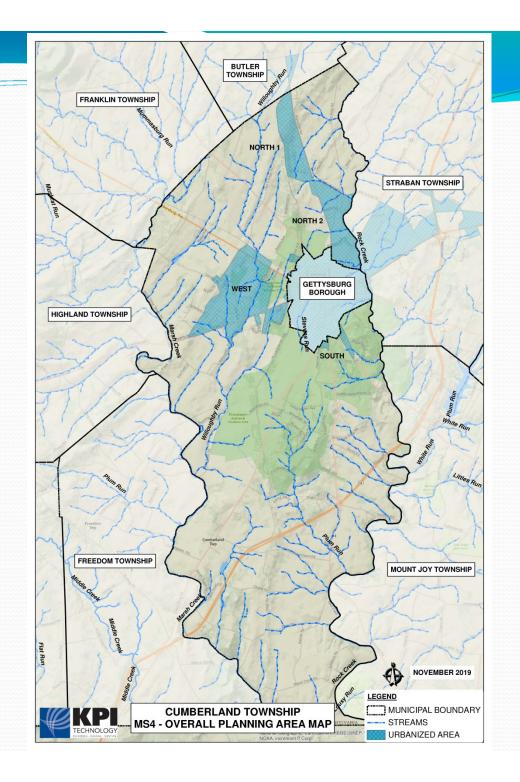
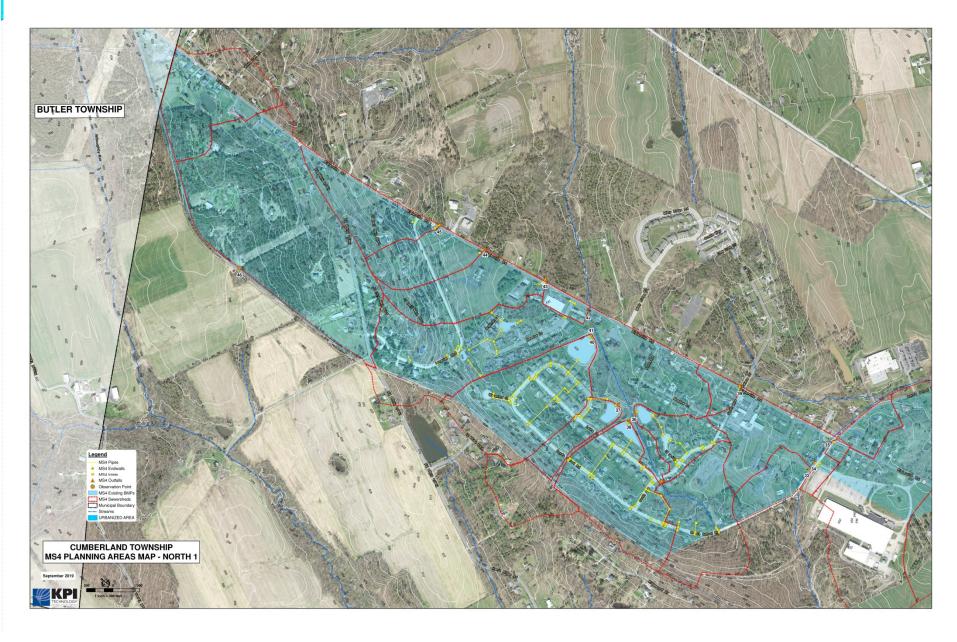
Cumberland Township Municipal Separate Storm Sewer System (MS4) Chesapeake Bay Pollutant Reduction Plan

