Municipal Separate Storm Sewer System (MS4)

Pollution Reduction Plan (PRP)

For the Sams Run, Hinckston Run and Conemaugh River
Sediment Impaired Surface Waters

September, 2017
revised May, 2018

City of Johnstown
City Hall
401 Main Street
Johnstown, PA 15901

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SECTION A - PUBLIC PARTICIPATION

The City of Johnstown held a Public Meeting on Wednesday, August 30, 2017 at 5:00pm in City Council Chambers to review their Municipal Separate Storm Sewer System (MS4) Permit renewal submission, MS4 Stormwater Program and the Pollution Reduction Plan (PRP). Representatives from the City of Johnstown and The EADS Group, the engineering/planning consultant assisting the City with their MS4 program attended and were prepared to facilitate the meeting. Representatives were also prepared to answer questions and to have group and one-on-one discussions with attendees. Other than the City and EADS Group representations, **no other persons attended this meeting and no comments were received.**

A copy of the Public Notice published in the Tribune Democrat is provided in EXHIBIT I. Notification of this Public Meeting, requirement to prepare and submit an NOI for renewed coverage under PAG-13 and the requirement to prepare and submit a PRP plan was made at the City of Johnstown – City Council meetings held on August 9th and September 13th in City Council Chambers. The City Council meetings are open to the public and are televised and aired live on a local access channel provided by Atlantic Broadband. Notification of the Public Meeting, requirement to prepare and submit an NOI for renewed coverage under PAG-13 and the requirement to prepare and submit a PRP plan was also included with The EADS Group's Engineers Reports submitted at the City of Johnstown - City Council meetings held on Wednesday, August 9th and September 13th. The Engineers Reports become part of the official Meeting Minutes which are provided on the City of Johnstown website.

Three (3) complete copies of the draft version of the PRP, including all MS4 mapping, were made available in City Hall, 401 Main St., starting on August 9 for the required 30-day public review period. Comments sheets were also provided to facilitate the submission of written comments. **No written comments (or comments of any-kind were submitted) were received.** The City was prepared to consider and made a record of their consideration of each comment received.

SECTION B – MS4 MAPS

The following MS4 maps are provided in EXHIBIT II.

- City of Johnstown PRP Required Sewersheds Overview Map
- MS4 - Sams Run Sewershed Boundary Map (BMP locations included)
- MS4 - Hinckston Run Sewershed Boundary Map (BMP locations included)
- MS4 - Conemaugh River Sewershed Boundary Map (BMP locations included)
- City of Johnstown Impervious/Pervious Surfaces Overview Map
- Sams Run Impervious/Pervious Surfaces Map
- Hinckston Run Impervious/Pervious Surfaces Map
- Conemaugh River Impervious/Pervious Surfaces Map

The MS4 maps include the following information:

1. The City of Johnstown municipal boundary
2. The boundary of the Johnstown Urbanized Area (entire City is contained in the Johnstown Urbanized area)
3. PRP Planning Area
4. Drainage Areas to MS4 Stormwater Outfall within the PRP Planning Area
5. MS4 Stormwater Outfalls
6. MS4 Targeted Stormwater Outfalls (illicit discharge outfalls)
7. MS4 Stormwater System – pipes
8. MS4 Stormwater System – catch basins
9. MS4 Stormwater System – manholes
10. Surface Water
11. Sanitary Sewer Overflows
12. City Structures
13. City Parcels
14. City Street network and street names
15. City Owned Properties
16. Aerial Images

SECTION C - POLLUTANTS OF CONCERN

The PA DEP published MS4 Requirements Table (Municipal) (revised 8/2/2017) identifies three (3) impaired Downstream Waters or Applicable TMDL Names within the City of Johnstown MS4 area requiring completion of a Pollution Reduction Plan (PRP). These include Sams Run, Hinckston Run and the Conemaugh River. The following identifies the pollutants of concern for each impaired Downstream Waterway within the City of Johnstown MS4 area requiring completion of a Pollution Reduction Plan (PRP):

Planning Area	Pollutant of Concern	Requirement
Sams Run Sewershed	Siltation (inorganic solids)	10% reduction
Hinckston Run Sewershed	Suspended Solids (inorganic solids)	10% reduction
Conemaugh River Sewershed	Siltation (inorganic solids)	10% reduction

The PA DEP published MS4 Requirements Table (Municipal) (revised 8/2/2017) also identifies eight (8) impaired Downstream Waters within the City of Johnstown MS4 area having a requirement for Metals. These include Unnamed tributaries to Elk Run, Solomon Run, Strayer Run, Kiskiminetas-Conemaugh River Watersheds TMDL, Hinckston Run, Conemaugh River, Stonycreek River and St. Clair Run.

SECTION D - EXISTING LOADINGS FOR POLLUTANTS OF CONCERN

Land uses in the City of Johnstown were prepared by adapting generalized land use mapping prepared by The EADS Group Planning Department staff in December 2011 for the Cambria County Comprehensive Plan Update. The existing land use mapping was revaluated for this Pollution Reduction Plan (PRP) using secondary source data, interpretation of aerial photography and by field verification. Revisions were made to reflect current conditions. The land use mapping and data presented in this section represents the most accurate land use information available for the City of Johnstown.

The revised land use was then evaluated to identify and tabulate existing pervious and impervious acreages. Two (2) major component headings were considered to identify and tabulate existing pervious and impervious acreages within the City of Johnstown: developed and undeveloped land areas. The specific land use categories employed to define the developed and undeveloped component headings are as follows:

The following *developed land use* categories were reviewed for the City of Johnstown. These are collectively considered *Impervious Land*:

- Structures – includes residential housing units and associated structures such as garages, sheds, pavilions and commercial, industrial and public/semi-public structures that sustain community uses, such as libraries, facilities, schools, houses of worship, government buildings, etc.

- Impervious Lots – includes land primarily surrounding commercial, industrial and public/semi-public structures including parking lots, storage areas and/or other hard compacted land areas.

- Transportation – includes the land within the right-of-way lines of state and local roadways.

The following *undeveloped land use* categories were reviewed for the City of Johnstown. These are collectively considered *Pervious Land*:

- Wooded Land – land covered by deciduous and/or evergreen vegetation, and timberland not located on any of the above active land use.

- Cleared or Grassland – residential yard and other non-wooded land not in any of the above developed land uses.

- Surface Water – includes rivers, streams and water bodies.

The Table below presents a summarized tabulation of the existing Impervious and Pervious land uses in the City of Johnstown MS4 Urbanized Area. The Impervious and Pervious land use totals allow each respective category to be presented as a percentage of developed land and total land area.

City of Johnstown Existing Impervious and Pervious Land Use
MS4 Urbanized Area and Drainage Area

Land Use Category	City of Johnstown		
	Acreage	% of Total	% of Developed Land
Structures	529.11	13.48%	38.81%
Impervious Lots	467.75	11.92%	34.31%
Transportation	366.51	9.34%	26.88%
Subtotal – Impervious Land	***1,363.37***	***34.73%***	***100.00%***
Wooded Land	804.97	20.51%	NA
Cleared or Grassland	1,586.58	40.42%	NA
Surface Water	170.66	4.35%	NA
Subtotal – Pervious Land	***2,562.21***	***65.27%***	***NA***
TOTAL ACREAGE	3,925.58	100.00%	NA

Sources: The Study Area acreage and calculations by The EADS Group; 2017

Several factors emerge after reviewing the Table.

- A total of 2,562.21 acres (65.27%) of the land area in the MS4 Area is undeveloped, while 1,363.37 acres (34.73%) sustains some form of development.

- Structures account for approximately 39% (529 acres) of developed land and 13.5% of the total land area in the MS4 Area. Impervious lots account for 34% (468 acres) of the developed land and 12% of the total land area in the MS4 Area and State and Local roadways account for nearly 27% (366.51 acres) of the developed land and 9.34% of the total land area in the MS4 Area.

