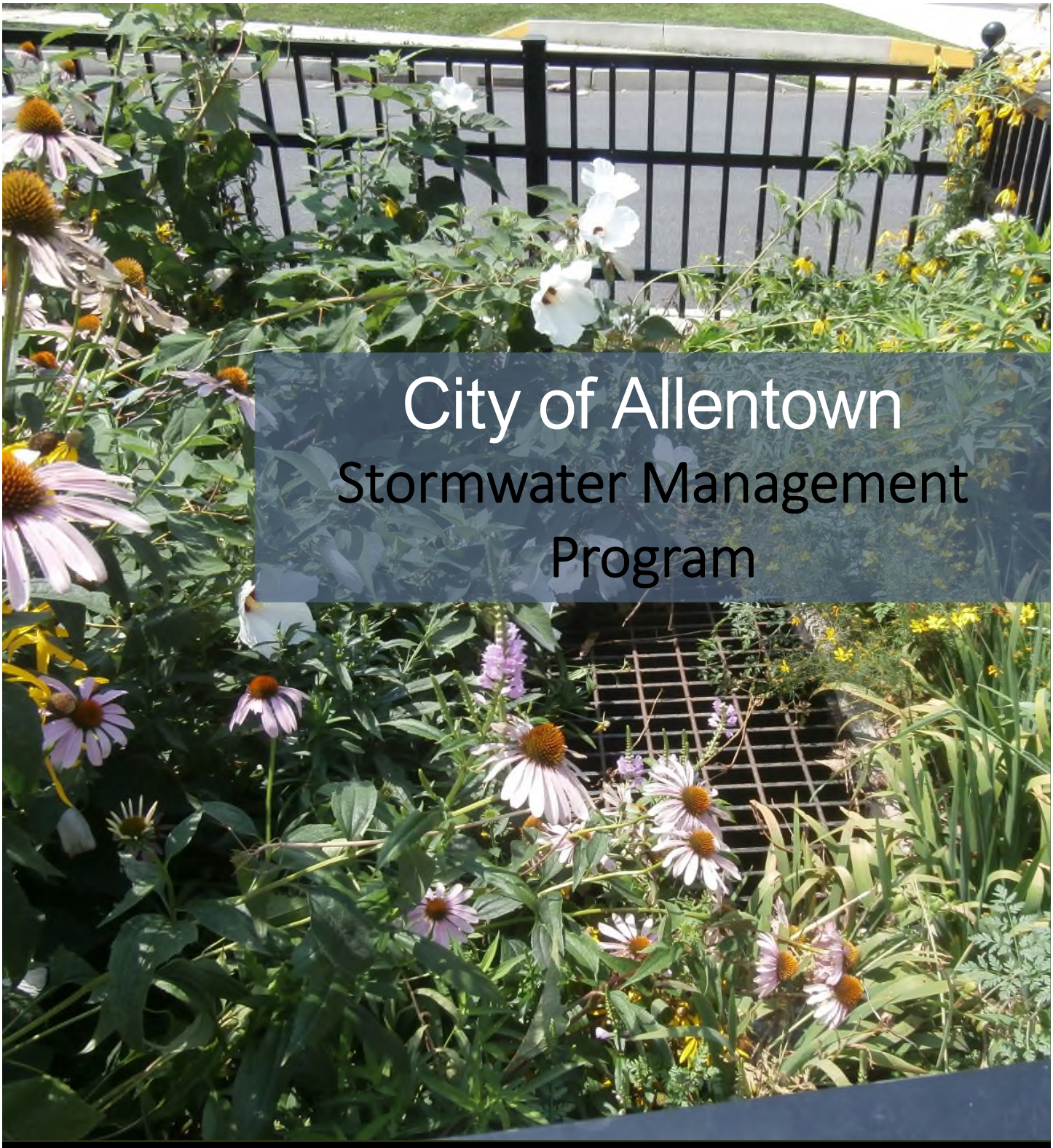


City of Allentown
Stormwater Management Program

2019-2020 Annual MS4 Progress Report

MS4 NPDES PERMIT NO. PA0063665

Craig W. Messinger
Director of Public Works
Department of Public Works
641 South Tenth Street, 3rd Floor
Allentown, PA 18103
Phone: 610.437.7587
Craig.Messinger@allentownpa.gov

Allentown
City without limits.

June 2, 2020

Mr. Paul Grella
MS4/CAFO Coordinator
PA Department of Environmental Protection
Northeast Regional Office
2 Public Square
Wilkes-Barre, PA 18701-1915

Subject: City of Allentown's Annual MS4 Progress Report
Reporting Period 4/26/2019 - 4/25/2020
MS4 NPDES Permit No. PA0063665

Dear Mr. Grella,

Enclosed is the City of Allentown's Annual Progress Report for our Stormwater Management Program as required per individual, MS4 NPDES permit No. PA0063665.

Pursuant to Part A 8. c. (ii) of the permit, an updated Stormwater Management Program Plan (SWMPP) is submitted with this report. The SWMPP reflects our current practices in accordance with the conditions of the permit; and, updates to the prior SWMPP were made to address program conditions negotiated in good faith with PaDEP in 2018 and 2019 to bring alignment between ongoing Best Practices and our required permit documentation.

During this reporting period, Governor Wolf issued a Stay-at-Home Order to Lehigh County from March 25 - June 4, 2020 in response to the COVID-19 pandemic. Any impacts on our Stormwater Management Program are documented in this report.

If you have any questions or need additional information, please call me at 610-437-7587.

"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 knowing violations."

Sincerely,

Craig W. Messinger

cc. Rebecca K. Crane, United States Environmental Protection Agency (email)
Angela F. DiBuo, MS4 Coordinator, City of Allentown

CITY OF ALLENTOWN
STORMWATER MANAGEMENT PROGRAM

Introduction:
The goal of the City of Allentown's Stormwater Management Program is to control, through a variety of Best Management Practices, the entrance of pollutants into the local waterways through its MS4 system. The City strives to meet the requirements of its PaDEP issued, NPDES permit no. PA0063665; EPA enforced Title 40 Code of Federal Regulations, Part 122; and the Clean Water Act. The program promotes the use and continual assessment of City-wide best management practices to reduce runoff volume, pollution and localized flooding while improving the water quality in Allentown's waterways and the quality of life of its residents. Main priorities of the program include improvement of the City's stormwater collection system through a combination of inspection, upgrading, repair and replacement; and the promotion of public safety.

The basic components of the MS4 Program include:

- Compliance
- Construction
- Enforcement
- Erosion and Sediment Control
- Illicit Discharge Detection and Elimination
- Industrial/Commercial Inspections
- Infrastructure Improvements
- Maintenance
- Mapping
- Municipal Best Management Practices
- Municipal Good Housekeeping
- Municipal Training
- Planning and Development
- Post Construction Stormwater Management
- Public Education and Outreach
- Public Safety
- Spill Response and Reporting
- Watershed Planning
- Water Quality Monitoring and Reporting

2019 - 2020 Annual Progress Report
The annual progress report is organized based on the structure and references of the City of Allentown's NPDES MS4 Individual Permit NO: PA0063665 (see Report Index on following page). The term of coverage is 4/26/2004 - 4/25/2009. The conditions have been continued pending the issuance of the renewal of coverage. The report is due on 6/9/2020, 45 days of the anniversary date of permit issuance.

Summary of Updates, Changes and Accomplishments which occurred during the 4/26/2019 - 4/25/2020 Reporting Period:

- Pursuant to Part A 8. c. (ii) of the permit, an updated Stormwater Management Program Plan (SWMPP) (dated May 2020) is submitted with this report. The SWMPP reflects our current best practices in accordance with the conditions of the permit.

  The City has the responsibility and the opportunity to adjust the program plan as conditions change, and the commitment for today's best practices requires that the City update the Plan.

- On December 17, 2019, Allentown City Council unanimously adopted Allentown Vision 2030 as the City's 10-year Comprehensive and Economic Development Plan. The plan addresses the topics of housing, workforce development, economic opportunity, social equity, environment and conservation, community development, transportation, land use, historic preservation, open space, and a range of other areas that affect the quality of life of the City of Allentown. The development of the Allentown Vision 2030 Plan was an inclusive process that engaged thousands of community members through Community Collaboration Meetings, a citywide survey, and neighborhood events.

  Within the chapter, "Enhancing Our Natural Systems," the next steps in advancing the City's stormwater management goals were incorporated as follows, to:
  - Conduct studies to determine sources of pollution.
  - Complete Hydrologic and Hydraulic studies to upgrade and protect infrastructure, and to address flood prone areas.
  - Integrate pollution reduction goals into City development ordinances.
  - Promote the treatment of existing uncontrolled impervious area during redevelopment.
  - Implement additional green stormwater infrastructure.
  - Incentivize partnerships between private property owners and developers to implement stormwater controls on a large-scale basis.
  - Engage and educate the community in good stewardship practices which reduce pollution from residential properties and activities.

  To view the plan, visit www.AllentownVision2030.org/plan

- The Community Engagement Program policy is being further developed to incentivize the participation of private property owners and residents in green infrastructure and educational outreach projects.

- The City of Allentown and PaDEP continued to work on updating the conditions of the City's MS4 NPDES permit. On January 29, 2020, the City's comments on the draft permit (dated January 7, 2020) were submitted to PaDEP.

- Due to the COVID-19 crisis, Governor Wolf issued a Stay-at-Home Order for Lehigh County from March 25, 2020 to June 4, 2020, impacting some of our metrics and outreach activities which typically occur in the Spring.

