

APPENDIX A

PA DEP FORM FOR THE CHESAPEAKE BAY POLLUTANT REDUCTION PLAN



MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) TMDL PLAN / CHESAPEAKE BAY POLLUTION REDUCTION PLAN

This form is designed to assist permittees in meeting the requirements of MS4 NPDES permits for TMDL Plans and Chesapeake Bay Pollutant Reduction Plans. Complete this form if (1) there are any stormwater discharges to receiving waters that are covered by an EPA-approved TMDL and wasteload allocation(s) (WLA(s)) have been assigned to the MS4 in the TMDL, and/or (2) any portion of the urbanized area (UA) is in the Chesapeake Bay Watershed. Complete Section A if (1) applies, Section B if (2) applies, and both Sections if (1) and (2) apply. Please review the instructions and attached Frequently Asked Questions (FAQ) document carefully before completing this form.

Check all that apply:

- TMDL Plan / TMDL Design Details (Section A) Completed
- Chesapeake Bay Pollutant Reduction Plan (Section B) Completed

GENERAL INFORMATION			
Permittee Name:	City of Williamsport	NPDES Permit No.:	PAI134808
Mailing Address:	City Hall 245 West 4 th Street	Effective Date:	April 1, 2014
City, State, Zip:	Williamsport	Expiration Date:	March 31, 2019
MS4 Contact Person:	John Grado	Renewal Due Date:	October 1, 2018
Title:	Director of Community Development	Municipality:	City of Williamsport
Phone:	570-327-7516	County:	Lycoming
Email:	cddirector@cityofwilliamsport.org	Consultant Name:	Michael Baker Corporation
Co-Permittees (if applicable): Borough of Montoursville, Lycoming Township, Hepburn Township, Loyalsock Township, Fairfield Township, Old Lycoming Township, Pennsylvania College of Technology			

SECTION A: TMDL PLAN / TMDL DESIGN DETAILS
<p>1. Provide a summary of the TMDL Strategy as submitted to DEP with the NPDES permit application or NOI:</p> <p style="margin-left: 20px;">N/A</p>

2. Identify the name(s) of surface waters that receive stormwater discharges from the MS4 UA that are covered by EPA-approved TMDLs:

N/A

3. Identify the total number of discharge points from the MS4 and their identification numbers (e.g., "001") for the discharges identified in No. 2, above. Attach an additional sheet if necessary. A map may also be used to identify the discharge points.

N/A

4. List the title of the applicable TMDL(s) (as the name appears on the TMDL report):

N/A

5. Identify the Watershed name(s) and 8-digit Hydrologic Unit Code(s) (HUC) (see instructions):

N/A

6. List the name(s) of all municipalities subject to the TMDL(s) within the area of the same 8-digit HUC:

N/A

7. List the pollutant(s) and wasteload allocations (WLAs) (including units) that are identified in the TMDL(s) for the MS4:

N/A

8. What is the estimated current load(s) discharged by the MS4 for the pollutant(s) identified in the TMDL(s), and the percent reduction(s) necessary in order to achieve the WLA(s) assigned to the MS4?

N/A

9. Explain in the space below (or an attached sheet) how the current load(s) in No. 8, above, were estimated:

N/A

10. In the space provided, or on additional sheets, provide a list of all control measures or Best Management Practices (BMPs) that will be implemented to achieve the required pollutant reduction(s). Identify each BMP and indicate (1) the location(s) of the BMP (latitude/longitude, street name(s) or other locational information), (2) a timeline for implementation with interim milestones as appropriate, (3) how each BMP is expected to reduce the TMDL pollutant(s) in the receiving waters, (4) an estimate of the pollutant load entering the BMP, (5) the reduction (in lbs/year or %) of the TMDL pollutant(s) that are expected and how the estimate(s) were derived, (6) the rationale for selecting the BMP, and (7) a description of the planned inspection, operation and maintenance for the BMP.

N/A

SECTION B: CHESAPEAKE BAY POLLUTANT REDUCTION PLAN

1. Provide a narrative description of the drainage area of the MS4 within the UA that discharges to the Chesapeake Bay Watershed. The description should discuss pervious and impervious cover.

Please see Section 2 MS4 Area in the attached report.

2. Identify areas where municipal infrastructure upgrades are planned and include an evaluation of the suitability of green infrastructure, low impact development (LID) or Environmental Site Design (ESD) BMPs.

Please see Section 2.2 Planned Infrastructure and New Discharges and Section 4 Pollutant Reduction Potential in the attached report.

3. Optional – Provide estimates of the current loads (lbs/year) of Nitrogen (N), Phosphorus (P) and Sediment being discharged annually to receiving waters in the Chesapeake Bay Watershed. Explain how the estimates were made.

No estimates of current loads were calculated at this time.

4. In the space provided, identify the control measures from Section II F of the NOI Instructions (3800-PM-BPNPSM0100c), or others, which will be implemented in the MS4 to reduce pollutant load to the Chesapeake Bay Watershed. Attach additional sheets if necessary. Identify a name or number for each BMP and indicate (1) the location(s) of the BMP (latitude/longitude, street name(s) or other locational information), (2) a timeline for implementation with interim milestones as appropriate, (3) how each BMP is expected to reduce N, P and/or Sediment in the receiving waters, (4) the rationale for selecting the BMP, and (5) a description of the planned inspection, operation and maintenance for the BMP. Optionally, for each BMP you may provide an estimate of the reduction (in lbs/year or %) of N, P and Sediment that are expected and how the estimate(s) were derived.