- Cleared or Grassland accounts for 40.42% (1,587 acres) of the total land area in the MS4 Area. Wooded land accounts for 20.5% (805 acres) of the total land area and Surface Waters comprise 4.35% (171 acres) of the total land area in the MS4 Area.

The City of Johnstown Impervious/Pervious Surfaces Map provided in EXHIBIT II visually depicts the Pervious/Impervious Land Use profile for the City. Mapping of Impervious/Pervious Surfaces within the Sams Run, Hinckston Run and Conemaugh River Sewersheds are also included in EXHIBIT II. The following pages identify the existing loading estimate for Sams Run, Hinckston Run and Conemaugh River Sewershed Planning Areas. The existing pollutant loading calculations were prepared on August 8, 2017.

Sams Run Sewershed Planning Area

Existing Pollutant Loading Estimate -

Land Use	Loading Rate (lbs/ac/yr)	Sediment Loading
50.69 impervious acres	2,155.29	**109,251.70 lbs/yr**
59.89 pervious acres	325.3	**19,482.22 lbs/yr**
110.58 total acres		**128,733.9, lbs/yr total from Sams Run Sewershed**

*due to the number of stormwater outfalls in the Planning Area, the existing loading rate was calculated on a Sewershed Planning Area basis.

Pollutant Reduction Estimate -

Sediment Loading (lbs/yr)	10% Reduction (lbs/yr)
128,733.92	**12,873.39**

Sams Run Sewershed PRP Planning Area Required Reduction needed = 12,873.39 lbs/yr

Hinckston Run Sewershed Planning Area

Existing Loading Estimate –

Land Use	Loading Rate (lbs/ac/yr)	Sediment Loading (lb/yr)
6.07 impervious acres	2,155.29	**13,082.61 lb/yr**
15.50 pervious acres	325.3	**5,042.15 lb/yr**
21.57 total acres		**18,124.76 lb/yr total from Hinckston Run Sewershed**

*due to the number of stormwater outfalls in the Planning Area, the existing loading rate was calculated on a Sewershed Planning Area basis.

Pollutant Reduction Estimate -

Sediment Loading (lbs/yr)	10% Reduction (lbs/yr)
18,124.76	**1,812.48**

Hinckston Run Sewershed PRP Planning Area Required Reduction needed = 1,812.48 lbs/yr

Conemaugh River Sewershed Planning Area

Existing Loading Estimate –

Land Use	Loading Rate (lbs/ac/yr)	Sediment Loading (lb/yr)
318.90 impervious acres	2,155.29	**687,321.98**
617.13 pervious acres	325.3	**200,752.39**
936.03 total acres		**888,074.37 lb/yr total from Conemaugh River Sewershed**

*due to the number of stormwater outfalls in the Planning Area, the existing loading rate was calculated on a Sewershed Planning Area basis.

Pollutant Reduction Estimate -

Sediment Loading (lbs/yr)	10% Reduction (lbs/yr)
888,074.37	**88,807.44**

Conemaugh River Sewershed PRP Planning Area Required Reduction needed = 88,807.44 lbs/yr

Pollutant Reduction Estimate Summary

Sewershed	10% Reduction (lbs/yr)
Sams Run	12,873.39
Hinckston Run	1,812.48
Conemaugh River	88,807.44

SECTION E - SELECTED BMPS TO ACHIEVE THE MINIMUM REQUIRED REDUCTIONS IN POLLUTANT LOADING

Sams Run Sewershed Planning Area

Sams Run Sewershed PRP Planning Area Required Reduction needed = 12,873.39 lbs/yr

The following proposed BMPs and their expected sediment loading reductions have been selected to meet the required loading reduction requirement.

BMP - Converting Impervious Land to Pervious Land

The City of Johnstown will be aggressively implementing a Blight Reduction Program over the next five (5) years. This will result in approximately 50 homes per year being demolished (250 total) in the City. It is anticipated that twenty (25) total structures (5 per yr) in the Sams Run Sewershed will be demolished in five (5) years and converted into pervious land. The City anticipates that the average footprint of the structures to be demolished will be 1,864 sq ft (0.043 acres). This avg. sq ft amount was calculated using GIS layers depicting structures in the City. The following Impervious to Pervious Land use reduction calculation indicates that the City will reduce its pollutant loading rate by 1,967.20 lb/yr for this BMP.

Land Use	Loading Rate (lbs/ac/yr)	Sediment Reduction
1.075 impervious acres	2,155.29	**2,316.90 lbs/yr**
1.075 pervious acres	325.3	**349.70 lbs/yr**

Net reduction = 1,967.20 lbs/yr acres

BMP – Additional Streetsweeping

It was calculated that the City removes approximately 6,996.72 lb/yr resulting from their existing streetsweeping program conducted in the Sams Run Sewershed PRP Planning area. The total road acres swept was calculated using GIS layers of the City's road network. The City of Johnstown will increase the frequency of their streetsweeping efforts in the Sams Run Sewershed by approximately 20% (5 times) from approximately 25 times per year to 30 times per year. The following reduction calculation indicates that the City removes 279.87 lbs per sweep event in the Sams Run Sewershed PRP Planning area.

Frequency	Sediment Reduction	Reduction Per Sweep Event
25	**6,996.72 lbs/yr**	**279.87 lbs**

Therefore, five (5) additional sweep events will allow the City to reduce its pollutant loading rate by 1,399.34 lb/yr (5 x 279.87 lbs).

BMP – Tree Planting

The City will work with the Western PA Conservancy and Vision 2025 and Capture Teams to increase the tree canopy coverage throughout the Sams Run Sewershed. It is anticipated that at least 25 new trees will be planted in the Sewershed. The loading reduction for this BMP was calculated in the following manner:

- Multiply the number of trees (25) planted by 0.01 acres = 0.25 aces
- Multiply 0.25 acres by the pollutant loading rate for the land prior to planting the trees (2,155.29 lbs/ac/yr) = 538.82 lbs/ac/yr
- Multiply 538.82 lbs/ac/yr by 20% (the PADEP determined BMP effectiveness value)

Number of Trees	Loading Rate – Impervious (lbs/ac/yr)	Reduction
25	2,155.29	**107.76 lbs/yr**

BMP – Filter Strip Stormwater Treatment

The City will support efforts to install vegetated runoff filter strips along Main St. in downtown Johnstown. Planning efforts within the Main St. Greenway Corridor are on-going as of the submission of this PRP Plan. It is anticipated that the Greenway Plan will be completed in Spring 2018. The Plan will identify locations and conceptual designs for installing this type of 'green' infrastructure along the Main St. Greenway Corridor. Construction of the recommended 'green' infrastructure is anticipated to be completed with the Central Business District Sanitary/Stormwater Sewer Separation Project (start anticipated 2020). The City anticipates replicating this vegetated runoff filter elsewhere in the City including within the Sams Run Sewershed Planning Area. The average drainage area to an outfall within the Sams Run Sewershed Planning Area is 6.53 acres. Completing a Filter Strip Stormwater Treatment Project (22% Sediment BMP Effectiveness Value) in the Sams Run Sewershed Planning Area will result in the reduction of approximately 3,096.29 lbs/yr.

Land Use	Loading Rate (lbs/ac/yr)	Sediment Reduction
6.53 impervious acres	2,155.29	**3,096.29 lbs/yr**

BMP - Storm Sewer System Solids Removal

The City will use their Vac Truck and public works employees to directly remove sediments from stormwater catch basins in the Sams Run Sewershed. The City has the program in place to effectively remove sediments from the stormwater catch basins. The City's MS4 map indicates there are 133 catch basins within the Sewershed each with a drainage area of 0.5 acres or less. The following highlights the annual loading reduction resulting from storm sewer solids removal. The following reflects the sediment reduction calculation method provided in the PRP Instructions, Appendix C.

