



## Summary of Restoration Portfolio Development for Baltimore City



The City of Baltimore submitted to MDE a portfolio of *Restoration Projects to Be Planned, Designed, and/or Constructed from CY 2020 through CY 2027* (Restoration Portfolio) in August 2019. That submittal was based on accounting principles and guidance provided by MDE in a letter dated April 12, 2019. The Restoration Portfolio was part of a response to the *MDE Physical Capacity Questionnaire for MS4 Permittees as Part of a Maximum Extent Practicable (MEP) Analysis*. The Restoration Portfolio specifically excluded alternative BMPs from the estimation of “impervious acres” credit (also referred to as impervious surface restoration or ISR); only total suspended solids (TSS) and total nitrogen (TN) reductions could be attributed to alternative restoration projects, such as stream restoration and tree planting. The Restoration Portfolio also did not include the operational programs used in the City’s current permit to meet the ISR credit.

In December 2019, the City submitted its FY 2019 MS4 Annual Report, based on the *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permit*, dated August 2014 (2014 Accounting Guidance). The report demonstrated that the City exceeded the 20% ISR requirement of the current permit by June 30, 2019.

On December 23, 2019 MDE issued a draft revised *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits (2019 Draft Accounting Guidance)*. On January 16, MDE provided an overview of the 2019 Draft Accounting Guidance to MS4 managers. In response to the overview, the MS4 managers collaborated and submitted questions and comments to MDE on January 31, 2020. MDE’s response to those comments were issued on February 14, 2020. On March 16, Baltimore City submitted a revised Restoration Portfolio, which was developed based on the 2019 Draft Accounting Guidance and MDE’s response to comments. The City reserves the right to adjust these credits if MDE provides new revisions, updates, or clarifications to either of these documents.

Following a conversation with MDE on April 8, Baltimore City submitted a second revision to the City’s Restoration Portfolio on April 27. MDE’s review of the submittal on May 1, 2020. Based on that review, Baltimore City has prepared a third revision to the City’s Restoration Portfolio as follows:

- Street sweeping will be continued from the previous permit. The street sweeping operations, listed under “Obligations from Previous Permit That Must Be Continued”, were based on the total mileage listed in the FY 2019 MS4 Annual Report, which accounted only for operations performed at least 2 times per month, using a street sweeper path width of 52 inches. The equivalent impervious area and pollution reductions were calculated using the mileage-based

method from the 2014 Accounting Guidance. Specifically, the equivalent impervious area was calculated using the rate of 0.13 EIA / area swept. The area swept is the width of the sweeper multiplied by the total miles swept during the year. Cost estimations include a 2% annual escalation in operations costs. This operation is critical to the City's trash TMDL and to reducing potential flooding. To be conservative, no increase in mileage is proposed; however, the City continues to take measures to improve the operation performance, such as the enforcement of parking requirements on street sweeping routes.

- Inlet cleaning will be continued from the previous permit. The street sweeping operations, listed under “Obligations from Previous Permit That Must Be Continued”, were based on the total tonnage listed in the FY 2018 MS4 Annual Report for both reactive and pro-active inlet cleaning. The number of inlets are listed as the number of BMPs. FY 2018 MS4 Annual Report data was used as a basis of continued operations because FY 2019 had record-setting rainfall; tonnage was considered an outlier in the data set. The equivalent impervious area and pollution reductions were calculated using the 2014 Accounting Guidance. Cost estimations include a 2% annual escalation in operations costs. To be conservative, no increase in tonnage is proposed; however, the City is evaluating potential expansions of the pro-active inlet cleaning operations.
- The capital projects reflect the current costs, schedule (CY), and nutrient reduction based on the 2019 Draft Accounting Guidance. The EIA conversion rate for outfall stabilization was changed from 0.01 to 0.02 acre / LF, per recommendations from MDE. Implementation costs include both design and construction costs; annual operations and maintenance (O & M) costs are listed in the Portfolio under Other.
- Tree plantings, IDDE, and restoration projects performed by private entities remained the same as the April Portfolio submittal.
- The City's current study related to PCBs in the Back River watershed has been added to the revised Portfolio under Other. This Study was initiated in 2018, in coordination with USGS and UMBC.