TMDL Control Measure information can be found in Section 4.2 BMP Selection and Implementation in the attached report.

- (1) A table of detailed structural and non-structural BMP information including can be found in Appendix B**
- (2) In Appendix C, Table C-1 contains a timeline for implementation. This can also be found in Section 5-1 Schedule of Implementation.**
- (3) BMP expectations are included in Section 4.2 BMP Selection and Implementation.**
- (4) The Selection process and rationale is explained in Section 4.2 Selection and Implementation.**
- (5) A description of BMP inspection, operation and maintenance is included in Section 5.2 Inspection, Operation, and Maintenance. No estimates of load reductions have been calculated.**

ENGINEER CERTIFICATION

I, being a Registered Professional Engineer in Pennsylvania, do hereby certify to the best of my knowledge and belief, that the TMDL and/or Chesapeake Bay Pollutant Reduction Plans are designed to achieve pollutant reductions consistent with the WLA(s) in the TMDL and/or the goals in the Chesapeake Bay Watershed Implementation Plan.

	Professional Engineer Name: Julia Fine
	Signature
	Date: 4/1/15
	License No.: PE077510
	License Expiration Date: 9/30/15
	Company: Michael Baker Corporation
Telephone: 215-442-5336	

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Name of Responsible Official	Signature
Telephone No.	Date

APPENDIX B

STORMWATER BEST MANAGEMENT PRACTICES INVENTORY

**Table B-1
Joint MS4s Combined Structural BMPs**

BMP ID	MS4 Entity	BMP/GI/LID Description	Receiving Watershed (HUC 12)	BMP Location		BMP Drainage Area	Property Owner	Installation Year	Benefit	Environmental	Constraint	Cost Factor	Total Score (120)	Rank	Permit Cycle
				Weighted Score (30)	Weighted Score (30)				Weighted Score (30)	Weighted Score (30)					
				Latitude	Longitude										
LST3	LST	Detention and infiltration basin at Loyalsock Senior High School.	Millers Run	41°15'40.73"N	76°57'50.51"W	Large	School District	2006 - 2014	26	24	23	17	90	1 / 60	1st
LST14	LST	Detention Basin (Bull Run), owned/maintained by Loyalsock Township School District, drainage area of 5 acres. Future improvements to the site will most likely facilitate removal of the Basin. Replacement BMP will be created when the old basin is removed.	Millers Run	41°15'42.77"N	76°56'58.98"W	Medium	School District	2006 - 2014	30	18	23	17	88	2 / 60	1st
WC6	WC	Detention basin at Laurel Run Circle.	Quenshukeny Run	41°14'10.19"N	77° 4'58.61"W	Large	Public	2006 - 2014	26	18	23	17	84	3 / 60	1st
OLT8	OLT	Relocated Recycling Facility at 1250 Princeton Ave, Old Lycoming Township PA 17701. BMPs to be implemented. They are flexible as to BMP type, and are willing to receive community input.	Lycoming Creek-West Branch Susquehanna River	41°15'15.37"N	77° 4'15.51"W	Medium	Public	2015 or later	16	22	28	18	84	3 / 60	1st
MB13	MB	The Borough currently owns 140.6 acres (including the larger island in the river and a smaller portion north along Loyalsock Creek that extends North) near the Williamsport Airport, which does not have stormwater runoff control. The area located in between the runway and river (located off of Miller St.) receives the runoff from the runway, and could be improved to help capture runoff.	Wolf Run	41°14'47.93"N	76°55'39.26"W	X-Large	Public	2015 or later	23	22	23	16	84	3 / 60	2nd
LST2	LST	Rain Garden at Loyalsock Senior High School.	Millers Run	41°15'41.56"N	76°57'50.96"W	Medium	School District	2006 - 2014	16	26	23	18	83	6 / 60	1st
WC4	WC	Rain Garden at Recycling Center.	Lycoming Creek-West Branch Susquehanna River	41°14'14.52"N	77° 2'37.21"W	Large	Public	2006 - 2014	22	20	23	18	83	6 / 60	1st
LST6	LST	Infiltration system at Windfield Drive.	Millers Run	41°16'7.53"N	76°59'6.97"W	Medium	Public	2006 - 2014	20	21	23	17	81	8 / 60	2nd
LST15	LST	In the area by the levee, behind TJMaxx shopping center between 180 and the "golden strip": Currently, the area is mowed and maintained but has the potential to be converted into an infiltration area or have trees planted as flood control. Future costs could be higher due to levee permitting.	Millers Run	41°14'50.09"N	76°58'5.40"W	Large	Public	2015 or later	26	24	23	8	81	8 / 60	2nd
PCT1	PCT	Infiltration Trench on Rose Street directly opposite Dauphin Hall. Services College Dorms. 3.08 acres.	Millers Run	41°14'6.98"N	77° 1'56.63"W	3.08 acres	Public	2006 - 2014	22	19	23	17	81	8 / 60	1st
LC3	LC	Flood-prone properties (Fairfield, Hepburn, Lycoming, Loyalsock, Montoursville, Old Lycoming) were/will be acquired, cleared, and returned to open space as part of the countywide flood mitigation initiative.	Varies	N/A	N/A	N/A	Public	2015 or later	22	10	23	25	80	11 / 60	1st
MB11	MB	Plans for improving Indian Park (behind Borough's building near the recycling center) currently proposed. The project will improve the water quality at the park and restore the ecology of the park's pond. Improvements include wetland/stream restoration, educational programs and community plantings.	Little Bear Creek-Loyalsock Creek	41°15'33.71"N	76°55'23.12"W	X-Large	Public	2015 or later	23	17	23	17	80	11 / 60	1st
PCT3	PCT	Inlet Sumps are currently located on the campus of the Pa. College of Tech. outside of Dauphin Hall, and are cleaned annually.	Millers Run	41°14'5.14"N	77° 1'50.61"W	X-Large	Public	2006 - 2014	21	21	23	15	80	11 / 60	1st
PCT5	PCT	Install oil/water separator at General Services Facility.	Quenshukeny Run	41°13'39.31"N	77° 3'8.89"W	Small	Public	2015 or later	7	22	28	20	77	14 / 60	1st
WC12	WC	Currently, a re-design of the intersection is under way near Bowman Field/Memorial Park. They have proposed a raised median strip (planter box) that could incorporate bio infiltration. This can be coordinated with the current redesign of the intersection.	Lycoming Creek-West Branch Susquehanna River	* 41°14'25.98"N	* 77° 2'32.78"W	Medium	Public	2015 or later	16	19	23	17.5	75.5	15 / 60	2nd
MB2	MB	Porous pavement and underground infiltration at Montoursville Area High School at 100 N. Arch Street.	Wolf Run	41°15'16.00"N	76°54'22.50"W	Medium	School District	2006 - 2014	13	21	23	15	72	16 / 60	2nd