- For more information about the City's Stormwater Management Program, visit: https://www.allentownpa.gov/Public-Works/Stormwater

The City's efforts are highlighted and summarized in this 2019 – 2020 Annual Progress Report. Supporting documentation is available upon request.

Report Index

City of Allentown
Best Management Practices
Legal Authority

Background

Part A, 2. (a) of the City's NPDES Permit No. 0063665 requires that the City operate and maintain its legal authority established by statute, ordinance, order or similar means to control stormwater discharges from its system.

Additionally, Part A, 2. (e) of the permit states that the City shall require, mandate, and enforce compliance with conditions in ordinances, permits, contracts or orders.

Entry of pollutants into the MS4 is controlled through a number of codified ordinances and agreements which include the following:

- Part Nine, Title Five – Sewers, Ordinance No. 13812, Article 942, Storm Sewer Ordinance
- Ordinance 12369, Article 1371, Land Development and Subdivision
- Title Seven – Land Development
    - Article 1385 Land Development Controls
    - Ordinance 13642 amended Article 1387 The City of Allentown's Act 167 – Stormwater Management Ordinance
- Part Eleven, Public Health Code,
  Title Five – Solid Wastes
  Title Five - Municipal Wastes
- Part Seven – General Offenses Code
- Part Fifteen – Fire Prevention Code
    - 1503 – Recovery Ordinance – Responsibility for Control, Extinguishment or Cleanup of Petroleum or Chemical Spills

- Inter-Governmental Cooperation Agreement for Allentown's NPDES Phase I Storm Water Quality Management Permit

- Memorandum of Understanding between the Lehigh County Conservation District and the City of Allentown

BMP Program Description

The City staff and solicitor have developed ordinances and an interagency agreement based on reasonable standards of practice, permit requirements, ability to enforce, etc. The Storm Sewer ordinance was adopted February, 2000 and the inter-governmental agreement was approved July, 2000. The legal backbone consists of a local ordinance which facilitates the requirements of the NPDES Stormwater Permit being addressed within the geographic limits of the permittee while the interagency agreement addresses stormwater generated in adjacent communities which discharge into one of the permittee's MS4. The interagency agreements contain language for reciprocal responsibilities among the parties.

The Memorandum of Understanding between the Lehigh County Conservation District and the City of Allentown defines each party's role in administering provisions to control accelerated erosion and to prevent sediment pollution of the waters of the Commonwealth.

Governing Regulations

1. NPDES Permit No. PA. 0063665

Pollution Prevention
The ordinance and interagency agreement will legally establish policies and procedures, allowable discharges, penalties, etc., which will focus primarily on eliminating or minimizing undesirable materials from entering the water courses via the stormwater system.

BMP Documentation
Development, approval, and adoption of the ordinance and interagency agreements.

Pollution Removal Assessment - N/A

Authorization Procedure - N/A

Legal Recourse for Violations
1. The Clean Water Act
2. NPDES Permit No. PA. 0063665
3. City Codified Ordinance Part Nine, Title Five-Sewers, Article 942; Storm Sewer Ordinance

Responsible Parties for BMP
1. City Utility Engineer
2. Chief Surveyor
3. Stormwater Manager
4. City Solicitor
5. Public Works Director
6. MS4 Coordinator
7. City Council

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

- In order to assure the future and proper functioning of post construction BMP features, an applicant (owner) is required to sign an Operations and Maintenance (O&M) Agreement with the City per Article 1387 – Act 167 Stormwater Management Ordinance. At the time of approval of the land development, the applicant is required to record pertinent stormwater plans at the Recorder of Deeds for Lehigh County. **13** O&M Agreements have been executed during this report period.

- In November 2019, an updated MS4 connection permit was drafted. Language was added for the purpose of identifying connections from industrial users needing a PaDEP issued permit. The draft language states: "Industrial facilities that are required to have NPDES permit coverage to discharge industrial stormwater, or for discharges of stormwater associated with industrial activity, as defined as by 40 CFR § 122.26(b)(14), will not be permitted to connect to the public storm sewer system without proof of coverage."

- The City's consultant, Wood Environment & Infrastructure Solutions, Inc. is evaluating the City's current ordinances and regulations for sufficiency to implement an updated Stormwater Management Program Plan (SWMPP).

- The Memorandum of Understanding (MOU) between the Lehigh County Conservation District (LCCD) and the City was signed in 2011. It may be amended by mutual consent. Both parties would like to update the MOU.

- The Inter-Governmental Cooperation Agreement for Allentown's NPDES Phase I Storm Water Quality Management Permit was included in the 1999-2000 Annual Progress Report. All adjacent communities are included under PaDEP's Phase II MS4 program.

- The City's codified ordinances are available for review on the City's website, www.allentownpa.gov by clicking on the "Government" drop down arrow.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.
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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Angela F. DiBuo X 5/20/2020

City of Allentown
Best Management Practices
Commercial and Industrial Inspections

Background

Part A, 2. (c) requires that the City control through ordinance, order, … the contribution of pollutants to its system from storm water discharges associated with industrial activity …" Additionally, Part A, 5. (d) requires the City to provide a description of a monitoring program for storm water discharges associated with industrial activities.

BMP Program Description

The implementation of an IHRR program continues for the identification and control of pollutants in stormwater discharges to the MS4 from industrial high risk runoff facilities (i.e., municipal landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to EPCRA Title III, Section 313) and any other industrial or commercial discharge determined to be contributing a significant pollutant loading to the MS4.

This program utilizes information from various sources and activities performed by stormwater and other departments to evaluate and prioritize monitoring locations to include:

- Field inspections of Industrial High-Risk Runoff (IHRR) facilities including those that are subject to section 313 of Superfund Amendments and Reauthorization Act (SARA).
- Reports from facility and point of connection inspections performed by Stormwater Operations and Water Quality Monitoring personnel, and illicit discharge screening of outfalls during dry and wet weather.
- Reports of inadequate storage and management of hazardous wastes sites, outdoor storage, and/or poor housekeeping conditions.
- Reports of noncompliance submitted/queried from facilities that have active National Pollutant Discharge Elimination Systems (NPDES) permits.
- Reports from inspections by Fire Marshals for automotive and service-related facilities (auto-body shops, detailers, repair, tire shops, and service stations) and dry-cleaning establishments.
- Reports from spills and other incidents from Fire Marshals and Stormwater Operations are used to evaluate potential risk and compliance.
- Reports from Health Department inspections of restaurants, grocery stores etc.
- List of industrial and commercial sites maintained and sorted based on various ranking criteria according to their potential to contribute significant pollution to the MS4.

The most current ranked list of the industrial and commercial facilities is used to plan inspections priorities.

Governing Regulations

1. NPDES Permit No. PA. 0063665
2. Clean Water Act, 33 U.S.C. 1251 et seq. and 40 CFR Part 122
3. City Codified Ordinance Part Nine, Title Five-Sewers, Article 942; Storm Sewers
4. City Codified Ordinance Part Nine, Title Five-Sewers, Article 941; Sewage and Industrial Waste

Pollution Prevention

Inspections of these facilities, and permitting as necessary, will minimize the impact on stormwater water quality discharged to streams.

BMP Documentation

Documentation and records such as standard operating procedures, work instructions, inspection reports and associated evidence (chemical analyses report of the discharges, photos, correspondence etc.) are maintained in various formats and available for review.

Pollution Removal Assessment

Methods to assess pollution removal may include:

- Reduction of the potential to contribute significant pollutants to the MS4.
- Improved compliance with City ordinance/regulations.
- NPDES Permit evaluation/issuance/compliance.
- Implementation/improvement/maintenance of BMPs.
- Collaborative programs between City and business to reduce pollution.

Authorization Procedure

The City will review site plans and operating practices for new facilities. New business licenses and databases from Environmental Protection Agency and Pennsylvania Department of Environmental Protection are queried at least yearly in order to update the inventory of inspection sites. If a federal or state permit is considered necessary, appropriate parties will be notified.

Legal Recourse for Violations

1. Ordinance 13812
2. Clean Water Act
3. If applicable, PaDEP will be advised

Responsible Parties for BMP

1. MS4 Coordinator
2. Stormwater Monitoring Coordinator
3. Stormwater Manager
4. Environmental Technicians

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

- Continued development of water quality monitoring component of the IHRR program with budgeted Compliance Inspectors, equipment, laboratory space and supplies. Due to anticipated revenue impacts caused by the COVID 19 pandemic, the expansion in personnel has been temporarily put on hold.

- Improved the existing documented procedures through issuance of the draft IHRR Standard Operating procedure, outreach letter and inspections forms.

- Continued inspection of facilities with storage of winterizing materials. See “Salt Storage from Industrial Activity” section of this report.

- Updated correspondence process with industries for annual report submissions and notifications.

- Updated the priority list of industrial sites within the City. See “Source Identification_Industrial Inventory” section of this report.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Rob Swift X 5/22/2020

City of Allentown
Best Management Practices
Prohibition of Illicit Discharges: Outfall Reconnaissance

Background

Part A, 2. (f) of the City's NPDES Permit No. 0063665 requires that the City carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition of illicit discharges to the its MS4. An illicit discharge is any discharge to the MS4 that is not composed entirely of stormwater, except discharges pursuant to a NPDES permit.

The City's Stormwater Department conducts an IDDE (Illicit Discharge Detection & Elimination) Program dedicated to the prohibition of illicit discharges into the MS4 system. The two maintain components of the program include: CCTV Inspection and Outfall Reconnaissance.

Approximately 281 outfalls are located within the City of Allentown. Those structures exclusive to private property have yet to be parsed out.