Although not listed in the Portfolio, the City plans to spend approximately \$50M on storm drain rehabilitation projects by CY 2025. These projects address both failing infrastructure and flood management, such as:

- Lining the 10-foot storm tunnel associated with the sinkhole at Monument Street in 2012, which closed a City block for 6 months.
- H & H Model, plus gray and green infrastructure installation to address flooding at Frederick Avenue, where evacuations occurred in 2018.
- Re-alignment of storm drain system at Patapsco Avenue to relieve repeated flooding in Cherry Hill neighborhood.

The Portfolio also does not show the efforts to address the City's bacteria TMDLs, which will be completed under the Modified Consent Decree (MCD) for sanitary sewer overflows (Civil Action JFM-02-1524) by 2031. The cost of the capital projects associated with Phase I of the Modified Consent Decree is on the order of \$2.6 billion, completed by CY 2021. Costs for Phase II of the

MCD have not been determined yet. Costs associated with the capital projects for the MCD are reported to MDE as part of the quarterly MCD reports, which are posted on-line.

A summary of the restoration efforts from the previous permit and proposed for the next permit are summarized in the following table.

**Summary of Restoration by End of Next Permit**

<b>Description</b>	<b>Reference</b>	<b>Area (ac)</b>
Baseline impervious	Baltimore City MS4 & TMDL Watershed Implementation Plan (2015)	21,455
Projects at End of Current Permit	FY 2018 MS4 Annual Report, WIP Progress tables for Projects, Table R1: 53 acres	101
	FY 2019 MS4 Annual Report, WIP Progress tables for Projects, Table N-1: 101 acres, 48 acres since 2018	
Restoration by Others at End of Current Permit	FY 2018 MS4 Annual Report, WIP Progress table for Partnerships, Table R-3: 471 acres	659
	FY 2019 MS4 Annual Report, WIP Progress tables for Partnerships, Table N-3: 659 acres, 188 acres since 2018	
Annual Operations (current)	Portfolio, average CY 2019 – 2025. Street Sweeping based on FY 2019. Inlet cleaning based on FY 2018.	5,701
<i>Subtotal of Impervious Area Completed at End of the Current Permit</i>		<i>6,461</i>
<i>Portion of baseline impervious area restored at End of the Current Permit</i>		<i>30.1%</i>
Proposed Capital Projects	Portfolio for next permit as of CY 2025, including GSI and WQM credits	922
IDDE	Portfolio, as listed for CY 2025	150
Estimated Partnerships (Redevelopment + Volunteer)	Portfolio as of CY 2025	166
<i>Additional Impervious Area Completed in the Next Permit (by CY 2025)</i>		<i>1,238</i>
<b>Cumulative Total of Impervious Area Completed by CY 2025</b>		<b>7,699</b>
<b>Portion of baseline impervious area restored by CY 2025</b>		<b>35.9%</b>

Restoration Projects To Be Planned, Designed, and/or Constructed From The End Of 4th Generation Permit Through CY 2027

Remaining Unmet Restoration Obligation from Previous Permit (Impervious Acres): 0

