

**Montgomery County MS4 Permittees
Chesapeake Bay Watershed Implementation Plan (WIP)
Milestones and Progress
January 29, 2016**

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Montgomery County MS4 Permittees Chesapeake Bay WIP Milestones and Progress January 29, 2016

In October of 2015, the Maryland Department of the Environment (MDE) requested that each local jurisdiction provide an update by January 29, 2016 on 2016-2017 local programmatic milestones. The requested two-year milestones represent near-term commitments that promote a steady pace of progress toward the long-term Chesapeake Bay restoration targets. The focus of this request is on programmatic milestone commitments to be achieved during the calendar year period January 1, 2016 – December 31, 2017. Local partners were also encouraged to submit BMP milestones achieved during the state fiscal year period July 1, 2013 – June 30, 2015.

This current submittal includes updates from the Montgomery County local Municipal Separate Storm Sewer System (MS4) Phase 1 (Montgomery County) and Phase 2 permittees of the Maryland-National Capital Park and Planning Commission (M-NCPPC), and the Cities of Rockville and Takoma Park.

Montgomery County Phase 1 MS4 Permit

The County's MS4 Permit encourages the County to assist in implementation of the Tributary Strategy designed to meet the nutrient and sediment reduction goals for the Chesapeake Bay. The Municipal Separate Storm Sewer System (MS4) Permit Annual Report covers activities on a fiscal year basis--for FY15, from July 1, 2014-June 30, 2015. The FY15 Annual Report will be submitted to MDE in March 2016. The published annual reports can be found on the County's web site at <https://www.montgomerycountymd.gov/DEP/water/ms4.html>.

Implementation

The County's implementation actions are being tracked in the required databases and included in the MS4 Permit annual report submissions to MDE. These annual submissions include GIS coverages and database information to document location, type of stormwater best management practices (SW BMPs) implemented, and estimated pollutant reductions. In addition, the County provides an extensive narrative section each year on its programmatic, 'directionally correct' activities, for which nutrient reductions cannot be directly quantified. These include watershed-specific stream resource monitoring, monitoring development-related BMPs, inspections and maintenance of SW BMPs, detection and elimination of illicit discharge and illegal connections, and watershed outreach materials and activities.

In August 2015, the County submitted a report to MDE summarizing the results of watershed restoration implementation over the five year (2010-2015) MS4 Permit term. That report, titled "Restoring our Watersheds, Montgomery County's 2010-2015 MS4 Watershed Restoration Achievements", can be found on the County's website:

<https://www.montgomerycountymd.gov/DEP/Resources/Files/downloads/water-reports/npdes/MoCo-RestorationAchievements-080715REV2.pdf>.

The County's MS4 Permit requires the County to add stormwater controls to 20% of the County's un or under-controlled impervious surfaces, or 3,777 impervious acres. Table 1 shows progress for impervious area restoration through FY15. There are a total of 4,039 projects with an anticipated impervious area controlled of 4,374 acres. By meeting the MS4 Permit impervious restoration requirement, the County determined that it will meet the 2017 and 2025 nutrient reductions for the State of Maryland's Bay Restoration Watershed Implementation Plan.

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Table 1. FY15 Summary of Watershed Restoration Projects Completed, in Construction, and in Design for Compliance with the 2010 MS4 Permit

Project Status	Number of Projects	Impervious Area Controlled (Acre)
Completed	3,861	1,774
In Construction	17	170*
In Design	161	2,430*
Total	4,039	4,374

*The impervious area control for projects in design and under construction is an estimate and may not reflect the final project computations

Funding

Stormwater Management Restoration Projects

The approved FY15-FY20 SWM Program shown in Table 2 totals \$363.7 million, an increase of \$128.7 million, or 55 percent from the amended approved FY13-FY18 program of \$235 million. This increase in stormwater management activity will be financed primarily through water quality protection bonds. The debt service for these bonds will be supported by the County’s WQPF. The budget assumes \$60 million in State aid based on past funding received from the State through grants.

Highlights of the FY15-FY20 SWM CIP Budget include expanded construction of stormwater management facilities, retrofits of old stormwater management facilities, repairs to damaged stream channels and tributaries in stream valley parks and priority watersheds, and structural repairs to County maintained stormwater management facilities. DEP will also expand the design and construction of ESD SWM facilities, County facilities, roads and schools.