BMP Program Description

Outfalls are inspected by basin, that is by the particular creek or watershed into which the outfall flows. Dry weather screenings are conducted only after 72 hours without precipitation (or less than < 0.1 inches precipitation). The inspector(s) records observations for each outfall on an "Outfall Reconnaissance Inventory/Sample Collection Field Sheet." Data on the physical structure and condition of the outfall is logged. If flow is observed, data on sensory indicators (such as odor, color, turbidity and floatables) are documented. If the source cannot immediately be located, grab samples are collected, one at the outfall (point where flow from outfall structure meets waterbody) and one from the outfall structure. Analyses are conducted by a certified contract lab. Field analyses can be conducted using a portable HACH kit in order to estimate pH, total chlorine, total copper, total phenol, and detergents (or surfactants). GIS, CCTV, and dye testing are utilized to find the source of an illicit discharge.

Governing Regulations

1. U.S. Clean Water Act
2. PA Clean Streams Law
3. Ordinance 13581

Pollution Prevention

Eliminating illicit discharge to the MS4 reduces pollution of the waterways.

BMP Documentation

An Outfall Reconnaissance Inventory/Sample Collection Field Sheet per outfall is saved on the N drive. An Outfall Inspection Tracking spreadsheet is continually updated and saved on the N Drive. Photographs are taken and saved in the appropriate file per location.

Pollution Removal Assessment

If flow is estimated, contaminant loading may be calculated using the concentration of each parameter detected. However, as the duration of flow will be unknown, this estimate would be based on 24 hours.

Authorization Procedure - N/A

Legal Recourse for Violations

1. Penalty Section of Ordinance No. 13581

Responsible Parties for BMP

1. Stormwater Manager
2. Environmental Technicians

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Outfall Location	# Inspections/ Total # Outfalls per Creek
Cedar Creek	37 of 42
Jordan Creek	39 of 44
Lehigh River	33 of 36
Little Cedar Creek	17 of 16 (one outfall was inspected twice)
Little Lehigh Creek	64 of 61 (three outfalls were inspected more than once)
Mill race	07 of 07
Trout Creek	06 of 53
Trout Creek West	13 of 25
TOTAL	**216 Total Inspections of 284 Total Outfalls (= 75%)**

No illicit discharges were found.

Weather-permitting, more inspections could have been conducted in Spring. However, due to the COVID-19 crisis, our field staff was limited to on-call emergency response and utility line locating from March 25, 2020 through April 19, 2020. From April 19, 2020 through the end of the reporting period, a limited number of field staff returned to work to conduct compliance and maintenance functions.

A consulting firm, Wood Environment & Infrastructure Solutions, Inc., will be performing quality control of the GIS system, delineating the extent of the regulated MS4 within the City based on permit definitions and EPA/DEP regulations.

Inspection reports are available upon request. A map showing inspection locations throughout the City is included for review.

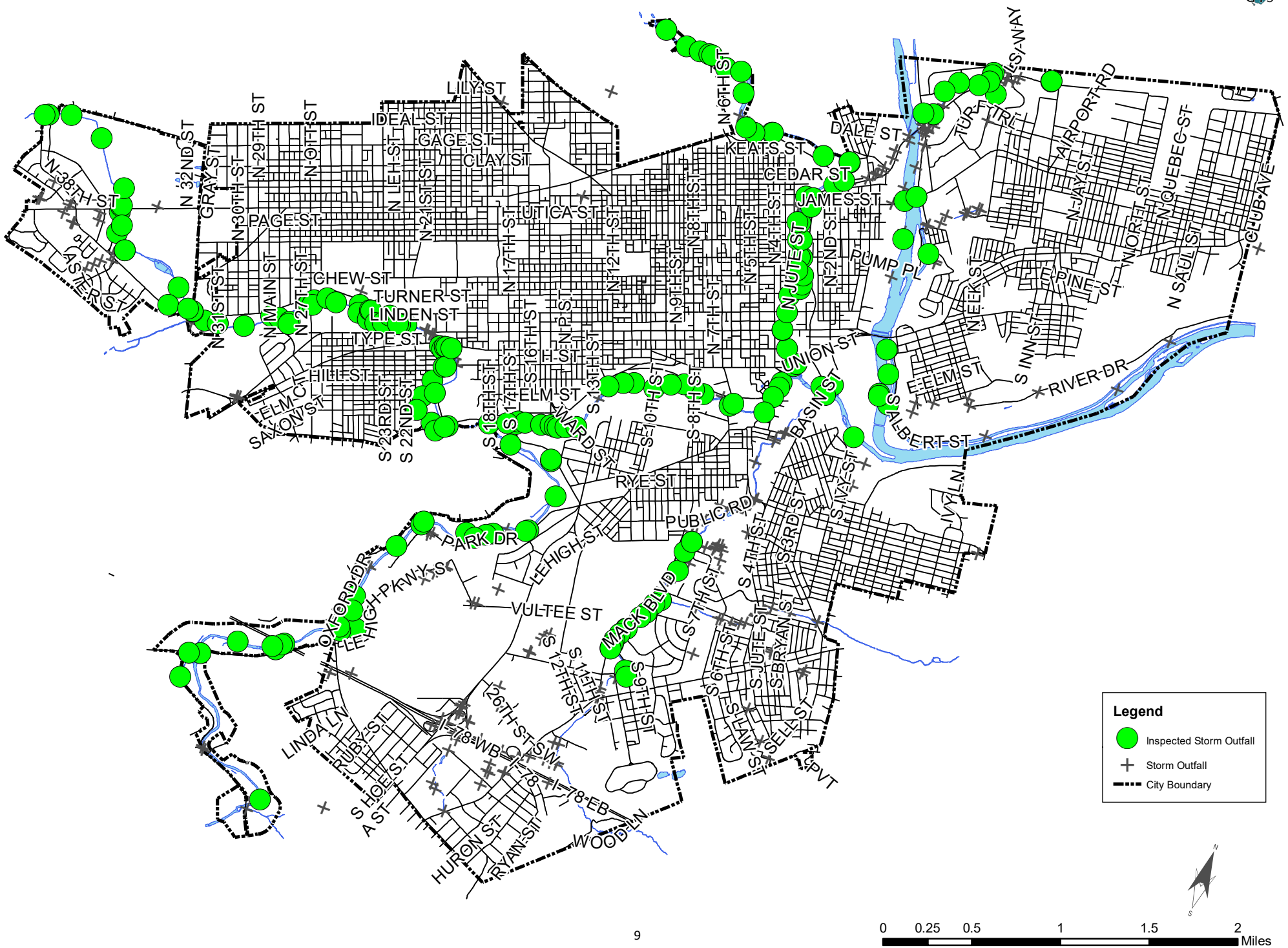
I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] X 5/20/2020

Inspected Storm Outfalls 4/26/2019-4/25/2020



City of Allentown
Best Management Practices
Prohibition of Illicit Discharges: CCTV Inspection Program

Background

Part A, 2. (f) of the City's NPDES Permit No. 0063665 requires that the City carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition of illicit discharges to the its MS4.

The City's Stormwater Department conducts an IDDE (Illicit Discharge Detection & Elimination) Program dedicated to the prohibition of illicit discharges into the MS4 system. The two maintain components of the program include: CCTV Inspection and Outfall Reconnaissance.

In the past, before the City provided a sanitary sewer collection and treatment system, property owners were sometimes permitted to connect sanitary waste lines to available storm sewers which drained directly to the various watercourses. Periodically, connections were made illegally. At the time of installation of sanitary collector sewers, these lines were reconnected to the sanitary system. 200.13 miles of various types of pipe (concrete, clay, cast iron and high-density polyethylene plastic) comprise the stormwater infrastructure of the City.

BMP Program Description

A CUES CCTV Inspection truck with Granite GIS compatible software is utilized. The CCTV unit is assigned to investigate problems, inspect storm lines prior to street resurfacing, check storm lines for problems, breaks, etc. CCTV enables for determinations to be made regarding repairing, lining or replacing storm lines. The crew responds to emergency calls as required.

In addition, these units are used to inspect for inflow and infiltration into the sanitary system. This process works in conjunction with visual property inspection. Illegal connections are identified when the number of storm laterals on a main do not match the storm laterals mapped in the GIS system.

Approximately 30 miles of storm sewer pipe are televised annually. Upon discovery of an illicit connection, the storm crew traces the source. Dye testing may be conducted. The owner is notified verbally and shown the CCTV footage. The supervisor provides contact information in order for the resident to advise when the repair was made. Once the problem is corrected, a follow up inspection is performed. If no cooperation is received, a letter is sent to the property owner detailing corrective actions and enforcement.

Governing Regulations

1. U.S. Clean Water Act
2. PA Clean Streams Law
3. Ordinance 13581

Pollution Prevention

Eliminating these illegal connections to the MS4 reduces pollution of the watercourse by human and other household wastes.

BMP Documentation

Maintenance crews document and report results of routine inspections. Monthly spreadsheets are maintained which document the date, location, pipe size, pipe condition and footage of line televised. Video is recorded. NASSCO ratings of CCTV'd lines are mapped in the GIS system.

Pollution Removal Assessment
Pollution removal in each case can be estimated with reasonable accuracy by taking the historical metered water use of the property and applying the average strength of residential sewage.

Authorization Procedure - N/A

Legal Recourse for Violations
1. Penalty Section of Ordinance No. 13581

Responsible Parties for BMP
1. Stormwater Manager
2. Stormwater Inspectors

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period
86,600.8 ft (16.40 miles) or **8.2%** of the system was televised during this timeframe.

A map of the televised/inspected system conducted during the reporting period, and a map of the inspected system to date are included for review. Inspected mains are designated by colors relative to their respective NASSCO ratings. Video footage is available upon request.