REST BMP ID	REST BMP TYPE <sup>1</sup>	BMP CLASS <sup>1</sup>	PERMANENT OR ANNUAL BMP	NUM BMP	DRAIN-AGE AREA (acres)	PE (inches)	LENGTH RESTORED (feet)/LANE MILES (miles)/MASS LOADING (lbs)	TP REDUCTION (lbs/year)	TSS REDUCTION (lbs/year)	TN <sup>6</sup> REDUCTION (lbs/year)	IMP ACRES (IA)	GREEN STORMWATER INFRASTRUCTURE (GSI) CREDIT (IA X 0.35)	WATERSHED MANAGEMENT (WM) CREDIT	TOTAL IMP ACRES (W/ GSI AND WM CREDITS)	IMPLEMENTATION COST	IMPLEMENTATION STATUS <sup>2</sup>	PROJECTED IMPLEMENTATION YEAR	TMDL PARAMETER OR WQ OBJECTIVE ADDRESSED	GENERAL COMMENTS <sup>7</sup>
<b>Remaining Unmet Restoration Obligations from Previous Permit</b>																			
<b>Annual Operational Programs (Unmet Obligations from Previous Permit)<sup>3, 4</sup></b>																			
Street Sweeping*		A	ANNUAL											0					
		A												0					
		A												0					
		A																	
Catch Basin		A												0					
		A												0					
		A												0					
		A												0					
Septic System Pumping		A												0					
		A												0					
		A												0					
		A												0					
		A												0					
Subtotal Operations <sup>3</sup>				0				0	0	0	0			0	\$0				
<b>Capital Projects (Unmet Obligations from Previous Permit Term)</b>																			
														0					
														0					
														0					
														0					
Subtotal Capital				0				0	0	0	0	0	0	0	\$0				
<b>Other (Unmet Obligations from Previous Permit Term)</b>																			
														0					
														0					
Subtotal Other				0				0	0	0	0	0	0	0	\$0				
<b>Total of Remaining Obligations from The Previous Permit</b>				<b>0</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$0</b>				
<b>Obligations from Previous Permit That Must Be Continued</b>																			
<b>Annual</b>																			
Street Sweeping	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,218,386	Complete	2019	Bay/ local TN,TP, TSS, trash	2014 guidance,min. 2 x / mo
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,322,753	Under	2020	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,429,208	Design	2021	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,537,792	Design	2022	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,648,548	Design	2023	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,761,519	Design	2024	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,876,750	Design	2025	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$5,994,285	Design	2026	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
	VSS	A	ANNUAL	1			80,187	1,718	3,790,658	24,639	5,475			5,475	\$6,114,170	Design	2027	Bay/ local TN,TP, TSS, trash	2014 guid.,min. 2 x / mo, 2% COLA
Catch Basin Cleaning	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226			226	\$4,246,485	Complete	2019	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as reference
	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226			226	\$4,331,414	Under	2020	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.
	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226			226	\$4,418,043	Design	2021	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.
	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226			226	\$4,506,404	Design	2022	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.