Table 2. Department of Environmental Protection Approved (May 2014) FY15-20 Stormwater Management (SWM) Capital Improvement Program Budget (in \$)

Projects	CIP Cycle Total	FY15	FY16	FY17	FY18	FY19	FY20
SWM Retrofit	146,470	18,726	22,968	23,408	23,732	27,696	29,940
SWM Retro-Government Facilities. Low Impact Development	17,732	3,026	2,816	2,820	3,270	2,900	2,900
SWM Retrofit- Roads	98,420	12,740	14,080	26,320	16,010	15,170	14,100
SWM Retrofit Schools	24,930	3,470	6,280	3,480	3,900	3,900	3,900
Miscellaneous Stream Valley Improvement	42,573	6,393	5,440	9,640	8,900	6,100	6,100
SWM Facility Planning	8,400	1,150	1,250	1,350	1,450	1,550	1,650
SWM Retrofit Anacostia	2,060	310	350	350	350	350	350
Major Structural Repair	23,070	7,530	3,540	3,000	3,000	3,000	3,000
Total	363,655	53,345	56,724	70,368	60,612	60,666	61,940

Montgomery County Phase II MS4 Permittees

M-NCPPC Department of Parks, Montgomery County

WIP Strategy Description

The M-NCPPC Department of Parks, Montgomery County (Montgomery Parks) manages over 466 miles of streams, more than 500 lakes, ponds, and stormwater management facilities, and over 27,791 acres of natural landscape within its 37,076 acres of parkland.

Montgomery Parks is committed to fulfilling its WIP requirements through compliance with its Phase II MS4 NPDES permit obligations (NPDES permit) and will develop a detailed Notice of Intent when the new Phase II permit is released.

The information included in this report represents the progress Montgomery Parks has made to reduce or eliminate stormwater pollutant sources on parkland during Fiscal Year 2015 (FY15) which spans from July 1, 2014 – June 30, 2015 and includes 2015-2017 WIP Milestones.

2015-2017 Milestones

Milestone 1: Develop Notice of Intent (NOI) under the next round of Phase II NPDES permits.

Status: The Maryland Department of the Environment has not issued the new Phase II NPDES Permit so Montgomery Parks has not yet developed its NOI.

Milestone 2: Conduct storm drain mapping and GIS analysis to better define the current storm drain network, impervious surfaces and potential restoration sites.

Status: Mapping of the storm drain network continued in FY15 and data from the Northwest Branch, Paint Branch, Little Paint Branch, and Little Falls watersheds were finalized. The GIS-based watershed data that were collected were field-verified and analyzed by staff. The next watersheds anticipated to be completed are Lower Rock Creek, Upper Rock Creek, Rock Run, Cabin John Creek, Watts Branch and Muddy Branch.

Milestone 3: Plan and build stormwater retrofits and stream restoration projects as funded by the CIP budget.

Status: Within Montgomery Parks' Capital Improvement Program (CIP), there are two funds dedicated to pollution prevention, stormwater management, and stream restoration. Using these funds, and in coordination with other agencies, over 8,500 linear feet (~1.6 miles) of stream was restored on parkland in FY15 (See Appendix 1). In FY15, twenty-five bioswales, two bioretentions, four playground stormwater management retrofits, three infiltration trenches, and eight wetlands were constructed on parkland. In addition, over 100,000 square feet (2.3 acres) of impervious surface was removed (See Appendix 2).

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The program to install stormwater retrofits through the parks to treat untreated impervious surfaces will continue. Pollution Prevention measures at Martin Luther King, Jr. Maintenance Yard will be constructed beginning in the fall of 2015 and include stormwater retrofits, covered storage, and a vehicle wash. Additionally, the Little Falls watershed will be the focus of an effort to install several ESD facilities.

Milestone 4: Continue to improve NPDES coordination both internally and externally.

Status: The Core NPDES team is now comprised of full-time staff across six Parks Divisions. A significant accomplishment of this group has been the work done to bring water quality priorities to all levels of the organization and to work with other agencies and partners to ensure efficiency of efforts county-wide.

Montgomery Parks continues to work collaboratively with Montgomery County Department of Environmental Protection (DEP) on storm drain mapping, Illicit Discharge, Detection, and Elimination (IDDE), coordination on new or retrofit stormwater management facilities, and stormwater management facility maintenance on parkland. Montgomery Parks is committed to continue working with Montgomery County DEP on public events and opportunities to reach out to the public with consistent messaging about water-quality related topics.