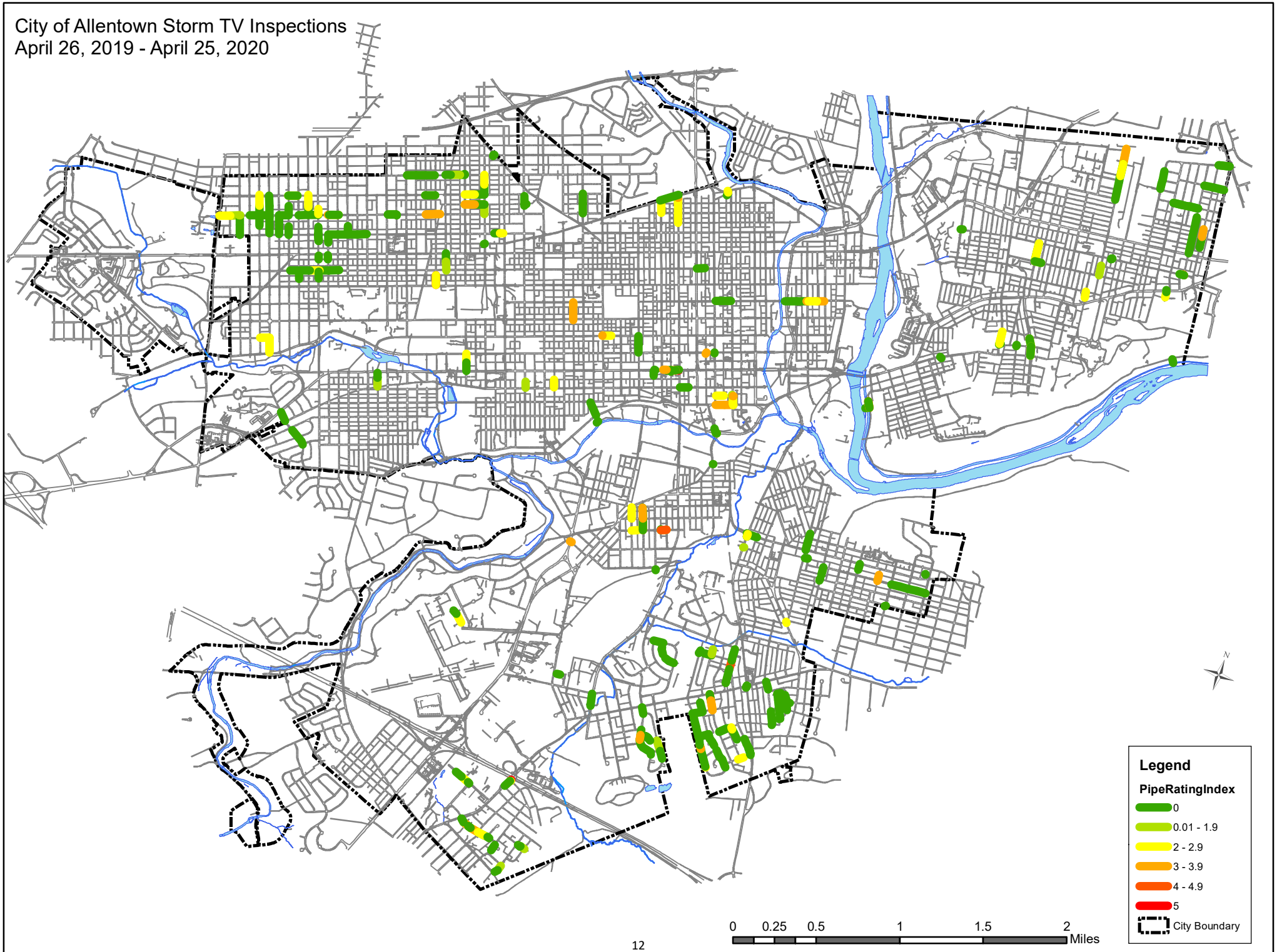
A local engineering firm is correcting the storm water collection system at a private residence at 127 N. 8th Street by removing the connection to the sanitary sewer.

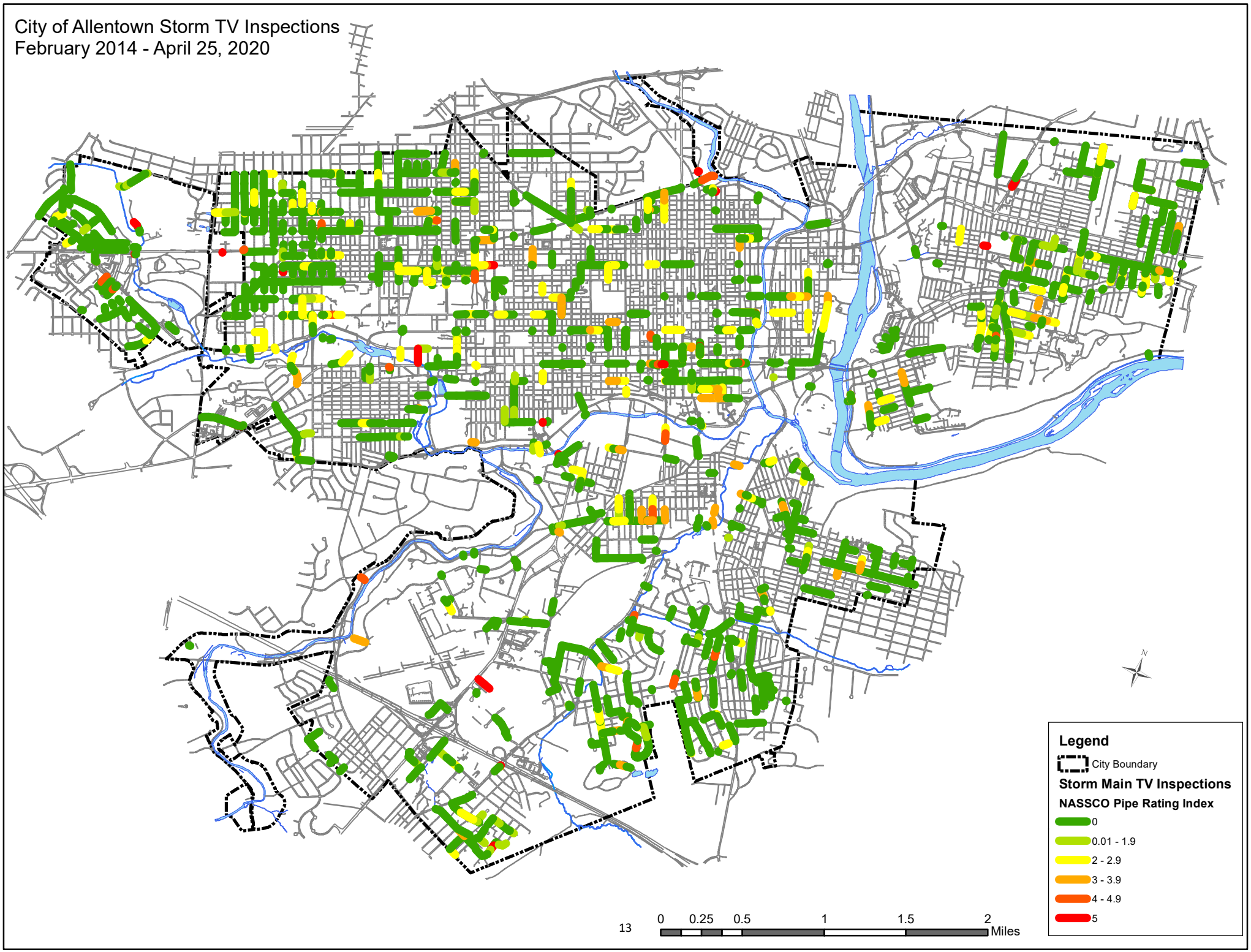
A second CCTV truck was added to the fleet in March of 2020.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.
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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] II X 5/20/2020


City of Allentown Storm TV Inspections
April 26, 2019 - April 25, 2020
Legend
PipeRatingIndex
0
0.01 - 1.9
2 - 2.9
3 - 3.9
4 - 4.9
5
City Boundary
0 0.25 0.5 1 1.5 2
Miles


City of Allentown Storm TV Inspections
February 2014 - April 25, 2020
Legend
City Boundary
Storm Main TV Inspections
NASSCO Pipe Rating Index
0
0.01 - 1.9
2 - 2.9
3 - 3.9
4 - 4.9
5
0 0.25 0.5 1 1.5 2
Miles

City of Allentown
Best Management Practices
Field Investigation and Enforcement Action

Background

Part A, 2. (f) of the City's NPDES Permit No. 0063665 requires that the City carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition of illicit discharges to the its MS4. Additionally, Part A, 5. (g) of the City's NPDES Permit No. 0063665 requires that the City provide a description of procedures to prevent, contain, and respond to spills that may discharge into its MS4.

Trained and knowledgeable City employees who work "in the field" can be an effective force in the detection and elimination of pollution at its source.

BMP Program Description

Due to the number of concerns being noticed or relayed by employees, a "Field Investigation" form was created in order to document and track actions necessary resultant of these investigations. Investigations are categorized as either Commercial/Industrial, Construction or Residential.

Stormwater personnel assess the scene upon arrival. Steps are taken to stop the source of pollution immediately. Photographic evidence is taken and witnesses may be interviewed. A determination is made as to whether or not the actions resulted in a violation of the City's MS4 NPDES permit. If this is the case, the resident/manager may be advised of recommendations in order to remediate the issue. A follow up inspection is performed. If compliance has not been achieved after issuance of a formal Notice of Violation (NOV), penalties may be imposed per City Ordinance 13812.