Public Meeting April 27, 2021

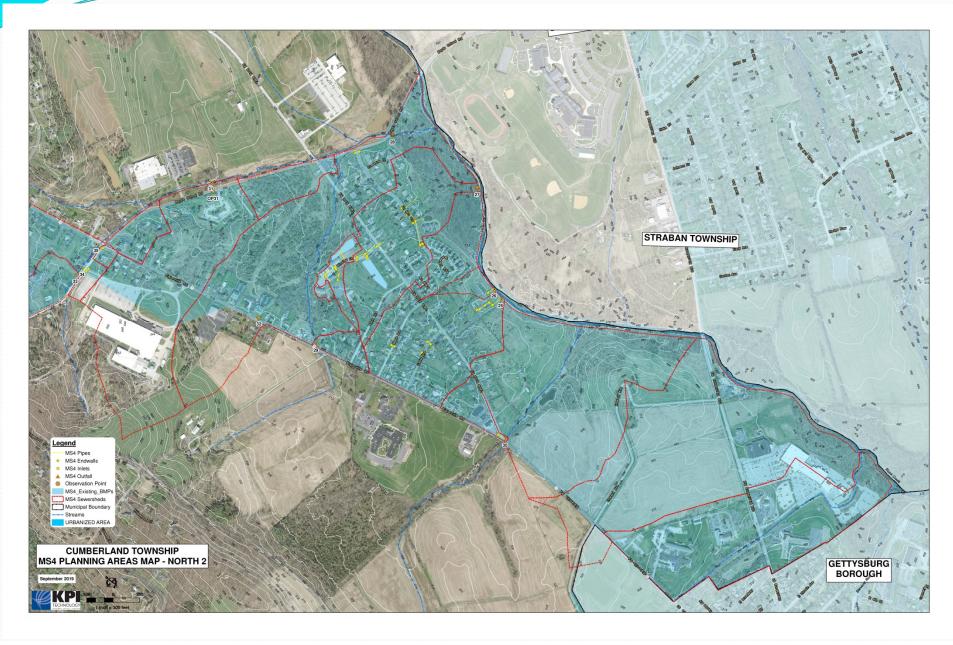
Mapping



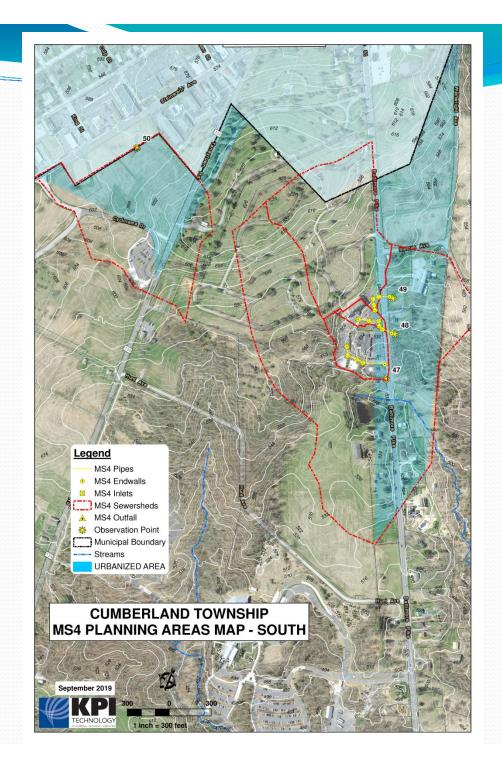
Mapping - North 1



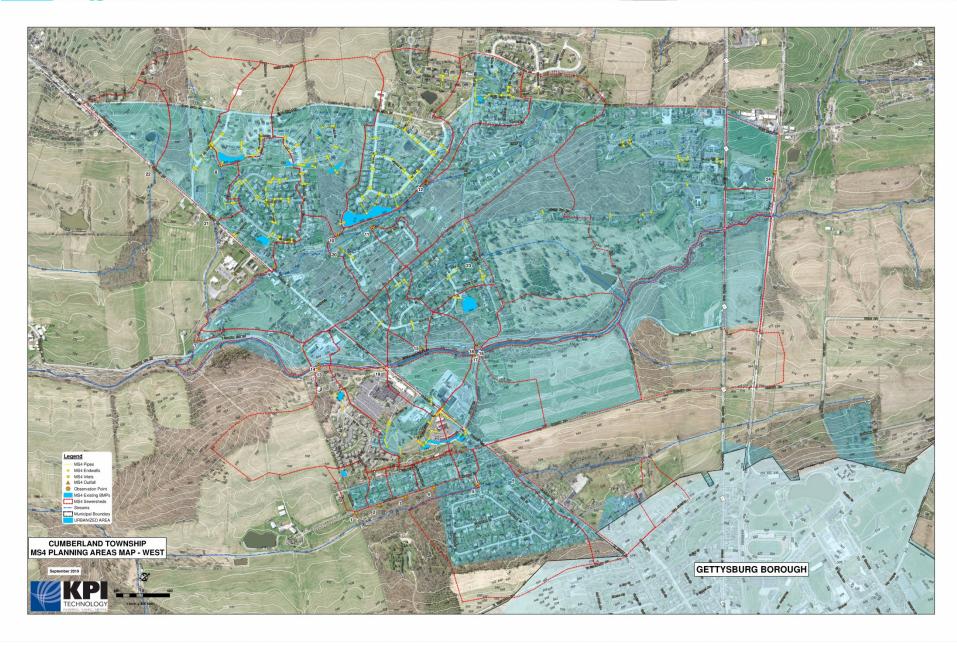
Mapping – North 2



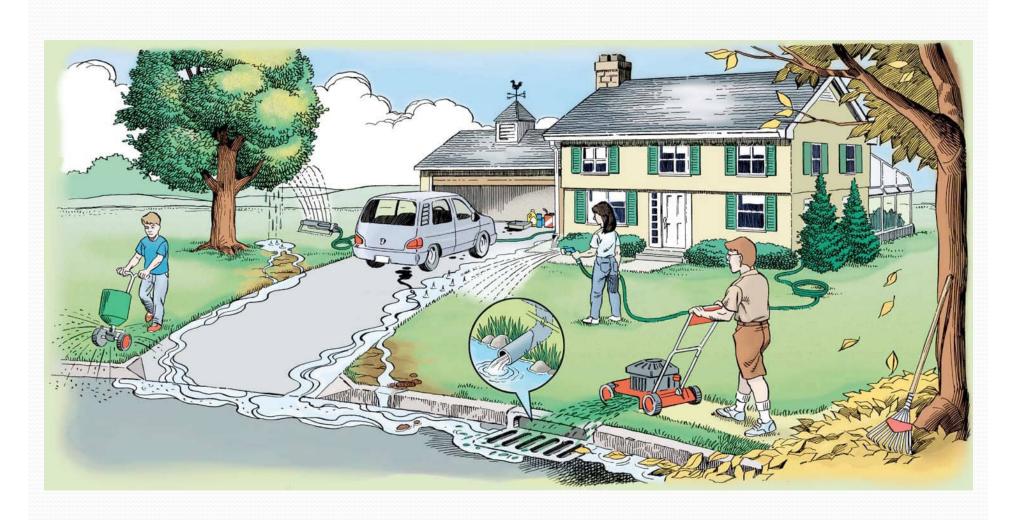
Mapping – South



Mapping - West



Why is it important?



Permit Application Requirements

- Notice of Intent (NOI)
- Minimum Control Measures (MCMs)
- Pollutant Reduction Plan (PRP)
- Mapping
- Permit issued April 30, 2018
- Expires March 15, 2023
- Annual Reports due September 30 for reporting period July 1 – June 30.

Minimum Control Measures (MCM)

- MCM #1 Public Education & Outreach
- MCM #2 Public Participation & Involvement
- MCM #3 Illicit Discharge Detection & Elimination
- MCM #4 Construction Sites Stormwater Runoff Control
- MCM #5 Post-Construction Stormwater Management in New Development & Re-Development
- MCM #6 Pollution Prevention & Good Housekeeping

MCM#1 - Public Education & Outreach

- Distribute education materials
- Public participation
- Education program
- Annual Public meeting



MCM#2 – Public Participation & Involvement

- Develop a public involvement plan
- Hold public meetings for the program
- Start a volunteer program
 - Storm Drain Stenciling
 - Stream/Street Clean-ups
 - School Partnerships



MCM#3 – Illicit Discharge Detection & Elimination

- Develop and Implement a written program
- Setup a Storm Water reporting mechanism
- Develop and maintain a map with outfalls, inlet, piping, swales, watershed boundaries.



MCM#4 – Construction Sites Stormwater Runoff Control

 Develop and implement a program for permitting, inspecting, enforcing the installation of E&S controls.