As a predominately stream valley park system stewarding over 466 miles of stream, Montgomery Parks is a major recipient of trash from surrounding areas that gets washed into parks and streams by stormwater runoff. In order to combat the trash problem, Montgomery Parks utilizes the invaluable assistance of volunteers to assist with the removal of trash through stream and park cleanups. Approximately 76 tons of trash was removed from Parks, and more than 5,500 volunteers were engaged in cleanup activities in FY15. Montgomery Parks will continue utilizing volunteers to help remove trash in FY16 and FY17 through stream and park cleanups as well as with educating the public through storm drain labeling projects.

Active dialogue continues between Montgomery Parks and the Stormwater Partners, a coalition of environmental groups concerned about stormwater and environmental issues, on protection of water resources. Formal meetings with the Stormwater Partners are held at least once annually with follow-up meetings occurring as needed.

Milestone 5: Increase staff training on environmental/water quality issues.

Status: Montgomery Parks increased staff training on pollution prevention and stormwater management. We have primarily focused on front line operations personnel in small training groups because this format enhances the training experience through encouraging questions and group discussion. An initiative is in place for FY16 to encourage more staff to acquire Erosion and Sediment Control Certification from the Maryland Department of the Environment. Targeted staff continue to receive training on Integrated Pest Management and Pesticide Safety. Beginning in FY15, through a partnership with the Maryland Department of Agriculture, staff began receiving necessary training leading to the Trained Fertilizer Applicator and Professional Fertilizer Applicator credentials.

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Montgomery Parks' newsletter-style outreach tool, Minnow Minutes, used to provide targeted environmental education to staff, won a Maryland Recreation and Parks Association award for creative programming in FY14. This tool continues to be used to present focused information and everyday BMPs staff can implement to protect natural resources in parks. New strategies to convey important information to staff are in development that can be used in informal group discussions on topics of water-quality and environmental protection.

Summary

In FY15, Montgomery Parks' successes have created a solid foundation for the Chesapeake Bay Watershed Implementation Plan (WIP) Phase II Plan. M-NCCPPC Department of Parks, Montgomery County, looks forward to continuing this effort to improve water quality in Montgomery County streams in conjunction with the issuance of MDE's new Phase II NPDES permit.

For more information about Montgomery Parks' NPDES program, the FY15 annual report can be found at the following link:

http://www.montgomeryparks.org/PPSD/Natural_Resources_Stewardship/stormwater/document/fy15-mnccppc.npdes.annual.report.pdf

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City of Rockville

The City of Rockville's 2014-2015 Programmatic Milestone Progress Report, and the 2014-2015 Implementation Progress Report are included in Appendix 3.

City of Takoma Park

The City of Takoma Park's 2016-2017 Programmatic Two Year Milestones, FY16-FY17 New BMP Implementation Milestones Report, and FY14-FY15 Final BMP Implementation Report are included in Appendix 4.

**Montgomery County MS4 Permittees Chesapeake Bay WIP Milestones and Progress
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Appendix 1

M-NCPPC, Department of Parks, Montgomery County (Montgomery Parks)

Stream Restoration Projects FY15 Progress

Appendix 1: M-NCPPC, Dept. of Parks, Montgomery County (Montgomery Parks)