Governing Regulations

1. Water Quality Act and Clean Water Act
2. Pennsylvania Clean Streams Law
3. NPDES Permit No. 0063665

Pollution Prevention

Pollution activities, enacted willfully or unknowing, may be corrected through education or enforcement. Stoppage of dumping or other pollution related practices into the MS4 will prevent further contamination of the waterways.

BMP Documentation

A "Field Investigation" Form is filed in the appropriate location on the drive. Photographs are taken.

Pollution Removal Assessment

To the degree possible, each incident will include an estimate of the amount of pollutants contained.

Authorization Procedure - N/A

Legal Recourse for Violations

1. City Ordinance 13812

Responsible Parties for BMP

1. Stormwater Manager
2. MS4 Coordinator
3. Environmental Technician

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

The following types of field investigations were conducted:

TYPE	#	Notice of Violation	Referred for PaDEP PAG-03 Permit
Commercial/Industrial	6	*	*
Construction	0	-	-
Municipal	0	-	-
Residential	0	-	-

*Two sites were referred to the Industrial High Risk Runoff Program for follow up.

Field Investigation tracking sheets are available upon request.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Angela F. DiBuo X 5/22/2020

City of Allentown
Best Management Practices
Complaint Investigation and Enforcement Action

Background

Part A, 2. (f) of the City's NPDES Permit No. 0063665 requires that the City carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition of illicit discharges to the its MS4. Additionally, Part A, 5. (g) of the City's NPDES Permit No. 0063665 requires that the City provide a description of procedures to prevent, contain, and respond to spills that may discharge into its MS4.

A multitude of complaints are received by various departments throughout the City. They are received by phone call, emails from other City Departments and regulators, etc. A Government Contact Form is available on the City's website for use by residents for the purpose of reporting illegal dumping, flooding issues and other concerns. The form is then emailed to the appropriate personnel.

MS4 related complaints are categorized into types: construction, residential and commercial/industrial. The City's Constructions Operations Manager and the Lehigh County Conservation District handle work site related calls. Stormwater Department personnel investigate residential and commercial/industrial complaints.

BMP Program Description

Stormwater personnel assess the scene upon arrival. Photographic evidence is taken and witnesses may be interviewed. If the complaint is against a business, the manager onsite is notified as to the reason of the visit and the City's findings. A determination is made as to whether or not the actions resulted in a violation of the City's MS4 NPDES permit. If this is the case, the resident/manager may be advised of recommendations in order to remediate the issue. A follow up inspection is performed. If compliance has not been achieved after issuance of a formal Notice of Violation (NOV), penalties may be imposed per City Ordinance 13812. A Complaint Investigation Form is completed per complaint. If the issue does not involve the MS4, it is reported to the appropriate department.

Governing Regulations

1. Water Quality Act and Clean Water Act
2. Pennsylvania Clean Streams Law
3. NPDES Permit No. 0063665

Pollution Prevention

Pollution activities, enacted willfully or unknowing, may be corrected through education or enforcement. Stoppage of dumping or other pollution related practices into the MS4 will prevent further contamination of the waterways.

BMP Documentation

A Complaint Investigation Form is filed in the appropriate location on the drive.
Photographs are taken.

Pollution Removal Assessment

To the degree possible, each incident will include an estimate of the amount of pollutants contained.

Authorization Procedure - N/A

Legal Recourse for Violations

1. City Ordinance 13812

Responsible Parties for BMP

1. Stormwater Manager
2. MS4 Coordinator
3. Environmental Technician

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Stormwater personnel responded to complaints as follows:

TYPE	#	Notice of Violation
Commercial/Industrial	11	-
Construction	04	01
Residential	12	01
Municipal	01	-
TOTAL	**28**	**02**

Individual complaint forms, NOV's, pictures, etc. are available upon request.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X RJC.5 II X 5/21/2020

City of Allentown
Best Management Practices
Source Identification: Mapping

Background
Part A, 3. (a) of the City's NPDES Permit No. 0063665 requires that the City submit any new source identification information, including identification and mapping of storm sewer system outfalls.

BMP Program Description
The storm sewer system is mapped to include storm main, manholes, inlets and outfalls. The flow path of water entering the system and discharging into each specific watershed is designated for each main. All structures are labelled. A code has been developed to assist in finding the location of each manhole. For example, an outfall code of JC431L40 means that the outfall is located on the Jordan Creek, 431 feet from the confluence of the Jordan and Little Lehigh Creek, 40 feet to the left.

The NASSCO grade is also labelled per main segment determined from inspections conducted through televising. The standardized grading system assesses pipe condition on a scale of 0-5. A rating of 0 is assessed for pipes in the best condition while a rating of 5 denotes pipes in the poorest condition.

Additional MS4 features are mapped to include retention basins and all post construction BMP's located throughout the City. The GIS database will be continually updated as new structures are identified or added to the system.

Governing Regulations
1. NPDES Permit No. PA. 0063665

Pollution Prevention
The mapping of the inlet locations, flow path and outfalls is critical in preventing contamination from a spill or illicit discharge from entering a watercourse once entry into the MS4 is known or discovered.

BMP Documentation
Maps and demonstrations are available upon request.

Pollution Removal Assessment - N/A

Authorization Procedure - N/A

Legal Recourse for Violations - N/A

Responsible Parties for BMP
1. Senior GIS Analyst
2. GIS Analyst
3. City Utility Engineer
4. Chief Surveyor
5. Stormwater Manager

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period
- On 05/03/2019, representatives from the Engineering Bureau and Department of Information Technology, GIS met to assess BMP mapping and data capture for annual reporting.
- No new outfalls were installed/mapped.

- The following structural BMP's were constructed and added to GIS:

BMP No.	BMP Name	DA (ac)	Responsible Party for O&M	Latitude	Longitude	O&M Requirements
1	Arts Walk Pocket Park 15 S. Church St	0.15	Owner	40° 36' 11"	75 °28' 15"	Owner
2	Filmtech 2121 31st St. SW	3.00	Owner	40° 33' 34"	75 °29' 02"	Owner

- GIS layers are continually updated to reflect changes identified through field investigations/ verifications.

I understand that the information provided will be reviewed by PaDEP and EPA to assess compliance with the requirements of the City's MS4 NPDES permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] X 5-28-2020

X [signature] X 5-28-2020

Source Identification: Land Use

Background

Part A, 3. (a) of the City's NPDES Permit No. 0063665 requires that the City submit any new source identification information, including … significant changes affecting the City's separate storm sewer system due to: land use activities, population estimates, runoff coefficients, major structural controls, landfills, publically owned lands and industries in the annual reports …"

Urbanization increases the amount of impervious land area, which increases stormwater runoff and associated pollutants. Municipalities can limit the amount of impervious runoff and pollutant loading through the land development process.

BMP Program Description

The City regulates subdivisions and land developments through the Subdivision and Land Development Ordinance (SALDO). Subdivision and Land Development, Zoning and Building Permit applications are submitted through the City's Bureau of Planning and Zoning.

All plans are provided to Public Works personnel for review and comment. Meetings are scheduled with the developer, engineer, City Engineer, Utility Engineer, Chief Surveyor and Lehigh County Conservation District (involving earth disturbance greater than one acre). The City's Planning Commission will provide land use change information through submission of an updated inventory of development projects.

Significant changes in runoff coefficients and population estimates per land development are submitted to the city during the land development process in a Stormwater Report that is required per land development ordinance/Act 167 and Chapter 102/NPDES regulations. We consider major changes to the runoff coefficients as the difference in impervious versus pervious area in land development plans. This information is submitted to the Lehigh County Conservation District, Lehigh Valley Planning Commission and the City for review and approval.

The Public Works Department maintains an updated inventory of major structural controls. See Post Construction BMP section of this report.

Governing Regulations

1. Subdivision and Land Development Ordinance 12369, as amended
2. Ordinance No. 14835, as amended
3. NPDES Permit No. PA. 0063665

Pollution Prevention

Land use regulations, site plan review procedures, installation of structural controls, etc. act to ensure that peak, post-development run-off conditions remain equivalent to pre-development conditions.

BMP Documentation

Plans are available upon request.

Pollution Removal Assessment - N/A

Authorization Procedure – County, City and Lehigh County Conservation District review process

Legal Recourse for Violations - N/A

Responsible Parties for BMP

1. Director of Planning and Zoning
2. Public Works Director
3. City Engineer
4. Environmental Engineer
5. Utility Engineer
6. Chief Surveyor

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

The updated document entitled "Significant Change in Runoff Coefficient and Population per Land Development/Subdivision: 2017-May 2020" has been included for review.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Michael E Lichty X 5-28-2020

Significant Change in Runoff Coefficient and Population per Land Development Project/Subdivision
(Net Change in Runoff Coefficient, Square footage)
2017 - April 25, 2020 (Updated 05/22/2020)