	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226		226	\$4,596,532	Design	2023	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.
	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226		226	\$4,688,463	Design	2024	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.
	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226		226	\$4,782,232	Design	2025	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.
	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226		226	\$4,877,876	Design	2026	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.
	CBC	A	ANNUAL	1,128			556	55	166,404	1,387	226		226	\$4,975,434	Design	2027	Bay/ local TN,TP, TSS, trash	2014 guidance, FY 2018 AR as ref.
Septic Sytem Pumping		A											0					
		A											0					
		A											0					
		A											0					
		A											0					
Subtotal Operations <sup>3</sup>							1,773	3,957,062	26,026	5,701			5701	\$92,326,294				
<b>Capital Projects (Proposed to Replace Annual Obligations)</b>																		
													0					
													0					
													0					
Subtotal Capital							0	0	0	0	0	0	0	\$0				
<b>Other (Proposed to Replace Annual Obligations)</b>																		
													0					
													0					
Subtotal Other							0	0	0	0	0	0	0	\$0				
Obligations from Previous Permit							1,773.0	3,957,062.0	0	0	0.0	0.0	5,701.0	\$92,326,294				
<b>Proposed Restoration for the Next Permit</b>																		
<b>Operational</b>																		
Street Sweeping		A												-				
		A												-				
		A												-				
		A												-				
		A												-				
Catch Basin Cleaning		A												-				
		A												-				
		A												-				
		A												-				
Septic Sytem Pumping		A												-				
		A												-				
		A												-				
		A												-				
Subtotal Operations (up to 2025) <sup>5</sup>							0	0	0	0			0	\$0				
<b>Capital Projects</b>																		
MMBR	E	PERMANENT	6	6.88	0.6		6	13079	44	1.87	2.52		4.39	\$691,069	Design	2022	Bay/ local TN,TP, TSS	Traffic calming and education
MMBR	E	PERMANENT	14	9.57	1		10	22115	74	3.73	5.04		8.77	\$243,863	Design	2022	Bay/ local TN,TP, TSS	Traffic calming and education
MMBR	E	PERMANENT	10	4.9	1.2		6	11826	39	3.2	4.32	0.16	7.68	\$1,124,962	Design	2023	Bay/ local TN,TP, TSS	Traffic calming and education
MMBR	E	PERMANENT	7	3	1		3	6933	23	2.4	3.24		5.64	\$825,000	Planning	2024	Bay/ local TN,TP, TSS	Traffic calming and education
MMBR	E	PERMANENT	14	6	1		7	13865	46	5	6.75		11.75	\$1,650,000	Planning	2025	Bay/ local TN,TP, TSS	Traffic calming and education
FBIO	S	PERMANENT	20	20.93	1.4		25	52034	174	6.67	9		15.67	\$2,774,700	Design	2022	Bay/ local TN,TP, TSS	Education
FBIO	S	PERMANENT	16	10.06	1.2		12	24279	81	5.85	7.9		13.75	\$2,014,252	Design	2023	Bay/ local TN,TP, TSS	Education
IMPP	A	PERMANENT	14	4.11	NA		2	29015	28	3.37			3.37	\$995,583	Complete	2020	Bay/ local TN,TP, TSS	Education, school
IMPP	A	PERMANENT	11	4.89	NA		2	34523	33	4.01			4.01	\$883,677	Design	2022	Bay/ local TN,TP, TSS	Education, school
IMPP	A	PERMANENT	7	1.06	NA		0.5	7490	7	0.87			0.87	\$425,690	Design	2023	Bay/ local TN,TP, TSS	Education, school
FPU	A	PERMANENT	4	1.18	NA		1	1430	4	0.33			0.33	\$32,122	Design	2022	Bay/ local TN,TP, TSS	Education, school
FPU	A	PERMANENT	25	5	NA		3	6065	16	1.4			1.4	\$220,000	Planning	2023	Bay/ local TN,TP, TSS	Est. 500 trees / yr, Tree Baltimore
FPU	A	PERMANENT	25	5	NA		3	6065	16	1.4			1.4	\$220,000	Planning	2024	Bay/ local TN,TP, TSS	Est. 500 trees / yr, Tree Baltimore
FPU	A	PERMANENT	25	5	NA		3	6065	16	1.4			1.4	\$220,000	Planning	2025	Bay/ local TN,TP, TSS	Est. 500 trees / yr, Tree Baltimore
FPU	A	PERMANENT	25	5	NA		3	6065	16	1.4			1.4	\$220,000	Planning	2026	Bay/ local TN,TP, TSS	Est. 500 trees / yr, Tree Baltimore
MENF	E	PERMANENT	1	3.07	2.6		4	8018	27	2.02	2.73	0.8	5.55	\$1,088,072	Design	2023	Bay/ local TN,TP, TSS	
WPWS	S	PERMANENT	2	1.02	1.6		1	2033	5	0.78	1.05	0.12	1.95	\$150,909	Design	2023	Bay/ local TN,TP, TSS	