Stream Restoration Projects FY15 Progress

LOCATION	LEAD AGENCY	WATERSHED	COMPLETION DATE	LENGTH (LINEAR FEET)	GOALS	DESCRIPTION
WSSC Stream Restoration in Cabin John Main Stem North (Cabin John SVU 2)	WSSC	Cabin John	September 2014	600	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
ICC ES/CM Project PR-257 in Olney Family Neighborhood Park	SHA	Patuxent River	September 2014	800	To stabilize eroding banks, alleviate flooding, re-establish floodplain connects, provide fish passage	Removal of an inline pond and establishment of a stream channel with adjacent wetlands through that area, stabilized eroding stream banks
Stream Restoration in Cabin John Mainstem at end of McDonald Drive (Cabin John SVU 4)	Montgomery Parks	Cabin John	September 2014	50	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
Rock Creek Debris Jam Removal Upstream of Connecticut Avenue	SHA	Rock Creek	October 2014	100	Stabilize the stream and prevent erosion of the adjacent trail	Removal of massive debris jam to prevent lateral erosion of Rock Creek into the adjacent trail
WSSC Stream Restoration in Unnamed Tributary to Cabin John near Wilson Lane and Braeburn Place (Cabin John SVU 1)	WSSC	Cabin John	October 2014	250	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
Ken-Gar Palisades LP-Phase 2	MNCPPC	Lower Rock Creek	October 2014	234	Replace an undersized culvert with a double box culvert and stabilize the downstream channel	Replacement of an existing culvert with twin 4'x2' concrete box culverts and stabilization of a section of stream with rock, cross vanes, and grading
US 29 Coir Logs	SHA	Paint Branch	November 2014	40	To stabilize eroding banks at the base and help catch freeze/thaw erosion before it enters the active channel.	Install coir logs to help stabilize steep eroding banks of outfall channel

LOCATION	LEAD AGENCY	WATERSHED	COMPLETION DATE	LENGTH (LINEAR FEET)	GOALS	DESCRIPTION
Valley Mill LP	MNCPPC	Paint Branch	December 2014	1,434	To remove a fish blockage, repair a diversion weir, cover an exposed sewer line and improve instream habitat	Outfall stabilization, in-stream grade control structures, bank grading and stabilization, new diversion weir
WSSC Stream Restoration in Bucks Branch (Buck Branch SVP)	WSSC	Cabin John	January 2015	350	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Stream Restoration in Cabin John Mainstem near Greentree Road and Tusculum Way (Cabin John SVU 5)	WSSC	Cabin John	February 2015	250	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Stream Restoration in Sligo Creek South of Brunett Avenue (Sligo Creek SVU 3)	WSSC	Sligo Creek	February 2015	200	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Stream Restoration in Cabin John Mainstem at Cabin John Campground near Coddle Harbor Lane (Cabin John Regional Park)	WSSC	Cabin John	February 2015	150	Permanently stabilize stream in order to protect 48" water line from breakage and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Stream Restoration in Cabin John Mainstem at Springlake (Cabin John Regional Park)	WSSC	Cabin John	March 2015	400	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Stream Restoration in Unnamed Tributary to Cabin John near Thornley Court (Cabin John SVU)	WSSC	Cabin John	March 2015	350	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage

LOCATION	LEAD AGENCY	WATERSHED	COMPLETION DATE	LENGTH (LINEAR FEET)	GOALS	DESCRIPTION
WSSC Stream Restoration in Cabin John Main Stem South of Lower Booze (Cabin John SVU 2)	WSSC	Cabin John	March 2015	500	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Stream Restoration in Cabin John Mainstem near Kentsdale (Cabin John SVU 5)	WSSC	Cabin John	March 2015	250	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Outfall Restoration in Unnamed Tributary to Bucks Branch South of Bells Mill Road (Buck Branch SVP)	WSSC	Cabin John	March 2015	150	Permanently stabilize storm drain outfall in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
Log House Road Emergency Culvert Replacement	MCDOT	Seneca Creek	April 2015	185	Replace two failing culverts and connect to stable stream	Replacement of two culverts along Log House Road. Stream was stabilized U/S and D/S with rock sills
Breewood Tributary Stream Restoration	DEP	Sligo Creek	May 2015	500	Restore degraded stream and provide SWM and groundwater recharge pools	Used riffle grade control and rock weirs to create a series of deep pools that capture runoff from impervious roads, and residential homes to provide SWM and groundwater recharge and create new biodiverse habitat
Rock Creek Trib. Outfall 50 feet North of overpass of Rte 28, northeast side of Norbeck Road into Main RC stream	Montgomery Parks	Upper Rock Creek	June 2015	600	Remove Fish Blockage and restore degraded stream	Removed blown out trail culvert and replaced with Bridge and restored 600 feet of stream channel. Installed cross vanes, riffle grade controls, Root wads and log toe bank protection
Hillandale Emergency Culvert Replacement	MCDOT	Little Falls	June 2015	235	Replace a failed culvert and connect to stable stream	A new 12' CMP culvert was placed. Stream was stabilized upstream and downstream with Rock, cross vanes, J-hooks and grading