Impervious Acres	Loading Rate	Efficiency Rate	lbs/yr (wet weight)	Debris & Refuse Removal	Remaining lbs/yr (wet weight)
50.69	2,155.29	80%	87,401.32	10%	78,661.19

Remaining lbs/yr (wet weight)	Inorganic Material Estimate	Wet Sediment Factor	Inorganic Material lbs/yr (dry weight)	TN Fraction	TN lbs/yr	TP Fraction	TP lbs/yr
78,661.19	55%	0.7	30,284.56	0.0027	81.77	0.0006	18.17

Remaining lbs/yr (wet weight)	Organic Material Estimate	Wet Organic Factor	Organic Material lbs/yr (dry weight)	TN Fraction	TN lbs/yr	TP Fraction	TP lbs/yr
78,661.19	45%	0.2	7,079.51	0.0111	78.58	0.0012	8.5

Inorganic Material lbs/yr (dry weight) (1)	Organic Material lbs/yr (dry weight) (2)	TN Inorganic (3)	TN Organic (4)	TP Inorganic (5)	TP Organic (6)	Total Sediment Loading Reduction (lbs/yr) (1+2) – (3+4+5+6)
30,284.56	7,079.51	81.77	78.58	18.17	8.5	12,873.39

Percentage satisfied of sediment reduction requirement = 289%

Maximum allowable reduction is 50% = 6,436.70 lbs/yr

SAMS RUN BMP REDUCTION SUMMARY

Selected BMP	Estimated Sediment Loading Reduction (lbs/ac/yr)
Impervious to Pervious Land Use Change	1,967.20
Additional Streetsweeping	1,399.34
Tree Planting	107.76
Filter Strip Runoff Reduction	3,096.29
Storm Sewer System Solids Removal	6,436.70
Total:	13,007.29
Minimum Required:	***12,873.39***

Hinckston Run Sewershed Planning Area

Hinckston Run Sewershed PRP Planning Area Required Reduction needed = 1,812.48 lbs/yr

The following proposed BMPs and their expected sediment loading reductions have been selected to meet the required loading reduction requirement.

BMP – Converting Impervious Land to Pervious Land

The City of Johnstown will be aggressively implementing a Blight Reduction Program over the next five (5) years. This will result in approximately 50 homes per year being demolished (250 total) in the City. It is anticipated that five (5) total structures (1 per yr) in the Hinckston Run Sewershed will be demolished in five (5) years and converted into pervious land. The City anticipates that the average footprint of the structures to be demolished will be 1,864 sq ft (0.043 acres). This avg. sq ft amount was calculated using GIS layers depicting structures in the City. The following Impervious to Pervious Land use reduction calculation indicates that the City will reduce its pollutant loading rate by 393.45 lb/yr for this BMP.

Land Use	Loading Rate (lbs/ac/yr)	Sediment Reduction
0.215 impervious acres	2,155.29	**463.38 lbs/yr**
0.215 pervious acres	325.3	**69.93 lbs/yr**

Net reduction = 393.45 lbs/yr acres

BMP – Additional Streetsweeping

It was calculated that the City removes approximately 729.35 lb/yr from their existing streetsweeping program conducted in the Hinckston Run Sewershed PRP Planning area. The total road acres swept was calculated using GIS layers of the City's road network. The City of Johnstown will increase the frequency of their streetsweeping efforts in the Hinckston Run Sewershed by approximately 20% (5 times) from approximately 25 times per year to 30 times per year. The following reduction calculation indicates that the City removes approximately 29.17 lb per sweep event in the Hinckston Run Sewershed PRP Planning area.

Frequency	Sediment Reduction	Reduction Per Sweep Event
25	**729.35 lbs/yr**	**29.17 lbs**

Therefore, five (5) additional sweep events will allow the City to reduce its pollutant loading rate by 145.85 lb/yr (5 x 29.17 lbs).

BMP – Tree Planting

The City will work with the Western PA Conservancy and Vision 2025 and Capture Teams to increase the tree canopy coverage throughout the Hinckston Run Sewershed. It is anticipated that at least 25 new trees will be planted in the Sewershed. The loading reduction for this BMP was calculated in the following manner:

- Multiply the number of trees (25) planted by 0.01 acres = 0.25 aces
- Multiply 0.25 acres by the pollutant loading rate for the land prior to planting the trees (2,155.29 lbs/ac/yr) = 538.82 lbs/ac/yr
- Multiply 538.82 lbs/ac/yr by 20% (the PADEP determined BMP effectiveness value)

Number of Trees	Loading Rate – Impervious (lbs/ac/yr)	Reduction
25	2,155.29	**107.76 lbs/yr**

BMP - Bioretention – Raingarden

The City owns a 0.79 acre parcel of land in the Sewershed formerly used as a playground. The City will construct a biorentention raingarden type facility on this parcel of land. The exact design and details will be determined as the project moves towards implementation. The drainage area to the site is approximately 5.22 acres. Using a conservative estimate that the site contains C/D soils and that an underdrain will be installed allows use of a 55% Sediment BMP Effectiveness Value.

Land Use	Loading Rate (lbs/ac/yr)	Sediment Reduction
0.90 impervious acres	2,155.29	**1,939.76 lbs/yr**
4.32 pervious acres	325.3	**1,405.30 lbs/yr**
		3,345.06 lbs/yr

Total Loading Reduction = 3,345.06 lbs/yr x 55% = 1,839.78 lbs/yr

BMP - Storm Sewer System Solids Removal

The City will use their Vac Truck and public works employees to directly remove sediments from stormwater catch basins in the Hinckston Run Sewershed. The City has the program in place to effectively remove sediments from the stormwater catch basins. The City's MS4 map indicates there are 26 catch basins within the Sewershed each with a drainage area of 0.5 acres or less. The following highlights the annual loading reduction resulting from storm sewer solids removal. The following reflects the sediment reduction calculation method provided in the PRP Instructions, Appendix C.

Impervious Acres	Loading Rate	Efficiency Rate	lbs/yr (wet weight)	Debris & Refuse Removal	Remaining lbs/yr (wet weight)
6.07	2,155.29	80%	10,466.09	10%	9,419.48

Remaining lbs/yr (wet weight)	Inorganic Material Estimate	Wet Sediment Factor	Inorganic Material lbs/yr (dry weight)	TN Fraction	TN lbs/yr	TP Fraction	TP lbs/yr
9,419.48	55%	0.7	3,626.50	0.0027	9.79	0.0006	2.18

Remaining lbs/yr (wet weight)	Organic Material Estimate	Wet Organic Factor	Organic Material lbs/yr (dry weight)	TN Fraction	TN lbs/yr	TP Fraction	TP lbs/yr
9,419.48	45%	0.2	847.75	0.0111	9.41	0.0012	1.02

Inorganic Material lbs/yr (dry weight) (1)	Organic Material lbs/yr (dry weight) (2)	TN Inorganic (3)	TN Organic (4)	TP Inorganic (5)	TP Organic (6)	Total Sediment Loading Reduction (lbs/yr) (1+2) – (3+4+5+6)
3,626.50	847.75	9.79	9.41	2.18	1.02	4,451.86

Percentage satisfied of sediment reduction requirement = 246%

Maximum allowable reduction is 50% = 906.24 lbs/yr

HINCKSTON RUN BMP REDUCTION SUMMARY

Selected BMP	Estimated Sediment Loading Reduction (lbs/ac/yr)
Impervious to Pervious Land Use Change	393.45
Additional Streetsweeping	145.85
Tree Planting	107.76
Bioretention – Raingarden	1,839.78
Storm Sewer System Solids Removal	906.24
Total:	3,393.08
Minimum Required:	***1,812.48***

Conemaugh River Sewershed Planning Area

Conemaugh River Sewershed PRP Planning Area Required Reduction needed = 88,807.44 lbs/yr

The following proposed BMPs and their expected sediment loading reductions have been selected to meet the required loading reduction requirement.