**Table B-1
Joint MS4s Combined Structural BMPs**

BMP ID	MS4 Entity	BMP/GI/LID Description	Receiving Watershed (HUC 12)	BMP Location		BMP Drainage Area	Property Owner	Installation Year	Benefit	Environmental	Constraint	Cost Factor	Total Score (120)	Rank	Permit Cycle
				Weighted Score (30)	Weighted Score (30)				Weighted Score (30)	Weighted Score (30)					
				Latitude	Longitude										
WC11	WC	On Basin Street (Southeast of Route 180), there is a concrete triangle in the middle of the road that has BMP potential. Proposal to mimic the beautification that the traffic circles have (First Church volunteered their time to plant the flowers in existing traffic circles). Private maintenance for the project is possible, since adjacent traffic circles are privately maintained.	Millers Run	41°14'29.97"N	76°59'44.98"W	Small	Public	2015 or later	10	19	28	15	72	16 / 60	2nd
PCT2	PCT	Underground detention and infiltration at parking lot on Rose St.	Millers Run	41°14'3.53"N	77° 1'52.29"W	Medium	Public	2006 - 2014	13	21	23	15	72	16 / 60	2nd
MB14	MB	Farm Field located west of RT 180 W Highway in the Floodway of Loyalsock Creek, has an existing tree line stream buffer. Possible BMP improvements.	Little Bear Creek-Loyalsock Creek	41°15'15.55"N	76°56'02.32"W	Large	Public	2015 or later	21	11	23	16	71	19 / 60	2nd
WC10	WC	New Parking Garage. Provide Streetscaping, street trees, BMPs	Millers Run	0	0	Medium	Public	2015 or later	13	21	23	14	71	19 / 60	3rd
LC1	LC	2 riparian buffers proposed on both sides of Lycoming Creek; creek is a cold water fishery with significant development pressure. Buffer intended to protect floodplain, preserve habitat, prevent erosion, and improve water quality.	Varies	N/A	N/A	N/A	Public	2015 or later	16	12	23	19.5	70.5	21 / 60	2nd
PCT4	PCT	The placement of a rain garden is currently being discussed, and will be located near the field house and tennis courts.	Millers Run	41°14'1.98"N	77° 1'42.52"W	Small	Public	2015 or later	10	21	23	15.5	69.5	22 / 60	2nd
LC2	LC	Riparian buffer along Hoagland Run where it is a high quality-cold water fishery. Intended to improve water quality and preserve habitat. Run goes into Lycoming Creek, but is not located in an urbanized area.	Lycoming Creek-West Branch Susquehanna River	0	0	Medium	Public	2015 or later	16	10	23	19.5	68.5	23 / 60	Future
WC7	WC	Installed 3 detention, 3 bio-retention, 1 infiltration trench, 1 infiltration basin, inlet sumps, and a bio-retention/storm cepter between 2003 and 2012.	Varies	N/A	N/A	N/A	Public	2006 - 2014	14	14	23	17	68	24 / 60	3rd
MB12	MB	Mill Race currently runs through Indian Park and during wet periods it fills and ponds, then slowly infiltrates into the ground. The area is currently lined with trees, however there is a possibility of naturalization.	Little Bear Creek-Loyalsock Creek	41°15'33.71"N	76°55'23.12"W	Medium	Public	2015 or later	15	14	23	16	68	24 / 60	2nd
MB10	MB	Possible Infiltration improvements at the Borough Maintenance Yard. Currently, there is an outfall that drains from the direction of the route 87 to an open field area. Naturalization of the area could be used to improve the site.	Little Bear Creek-Loyalsock Creek	41°15'33.71"N	76°55'23.12"W	Medium	Public	2015 or later	15	14	23	16	68	24 / 60	3rd
LST12	LST	Detention basin (Mill Creek), owned/maintained by Lycoming County Commissioners, drainage area of 2 acres.	Mill Creek-West Side of Loyalsock Creek	41°16'32.72"N	76°55'49.66"W	2 acres	Public	2006 - 2014	18	9	23	17	67	27 / 60	2nd
LST1	LST	Oil/water separator at township maintenance building.	Millers Run	0	0	Small	Public	2006 - 2014	7	22	23	14	66	28 / 60	3rd
OLT4	OLT	Oil/water separator and collection system at township maintenance building.	Lycoming Creek-West Branch Susquehanna River	0	0	Small	Public	2006 - 2014	7	20	23	14	64	29 / 60	3rd
MB3	MB	UDS 1, owned by Montoursville Area School District.	Wolf Run	41°15'0.38"N	76°55'6.97"W	0.5 acres	School District	2006 - 2014	3.5	21	23	15	62.5	30 / 60	3rd
MB4	MB	UDS 2, owned by Montoursville Area School District.	Wolf Run	41°15'0.38"N	76°55'6.97"W	0.5 acres	School District	2006 - 2014	3.5	21	23	15	62.5	30 / 60	3rd