LOCATION	LEAD AGENCY	WATERSHED	COMPLETION DATE	LENGTH (LINEAR FEET)	GOALS	DESCRIPTION
WSSC Stream Restoration in Unnamed Tributary to Sligo Creek Parkway near Parkside Headquarters (Parkside HQ)	WSSC	Sligo Creek	June 2015	75	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
Storm Drain Outfall Enhancement in Bucks Branch near Harness Trail (Buck Branch SVP)	Montgomery Parks	Cabin John	June 2015	75	Remove existing concrete lined storm drain outfall and create riparian enhancement	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage
WSSC Stream Restoration in Unnamed Tributary to Old Farm Creek near Arroyo (Tilden Woods SVP)	WSSC	Cabin John	June 2015	900	Permanently stabilize stream in order to protect sewer assets and prevent discharge into streams	Installation of grade control structures to provide adequate cover over sewer asset and to transition into existing channel at a stable slope to provide fish passage

**Montgomery County MS4 Permittees Chesapeake Bay WIP Milestones and Progress
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Appendix 2

M-NCPPC, Department of Parks, Montgomery County (Montgomery Parks)

Post Construction Stormwater Management FY15 Progress

**Appendix 2: M-NCPPC, Dept. of Parks, Montgomery County (Montgomery Parks)
Post Construction Stormwater Management FY15 Progress**

PARK NAME AND LOCATION DESCRIPTION	LEAD AGENCY	TYPE OF RETROFIT	WATERSHED	COMPLETION DATE	PROJECT DESCRIPTION	DRAINAGE AREA	TREATMENT VOLUME
Kensington - Warner Circle	Montgomery Parks	Bioswale	Lower Rock Creek	December 2014	Bioswale installation	0.5 ac	832 cf
Good Hope Encroachment Clean Up	Montgomery Parks	Impervious removal and wetland/vernal pool creation	Paint Branch	April 2015	Removal of gravel driveway with soil deconsolidation, removal of trash/debris from site, wetland creation, tree and shrub planting	N/A	N/A
Argyle LP	Montgomery Parks	Pervious Parking Area	Sligo Creek	September 2014	Pervious Pavement added to replace existing impervious areas that were previously untreated.	0.3 ac	794 cf
Argyle LP	Montgomery Parks	Bioswale	Sligo Creek	September 2014	Bioswale added to treat existing impervious areas that were previously untreated.	0.4 ac	672 cf
Sligo Creek Parkway Bioswales	Montgomery Parks	Bioswale	Sligo Creek	University Blvd to Dennis Ave completed 4/2015; Dennis Ave to Forest Glen Rd completed 6/2015	Installed 12 bioswales totaling 395 feet in length	15.2 ac	3048 cf
Burning Tree	Montgomery Parks	Infiltration Trench	Cabin John	November 2014	Installed infiltration trench around tennis courts to catch court and path runoff	1.1 ac	1118 cf
West Fairland Local Park	Montgomery Parks	Bioswale	Paint Branch	October 2014	Construction of 2 bioswales treating stormwater runoff from road and part of driveway access and tennis court	4.0 ac	811 cf
Seven Oaks Micro-bioretentions	Montgomery Parks	Micro-bioretentions	Sligo Creek	April 2015	Installed two micro-bioretentention facilities to treat excessive drainage at bottom of hill	2.4 ac	933 cf

PARK NAME AND LOCATION DESCRIPTION	LEAD AGENCY	TYPE OF RETROFIT	WATERSHED	COMPLETION DATE	PROJECT DESCRIPTION	DRAINAGE AREA	TREATMENT VOLUME
Raymoor Road Bioswale and Wetland Creation along Beach Drive	Montgomery Parks	Bioswale and Wetland Enhancement	Rock Creek	May 2015	Installed bioswale and wetland enhancement to provide treatment of water from a storm drain outfall before it drains to Rock Creek	4.9 ac	280 cf
Indian Spring Terrace Park	Montgomery Parks	Bioswale	Long Branch	June 2015	Construction of bioswale, an inlet and storm drain to collect and treat stormwater runoff	1.6 ac	4592 cf
Long Branch Local Park - Miles Glass Impervious Removal	Montgomery Parks	Impervious Removal	Sligo Creek	September 2014	Impervious removal (asphalt pavement, concrete building slab, concrete sidewalk) (approx. 17,000 sf)	N/A	N/A
Brennon Lane Bioswale	Private Developer - Larry Crafritz	Bioswale	Little Falls	June 2015	Construction of bioswale as mitigation for discharging private property sump pump into a storm drain through Parks property	3.4 ac	112 cf
Sligo Creek Pkwy at Godwin Drive	Montgomery Parks	Impervious removal and infiltration trench	Sligo creek	May 2015	8'x76' Impervious removal and 6' x 70' stone infiltration trench install at 24" depth	0.1 ac	30 cf
Cabrera Property	Montgomery Parks	Impervious Removal and Soil Deconsolidation	Paint Branch	August 2014	Removed structures and pavement from site then used deep ripping (>20") and tilling (6-9") with compost amendment	N/A	N/A
Norwood Local Park Dry Well	Montgomery Parks	Dry Well	Little Falls	September 2014	Installed a dry well to encourage groundwater recharge of existing runoff	0.1 ac	30 cf