Development Projects	Plan Submittal Date	Impervious Net Change (+/- Sq. ft.)	Size of Development (Acres)	Land Use Pre-Development	Land Development Change	Significant Population Change	BMPs Provided	Status of Project
Family Dollar (1735 N. 4th St.)	2/14/2017	-2,178	0.634	Fast food restaurant	Store	No change	Y	Constructed
1203 N. 19th St.	3/13/2017	1,614.0	0.137	Grass lot	2 Townhouses	Slight increase	N	Under review
Evangelical Lutheran Church 4004 Tilghman	3/20/2017	4,731	4.163	church	addition to church	No change	Y	Approved
Trump St., Holdings (691 Trump St.)	3/21/2017	-7,147	1.673	Silk ribbon manufacturer	Apartments	Increase - 24 apartments	Y	Under construction
1037 N. Jasper St.	3/22/2017	6,410	0.44	Vacant grass lot	Warehouse	No change	N	Approved
520 Hamilton Street Apartments	7/7/2017	-2,245	0.311	Disco	69 Apartments	Increase	Y	Constructed
Waterfront - Riverside Drive addition	10/2/2017	26,206	2.64	Railroad main line	City street	No change	Y	Under construction
ASD Elementary School (1227 Gordon St.)	12/12/2017	7,069	3.0224	Lumber yard and dwelling	Elementary school	No change	Y	Under Construction
Abdouche Apartments (1935 S. 5th St.)	12/12/2017	0	0.836	Manufacturing plant	17 Apartments	Increase	Y	Constructed
5 CC Office tower	1/12/2018	-4,611	0.639	Retail/ apartments	Office tower	No change	Y	Constructed
Walnut St. Commons (lot B)	1/12/2018	10,516	0.454	Multiple use	61 Apartments	Slight increase	Y	Constructed
Southside Houses by Smart Living	1/16/2018	74,175	5.749	Single dwellings/ open land	53 Townhouses	Increase	Y	Under review
5 CC- 8th & Walnut 777 W Walnut/Apts	2/9/2018	-6,150	0.560	Commercial/residential	98 Apts	Increase	Y	Under Construction
5 CC- 8th & Walnut 21 S. 8th St/parking deck	2/9/2018	-6,150	0.720	Commercial/residential	Parking Deck	No change	Y	Under Construction
120-160 Union St.	2/15/2018	-3,049	5.37	Railroad freight terminal	Office/ garage	No change	Y	Under review
Southside Houses by Smart Living 401 Harris	10/26/2018	9,726	0.383	Empty Lot	6 Townhouses	Slight increase	N	Approved
Taco Bell 1901 S. 4th St	1/16/2019	-56,658	3.344	Existing bank with open lot	Ex. Bank & restaurant	No change	Y	Under review
SVN Square East Apts 36 S. 7th St	12/28/2018	-12,635	2.262	Residential/Basement pkg	220 apts	Increase	Y	Under Construction
Wawa @ 4th & Susquehana	12/31/2018	10,890	2.750	Commercial	Mini Market	Slight decrease	Y	Under review
Elias Market expansion	12/7/2018	11,480	0.360	Residential	Parking lot	Slight decrease	Y	Under construction
Emaus Ave Laundromat 2825 Emaus Ave	2/13/2019	1,800	8.455	Laundromat	Additional garage	No change	Y	Withdrawn by owner
Family Dollar (1030 Sumner Ave)	11/6/2018	21,667	1.290	Empty Lot	Store	No change	Y	Under review
Parking Lot 833 S. Linden St	3/15/2019	4,480	0.112	3-Story apt bldg	Additional parking	No change	N	Under review
Ramila Holdings 1102 S. Carlisle St	1/16/2019	1,275	0.566	4 Lot Subdivision	5 Lot Subdivision	No change	N	Approved
Riverview Lots 114-122 Allen St	9/11/2018	0	0.364	Warehouse	22 Apartments	Slight Increase	N	Under Final Review
Camelot for Children 2354 Emaus Ave	2/18/2019	0	0.910	Open Field area	Grass parking lot	No change	N	Approved
Pannebier Medical Center	3/19/2019	45,892	1.300	Empty Lot	Medical bldg	No change	Y	Under Construction
Habitat for Humanity	2/8/2019	12,917	1.050	Empty Lot	5 Twin dwellings	Slight increase	Y	Under Construction
Carlisle Apts 501-515 N. Carlisle St.	3/26/2019	10,389	0.480	Empty Lot	8 Apartment buildings	Slight increase	Y	In design
Waterfront - Phase 2	1/31/2019	1022736	32.8	Empty Lot	Commercial/Residential	Slight increase	Y	Under Final Review
Penn Square Flats - 836 Constitution Ave	4/30/2019	213,995	17.687	Open space	190 Apartments	Increase	Y	Under review
414 S Carlisle St	5/15/2019	-6,220	0.352	Ex parking lot	8 apartments	Increase	N	Under review
Arts Walk Pocket Park 15-21 Church St	6/20/2019	1,708	0.154	existing amphitheater	grass amphitheater	No change	N	Under review
Lincoln Leadership 1401 Cedar St	7/16/2019	-1,076	12.608	school and parking lot	school expansion	No change	N	Under review
Luv and Hugs Villages 309 E Hamilton St	8/16/2019	453	0.714	Ex commercial site	day care	No change	Y	Under review
Neuweiler Brewery	10/15/2019	41,175	4.080	Ex commercial site	Commercial	No change	Y	Under review
1 Center Square	12/3/2019	-4,741	0.678	Ex commercial site	Residential/commercial	Increase	Y	Under review
Allentown Comm Dev Corp 868 Constitution	1/17/2020	1,051	0.080	open space/woods	1 SF lot	No change	N	Under review
423 E. Tioga St	1/30/2020	2,750	0.490	existing grass lot	single lot	Increase	N	Under review
702 E. Congress	1/30/2020	117,617	0.441	Empty Lot	Warehouse	No change	Y	Under review
1110 N Sherman	1/30/2020	2,640	2.310	Ex warehouse	expansion	No change	Y	Under review
Allentown Transportation Ctr - 112 N 6th St	2/3/2020	-3,524	2.206	Ex commercial site	Prop commercial	No change	Y	Under review
Grand Plaza - 835 Hamilton St	2/10/2020	-5,405	0.566	Ex plaza	reduced paving plaza	No change	N	Under review
Central Park Apts. 605 N. Wahneta	2/11/2020	152,493	12.105	Wooded	118 apt. units	Increase	Y	Under review
St. Lukes addition - 1736 Hamilton St	2/11/2020	-83	4.360	parking lot	Hospital addition	No change	N	Under review
948 S. Front St.	2/14/2020	2,742	0.270	Empty Lot	4 Prop townhouses	Increase	Y	Under review
Caliber Collision - 1633 Airport Rd	2/21/2020	7,943	1.170	Ex. Commercial	Expanded commercial	No change	N	Under review
570 Union Blvd	2/21/2020	-8,506	0.668	Ex. Commercial	Prop commercial	No change	N	Under review
Barnes Lane subdivision-2701 Barnes Ln	2/28/2020	120,661	13.482	undeveloped land	43 Lot subdivison	Increase	Y	Under review
895 N Fenwick	3/16/2020	956	0.589	Ex parking lot	Prop commercial	No change	Y	Under review
7th and Linden - 100 block N Church	3/17/2020	-23,291	1.758	parking lot	Residential apartments	Increase	Y	Under review
Valania Park - 531 Union St	3/17/2020	-3,485	1.350	Park	Park	No change	Y	Under review
Ava Acres 2232 S 11th St	3/24/2020	5,150	0.220	ex single family lot	3t ownhouse lots	Increase	N	Under review
Orange Products 1929 Vultee St	3/24/2020	0	3.143	ex building	expansion	No change	N	Under review
Ridge Ave Towns - 1035-37 Ridge Ave	3/25/2020	5,556	0.368	Grass	4 unit apartments	Increase	Y	Under review
Enterprise Rent A Car - 1801 Lehigh St	4/3/2020	-2,359	0.860	Ex. Restauraunt	Additional parking	No change	N	Under review

Notes:
Not all projects have been finally approved and/or are under construction.
Red text is updated information to submissions for past reporting periods.
Blue-highlighted text is information relevant to the current reporting period.

City of Allentown
Best Management Practices
Source Identification: Industrial Inventory

Background

Part A, 3. (b) requires the following information be submitted with annual reports: an updated inventory of industries organized by watershed with facility name, address and description (which best reflects the principle products or services provided by each facility) which may discharge to the Municipal Separate Sewer System.

Stormwater from industrial/commercial sites has a higher potential of contributing pollutants to receiving waters. Sources, as determined by the City, with a higher potential to contribute pollutants include: operating or closed landfills, hazardous waste treatment, storage and disposal facilities, industrial facilities that are subject to Section 313 Superfund Amendments and Reauthorization Act (SARA) regulations, those that store, receive or dispose of municipal wastes and industrial sites that handle, store or transport toxics or hazardous materials. These operations have been identified in the Environmental Protection Agency stormwater regulations may require general or individual, industrial NPDES permits and are currently only partially covered by such permits issued by Pennsylvania Department of Environmental Protection.

BMP Program Description

A process to develop and prioritize the list of industrial and commercial sites that have the potential to discharge pollutants to the MS4 system has been submitted in the previous reporting years.
Multiple sources of information were included in the process of compiling the list:

- Allentown's Source Water Protection Plan (2011) lists both Point and Non-Point Potential Sources of Contamination (PSOC's) in the City as well as surrounding areas. As appropriate, the City will conduct surveys of existing records, and request state reports for facilities which have the potential of contributing significant pollutant loads to the MS4 system.
- The Allentown Fire Department or Stormwater Department maintains updated inventories of SARA Title III and Hazmat site locations that have applied for a license.
- Various Environmental Protection Agency databases (ECHO, RECRA, TRI etc.).
- Various Pennsylvania Department of Environmental Protection databases (permits, inspections, Discharge Monitoring Reports, storage tanks licenses etc.).

Industrial and commercial businesses operating in the City are categorized and common information on the list include: SIC/NAICS codes license status, address, owner mailing address, watershed, different permits and licenses, compliance status, inspections results etc.