**Table B-1
Joint MS4s Combined Structural BMPs**

BMP ID	MS4 Entity	BMP/GI/LID Description	Receiving Watershed (HUC 12)	BMP Location		BMP Drainage Area	Property Owner	Installation Year	Benefit	Environmental	Constraint	Cost Factor	Total Score (120)	Rank	Permit Cycle
				Weighted Score (30)	Weighted Score (30)				Weighted Score (30)	Weighted Score (30)					
				Latitude	Longitude										
WC5	WC	Detention basin at Moran Logistics. Twenty-two acres.	Quenshukeny Run	41°14'3.22"N	77° 4'15.27"W	22 acres	Private	2006 - 2014	30	22	-7	17	62	32 / 60	Future
WC9	WC	The City of Williamsport's 2012 Street Reconstruction Project reconstructed ten (10) inlets and forty-two (42) catch basins, and converted thirteen (13) inlets to safety grates at various locations throughout the municipality. It also constructed a new storm sewer which removed three (3) catch basins from the sanitary sewer system at the intersection of Court and W 3rd Streets.	Varies	N/A	N/A	N/A acres	N/A	2006 - 2014	7	16	23	15	61	33 / 60	3rd
MB15	MB	Current paving projects are underway that have BMP implementation possible during construction, including curb cuts, detention basins, street trees, etc.	Varies	0	0	Medium	Public	2015 or later	13	16	23	8	60	34 / 60	3rd
LST11	LST	Detention basin (Grafius Run) privately owned/maintained, drainage area of 4 acres.	Millers Run	0	0	4 acres	Private	2006 - 2014	26	13	-7	24	56	35 / 60	Future
WC1	WC	Bioretention/Storm Ceptor at William Street Kohl's Department Store. Six acre drainage area.	Millers Run	41°14'21.64"N	77° 0'11.45"W	6 acres	Private	2006 - 2014	26	19	-7	18	56	35 / 60	Future
WC3	WC	Infiltration Trench at YMCA construction site. 4.35 acres.	Millers Run	0	0	4.35 acres	Private	2006 - 2014	27	19	-7	17	56	35 / 60	Future
MB1	MB	Infiltration trench at South Loyalsock Avenue.	Little Bear Creek-Loyalsock Creek	41°14'47.93"N	76°55'39.26"W	Large	Private	2006 - 2014	26	17	-7	17	53	38 / 60	Future
LST9	LST	4 rain gardens associated with the Grafius Run receiving body of water that are privately owned/maintained.	Millers Run	* 41°15'56.12"N	* 77° 1'14.41"W	4 acres	Private	2006 - 2014	22	13	-7	25	53	38 / 60	Future
HT1	HT	Detention and Infiltration basin at intersection of Route 973 and Lycoming Creek Road.	Lycoming Creek-West Branch Susquehanna River	41°18'18.89"N	77° 3'52.34"W	Large	Private	2006 - 2014	26	17	-7	17	53	38 / 60	Future
OLT3	OLT	Detention and infiltration basin on Hillside Baptist Church property at 40 Hillview Avenue. Visually inspected at least every three months and cleaned as needed.	Quenshukeny Run	41°14'50.72"N	77° 4'15.54"W	Large	Private	2006 - 2014	26	16	-7	17	52	41 / 60	Future
MB6	MB	Infiltration/Detention Basin owned by Parkside Elderly Housing, LLC.	Little Bear Creek-Loyalsock Creek	0	0	3 acres	Private	2006 - 2014	22	19	-7	17	51	42 / 60	Future
LST10	LST	Wetland Recharge associated with the Grafius Run receiving body of water, privately owned/maintained.	Millers Run	* 41°15'56.12"N	* 77° 1'14.41"W	1 acres	Private	2006 - 2014	14	18	-7	24	49	43 / 60	Future
LST8	LST	Detention basin and wetlands at Northwoods Estates.	Millers Run	41°16'5.56"N	77° 0'55.33"W	Large	Private	2006 - 2014	26	13	-7	17	49	43 / 60	Future
OLT5	OLT	Underground detention and infiltration on the C&N Bank Property at 1510 Dewey Avenue.	Lycoming Creek-West Branch Susquehanna River	41°14'57.69"N	77° 2'53.15"W	1.23 acres	Private	2006 - 2014	15	17	-7	24	49	43 / 60	Future
LST7	LST	Detention basin at Poco Estates.	Millers Run	41°16'1.90"N	76°59'54.38"W	Medium	Private	2006 - 2014	20	18	-7	17	48	46 / 60	Future
LST5	LST	Detention and infiltration basin at Mill Creek Estates.	Mill Creek-West Side of Loyalsock Creek	41°16'48.70"N	76°55'50.57"W	Large	Private	2006 - 2014	26	12	-7	17	48	46 / 60	Future
LST13	LST	Detention basin (Mill Creek), Privately owned/maintained, drainage area of 45 acres.	Mill Creek-West Side of Loyalsock Creek	0	0	45 acres	Private	2006 - 2014	30	9	-7	15	47	48 / 60	Future
OLT2	OLT	The Lacomie Detention Basin is located just South of Ridge Road between Lacomie Street and Round Hill Road in the Township. It is dredged and cleaned as often as necessary, depending on the number and magnitude of storms. The last major cleaning of the Basin was in 2013.	Lycoming Creek-West Branch Susquehanna River	41°14'48.34"N	77° 3'5.53"W	Medium	Private	2006 - 2014	20	16	-7	17	46	49 / 60	Future