MCM#5 – Post Construction Stormwater Management in New Development and Re-Development

- Ensure controls are installed to minimize water quality impacts
- Ensure adequate O&M of all BMPs
- Encourage low impact development





MCM#6 – Pollution Prevention & Good Housekeeping

- Develop and implement an employee training program
- Identify and document all activities and facilities with potential impact





Chesapeake Bay Pollutant Reduction Plan

- Components
 - Public Participation
 - Mapping
 - Pollutants of Concern
 - Funding Mechanisms
 - BMP Operation & Maintenance
 - Implementation Schedule
 - GOAL Sediment/Nutrient Load Reduction within 5 years

Pollutants of Concern

- Three (3) Pollutants of Concern
 - Total Nitrogen (TN) 3%
 - Total Phosphorus (TP) 5%
 - Total Suspended Solids (TSS) Sediment 10%

MS4 Name	NPDES ID	Individual Permit Required?	Reason	Impaired Downstream Waters or Applicable TMDL Name	Requirements	Other Cause(s) of Impairment
Adams County						
Cumberland Township		No		Chesapeake Bay Nutrients/Sediment	Appendix D-Nutrients, Siltation (4a)	
				Willoughby Run	Appendix E-Organic Enrichment/Low D.O., Siltation (5)	Other Habitat Alterations (4c)
				Unnamed Tributaries to Rock Creek	Appendix E-Siltation	Water/Flow Variability (4c)
				Rock Creek	Appendix E-Nutrients (5)	

Existing Loading

Total Existing Base Load					
Marsh Creek Watershed					
West	516,407	lbs sediment/year			
	Rock Creek Watershed				
North 1	154,413	lbs sediment/year			
North 2	207,746	lbs sediment/year			
South	42,275	lbs sediment/year			
Total	404,435	lbs sediment/year			