The list is updated at least annually through the addition/removal of new/closed industrial and commercial sites during the reporting period and other information available on queried databases. Results of the different monitoring activities (inspections, illicit discharge detection elimination process, spill incidents other violations) are incorporated in the process of ranking various sites regarding their pollution potential. The ranking system is ultimately used to determine monitoring activities including industrial and commercial inspections priorities and frequencies.

Governing Regulations

1. NPDES Permit No. PA. 0063665
2. Clean Water Act, 33 U.S.C. 1251 et seq. and 40 CFR Part 122
3. City Codified Ordinance Part Nine, Title Five-Sewers, Article 942; Storm Sewers

Pollution Prevention

The inventory list helps to maintain information regarding new industrial and commercial facilities and establishing the base for an efficient monitoring process. Different industrial and commercial sites on the list can be ranked according to the criteria used for evaluating their potential for pollution. Some of the methods utilized to reduce the impact of pollutants on the stormwater discharge to the MS4 system may include:

- inspections of these facilities
- enforcement when permitting may be necessary
- implementation/maintenance of nonstructural BMP's
- documentation and implementation of specific methods to control pollutant discharge
- partnering and direct technical assistance to individual businesses
- employee and contractor training

BMP Documentation

BMP documentation includes the downloads of the queries from different information sources and the updated list of industrial sites organized by watershed which discharge through the MS4 system. These documents are maintained in electronic format are available for auditing and provided to the industrial inspections staff.

Pollution Removal Assessment

The efficiency of listing compiled is captured with different metrics and reflected in the ranking of industrial/commercial sites in terms of their pollution potential for monitoring purpose. Such metrics may include:

- efficiency of the monitoring through prevention of pollutant discharge
- pollutant removal in the runoff
- BMP efficiency and maintenance
- level of awareness and implementation of BMP's
- level of compliance with City ordinances and other federal or state regulations

Authorization Procedure

The City will review site plans and operating practices for new facilities involved in the activities listed in "Background" (above). If a federal or state permit is considered necessary, parties will be notified.

Legal Recourse for Violations

1. Ordinance 13812
2. Clean Water Act
3. If applicable, PaDEP will be advised

Responsible Parties for BMP

1. MS4 Coordinator
2. Stormwater Monitoring Coordinator
3. Stormwater Compliance Specialist – to be hired per 10-year plan

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

The inventory list compiled and submitted during the previous reporting periods has been updated based on the additional information sources such as the EPA, DEP databases and the new licensed/closed businesses for the current reporting period. Updates to list from last year include hazardous waste generators and other businesses that may qualify to be referenced for NPDES permit issuance evaluation.

SIC codes listed on PaDEP's PAG-03 Fact Sheet NOI were compared to active business licenses with equivalent SIC codes accessed through the City's EDEN system.

A summary of the updates is presented below:

- 23 new business qualified as new, MS4 inspection sites per SIC as indicated above.
- 25 businesses were closed.
- The Fire Department Hazmat permits from the search query in EDEN inventory includes 25 sites.

4/26/2019-4/25/2020 List of New Qualifying Business Licenses

Customer #	Business Name	Full Primary Address	Creation Date	SIC Code	SIC Description	PAG-03 Appendix	Watershed
00244349	BATCH MICROCREAMERY LLC	27 N 7TH ST SUITE 140 BAY 8 ALLENTOWN PA 18101	9/1/2019	2024	Food and Kindered Products	I	Jordan Creek
00250562	BINAH WINERY	905 N HARRISON ST STE 131 ALLENTOWN PA 18103	3/5/2020	2084	Food and Kindered Products	I	Little Lehigh Creek
00248563	BLUE STEEL VODKA LLC	321 S CARLISLE ST ALLENTOWN PA 18109	10/1/2019	2085	Food and Kindered Products	I	Lehigh River
00248328	CECE J'S SNACKS	1006 HANOVER AVE ALLENTOWN PA 18109	3/1/2020	2099	Food and Kindered Products	I	Lehigh River
00241752	CURRY BOWL 97 INC	931 HAMILTON ST ALLENTOWN PA 18101	5/14/2019	2099	Food and Kindered Products	I	Jordan Creek
00243372	D&B PILOT CAR AND TRUCK SERVICES LLC	907 S POPLAR ST ALLENTOWN PA 18103	8/1/2019	4213	Land Transportation and Petroleum stations and terminals	L	Little Lehigh Creek
00244340	EAST PENN SELF STORAGE	383 WASHINGTON ST ALLENTOWN PA 18102	8/20/2019	4225	Land Transportation and Petroleum stations and terminals	L	Jordan Creek
00247633	EGYPT LOGISTICS LLC	1133 S JEFFERSON ST ALLENTOWN PA 18103	12/2/2019	4212	Land Transportation and Petroleum stations and terminals	L	Little Lehigh Creek
00250151	ERWIN TRANSPORTATION CORP	28 N 15TH ST ALLENTOWN PA 18102	3/2/2020	4119	Land Transportation and Petroleum stations and terminals	L	Little Lehigh Creek
00248229	FROM THE HEARTH	1825 CHEW ST ALLENTOWN PA 18104	1/8/2020	2051	Food and Kindered Products	I	Jordan Creek
00241628	GNW EXPRESS CORP	1436 LIBERTY ST ALLENTOWN PA 18102-2673	5/9/2019	4215	Land Transportation and Petroleum stations and terminals	L	Jordan Creek
00249961	HOLISTIC VIBES	21 N 7TH ST ALLENTOWN PA 18101	2/25/2020	2099	Food and Kindered Products	I	Jordan Creek
00243738	HOP DADDY'S BREWING COMPANY	732 HAMILTON ST ALLENTOWN PA 18101	10/1/2019	2082	Food and Kindered Products	I	Jordan Creek
00243177	ITREND USA	1510 HANOVER AVE ALLENTOWN PA 18109	6/26/2019	4213	Land Transportation and Petroleum stations and terminals	L	Lehigh River
00241629	JANO'S DELIVERY INC	1436 LIBERTY ST ALLENTOWN PA 18102-2673	5/9/2019	4215	Land Transportation and Petroleum stations and terminals	L	Lehigh River
00243718	JL TRUCKING SERVICE INC	402 S 15TH ST APT 1208 ALLENTOWN PA 18102	7/19/2019	4213	Land Transportation and Petroleum stations and terminals	L	Little Lehigh Creek
00243505	KRAVE 2 TASTE	245 N 2ND ST ALLENTOWN PA 18102	7/10/2019	2037	Food and Kindered Products	I	Jordan Creek
00248594	LEHIGH COINS & JEWELRY INC	2357 LEHIGH ST ALLENTOWN PA 18103	1/22/2020	3911	Fabricated Metal Products	U	Trout Creek Tributary
00241233	LUXURY TRANSPORTATION	1018 E HAMILTON ST APT N3 ALLENTOWN PA 18109	4/30/2019	4111	Land Transportation and Petroleum stations and terminals	L	Lehigh River
00247486	PRIME AUTO GLASS WAREHOUSE INC	352 GREEN ST ALLENTOWN PA 18102	12/1/2019	4225	Land Transportation and Petroleum stations and terminals	L	Jordan Creek
00249278	PRINTFORCE LLC	2361 SUNSHINE RD ALLENTOWN PA 18103	1/1/2020	2752	Printing and Publishing	R	Trout Creek Tributary
00250396	SIGNARAMA OF ALLENTOWN	2028 UNION BLVD ALLENTOWN PA 18109	12/19/2019	3993	Rubber Miscellaneous Plastic Products and Miscellaneous Manufacturing Industries	S	Lehigh River
00249524	STRATEGIC FIVE STAR MOVERS	374 W LINDEN ST ALLENTOWN PA 18102	2/12/2020	4214	Land Transportation and Petroleum stations and terminals	L	Jordan Creek

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Rodney Swope X 5/22/2020

City of Allentown
Best Management Practices
Discharge Characterization

Background

Part A, 4. of the City's NPDES Permit No. 0063665 establishes stormwater monitoring requirements. Per Part A, 4. (i), the City must submit quantative data on physical and chemical characteristics to the Department, annually, for 5 representative outfalls identified in the Part 2 stormwater application.

Per Part A, 8. C (iv), annual progress reports shall include a summary of data, including monitoring data, that are accumulated throughout the reporting year.

BMP Program Description

Per Part A, 4. (ii) & (iv), the City must collect during the term of the permit, samples of storm water discharges for each representative outfall, from three storm events occurring at least one month apart. All samples should be collected following a storm event that is equal or greater than 0.1 inches and occurs at least 72 hours from the previously measurable (0.1 inch rainfall) storm event. Sampling locations are presented below:

CODE	OUTFALL #	LOCATION
SW001	CC2663L134.65	South Street & Cedar Creek Blvd
SW002	TC34222082R6.75	Mack Boulevard
SW003	TCTRIBE3350L246.14	SW 26th St. & Mitchell Avenue
SW004	LRTRIBO36313768R32.8	American Parkway & Business Park Lane
SW005	JC431L40.17	Martin Luther King Jr. Drive & Jordon Creek

Governing Regulations

1. The Clean Water Act
2. NPDES Permit No. 0063665

Pollution Prevention

Stormwater discharge monitoring as part of the Stormwater Management Program is an important tool that can serve multiple purpose all contributing to the goal of reducing pollutants. Some of these goals include:

- Characterization of discharges for estimation of pollutant loading.
- Tool in the planning process for implementing BMPs designed to control and reduce pollution of the streams. Through use of the monitoring data, priorities can be given to the areas/sources that are the largest contributors of pollutants.
- Evaluation of efficiency of a structural/nonstructural BMPs.
- Evaluation of pollutant impacts on discharge and receiving waters.