BMP – Converting Impervious Land to Pervious Land

The City of Johnstown will be aggressively implementing a Blight Reduction Program over the next five (5) years. This will result in approximately 50 homes per year (250 total) being demolished in the City. It is anticipated that sixty (60) total structures in the Conemaugh River Sewershed will be demolished in five (5) years and converted into pervious land. The City anticipates that the average footprint of the structures to be demolished will be 1,864 sq ft (0.043 acres). This avg. sq ft amount was calculated using GIS layers depicting structures in the City. The following Impervious to Pervious Land use reduction calculation indicates that the City will reduce its pollutant loading rate by 5,123.97 lb/yr for this BMP.

Land Use	Loading Rate (lbs/ac/yr)	Sediment Reduction
2.58 impervious acres	2,155.29	**5,560.65 lbs/yr**
2.58 pervious acres	325.3	**839.27 lbs/yr**

Net reduction = 4,721.37 lbs/yr acres

BMP – Additional Streetsweeping

It was calculated that the City removes approximately 31,230.15 lbs/yr from their existing streetsweeping program conducted in the Conemaugh River Sewershed PRP Planning area. The total road acres swept was calculated using GIS layers of the City's road network. The City of Johnstown will increase the frequency of their streetsweeping efforts in the Conemaugh River Sewershed by approximately 20% (5 times) from approximately 25 times per year to 30 times per year. The following reduction calculation indicates that the City removes approximately 1,249.21 lbs per sweep event in the Conemaugh River Sewershed PRP Planning area.

Frequency	Sediment Reduction	Reduction Per Sweep Event
25	**31,230.15 lbs/yr**	**1,249.21 lbs**

Therefore, five (5) additional sweep events will allow the City to reduce its pollutant loading rate by 6,246.03 lb/yr (5 x 1,249.21 lbs 4`).

BMP – Tree Planting

The City will work with the Western PA Conservancy and Vision 2025 and Capture Teams to increase the tree canopy coverage throughout the Conemaugh River Sewershed. It is anticipated that at least 25 news trees will be planted in the Sewershed. The loading reduction for this BMP was calculated in the following manner:

- Multiply the number of trees (25) planted by 0.01 acres = 0.25 aces
- Multiply 0.25 acres by the pollutant loading rate for the land prior to planting the trees (2,155.29 lbs/ac/yr) = 538.82 lbs/ac/yr
- Multiply 538.82 lbs/ac/yr by 20% (the PADEP determined BMP effectiveness value)

Number of Trees	Loading Rate – Impervious (lbs/ac/yr)	Reduction
25	2,155.29	**107.76 lbs/yr**

BMP - Bioretention – Raingarden

The City owns 14 parcels of land totaling approximately 43.7 acres in the Sewershed. The City will construct biorentention raingarden type facilities on these parcels of land. The exact design and details will be determined as the project moves towards implementation. The total drainage areas to the sites comprise approximately 23.80 acres of impervious land and 16.70 acres of pervious land. Using a conservative estimate that the areas where the projects will be installed contain C/D soils and will have an underdrain installed allows use of a 55% Sediment BMP Effectiveness Value.

Land Use	Loading Rate (lbs/ac/yr)	Sediment Reduction
23.80 impervious acres	2,155.29	**51,295.90 lbs/yr**
16.70 pervious acres	325.3	**5,432.51 lbs/yr**
		56,728.41 lbs/yr

Total Loading Reduction = 56,728.41 lbs/yr x 55% = 31,200.63 lbs/yr

BMP – Dry Extended Detention Basin

The City owns an approximately 20 acre parcel of land in the Conemaugh River Sewershed that is currently being used a Clean Fill Disposal Site. The Site contains a temporary sediment basin. The Post Construction Stormwater Management plan for the Clean Fill Disposal Site requires that the temporary sediment basin be converted to a stormwater management facility by or around 2022. The following reduction calculation indicates that the City will reduce its pollutant loading rate by 3,388.82 lb/yr for this BMP.

Land Use	Loading Rate (lbs/ac/yr)	Sediment Reduction	Effectiveness Value	Reduction (lbs/yr)
0.1 impervious acres	2,155.29	**215.53 lbs/yr**	**60%**	**129.32**
16.7 pervious acres	325.3	**5,432.51 lbs/yr**	**60%**	**3,259.51**
				3,388.82

BMP - Storm Sewer System Solids Removal

The City will use their Vac Truck and public works employees to directly remove sediments from stormwater catch basins in the Conemaugh River Sewershed. The City has the program in place to effectively remove sediments from the stormwater catch basins. The City's MS4 map indicates there are over 500 catch basins within the Sewershed each with a drainage area of 0.5 acres or less. The following highlights the annual loading reduction resulting from storm sewer solids removal. The following reflects the sediment reduction calculation method provided in the PRP Instructions, Appendix C.

Impervious Acres	Loading Rate	Efficiency Rate	lbs/yr (wet weight)	Debris & Refuse Removal	Remaining lbs/yr (wet weight)
318.9	2,155.29	80%	549,857.58	10%	494,871.83

Remaining lbs/yr (wet weight)	Inorganic Material Estimate	Wet Sediment Factor	Inorganic Material lbs/yr (dry weight)	TN Fraction	TN lbs/yr	TP Fraction	TP lbs/yr
494,871.83	55%	0.7	190,525.65	0.0027	514.42	0.0006	114.32

Remaining lbs/yr (wet weight)	Organic Material Estimate	Wet Organic Factor	Organic Material lbs/yr (dry weight)	TN Fraction	TN lbs/yr	TP Fraction	TP lbs/yr
494,871.83	45%	0.2	44,538.46	0.0111	494.38	0.0012	53.45

Inorganic Material lbs/yr (dry weight) (1)	Organic Material lbs/yr (dry weight) (2)	TN Inorganic (3)	TN Organic (4)	TP Inorganic (5)	TP Organic (6)	Total Sediment Loading Reduction (lbs/yr) (1+2) – (3+4+5+6)
190,525.65	44,538.46	514.42	494.38	114.32	53.45	233,887.56

Percentage satisfied of sediment reduction requirement = 263%

Maximum allowable reduction is 50% = 44,403.72 lbs/yr

CONEMAUGH RIVER BMP REDUCTION SUMMARY

Selected BMP	Estimated Sediment Loading Reduction (lbs/ac/yr)
Impervious to Pervious Land Use Change	4,721.37
Additional Streetsweeping	6,246.03
Tree Planting	107.76
Bioretention – Raingarden	31,200.63
Dry Extended Detention Basin	3,388.82
Storm Sewer System Solids Removal	44,403.72
Total:	90,068.33
Minimum Required:	***88,807.44***

City of Johnstown
Pollution Reduction Plan
Sams Run, Hinckston Run and Conemaugh River Sewersheds

The following is a summary matrix highlighting the Best Management Practices selected for the Sams Run, Hinckston Run and Conemaugh River Sewersheds and their requirements/outcomes:

Sams Run **Pollution Reduction Required = 12,873.39 (lbs/yr)** **Pollution Reduction Achieved via BMPs = 13,007.29 (lbs/yr)**	**Hinckston Run** **Pollution Reduction Required = 1,812.48 (lbs/yr)** **Pollution Reduction Achieved via BMPs = 3,393.08 (lbs/yr)**	**Conemaugh River** **Pollution Reduction Required = 88,807.44 (lbs/yr)** **Pollution Reduction Achieved via BMPs = 90,068.33 (lbs/yr)**
Converting Impervious Land to Pervious Land 5/yr = 25 in 5yrs – structures demolished and vacant land vegetated	**Converting Impervious Land to Pervious Land** 1/yr = 5 in 5yrs – structures demolished and vacant land vegetated	**Converting Impervious Land to Pervious Land** 12/yr = 60 in 5yrs – structures demolished and vacant land vegetated
Additional Streetsweeping 20% increase = 5 more times/yr	**Additional Streetsweeping** 20% increase = 5 more times/yr	**Additional Streetsweeping** 20% increase = 5 more times/yr
Tree Planting 25 new trees	**Tree Planting** 25 new trees	**Tree Planting** 25 new trees
Filter Strip Stormwater Treatment Construct project similar to Main Street Greenway Concept	**Bioretention Raingarden** @ former playground site in Minersville	**Bioretention Raingarden** @ 14 city owned parcels .
Storm Sewer System Solids Removal Remove at least 6,436.70 lbs/yr -	**Storm Sewer System Solids Removal** Remove at least 906.24 lbs/yr -	**Storm Sewer System Solids Removal** Remove at least 44,403.72 lbs/yr -
		Dry Extended Detention Basin Convert City Dump Site's temporary sediment basin as per their Post Construction Stormwater Management Plan

SECTION F - SELECTED BMP FUNDING METHODS

The following pages provide a summary matrix highlighting the probable funding methods for the selected BMPS for the Sams Run, Hinckston Run and Conemaugh River Sewersheds. These methods include through the City's General Operating Budget, the Sewer Rental/Upgrade/Maintenance/Repair Fund and CDBG annual allotments. These sources exist and are included in annual City Budgets. Other Grants and Other sources of funding are also identified. The probable funding methods were identified in collaboration by the City Manager and City Finance Director.

City of Johnstown
Pollution Reduction Plan
Sams Run, Hinckston Run and Conemaugh River Sewersheds

The following is a summary matrix highlighting the probable funding methods for the selected BMPS for the Sams Run Sewershed. The probable funding methods were developed by the Johnstown City Manager and City Finance Director.

Sams Run **Pollution Reduction Achieved via BMPs = 13,007.29 (lbs/yr)**	**City of Johnstown General Operating Budget**	**City of Johnstown Sewer Rental/Upgrade/Maintenance/Repair Fund**	**City of Johnstown CDBG**	**Grants / Other**
Converting Impervious Land to Pervious Land 5/yr = 25 in 5yrs – structures demolished and vacant land vegetated			**X** **Through an annual allotment of approx. $200,000 directed towards the City's Blight Removal Program**	**X** **Through the Johnstown Redevelopment Authority's (JRA) Blight Removal Program** **Additional funding through the Community Foundation of the Alleghenies**
Additional Streetsweeping 20% increase = 5 more times/yr	**X** **Through adjustment of existing staff work orders/hours**			
Tree Planting 25 new trees	**X** **Installation and maintenance support provided by City Public Works Department**			**X** **Costs for trees anticipated through the Western PA Conservancy, the TreeVitalize Program and the Johnstown Vision 2025 Greenspace and Trails Capture Team**
Filter Strip Stormwater Treatment Construct project similar to Main Street Greenway Concept	**X** **Construction and maintenance support provided by City Public Works Department**			
Storm Sewer System Solids Removal Remove at least 6,436.70 lbs/yr -		**X** **Costs associated with cleaning and maintenance of Storm inlets will continued to be covered by the Sewer Rental/Upgrade/Maintenance/Repair Fund**		

City of Johnstown
Pollution Reduction Plan
Sams Run, Hinckston Run and Conemaugh River Sewersheds

The following is a summary matrix highlighting the probable funding methods for the selected BMPS for the Hinckston Run Sewershed. The probable funding methods were developed by the Johnstown City Manager and City Finance Director.

Hinckston Run **Pollution Reduction Achieved via BMPs = 3,393.08 (lbs/yr)**	**City of Johnstown General Operating Budget**	**City of Johnstown Sewer Rental/Upgrade/Maintenance/Repair Fund**	**City of Johnstown CDBG**	**Grants / Other**
Converting Impervious Land to Pervious Land 1/yr = 5 in 5yrs – structures demolished and vacant land vegetated			**X** **Through an annual allotment of approx. $200,000 directed towards the City's Blight Removal Program**	**X** **Through the Johnstown Redevelopment Authority's (JRA) Blight Removal Program** **Additional funding through the Community Foundation of the Alleghenies**
Additional Streetsweeping 20% increase = 5 more times/yr	**X** **Through adjustment of existing staff work orders/hours**			
Tree Planting 25 new trees	**X** **Installation and maintenance support provided by City Public Works Department**			**X** **Costs for trees anticipated through the Western PA Conservancy, the TreeVitalize Program and the Johnstown Vision 2025 Greenspace and Trails Capture Team**
Bioretention Raingarden @ former playground site in Minersville	**X** **Construction and maintenance support provided by City Public Works Department**			**X** **Construction and maintenance support provided by City Public Works Department**
Storm Sewer System Solids Removal Remove at least 906.24 lbs/yr -		**X** **Costs associated with cleaning and maintenance of Storm inlets will continued to be covered by the Sewer Fund**		

City of Johnstown
Pollution Reduction Plan
Sams Run, Hinckston Run and Conemaugh River Sewersheds

The following is a summary matrix highlighting the probable funding methods for the selected BMPS for the Conemaugh Run Sewershed. The probable funding methods were developed by the Johnstown City Manager and City Finance Director.

Conemaugh River **Pollution Reduction Achieved via BMPs = 90,068.33 (lbs/yr))**	**City of Johnstown General Operating Budget**	**City of Johnstown Sewer Rental/Upgrade/Maintenance/Repair Fund**	**City of Johnstown CDBG**	**Grants / In-Kind / Other**
Converting Impervious Land to Pervious Land 12/yr = 60 in 5yrs – structures demolished and vacant land vegetated			**X** **Through an annual allotment of approx. $200,000 directed towards the City's Blight Removal Program**	**X** **Through the Johnstown Redevelopment Authority's (JRA) Blight Removal Program** **Additional funding through the Community Foundation of the Alleghenies**
Additional Streetsweeping 20% increase = 5 more times/yr	**X** **Through adjustment of existing staff work orders/hours**			**X** **Through adjustment of existing staff work orders/hours**
Tree Planting 25 new trees	**X** **Installation and maintenance support provided by City Public Works Department**			**X** **Installation and maintenance support provided by City Public Works Department**
Bioretention Raingarden @ 14 city owned parcels .	**X** **Construction and maintenance support provided by City Public Works Department**			**X** **Construction and maintenance support provided by City Public Works Department**
Storm Sewer System Solids Removal Remove at least 44,403.72 lbs/yr -		**X** **Costs associated with cleaning and maintenance of Storm inlets will continued to be covered by the Sewer Fund**		
Dry Extended Detention Basin Convert City Dump Site's temporary sediment basin as per their Post Construction Stormwater Management Plan	**X** **Construction and maintenance support provided by City Public Works Department**			

SECTION G – OPERATION AND MAINTENANCE OF BMPs

The previous sections of this PRP identified the BMPS selected for the Sams Run, Hinckston Run and Conemaugh River Sewersheds and identified the probable funding methods for each. This section of the PRP describes aspects related to Operation and Maintenance related to the BMPs and identifies entities most responsible for implementing the BMPs. A matrix is provided on the following page that summarizes this information.

- The City of Johnstown's Public Works Department will be responsible for implementing many of the BMPs selected for the Sams Run, Hinckston Run and Conemaugh River Sewersheds. The Department has the ability and capacity to provide the necessary administrative and engineering supervision for the planning, design, construction and project oversight for various types of improvement projects and for completing various types of operation and maintenance, repair and documentation requirements.

- The City's Mechanical Division performs a variety of functions to support the Public Works Department, as well as all the departments of the City of Johnstown. The Mechanical Division maintains and repairs the service fleets for the Fire Department, Police Department and Public Works Department. This includes the City owned Streetsweepers, Vac Truck and other support vehicles and equipment necessary to complete, construct and maintain the BMPs identified in this PRP Plan.