Existing BMP Reduction

Watersheds	Pollutant Load (lbs/yr)	BMP Pollutant Reduction	Adjusted Baseline
Marsh Creek	516,407	58,191	458,216
Rock Creek	404,435	66,119	338,316
Total	920,842	124,310	796,532

Watersheds	Adjusted Baseline Pollutant Loading	Required Reduction Percentage	Load Sediment Reduction Goal
Marsh Creek	458,216	10%	45,822
Rock Creek	338,316	10%	33,832
Load Sediment Reduction Goal	796,532		79,653

Proposed Projects

Stream Restorations

Existing Basin Retrofits

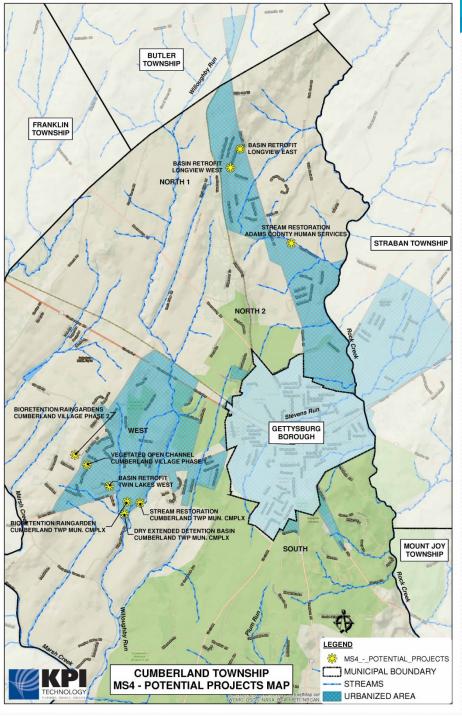
Bioretention/Raingardens

Dry Extended Detention Basin

Vegetated Open Channel

Proposed Project Locations

Marsh Creel	k Watershed		
45,822 lb/yr required sedimer	nt reduction		
	Achieved		Estimated
	Sediment	% Total Required	Construction
Project	Reduction (lb/yr)	Reduction	Cost
Basin Retrofit at Twin Lakes West	5,130	11.2%	\$52,000
Bioretention/Raingarden at Cumberland Twp MC	1,277	2.8%	\$18,000
Dry Extended Detention Basin at Cumberland Twp Mo	2,319	5.1%	\$24,000
Stream Restoration at Cumberland Twp MC	22,440	49.0%	\$100,000
Developer Projects			
Vegetated Open Channel at Cumberland Village P1	3,083	6.7%	\$0
Bioretention/Raingardens at Cumberland Village P2	15,918	34.7%	\$30,000
	50,167	109.5%	
*Township can pay cost to enhance.	Construction Subtotal		\$224,000
Rock Creek	Watershed		
33,832 lb/yr required sedimer	nt reduction		
	AAAAAAAAAAAAAA	100000000000000000000000000000000000000	
	Achieved		Estimated
	Sediment	% Total Required	Construction
Project	Reduction (lb/yr)	Reduction	Cost
Longview Blvd West Basin	2,631	7.8%	\$22,000
Longview Blvd East Basin	3,010	8.9%	\$20,000
Stream Restoration at Adams County Human Services	31,416		\$140,000
Stream Restoration at Adding County Haman Services	37,057	109.5%	ψ1 10,000
		struction Subtotal	\$182,000
	Construction Subtotal Construction Total Contingency (10%) Engineering/Permitting (20%)		\$406,000
			\$40,600
			\$81,200
V	ear One Administrative Startup (5%)		\$20,300
Te	Total Projects Cost		\$20,300 \$548,100
		otal Projects Cost	3346,1UU



BMP Operation & Maintenance

- Responsibility of Township/Owner
- Varies with different BMPs
- Annual Inspection

Basin



Basin with Forebay



Funding Mechanisms

- Grant Funding
- Public Private Partnerships
- General Fund / Tax Revenue
- Stormwater Management (MS4) Fee
- Municipal Authority

Implementation Schedule

<u>Task</u> <u>Implementation Date</u>

MS4 Permit Authorization April 30, 2018

BMP Selection / MCM Compliance April 2018 – June 2019 – Year 1

Design/Funding Programs / BMP Implementation July 2019 – June 2022 – Yrs 2-4

Complete BMP, Installation, Review/ July 2022 – June 2023 – Year 5 O&M Implementation to Achieve Compliance

Progress reports along with review of the status for implementation of the PRP will be provided annually in conjunction with submission of the annual report to PA DEP.

Question? Comments