PARK NAME AND LOCATION DESCRIPTION	LEAD AGENCY	TYPE OF RETROFIT	WATERSHED	COMPLETION DATE	PROJECT DESCRIPTION	DRAINAGE AREA	TREATMENT VOLUME
Fairland Recreational Park	Holly Ridge Development, LLC	Infiltration Pool	Little Paint Branch	May 2015	Removed haul road with severe drainage and erosion problems. Stabilized eroded soil and constructed infiltration pools to collecting the runoff at three points along the slope	100,000 ac	N/A
Fairland Recreational Park	Holly Ridge Development, LLC	Wetland Enhancement	Little Paint Branch	November 2014	Removed haul road and concrete culvert. Constructed wetlands	N/A	N/A
Rock Creek WSSC Access Road off of Beach Drive	WSSC	Wetland Enhancement	Rock Creek	March 2015	Constructed WSSC Access Road with a geogrid to hold stone in place and graded a wetland enhancement to provide important habitat on both sides of the access road in this environmentally sensitive area	N/A	N/A
Aberdeen LP Park Bioswales	Montgomery Parks	Bioswales and infiltration	Muddy Branch	September 2014	Construction of 3 bioswales, storm drain culverts and an infiltration trench treating onsite impervious runoff from tennis court, playground, parking lot, volleyball court and athletic field.	8.0 ac	2024 cf
Hillandale LP	Montgomery Parks	Impervious Removal	Northwest Branch	June 2015	Impervious removal of building and walkway (approx. 5,900 sf)	N/A	N/A
Seneca Landing Special Park	Montgomery Parks	Impervious Removal	Seneca Creek	February 2015	Impervious removal of house, walkway, and parking lot (approx. 9,600 sf)	N/A	N/A
Camp Seneca Special Park	Montgomery Parks	Impervious Removal	Seneca Creek	January 2015	Impervious removal of pool and house (approx. 4,600 sf)	N/A	N/A

PARK NAME AND LOCATION DESCRIPTION	LEAD AGENCY	TYPE OF RETROFIT	WATERSHED	COMPLETION DATE	PROJECT DESCRIPTION	DRAINAGE AREA	TREATMENT VOLUME
Wheaton Regional Park – Stubbs Site	Montgomery Parks	Impervious Removal	Northwest Branch	October 2014	Impervious removal of house, walkway and parking lot (approx. 25,700 sf)	N/A	N/A
Bradley Hills LP	Montgomery Parks	Playground infiltration	Booze creek	March 2015	Renovate playground and provide SWM	0.1 ac	3900 cf
Bedfordshire NP	Montgomery Parks	Playground infiltration	Kilgour Branch	March 2015	Renovate playground and provide SWM	0.1 ac	3900 cf
Forest Glen LP	Montgomery Parks	Playground infiltration	Rock Creek	March 2015	Renovate playground and provide SWM	0.1 ac	3900 cf
Ellsworth LP	Montgomery Parks	Playground infiltration	Sligo Creek	March 2015	Renovate playground and provide SWM	0.1 ac	3900 cf