- The EADS Group is identified in this PRP. EADS is retained by the City to provide engineering and inspection services related to the City's Consent Order and Agreement with the PADEP to remove all sanitary sewer overflows within the City. This includes the completion of many on-going Sanitary/Storm Sewer Separation Projects and activities.

- Vision 2025 and their Capture Teams are identified in this PRP. Vision 2025 is a volunteer-based organization focused on revitalizing Greater Johnstown based upon an open, collaborative, and community-driven approach. The Vision 2025 Greenspace and Trails Capture Team is engaged in developing projects that improve the natural setting in Johnstown. Members of this Capture Team have participated in the Western PA Conservancy Tree Tender courses conducted by Penn State Extension. Completion of this course earned those attending the courses certificates as Tree Tenders and qualifies them to take care our new trees.

- The City of Johnstown's Shade Tree Commission is identified in this PRP. The Commission is composed of seven members that include the City Manager and a representative from Public Works. The Commission has the authority for regulating the planting, maintenance and removal of trees, on pubic and city owned streets. It is the mission of the Johnstown Shade Tree Commission to protect and preserve the urban canopy, of the city of Johnstown.

City of Johnstown
Pollution Reduction Plan
Sams Run, Hinckston Run and Conemaugh River Sewersheds

The following is a summary matrix highlighting the Operation and Maintenance responsibilities for the selected Best Management Practices for the Sams Run, Hinckston Run and Conemaugh River Sewersheds:

Sams Run **Pollution Reduction Achieved via BMPs = 13,007.29 (lbs/yr)**	**Hinckston Run** **Pollution Reduction Achieved via BMPs = 3,393.08 (lbs/yr)**	**Conemaugh River** **Pollution Reduction Achieved via BMPs = 90,068.33 (lbs/yr)**
Converting Impervious Land to Pervious Land 5/yr = 25 in 5yrs – structures demolished and vacant land vegetated *responsibility – demolitions to be completed through City and JRA Blight Removal Programs and through private demolitions. O&M requirements included in executed demolition contracts. City Codes Department ensures all contract requirements are met.*	**Converting Impervious Land to Pervious Land** 1/yr = 5 in 5yrs – structures demolished and vacant land vegetated *responsibility – demolitions to be completed through City and JRA Blight Removal Programs and through private demolitions. O&M requirements included in executed demolition contracts. City Codes Department ensures all contract requirements are met.*	**Converting Impervious Land to Pervious Land** 12/yr = 60 in 5yrs – structures demolished and vacant land vegetated *responsibility – demolitions to be completed through City and JRA Blight Removal Programs and through private demolitions. O&M requirements included in executed demolition contracts. City Codes Department ensures all contract requirements are met.*
Additional Streetsweeping 20% increase = 5 more times/yr *responsibility – Public Works Department. The City's Mechanical Division performs a variety of routine functions to maintain and repair the service fleets for the Public Works Department - manufacturer's recommendations are followed. Documentation will be maintained by Public Works Administrative staff.*	**Additional Streetsweeping** 20% increase = 5 more times/yr *responsibility – Public Works Department. The City's Mechanical Division performs a variety of routine functions to maintain and repair the service fleets for the Public Works Department - manufacturer's recommendations are followed. Documentation will be maintained by Public Works Administrative staff.*	**Additional Streetsweeping** 20% increase = 5 more times/yr *responsibility – Public Works Department. The City's Mechanical Division performs a variety of routine functions to maintain and repair the service fleets for the Public Works Department - manufacturer's recommendations are followed. Documentation will be maintained by Public Works Administrative staff.*
Tree Planting 25 new trees *responsibility – WPA Conservancy, Vision 2025 and Capture Teams Capture Team members are registered for a Tree Tender course that will earn them a certificate as Tree Tenders to care for our new trees. The City's Shade Tree Commission is also responsible for protecting and preserving the City's urban canopy.*	**Tree Planting** 25 new trees *responsibility – WPA Conservancy, Vision 2025 and Capture Teams Capture Team members are registered for a Tree Tender course that will earn them a certificate as Tree Tenders to care for our new trees. The City's Shade Tree Commission is also responsible for protecting and preserving the City's urban canopy.*	**Tree Planting** 25 new trees *responsibility – WPA Conservancy, Vision 2025 and Capture Teams Capture Team members are registered for a Tree Tender course that will earn them a certificate as Tree Tenders to care for our new trees. The City's Shade Tree Commission is also responsible for protecting and preserving the City's urban canopy.*
Filter Strip Stormwater Treatment Construct project similar to Main Street Greenway Concept *responsibility – Public Works Department - Designs prepared for this project will include an O&M schedule and requirements.*	**Bioretention Raingarden** @ former playground site in Minersville *responsibility – Public Works Department. Designs prepared for raingarden projects will include an O&M schedule and requirements.*	**Bioretention Raingarden** @ 14 city owned parcels *responsibility – Public Works Department. Designs prepared for raingarden projects will include an O&M schedule and requirements.*
Storm Sewer System Solids Removal Remove at least 6,436.70 lbs/yr - *responsibility – City Vac Truck, Public Works Department – assistance from EADS Group staff. O&M of Vac Truck by the City's Mechanical Division and will follow manufacturer's recommendations. Documentation of basin cleanings will be maintained by the City.*	**Storm Sewer System Solids Removal** Remove at least 906.24 lbs/yr - *responsibility – City Vac Truck, Public Works Department – assistance from EADS Group staff. O&M of Vac Truck by the City's Mechanical Division and will follow manufacturer's recommendations. Documentation of basin cleanings will be maintained by the City.*	**Storm Sewer System Solids Removal** Remove at least 44,403.72 lbs/yr - *responsibility – City Vac Truck, Public Works Department – assistance from EADS Group staff. O&M of Vac Truck by the City's Mechanical Division and will follow manufacturer's recommendations. Documentation of basin cleanings will be maintained by the City.*
-	-	**Dry Extended Detention Basin** Convert City Dump Site's temporary sediment basin as per their Post Construction Stormwater Management Plan *responsibility – Public Works Department – O&M information included with the approved Post Construction Stormwater Management Plan will be followed.*

EXHIBIT I

PUBLIC NOTICE

Public Notices

PUBLIC HEARING NOTICE CITY OF JOHNSTOWN, PENNSYLVANIA MUNICIPAL SEPARATE STORM SEWER SYSTEM

The City of Johnstown will hold a public meeting on Wednesday, August 30, 2017 at 5:00 pm in City Council Chambers to review their Municipal Separate Storm Sewer System (MS4) Permit renewal submission. Representatives will be available to review the MS4 Program, the Permit renewal submission and the required Pollution Reduction Plan (PRP). The PRP describes how the City will reduce the amount of pollutants discharging from the stormwater system into local waterways. A draft copy of the PRP will be available in City Hall, 401 Main St., starting on August 9. Written comments will be accepted during a 30-day public review period. The final Permit renewal submission will be made on or before September 16, 2017.

Legals

ESTATE NOTICE

Estate of James P. Hess, late of Johnstown (Richland TWP), County of Cambria, Pennsylvania, Deceased.

Letters Testamentary in said Estate having been granted, all persons indebted thereto are requested to make immediate payment, and those having claims or demands against the same will present them without delay to:

Mark Anderson Hess,
Executor,
150 S. 300 E. Apt 403,
Salt Lake City, UT 84111.

CITY OF JOHNSTOWN
ENGINEER'S REPORT
August 9, 2017

1. DEP Consent Order and Agreement (CO&A)

   A. Assessment and Repair: The following are projects in varying degrees of completion.

   - Hornerstown Phase I
     Flow Monitoring Period II began in March 2017 and commenced in July 2017, as flows were shown to be over the DEP allowable flow prior to the February 2018 deadline. The remaining 59 property owners who did not complete their Lateral Testing will now be mandated to Pressure Test their private laterals.

