conservancy, and Frederick County Government for milestone reporting.

This submittal is a demonstration of a seemingly technically viable way based on limited information of how targets might be met. Note that this demonstration has not been selected or adopted by the locality at this time and is simply a technical analysis of one theoretical option that may not be viable as a practical matter due to a variety of reasons. Frederick County Government and other entities represented here expressly reserve the right to change this analysis at any time for any reason in the sole determination of the locality. It is an analysis, not a plan or commitment. Frederick County Government intends to maintain its current pace as resources allow and intends to increase implementation activities as future resources may allow.