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BMP ID	MS4 Entity	BMP/GI/LID Description	Receiving Watershed (HUC 12)	BMP Location		BMP Drainage Area	Property Owner	Installation Year	Benefit	Environmental	Constraint	Cost Factor	Total Score (120)	Rank	Permit Cycle
				Weighted Score (30)	Weighted Score (30)				Weighted Score (30)	Weighted Score (30)					
				Latitude	Longitude										
WC2	WC	Bio retention at Susquehanna Health parking area on High Street. Two acre drainage area.	Millers Run	41°14'44.55"N	77° 0'47.23"W	2 acres	Private	2006 - 2014	14	19	-7	18	44	50 / 60	Future
FT1	FT	Detention basin South of Old State Road.	Wolf Run	* 41°14'31.18"N	* 76°52'1.38"W	Medium	Private	2006 - 2014	20	13	-7	17	43	51 / 60	Future
MB9	MB	Infiltration Basin owned by Euro-Optics.	Little Bear Creek-Loyalsock Creek	*41°14'58.57"N	*76°55'22.81"W	0.04 acres	Private	2006 - 2014	10	19	-7	17	39	52 / 60	Future
LST4	LST	Infiltration trench at Greenview Commons development site.	Mill Creek-West Side of Loyalsock Creek	41°16'6.89"N	76°55'58.41"W	Medium	Private	2006 - 2014	20	9	-7	17	39	52 / 60	Future
OLT1	OLT	Underground detention and infiltration on at PSS property at 1431 Dewey Avenue.	Lycoming Creek-West Branch Susquehanna River	41°14'52.91"N	77° 3'2.06"W	Medium	Private	2006 - 2014	13	17	-7	15	38	54 / 60	Future
WC8	WC	Reach Road Industrial Park Project will involve drainage improvements that include stormwater BMPs.	0	0	0	Medium	Private	2015 or later	13	19	-7	10.5	35.5	55 / 60	Future
MB7	MB	Rain Garden owned by Sooner Pipe.	Little Bear Creek-Loyalsock Creek	* 41°14'47.93"N	* 76°55'39.26"W	0.14 acres	Private	2006 - 2014	7	17	-7	18	35	56 / 60	Future
OLT7	OLT	Stormtech Underground Detention System (UDS) at site of CVS Store on Lycoming Creek Road.	Lycoming Creek-West Branch Susquehanna River	41°15'12.93"N	77° 2'37.79"W	1.65 acres	Private	2006 - 2014	10	17	-7	15	35	56 / 60	Future
OLT6	OLT	Stormtech Underground Detention System (UDS) on Susquehanna Bank property at 1901 Lycoming Creek Road.	Lycoming Creek-West Branch Susquehanna River	41°15'16.66"N	77° 2'39.52"W	0.99 acres	Private	2006 - 2014	7	17	-7	15	32	58 / 60	Future
MB5	MB	UDS 3, owned by Lycoming Physical Therapy.	Wolf Run	41°14'51.79"N	76°54'35.71"W	0.11 acres	Private	2006 - 2014	3.11	19	-7	15	30.11	59 / 60	Future
MB8	MB	UDS 4, owned by VisionMax.	Little Bear Creek-Loyalsock Creek	41°15'0.67"N	76°55'44.61"W	0.1 acres	Private	2006 - 2014	3	17	-7	15	28	60 / 60	Future

MS4 Entity Legend	
PCT	Pennsylvania College of Technology
FT	Fairfield Township
HT	Hepburn Township
LCT	Lycoming Township
LC	Lycoming County
LST	Loyalsock Township
MB	Borough of Montoursville
OLT	Old Lycoming Township
WC	City of Williamsport