	MRWH	E	PERMANENT	8	20	1		22	46218	154	20	27		47	\$1,200,000	Planning	2024	Bay/ local TN,TP, TSS	Flood mgt, DW conservation
	MRWH	E	PERMANENT	8	20	1		22	46218	154	20	27		47	\$1,200,000	Planning	2025	Bay/ local TN,TP, TSS	Flood mgt, DW conservation
	MRWH	E	PERMANENT	12	20	1		33	69327	231	30	40.5		70.5	\$1,800,000	Planning	2026	Bay/ local TN,TP, TSS	Flood mgt, DW conservation
	MRWH	E	PERMANENT	12	20	1		33	69327	231	30	40.5		70.5	\$1,800,000	Planning	2027	Bay/ local TN,TP, TSS	Flood mgt, DW conservation
	Spsc	A	PERMANENT	1	7.2	1		8	16638	55	6.08	8.21		14.29	\$1,180,295	Design	2022	Bay/ local TN,TP, TSS	Treated as upland/ MMBR
	STRE	A	PERMANENT	1	NA	NA	12700	864	3149600	953	254			254	\$11,440,864	Under Constructi	2021	Bay/ local TN,TP, TSS	Utility protection, education
	STRE	A	PERMANENT	2	NA	NA	7653	520	1897944	574	153			153	\$18,116,471	Design	2022	Bay/ local TN,TP, TSS	Utility protection, education
	STRE	A	PERMANENT	4	NA	NA	11967	814	2967816	898	239			239	\$12,729,736	Design	2023	Bay/ local TN,TP, TSS	Utility protection, education
	STRE	A	PERMANENT	1	NA	NA	10560	718	2618880	792	211			211	\$22,500,000	Planning	2026	Bay/ local TN,TP, TSS	Utility protection, education
	OUT	A	PERMANENT	50	NA	NA	2000	136	496000	150	40			40	\$3,790,000	Planning	2024	Bay/ local TN,TP, TSS	
	OUT	A	PERMANENT	50	NA	NA	2000	136	496000	150	40			40	\$3,790,000	Planning	2025	Bay/ local TN,TP, TSS	
	OUT	A	PERMANENT	50	NA	NA	2000	136	496000	150	40			40	\$3,790,000	Planning	2026	Bay/ local TN,TP, TSS	
	OUT	A	PERMANENT	50	NA	NA	2000	136	496000	150	40			40	\$3,790,000	Planning	2027	Bay/ local TN,TP, TSS	
														0					
	Subtotal Capital (up to 2025)			475				2610.5	9361269	3721	816.38	104.76	1.08	922.22	\$67,007,265				
<b>Other</b>																			
	IDDE	A	ANNUAL	1				500	0	3218	135			135	\$1,816,333	Complete	2019	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				523	0	3343	141			141	\$152,660	Under Constructi	2020	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				569	0	3593	152			152	\$1,889,713	Planning	2021	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				612	0	3833	163			163	\$1,927,507	Planning	2022	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				651	0	4063	174			174	\$1,966,057	Planning	2023	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				694	0	4283	184			184	\$2,005,378	Planning	2024	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				569	0	3482	150			150	\$2,045,486	Planning	2025	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				548	0	3259	143			143	\$2,086,396	Planning	2026	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IDDE	A	ANNUAL	1				400	0	2245	102			102	\$2,128,124	Planning	2027	Bay/ local TN,TP, TSS, and bacteria	Cumulative since 2015
	IMPP	A	PERMANENT	1	15	1		6	105900	101	6			6	\$0	Planning	2025	Bay/ local TN,TP, TSS	Est. redevelopment 2019-2025
	MMBR	E	PERMANENT	1	75	1		82	173317	577	82			82	\$0	Planning	2025	Bay/ local TN,TP, TSS	Est. redevelopment 2019-2025
	FSND	S	PERMANENT	1	40	1		41	72600	180	41			41	\$0	Planning	2025	Bay/ local TN,TP, TSS	Est. redevelopment 2019-2025
	WPWS	S	PERMANENT	1	25	1		26	45375	113	26			26	\$0	Planning	2025	Bay/ local TN,TP, TSS	Est. redevelopment 2019-2025
	IMPP	A	PERMANENT	1	1	1		0.4	7060	7	1			1	\$250,000	Planning	2025	Bay/ local TN,TP, TSS, trash	Est. grant funded, volunteer NGO
	MMBR	E	PERMANENT	1	12	1		13	27731	92	10			10	\$750,000	Planning	2025	Bay/ local TN,TP, TSS, trash	Est. grant funded, volunteer NGO
	OTH	A	PERMANENT	1											\$20,000,000	Planning	2025	Bay/ local TN,TP, TSS, trash	H & H model of Storm drain system
	OTH	A	ANNUAL	1											\$150,000	Under Constructi	2020	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	ANNUAL	1											\$150,000	Planning	2021	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	ANNUAL	1											\$200,000	Planning	2022	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	ANNUAL	1											\$500,000	Planning	2023	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	ANNUAL	1											\$600,000	Planning	2024	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	ANNUAL	1											\$650,000	Planning	2025	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	ANNUAL	1											\$700,000	Planning	2026	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	ANNUAL	1											\$750,000	Planning	2027	Bay/ local TN,TP, TSS, trash	O & M of BMPs, including stream rest
	OTH	A	PERMANENT	1											\$400,000	Under Constructi	2021	PCB TMDL	USGS/ UMBC Study
	Subtotal Other (up to 2025)			15				737	431983	4552	316	0	0	316	\$32,803,134				
	Permit (up to 2025)			490				3,347.9	9,793,252.0	8,273.0	1,132.4	104.8	1.1	1,238.2	\$99,810,399				
<b>Total for Next Permit and Projected Years</b>				490				8,904	13,548,851	37,680.0	2,679	185.8	1.1	2,865.6	\$137,924,919				
<b>Total for Remaining Obligations from The Previous Permit, Continued Obligations, and Proposed Activities for The Next Permit (up to 2025)</b>				1,619				5,121	13,750,314	34,299	6,833	104.8	1.1	6,939.2	\$109,862,475				
<b>Total for Remaining Obligations from The Previous Permit, Continued Obligations, and Proposed Activities for The Next Permit (up to 2027)</b>				1,296				10,677	17,505,913	63,706	8,380	186	1	8,567	\$128,183,396				