   - Hornerstown / Walnut Grove Phase II
     Mandatory Lateral Testing – Walnut Grove - Notification letters sent on 9/29/16; the deadline for testing is 9/1/17. Approximately 244 properties remaining to complete testing.

     Mandatory Lateral Testing – Hornerstown - Initial notification letters sent on 2/1/17; the deadline for testing is 9/1/17. Approximately 316 properties remaining to complete testing.

   - Roxbury Phase I
     Contract 2013-04 (Greenland) - One live tie-in to complete along Franklin St.

     Mandatory Lateral Testing – Initial notification letters sent on 3/3/17. The deadline for testing is 5/1/18. Approximately 475 properties remaining to complete testing.

   - Oakhurst Phase I
     Contract 2014-01 - (A. Liberoni) Installation of additional sewer main and ten live tie-ins in the North Sheridan St. area is complete. Final restoration remains.

     Mandatory Lateral Testing – Initial notification letters sent on 11/4/16; the deadline for testing is 9/1/17. Approximately 341 properties remaining to complete testing.

2. MS-4 Program
    - The MS4 Permit renewal and the required Pollution Reduction Plan (PRP) submission will be made to the PADEP on or before September 16, 2017– in progress. A draft copy of the PRP will be available in City Hall starting on August 9 for a 30-day public review period.
    - Preparing for anticipated PADEP MS4 audit/inspection.

3. Parking Garage Assistance
    - Main Street East Garage
        - Construction complete. Close-out remains.

4. Miscellaneous
    - Planning work on Phase 2 of the Cambria City Neighborhood Plan is on-going. A Stakeholders Group meeting was held on 6/30/16 to review status of background studies and receive input on streetscape concepts, localized redevelopment opportunities and implementation alternatives. Stakeholders Group meeting held on 11/17/16 to discuss and define conceptual plans for the neighborhood.

5. Complaints Filed
    - Refer attached pages 7 and 8.

CITY OF JOHNSTOWN
ENGINEER'S REPORT
September 13, 2017

1. DEP Consent Order and Agreement (CO&A)

   A. Assessment and Repair: The following are projects in varying degrees of completion.

   - Hornerstown Phase I
     Flow Monitoring Period II began in March 2017 and commenced in July 2017, as flows were shown to be over the DEP allowable flow prior to the February 2018 deadline. The remaining 59 property owners who did not complete their Lateral Testing will now be mandated to Pressure Test their private laterals. Notifications will be prepared and issued.

   - Hornerstown / Walnut Grove Phase II
     Mandatory Lateral Testing – Walnut Grove - Notification letters sent on 9/29/16; original deadline for testing was 9/1/17. Deadline extended to 12/31/17 – extension notification letters sent 9/5/17. Approximately 227 properties remaining to complete testing.

     Mandatory Lateral Testing – Hornerstown - Initial notification letters sent on 2/1/17; original deadline for testing was 9/1/17. Deadline extended to 12/31/17 – extension notification letters sent 8/31/17. Approximately 304 properties remaining to complete testing.

   - Roxbury Phase I
     Contract 2013-04 (Greenland) - One live tie-in to complete along Franklin St.

     Mandatory Lateral Testing – Initial notification letters sent on 3/3/17. The deadline for testing is 5/1/18. Approximately 469 properties remaining to complete testing.

   - Oakhurst Phase I
     Contract 2014-01 - (A. Liberoni) Installation of additional sewer main and ten live tie-ins in the North Sheridan St. area is complete. Final restoration remains.

     Mandatory Lateral Testing – Initial notification letters sent on 11/4/16; original deadline for testing was 9/1/17. Deadline extended to 12/31/17 – extension notification letters to be sent by week of 9/11. Approximately 328 properties remaining to complete testing.

2. MS-4 Program
    - The MS4 Permit renewal and the required Pollution Reduction Plan (PRP) submission will be made to the PADEP on or before September 16, 2017– in progress. A draft copy of the PRP was available in City Hall from August 9 to September 8 for a public review period.
    - Preparing for anticipated PADEP MS4 audit/inspection.

3. Parking Garage Assistance
    - Main Street East Garage
        - Project Complete

4. Miscellaneous
    - Planning work on Phase 2 of the Cambria City Neighborhood Plan is on-going. A Stakeholders Group meeting was held on 6/30/16 to review status of background studies and receive input on streetscape concepts, localized redevelopment opportunities and implementation alternatives. Stakeholders Group meeting held on 11/17/16 to discuss and define conceptual plans for the neighborhood.

5. Complaints Filed
    - Refer attached pages 7 and 8.

EXHIBIT II

MS4 MAPS

Storm Sewershed Boundaries - PRP Planning Areas

MS4 Stormwater Outfall

MS4 Stormwater System

Surface Water

City Owned Property

City of Johnstown

MIDDLE TAYLOR

WEST TAYLOR TWP

EAST TAYLOR TWP

HINCKSTON RUN SEWERSHED

LOWER YODER TWP

CONEMAUGH RIVER SEWERSHED

WESTMONT BORO

JOHNSTOWN

CONEMAUGH TWP

SOUTHMONT BORO

STONYCREEK TWP

UPPER YODER TWP

LORAIN BORO

SAMS RUN SEWERSHED

Entire City is within MS4 Urbanized Area

THE EADS GROUP
ENGINEERING ARCHITECTURE and DESIGN SERVICES

0 1,000 2,000 Feet

City of Johnstown
MS4 Storm Sewershed Boundaries
PRP Required Sewersheds

Entire City is within MS4 Urbanized Area

JOHNSTOWN

LORAIN BORO

FERNDALE BORO

STONYCREEK RIVER

SAMS RUN

108

135

129

133

~Additional Streetsweeping BMP~ to be conducted on streets within the PRP Planning Area

- Sams Run Storm Sewershed - PRP Planning Area
- Sams Run Outfall Drainage Areas
- MS4 Stormwater Outfall
- MS4 Targeted Stormwater Outfall
- MS4 Stormwater System
- Surface Water
- Sanitary Sewer Overflow
- Stormwater Manhole
- City Owned Property
- Catch Basins (Storm Sewer Sediment Removal BMP Locations)
- Impervious to Pervious BMP (additional sites to be identified as MS4 program continues)
- Tree Planting BMP Locations
- Filter Strip Stormwater Treatment BMP Locations
- Structures
- Parcels
- City of Johnstown

THE EADS GROUP
ENGINEERING ARCHITECTURE and DESIGN SERVICES

0 250 500 Feet

City of Johnstown
MS4 Storm Sewershed Boundary
Sams Run

Hinckston Run Storm Sewershed - PRP Planning Area

Hinckston Run Outfall Drainage Areas

MS4 Stormwater Outfall

MS4 Targeted Stormwater Outfall

MS4 Stormwater System

Surface Water

Stormwater Manhole

City Owned Property

Catch Basins (Storm Sewer Sediment Removal BMP Locations)

Impervious to Pervious BMP (additional sites to be identified as MS4 program continues)

Bioretention Raingarden BMP Location

Tree Planting BMP Locations

Structures

Parcels

City of Johnstown

~Additional Streetsweeping BMP~ to be conducted on streets within the PRP Planning Area