Table B-2
Joint MS4s Combined Non-Structural BMPs

MS4 Entity	BMP/GI/LID Description	Document	MCM #
LC	Strategic Action to develop a primer entitled "Beyond the Beauty: Environmental and Community Benefits of Forestland," to provide information on forest benefits to water quality, reduced flooding, and groundwater recharge.	Lycoming County Comprehensive Plan	1
LC	Strategic Action to identify and map riparian forest buffers, wetlands, and natural undeveloped water retention areas and encourage stream bank preservation programs. Educate local officials on their ability to regulate riparian buffer areas and distribute information on the value of riparian buffers to officials and the general public.	Lycoming County Comprehensive Plan	1
LC	Strategic Action to protect water supply and water quality by incorporating BMPs into ordinances. Ex. replace high maintenance lawn requirements with seasonal meadow options. Provide demonstration areas to show how BMPs are designed and maintained and what benefits are gained.	Lycoming County Comprehensive Plan	1
LC	Mitigation Action to provide education for residents about water-saving landscaping techniques.	Lycoming County 2014 All-Hazard Mitigation Plan	1
LC	The Public Education and Outreach Program (PEOP) of each MS4 Entity will be updated.	MCM Compliance Breakdown	1
LC	A target audience list will be developed for each MS4 Entity, and will be kept up-to-date.	MCM Compliance Breakdown	1
LC	Planning Department staff updates Lycoming County Conservation District on their current projects at the monthly Board of Directors public meetings.	MCM Compliance Breakdown	1
LC	MS4 Updates presented by Lycoming County at the Lycoming/Sullivan County Boroughs Association Meetings.	MCM Compliance Breakdown	1
LC	Flyers and educational brochures (including "Only Rain Down the Storm Drain", "How to Build a Rain Garden", "Endless Mountain Water Resources", and "5 Easy Ways to Make a Rain Barrel"), and other MS4 information distributed and presented at major events across the County, including Stormwater and Municipal Summits, Local Environmental Chapters, Conventions, public meetings, and Municipal/non-municipal Board Meetings. Bulletin Board located in the Executive Plaza also provides general stormwater and MS4 information for the public.	MCM Compliance Breakdown	1
LST	E&S fact sheet distributed by MS4s and County Conservation District.	2012 MS4 Report	1
LST	Rain Drain Brochures distributed by MS4s and County Conservation District at County Fair.	2012 MS4 Report	1
LST	Lycoming County staff performed public education presentations on low impact stormwater practices, stormwater management, and flooding to Leadership Lycoming and Lycoming Tioga Flood Summit.	2012 MS4 Report	1
LST	County Conservation district purchased storm drain markers installed by County and MS4 personnel.	2012 MS4 Report	1
LST	"When it Rains it Drains" brochure distributed to all applicants for building permits and land developments, and distributed at the county fair.	2012 MS4 Report	1
WC	When It Rain, It Drains brochure is distributed at events and available in the department offices. Also distributed to all applicants for building permits and land developments at the County Planning Department and the City of Williamsport Bureau of Codes.	MS4 Annual Report 2012-2013	1
WC	Several hundred storm drain markers were purchased and installed to discourage dumping.	MS4 Annual Report 2012-2013; Storm Drain Marker News Release	1

Table B-2
Joint MS4s Combined Non-Structural BMPs

MS4 Entity	BMP/GI/LID Description	Document	MCM #
WC	Storm drain marker educational brochure (Only Rain Down the Storm Drain) designed and will be distributed in water and sewer bills.	MS4 Annual Report 2012-2013; "Only Rain" Brochure	1
WC	E & S fact sheet distributed by MS4s and County.	MS4 Annual Report 2012-2013	1
WC	Lycoming County staff performed a widespread public educational campaign about Chesapeake Bay issues including presentations made to various Williamsport local groups.	MS4 Annual Report 2012-2013; Public Education Plan	1
WC	An "Erosion and Sediment Control for Earthmoving Sites" Fact Sheet prepared by the Lycoming County Conservation District was distributed to all developers and to any applicant for a building permit or land development approval.	MS4 Annual Report 2012-2013	1
LCT	Lycoming Township Newsletter distributed to residents that includes instructions on how to wash your car without harming the environment.	MCM Compliance Breakdown	1
MB	Lycoming Township Newsletter distributed to residents of Montoursville that includes County Environmental Brochures and MS4 information.	MCM Compliance Breakdown	1
LC	Strategic Action to establish watershed associations for all watersheds.	Lycoming County Comprehensive Plan	1, 2
LC	Update and implement Public Involvement and Participation Programs (PIPP) for each MS4 Entity.	MCM Compliance Breakdown	2
LC	Municipalities' Supervisor and Council Meetings are posted and available for all public to attend monthly to provide review and input.	MCM Compliance Breakdown	2
LC	Public involvement and comments allowed and encouraged at various MS4 Events held countywide. These events include Stormwater and Municipality Summits, MS4 Public Meetings, and MS4 Roadshows. Future events are planned with public comment encouraged.	MCM Compliance Breakdown	2
LST	Outfall screening and sampling conducted by Penn College Environmental Technology students.	2012 MS4 Report	2, 3
LC	An Illicit Discharge Detection and Elimination plan will be updated and adopted by each of the MS4 Entities.	MCM Compliance Breakdown	3
LC	All new permittees will develop a map of regulated MS4s that includes all outfall information.	MCM Compliance Breakdown	3
LC	All new permittees will submit an ordinance letter from an official engineer or solicitor in the first report that prohibits non-structural discharges.	MCM Compliance Breakdown	3
LC	This section gives an outline of the identified 21 drainage areas within the county. Descriptions of each drainage area are provided, and include current development information.	Lycoming County Act 167 Stormwater Management Plan	3
LST	MS4 outfall mapping done for entire MS4 area, including photos and GPS locations.	2012 MS4 Report	3
OLT	Old Lycoming Township provides an up-to-date list of Storm Sewer Outfall Locations.	OLT StormSewer Outfall Locations	3
PCT	The college currently employs an Illicit Discharge Detection and Elimination Plan, and incorporates a complaint and investigation program with its Environmental Specialist. Spill Response Reports may be filed.	PCT Illicit Discharge Detection and Elimination Plan	3
WC	All outfalls and receiving water-bodies mapped in GIS for entire urbanized area.	MS4 Annual Report 2012-2013; West Branch outfalls maps	3
WC	Outfall screening and sampling conducted by Penn College environmental technology students (previously) and completed by City staff under the direction of Penn College staff.	MS4 Annual Report 2012-2013	3
WC	Williamsport Bureau of Codes receives complaints and investigates illicit discharges into the city's storm sewer system. Reports are tracked through GeoPlan (GIS-based code enforcement program).	Illicit Discharge Detection and Elimination Plan	3
WC	City of Williamsport works with the Williamsport Municipal Water and Sanitary Authority to investigate illicit sanitary connections to the storm sewer system.	Illicit Discharge Detection and Elimination Plan	3