BMP Class	
Code	Code Description
A	Alternative BMP
E	ESD
S	Structural BMP

BMP Classification	BMP Type Code	BMP Type
Alternative Surfaces (A)		
E	AGRE	Green Roof – Extensive
E	AGRI	Green Roof – Intensive
E	APRP	Permeable Pavements
E	ARTF	Reinforced Turf
Nonstructural Techniques (N)		
E	NDRR	Disconnection of Rooftop Runoff
E	NDNR	Disconnection of Non-Rooftop Runoff
E	NSCA	Sheetflow to Conservation Areas
Micro-Scale Practices (M)		
E	MRWH	Rainwater Harvesting
E	MSGW	Submerged Gravel Wetlands
E	MILS	Landscape Infiltration
E	MIBR	Infiltration Berms
E	MIDW	Dry Wells
E	MMBR	Micro-Bioretenion
E	MRNG	Rain Gardens
E	MSWG	Grass Swale
E	MSWW	Wet Swale
E	MSWB	Bio-Swale
E	MENF	Enhanced Filters
Ponds (P)		
S	PWED	Extended Detention Structure, Wet
S	PWET	Retention Pond (Wet Pond)
S	PMPS	Multiple Pond System
S	PPKT	Pocket Pond
S	PMED	Micropool Extended Detention Pond
Wetlands (W)		
S	WSHW	Shallow Marsh
S	WEDW	ED – Wetland
S	WPWS	Wet Pond – Wetland
S	WPKT	Pocket Wetland
Infiltration (I)		
S	IBAS	Infiltration Basin
S	ITRN	Infiltration Trench
Filtering Systems (F)		
S	FBIO	Bioretention
S	FSND	Sand Filter
S	FUND	Underground Filter
S	FPER	Perimeter (Sand) Filter
S	FORG	Organic Filter (Peat Filter)
S	FBIO	Bioretention
Open Channels (O)		
S	ODSW	Dry Swale
S	OWSW	Wet Swale
Other Practices (X)		
S	XDPD	Detention Structure (Dry Pond)
S	XDED	Extended Detention Structure, Dry

S	XFLD	Flood Management Area
S	XOGS	Oil Grit Separator
S	XOTH	Other
Alternative BMPs		
A	MSS	Mechanical Street Sweeping
A	VSS	Regenerative/Vacuum Street Sweeping
A	IMPP	Impervious Surface Elimination (to pervious)
A	IMPF	Impervious Surface Elimination (to forest)
A	FPU	Planting Trees or Forestation on Pervious Urban
A	CBC	Catch Basin Cleaning
A	SDV	Storm Drain Vacuuming
A	STRE	Stream Restoration
A	OUT	Outfall Stabilization
A	SPSC	Regenerative Step Pool Storm Conveyance
A	SHST	Shoreline Management
A	SEPP	Septic Pumping
A	SEPD	Septic Denitrification
A	SEPC	Septic Connections to WWTP
A	FTW	Floating Treatment Wetland
A	FTC	Forest Conservation
A	CLS	Conservation Landscaping
A	RCL	Riparian Conservation Landscaping
A	IDDE	Illicit Discharge Detection & Elimination
A	OTH	Other