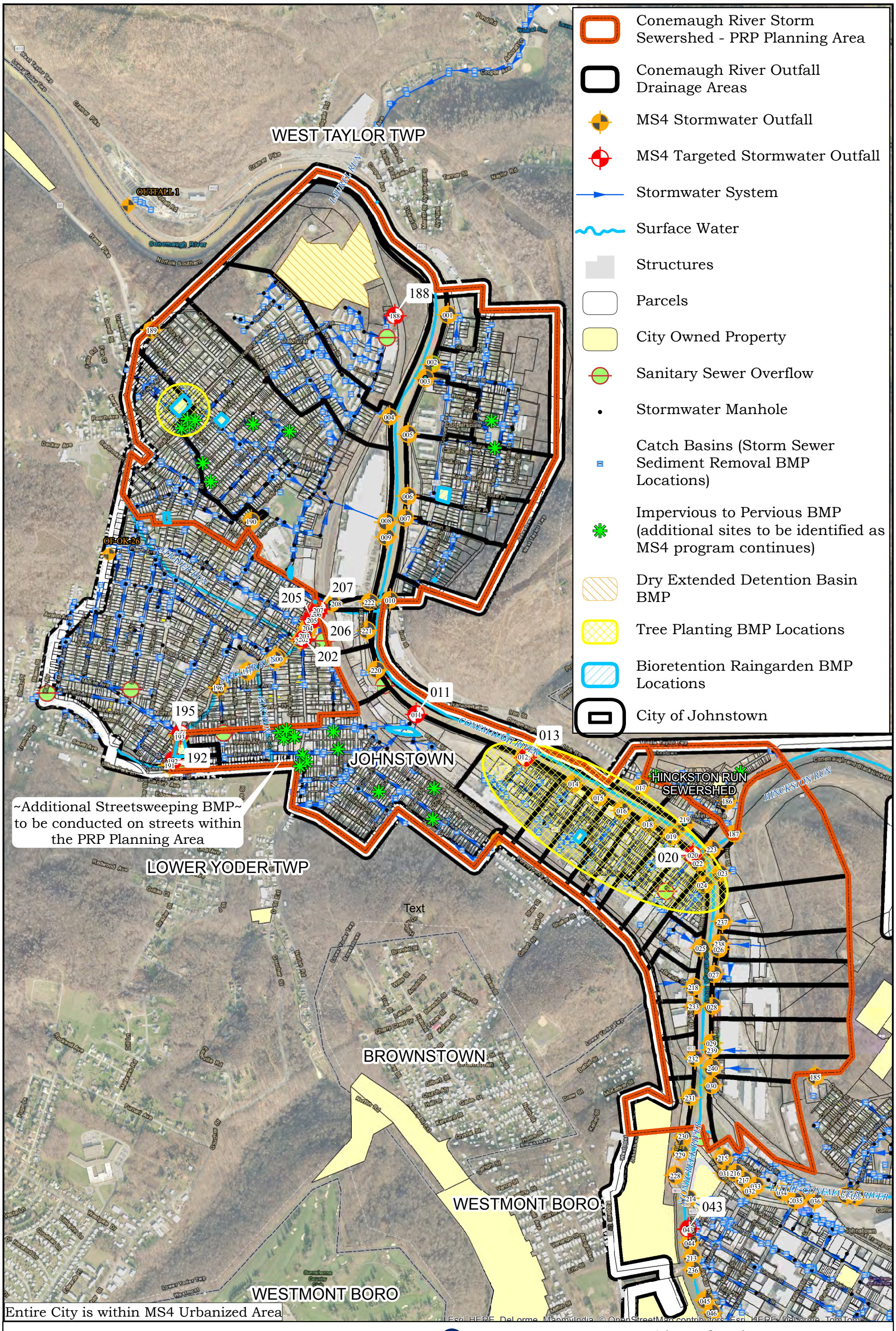
020

Entire City is within MS4 Urbanized Area

THE EADS GROUP
ENGINEERING ARCHITECTURE and DESIGN SERVICES

0 250 500 Feet

City of Johnstown
MS4 Storm Sewershed Boundary
Hinckston Run



Conemaugh River Storm Sewershed - PRP Planning Area

Conemaugh River Outfall Drainage Areas

MS4 Stormwater Outfall

MS4 Targeted Stormwater Outfall

Stormwater System

Surface Water

Structures

Parcels

City Owned Property

Sanitary Sewer Overflow

Stormwater Manhole

Catch Basins (Storm Sewer Sediment Removal BMP Locations)

Impervious to Pervious BMP (additional sites to be identified as MS4 program continues)

Dry Extended Detention Basin BMP

Tree Planting BMP Locations

Bioretention Raingarden BMP Locations

City of Johnstown

THE EADS GROUP
ENGINEERING ARCHITECTURE and DESIGN SERVICES

0 1,000 2,000 Feet

City of Johnstown
MS4 Storm Sewerhed Boundary
Conemaugh River

Land Use Category	City of Johnstown		
	Acreage	% of Total	% of Developed Land
Structures	529.11	13.48%	38.81%
Impervious Lots	467.75	11.92%	34.31%
Transportation	366.51	9.34%	26.88%
Subtotal – Developed Impervious Land	***1,363.37***	***34.73%***	***100.00%***
Wooded Land	804.97	20.51%	NA
Cleared or Grassland	1,586.58	40.42%	NA
Agricultural	-	-	NA
Surface Water	170.66	4.35%	NA
Subtotal – Undeveloped Pervious Land	***2,562.21***	***65.27%***	***NA***
TOTAL ACREAGE	**3,925.58**	**100.00%**	**NA**

Surface Water
Structures
Impervious Lots
Transportation
Cleared or Grassland
Wooded Land

THE EADS GROUP

0 0.5 1 Miles

City of Johnstown
MS4 PRP Plan
IMPERVIOUS SURFACE MAP

Sams Run Storm Sewershed - PRP Planning Area

MS4 Stormwater Outfall

MS4 Stormwater System

Impervious Land Use:

Structures

Impervious Lots

Transportation

Pervious Land Use:

Cleared or Grass Area

Wooded Land

Surface Water

City of Johnstown

JOHNSTOWN

LORAIN BORO

STONYCREEK TWP

FERNDALE BORO

STONYCREEK RIVER

SAMS RUN

Entire City is within MS4 Urbanized Area

THE EADS GROUP
ENGINEERING ARCHITECTURE and DESIGN SERVICES

0 250 500 Feet

City of Johnstown
MS4 Impervious/Pervious Surfaces
Sams Run Storm Sewershed

Hinckston Run Storm Sewershed - PRP Planning Area

MS4 Stormwater Outfall

MS4 Stormwater System

Impervious Land Use:

Structures

Impervious Lots

Transportation

Pervious Land Use:

Cleared or Grass Area

Wooded Land

Surface Water

City of Johnstown

MIDDLE TAYLOR TWP

JOHNSTOWN

Middle Taylor Twp

Johnstown

Benshoff Hill Rd

Iron St

Garvey Pl

Benshoff St

Kingbird Pl

McCauley Ave

Honan Ave

Honan Ave

Riders Rd

HINCKSTON RUN

Connelly Ave

4th Ave

Iron St

Riders Rd

CSX Transportation

Power St

Cambria Pl

Roosevelt Blvd

CONEMAUGH RIVER

3rd Ave

Chestnut St

017

018

219

186

187

0191

223

020

022

023

024

Entire City is within MS4 Urbanized Area

THE EADS GROUP
ENGINEERING ARCHITECTURE and DESIGN SERVICES

0 250 500 Feet

City of Johnstown
MS4 Impervious/Pervious Surfaces
Hinckston Run Storm Sewershed

Conemaugh River Storm Sewershed - PRP Planning Area

MS4 Stormwater Outfall

MS4 Stormwater System

Impervious Land Use:

Structures

Impervious Lots

Transportation

Pervious Land Use:

Cleared or Grass Area

Wooded Land

Surface Water

City of Johnstown

WEST TAYLOR TWP

JOHNSTOWN

LOWER YODER TWP

BROWNSTOWN

WESTMONT BORO

Entire City is within MS4 Urbanized Area

THE EADS GROUP
ENGINEERING ARCHITECTURE and DESIGN SERVICES

0 1,000 2,000 Feet

City of Johnstown
MS4 Impervious/Pervious Surfaces
Conemaugh River Storm Sewershed