Appendix 3

City of Rockville's 2014-2015 Programmatic Milestones Report

City of Rockville's 2014-2015 Implementation Progress Report

City of Rockville 2014 - 2015 Programmatic Milestone Progress Report

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
Urban Stormwater				
2014	Preserve the City’s current stormwater management (SWM) utility fee structure.	<ul style="list-style-type: none"> • State legislature’s elimination of exempted entities from the various fee statues. • State legislature’s requirement for state and other government property owners to pay appropriate SWM utility fee bills. 	Public Works	The City has been unable to fully resolve this. State entities (Montgomery College and Montgomery County Public Schools) are not paying the fee. As a result of a 2015 legislative requirement, Montgomery County has agreed to pay the FY16 SWM utility fee rate for two years. The City of Rockville will continue to work on this issue.
2016	Identify untreated impervious areas within Rockville City limits.	<ul style="list-style-type: none"> • GIS map layer for both public and private facilities highlighting impervious area treated and to what “treatment level”. 	Public Works	The City has identified approximately 95% of the treated area. Please note: the City is only identifying areas treated by facilities built after 1985.
TBD	Develop detailed NOI when MDE issues the Phase II MS4 General Permit.	<ul style="list-style-type: none"> • Participate in comment period for Draft Phase II MS4 NPDES permit when available. • Submit NOI to MDE. • Reporting tools 	Public Works	The City is still awaiting its updated NPDES Phase II permit.

City of Rockville 2014 - 2015 Implementation Progress Report

Project	Description	Calendar Year Complete (projected)	Status	Comment
Glenora Tributary restoration and wetland creation	700 LF of stream restoration utilizing natural channel design, 90 LF of additional stream creation, 0.15 acre of wetland creation, one SPSC outfalls, one rip-rap stabilized outfall 27 LF in length	2015	Complete	This project was partially funded through the DNR Chesapeake and Atlantic Costal Bays Trust Fund; Ongoing monitoring for five years post construction.
Horizon Hill SWM retrofit and stream restoration	Convert two dry ponds to wet, upgrade one dry pond riser structures, create 8,500 square feet of wetland habitat and restore approximately 1300 LF of stream	2016	Construction	This project was partially funded through the DNR Chesapeake and Atlantic Costal Bays Trust Fund; Ongoing monitoring for five years post construction.
Dogwood Park stream restoration	Restoration of 1,951 LF of stream	2017	Design	This project was partially funded through the DNR Chesapeake and Atlantic Costal Bays Trust Fund; Ongoing monitoring for five years post construction.
Rollins Avenue storm drain outfall and Aleutian Avenue stream repair	Perform “spot” repairs on stream segments to protect infrastructure or resolve a safety issue.	2016	Construction	
Retrofit of on three existing SWM facilities, Locks Pond, Antree Pond and Potomac Woods pond	Deepening existing ponds for better water quality treatment and less maintenance needs.	2016	Complete	
King Farm Watkins Pond	Deepening existing ponds for better water quality treatment and less maintenance needs.	2017	Design	This project was partially funded through the DNR Chesapeake and Atlantic Costal Bays Trust Fund
Upper Watts Branch	Stream stabilization/restoration for	2017	Design	This project was partially funded

City of Rockville 2014-2015 Programmatic/Implementation Milestone Progress Report January 2016

stream restoration	approximately 1700 linear feet of stream. This includes RSCs at three eroded outfalls.			through the DNR Chesapeake and Atlantic Coastal Bays Trust Fund; Ongoing monitoring for five years post construction.
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Appendix 4

The City of Takoma Park's:

2016-2017 Programmatic Two Year Milestones,

FY16-FY17 New BMP Implementation Milestones Report,

FY154-FY15 Final BMP Implementation Report



City of Takoma Park
2016 - 2017 Programmatic Interim Two-Year Milestones
 (Reporting Period: January 2016 to December 2017)

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
Funding				
July, 2016	Compare property tax database to stormwater billing database and identify properties that are missing from current billing	Revised billing list for stormwater utility fee	DPW & Finance	
January, 2017	Re-evaluate commercial, institutional and multifamily properties impervious area for stormwater billing	Develop and advertise RFP, select consultant, implement recommended billing changes based on update data	DPW	RFP advertisement by July, 2016, Consultation selection in Fall, 2016, Report by Spring, 2017, Recommendations to Council in summer, 2017. Implement billing change in fall 2017
July, 2016	New Funding Source Development - Grant Applications	Research and apply grant from various public and private sources	DPW	Research and apply for grants for stream restoration and trash interceptor project at Sligo Mill
Program Development or Enhancement				
July, 2017	Evaluate Credit for Street Sweeping Program	Track the weight of debris collected by the street sweeper, determine if using weight as opposed to lane miles would enhance Equivalent Impervious Area Reduction (EIAR)	DPW	