Table B-2
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MS4 Entity	BMP/GI/LID Description	Document	MCM #
WC	Williamsport Bureau of Fire personnel are trained with HAZMAT training to respond to spills of hazardous material to ensure that it does not enter the storm sewer system.	Illicit Discharge Detection and Elimination Plan	3, 6
FT	Zoning Ordinance states that if more than five (5) spaces are to be provided in a parking area, the surface of the parking area shall be considered as impervious for the purposes of preparing a stormwater management plan for the site.	Zoning Ordinance	4
HT	Subdivision and Land Development Ordinance states that no subdivision and land development plan can be approved without an E&S plan.	Subdivision and Land Development Ordinance	4
HT	Ordinance requires that, to the maximum extent practicable, all regulated activities should incorporate techniques for low impact development practices described in the PA BMP Manual.	Stormwater Management Ordinance	4
LST	Stormwater Management Ordinance requires E&S Plan and stormwater management plan for any project with disturbance activity of > = 5,000 sq. ft. Ordinance also requires minor stormwater plan for sites between 1,000 and 5,000 sq. ft. of contiguous area.	2012 MS4 Report	4
LST	E&S Control for Earthmoving Sites Fact Sheet prepared by conservation district was distributed to all developers and to any applicant for a building permit or land development approval.	2012 MS4 Report	4
LCT	A Complete Erosion and Sedimentation Control (ESC) Plan is required for various land-disturbance activities. This section outlines ESC Plan eligibility requirements.	Lycoming Township SLDO	4
OLT	A Complete Erosion and Sedimentation Control (ESC) Plan is required for various land-disturbance activities. This section outlines ESC Plan eligibility requirements.	Old Lycoming Twp Chapter 22 Subdivision and Land Development	4
OLT	Outlines requirements for future landscaping, and limits removal of existing green space. BMPs are encouraged to facilitate drainage and reduce impacts from any removed vegetation.	Old Lycoming Twp Chapter 22 Subdivision and Land Development	4
OLT	Requires that all activities include measures to maintain buffers, minimize disturbance, and generally ensure that runoff is directed to pervious surfaces whenever possible.	Old Lycoming Twp Chapter 26 Stormwater Management	4
WC	Under the amendment to the Stormwater Management Ordinance (adopted April 5, 2012), a stormwater management plan and E&S plan is required for any project with an earth disturbance activity of 5,000 square feet or more. Williamsport Bureau of Codes requires the review and approval of all E&S plans prior to the issuance of a building permit.	MS4 Annual Report 2012-2013	4
WC	Planning and Zoning Code contains design and construction standards governing stormwater drainage. Requires erosion and sediment control BMPs for all regulated earth disturbance activities.	City of Williamsport Planning and Zoning Code	4
LC	Lycoming County Stormwater Plan adopted 2010.	MS4 Annual Report 2009-2010	4, 5
FT	Ordinance requires a Stormwater Management Plan for all regulated activities with the submission of preliminary and/or final subdivision or land development plan.	Stormwater Management Ordinance	4, 5
LCT	Lycoming Township Stormwater Management Plan is currently provided by the Township. This plan is a requirement in the Lycoming Twp. SALDO Plan (Section 508, page 54).	Lycoming Township Stormwater Ordinance	4, 5
HT, LCT, LST, OLT, WC	Lycoming Creek Watershed Stormwater Plan adopted 2010.	MS4 Annual Report 2009-2010	4, 5
MB	Montoursville Township Stormwater Management Plan is currently provided by the Municipality.	Montoursville Township Stormwater Ordinance	4, 5
OLT	Old Lycoming Township Stormwater Management Plan is currently provided by the Municipality.	Old Lycoming Township Chapter 26 Stormwater Management	4, 5