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
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July, 2017	Implement an Illicit Discharge Detection and Elimination Program	Develop a service contract to track and eliminate illicit discharge. The aim is to plan the annual program within the sub-basin boundaries	DPW	
July, 2017	Develop an incentive program for property owners to reduce stormwater run-off from private property	Develop and promote program to property owners	DPW	Likely to be a rebate program to cover a portion of the cost for installation projects that help reduce stormwater runoff. Few examples of the projects are : down spout disconnects, rain barrels, rain gardens, conservation landscaping etc.
July, 2017	Update the Stormwater Pollution Prevention Plan (SWPPP) for Public Works Facility	MDE Industrial Stormwater General Permit for Public Works facility	DPW	
June, 2017	Measure weight of materials removed from stormwater infrastructure during cleaning	Develop method for weighing and recording sediment and debris removed from inlets and pipes during cleaning	DPW	
December, 2017	Periodically update the GIS database with new permitted BMPs	Digitize location of all permitted BMPS on GIS database	DPW	
Tracking & Reporting				
January, 2017	Interim WIP Milestone Reporting	Submit Interim Programmatic and Interim BMP Milestone reports to MDE by January 31, 2017	DPW	
February, 2016	NPDES Phase II Stormwater Program report for FY 2016 & FY 2017	Submit annual report to MDE in September	DPW	

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
Outreach/Education				
July, 2017	Revive the Mark a Drain Program	Identify new outreach measures to recruit volunteers to mark storm drains	DPW	
September, 2016	Develop flyer with information about City's SWM fee, program and practices	Flyer	DPW	An informational mailer is included with the annual stormwater fee. This year's flyer will be modified to include updated information and will be mailed in September, 2016.
December, 2017	Informational display boards at key stormwater management facilities	Design and install 4 onsite display boards	DPW	One of the board is scheduled for installation in March, 2016
July, 2017	Implement the City's Safe Grow Policy	Annual education event and outreach to commercial applicators and residents. Enforcement activity as needed	DPW	City law restricts use of pesticides for cosmetic lawn care. The policy went into effect in March, 2014. The City continues its outreach efforts to pesticide applicator and residents via annual events and web information: http://www.takomaparkmd.gov/safegrow .
Local Watershed/Project Planning				
Ongoing	Establish public private partnership for construction of stormwater BMPs	Identify possible properties that may benefit from BMP installation, discuss possible collaborative program with owner, identify funding sources	DPW/HCD	
July, 2017	Site identification for new BMPs installation	Develop 5 year Capital improvement Program of feasible BMP's	DPW	

Note: DPW = Department of Public Works; HCD = Housing and Community Development SWM= Stormwater Management; RFP = Request for Proposal; MDE = Maryland Department of Environment; Stormwater BMP = Stormwater Best Management Practice; City = City of Takoma Park

City of Takoma Park

FY 16- FY17

(July 1, 2015-June 30, 2017)

New BMP Implementation Milestones Report

No.	Action	Proposed Restoration Rates (2 yr period)	Actual Restoration	% Progress
1	Stream Restoration	200 feet		
2	SWM Retrofit	6 acres		
3	Regenerative Street Sweeping	Current rate, 40 acres IAE =5.2 acres annually		
4	Urban Tree Canopy Planting	200 trees		
5	Storm Drain Cleaning	20,000 ln ft		
6	Erosion Control	500 ln ft		

City of Takoma Park

FY 14- FY15

(July 1, 2013-June 30, 2015)

Final BMP Implementation Milestones Report

No.	Action	Proposed Restoration Rates (2 yr period)	Actual Restoration	% Progress
1	Stream Restoration	200 feet	400 LF	200%
2	SWM Retrofit	6 acres	6.69 acres	115%
3	Regenerative Street Sweeping	Current rate, 40 acres IAE =5.2 acres annually	Below goal - 36Acre, IAE=4.68 annually	90%
4	Urban Tree Canopy Planting	200 trees	200 trees	100%
5	Storm Drain Cleaning	20,000 ln ft	17,637 ln ft	88.1%
6	Erosion Control	500 ln ft	2,220 ln ft	N/A