Table B-2
Joint MS4s Combined Non-Structural BMPs

MS4 Entity	BMP/GI/LID Description	Document	MCM #
LC	Strategic Action to promote the use of conservation design techniques such as open space or conservation subdivisions.	Lycoming County Comprehensive Plan	5
FT	Stormwater management ordinance contains design standards for detention basins and for facilities to encourage recharge.	Stormwater Management Ordinance	5
HT	Stormwater management ordinance contains design standards for stormwater facilities.	Stormwater Management Ordinance	5
LST	Stormwater management ordinance contains design standards governing stormwater drainage facilities.	Stormwater Ordinance	5
LST	Subdivision and Land Development Ordinance contains design standards for storm drainage facilities in subdivisions. Facilities must be designed to handle a 25-yr frequency 24-hr duration rainfall.	Subdivision and Land Development Ordinance	5
LST, LCT, OLT	Strategic Action to promote the use of conservation design techniques such as open space or conservation subdivisions.	Comprehensive Plan for Lower Lycoming Creek Planning Area	5
LCT	Outlines water quality management options, including: implementing measures to minimize floodplain disturbance, maintain or extend forested buffers, minimize soil disturbances, etc.	Lycoming Township Stormwater Ordinance	5
MB	Strategic Action to promote the use of conservation design techniques such as open space or conservation subdivisions.	Comprehensive Plan for Montoursville – Muncy Planning Area	5
MB	Improvements to control drainage and runoff will be designed to increase infiltration and control rate of release of runoff off-site. Deed Covenants are suggested, which restrict the allowable impervious area on each lot, swales, basins, etc.	Ordinance 381 Zoning Ordinance	5
MB	Drainage requirements and suggestions are provided in this section, and include, but are not limited to: Drainage Easement requirements, open channel suggestions, minimizing of impervious surfaces, etc.	Ordinance 453 Stormwater Management	5
MB	Encourages integration of landscaping and stormwater management infiltration BMPs. Bio-retention facilities are specifically mentioned.	Ordinance 381 Zoning Ordinance	5
OLT	This section outlines grading requirements applicable to future development projects. It outlines grading design and cut/fill design requirements.	Old Lycoming Twp Chapter 22 Subdivision and Land Development	5
OLT	Outlines Storm Sewer requirements, and suggests using swales in lieu of or in addition to storm sewers wherever practicable. Gives design criteria for vegetated swales.	Old Lycoming Twp Chapter 26 Stormwater Management	5
WC	Roof drains and sump pumps must discharge to infiltration or vegetative BMPs to the maximum extent practicable.	Stormwater Management Ordinance	5
LC	Strategic Action to have LCPC Staff and Penn State Cooperative Extension perform a systematic audit of local ordinances and make recommendations on how to improve the regulation of landscaping and tree planting requirements.	Lycoming County Comprehensive Plan	6
LST	Street sweeping along Freedom Road.	MS4 Compliance Inspection Report July 2014	6
LST, OLT, WC	Strategic Action to review local ordinances for standards that require excessive impervious coverage, e.g. wider than necessary streets, excessive parking, etc. Revise such standards with provisions for better stormwater management practices, e.g. for shared parking, uncurbed streets, where appropriate.	Comprehensive Plan for the Greater Williamsport Alliance Planning Area	6
MB	Strategic Action to review local and County ordinances for standards that require excessive impervious coverage, e.g. wider than necessary streets, excessive parking, etc. Revise such standards with provisions for better stormwater management practices, e.g. for shared parking, uncurbed streets, where appropriate.	Comprehensive Plan for Montoursville – Muncy Planning Area	6

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Joint MS4s Combined Non-Structural BMPs

MS4 Entity	BMP/GI/LID Description	Document	MCM #
MB	Details Stormwater Management Facility inspection frequencies.	Ordinance 453 Stormwater Management	6
PCT	The college provides its Environmental Specialist (ES) with HAZMAT training and Hazardous Materials Management training. The ES is also trained as a Certified Stormwater Inspector. The document gives training frequencies and meeting types.	PCT Illicit Discharge Detection and Elimination Training	6
WC	Williamsport Department of Streets and Parks developed practices and procedures utilized during 2012 to control solids and floatable materials from being discharged into the city's storm sewer system.	MS4 Annual Report 2012-2013	6
WC	Developed a maintenance plan for storm water facilities on the site of River Valley Transit and the Williamsport Department of Public Services at 1500 West Third Street.	MS4 Annual Report 2012-2013	6
WC	The City of Williamsport and River Valley Transit, at their vehicle maintenance areas, has spill absorbent materials for use if necessary. Vehicle truck washing areas are designed with oil interceptor facilities which are regularly maintained. Department personnel are trained in the use of these facilities on a regular basis with review by the City's Safety Committee.	MS4 Annual Report 2012-2013	6
WC	Green Infrastructure Assessment Project – study to looking at land cover contributing to urban runoff, calculate nutrient and sediment reductions, and identify geographic areas for implementation of BMPs.	MS4 letters of support for National Fish and Wildlife grant	6
WC	In preparation of a measurable rainfall event that considerable runoff is anticipated, city crews are dispatched to clean storm sewer grates prior to and during the storm event.	Sanitary Authority Report	6
WC	City operates a Jet-Vac Truck and cleaned approximately forty-five (45) storm sewer basins and laterals during 2012.	Sanitary Authority Report	6
WC	Public Service vehicles are washed inside of the 1550 W Third Street facility which is equipped with a sediment and grease trap cleaned on a monthly basis.	Sanitary Authority Report	6
LC	An Operations and Maintenance (O&M) Plan will be developed and adopted by each MS4 entity.	MCM Compliance Breakdown	6
LC	Township Training provided during MS4 Coalition Meetings. Topics include O&M Programs, MS4 Tracking, Maintenance, and Procedures.	MCM Compliance Breakdown	6

MS4 Entity Legend	
PCT	Pennsylvania College of Technology
FT	Fairfield Township
HT	Hepburn Township
LGT	Lycoming Township
LC	Lycoming County
LST	Loyalsock Township
MB	Borough of Montoursville
OLT	Old Lycoming Township
WC	City of Williamsport