BMP Documentation

Documentation and records such as description of each sampling event, Discharge Monitoring Reports (DMRs), results of chemical/bacteriological analyses associated with the samples collected are maintained in different formats and are available for reference.

Pollution Removal Assessment – N/A

Authorization Procedure - N/A

Legal Recourse for Violations

1. Penalty Section of Ordinance No. 13581

Responsible Parties for BMP

1. MS4 Coordinator
2. Stormwater Monitoring Coordinator
3. Stormwater Manager
4. Environmental Technician(s)

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

- No successful samples were collected; therefore, no DMR's are included with the current submission.
- The Monitoring and Discharge Characterization Plan is being updated and further developed.
- The program is being expanded through the creation and hire of a new position (temporary on hold due to anticipated shortfalls associated with the COVID-19 crisis).

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Rodney Swope X 5/22/2020

City of Allentown
Best Management Practices
Pollutant Loading and Estimates of Mean Concentrations

Background

Part A, 4. (viii) of the City's NPDES Permit No. 0063665 states that no later than 3 years after the issuance of this permit, estimate annual, seasonal pollutants loads and estimates of the mean concentrations for all stormwater outfalls identified in the Part 2 stormwater application, using data collected and submitted with annual reports.

BMP Program Description

The primary purpose for estimating annual pollutant loads and event mean concentrations is to assign priorities for implementing BMPs. The magnitude of individual pollutant loadings is considered when assigning priorities to resources towards reducing pollution. The areas receiving the highest priority for implementation of BMPs will be those portions of the MS4 that appear to contribute the largest load of pollutants to the system. Therefore, it is the relative value of these calculations that is of importance, not the absolute value.

There are multiple methods to evaluate the pollutant loadings in our current approach , we use the "simple method" as described in Environmental Protections Agency's *"Guidance Manual For The Preparation Of Part 2 Of The NPDES Permit Applications For Discharges From Municipal Separate Storm Sewer Systems".*

Yearly contaminant loadings in each watershed are calculated using the following data:

- Event mean concentration (EMC) are calculated at the five outfalls described in the part 2 of permit application and in accordance with 40CFR 122.26(d)(2). Individual analytical results were submitted with the previous year's annual reports in the DMR section. Averages are summarized in Table 1. A conservative method detection limit or quantification limit was used for non-detect results when calculating averages.
- Area of the watershed basin.
- Weighted average runoff coefficient per basin based on the land use.
- Correction factor of 0.9 for the relative intensity of the rain events when to runoff occurs.
- Annual average rainfall for the period for which samples were collected.

Table 1 Mean Event Concentration for years 2005 to 2018

COMPONENT	SW001	SW002	SW003	SW004	SW005	Average Total
AMMONIA	0.199	0.157	0.114	0.178	0.167	0.166
CADMIUM	0.003	0.003	0.003	0.003	0.003	0.003
COPPER	0.012	0.015	0.011	0.023	0.017	0.015
LEAD	0.027	0.026	0.023	0.024	0.031	0.026
ZINC	0.043	0.085	0.102	0.139	0.119	0.096
TSS	41.7	108.6	73.9	109.9	59.7	78.9
TDS	38.6	68.3	34.9	113.0	37.0	60.7
BOD5	11.0	6.4	3.9	8.7	9.7	8.1
COD	50.7	37.3	36.9	53.5	65.5	48.7
TKN	1.352	1.133	0.872	1.179	1.415	1.203
TOTAL PHOSPHORUS	0.181	0.113	0.129	0.169	0.161	0.153
DISS. PHOSPHORUS	0.129	0.063	0.083	0.100	0.072	0.091

Governing Regulations

1. NPDES Permit No. 0063665

Pollution Prevention

The requirement to calculate pollutant loadings and concentrations is intended to be a planning and screening tool designed to be used towards establishing program priorities, rather than determine absolute values for reductions. The inherent uncertainty associated with this method can be diminished with use of different models and more targeted monitoring programs. The future efforts of our monitoring program will focus on improving the sampling methodologies and locations.

BMP Documentation

Documentation and records specific to this program include calculation methodology description and associated calculation spreadsheets. Associated records such as analytical results and other sampling specific parameters are part of the monitoring section of our program reported in section 14 of this annual report. All records in various formats are maintained and available for reference.

Pollution Removal Assessment – N/A

Authorization Procedure - N/A

Legal Recourse for Violations

1. Penalty Section of Ordinance No. 13581

Responsible Parties for BMP

1. MS4 Coordinator

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

A summary of the pollutant loading for individual watershed basins and the overall loading for Allentown is presented in Table 2: "Watershed and Annual Pollutant Loadings - (lb./watersheds/yr.)"

Table 2: Watershed and Annual Pollutant Loadings - (lb./watersheds/yr.)

POLLUTANT	EMC	CEDAR CREEK	JORDAN CREEK	LEHIGH RIVER	LITTLE CEDAR CREEK	LITTLE LEHIGH RIVER	TROUT CREEK	TROUT CREEK WEST	TOTAL LOADINGS
AMMONIA	0.166	540.60	2362.80	1335.2	583.59	1635.1	1739.3	856.04	9052.84
CADMIUM	0.003	9.96	43.54	24.60	10.75	30.13	32.05	15.77	166.81
COPPER	0.015	50.25	219.65	124.13	54.25	152.00	161.69	79.58	841.55
LEAD	0.026	85.49	373.65	211.16	92.29	258.58	275.06	135.37	1431.6
ZINC	0.096	311.16	1359.99	768.57	335.91	941.17	1001.1	492.72	5210.6
TSS	78.9	257169	1124011	635214	277623	777860	827437	407228	4306541
TDS	60.7	197888	864912	488789	213627	598553	636702	313357	3313829
BOD5	8.1	26366	115238	65125	28463	79749	84832	41751	441523
COD	48.7	158645	693391	391857	171263	479854	510438	251215	2656663
TKN	1.203	3921	17137	9685	4233	11860	12615	6209	65660
TOTAL PHOSPHORUS	0.153	498.75	2179.89	1231.9	538.42	1508.5	1604.7	789.77	8352.0
DISS. PHOSPHORUS	0.166	540.60	2362.80	1335.2	583.59	1635.1	1739.3	856.04	9052.8

We plan to improve the accuracy of the methods to calculate loads and concentrations to coordinate with development of the monitoring program and to help us evaluate the success of storm water management program.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Rodney Swope X 5/22/2020

Background

Part A, 5. of the City's NPDES Permit No. 0063665 requires that "during the period beginning on the effective date and lasting through the expiration date of this permit, the City shall implement a stormwater management program consistent with applicable State and Federal Laws …"

Activities conducted by municipal operations may negatively impact water quality. Conversely, some municipal activities, such as proper spill response, Erosion and Sediment Control measures, etc., reduce water quality impacts. Awareness of pollution activities relative to the MS4 can be increased through training.

BMP Program Description

Municipal employees need to be trained to recognize pollution potential resultant from their own operations and from the activities of residents, businesses, etc. Knowledge of environmental regulations and responsibilities will reinforce and enhance job specific training.

Additionally, in order to properly assess system infrastructure, detect illicit connections, determine corrective actions, and prioritize rehabilitation, Stormwater personnel partake in a Pipeline Assessment and Certification Program. NASSCO recertification is sought every three years. City personnel will be properly trained to recognize and correct stormwater system defects and problems.

The City's construction inspectors must be continually trained in proper Erosion and Sediment Control measures and post construction BMP inspection. Typically, the Lehigh Conservation District provides this training for City employees.

The Parks Department will continue to send personnel to pesticide applicator training in order to become certified. The Fire Department's Hazmat Team trains monthly. Department-wide spill response training occurs on an annual basis.

Governing Regulations

1. U.S. Clean Water Act
2. PA Clean Streams Law
3. Ordinance 13581

Pollution Prevention

Knowledge of proper spill response, municipal good housekeeping, and illicit discharge recognition relative to the MS4 reduces pollution of the waterways.

BMP Documentation

Certificates
Training announcements
Sign in sheets and agendas (as appropriate)

Pollution Removal Assessment – N/A

Authorization Procedure - N/A

Legal Recourse for Violations - N/A

Responsible Parties for BMP

1. Stormwater Manager
2. City Management
3. MS4 Coordinator

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

City personnel attended the following MS4 specific training.
Certificates, agendas, announcements, and sign in sheets are available upon request.

Date	Training
09/19/2019	*Survey123 Training for Stormwater Inspection Report Creation* (Attended by IT Department and Stormwater Bureau employees)
10/02/2019	LTAP Workshop: *Salt and Snow Management* (Attended by Streets Department and Stormwater Bureau employees)
10/10/19 - 10/11/19	An Ecological Approach to Waterway Stabilization and Restoration (Attended by Department of Parks and Recreation employee)
10/15/2019	*2019 Lehigh Valley Watershed Conference* (Attended by Public Works Department, Stormwater and Engineering Bureaus, and Department of Parks and Recreation employees)
10/24/2019	*Certified Stormwater Inspector Training* (Attended by Stormwater Bureau employees)
11/04/2019	*Orientation for New Stormwater Personnel* (Attended by Stormwater Bureau employee, Radu Lungu)
11/04/2019	*Lehigh Valley's 1st Annual Underground Planning and Construction Summit* (Attended by Stormwater Bureau employee)
11/20/2019	*Water Asset Management Conference, Operations Optimization* (Attended by Stormwater Bureau employees)
03/18/2020	*Stream Restoration Workshop* (Attended by Stormwater Bureau employees)
4/15/2020	Stormwater Impacts and Green Solutions in your Watershed Webinar (Attended by Department of Parks and Recreation employee)
04/23/2020	*Stormwater Facility Operation and Maintenance* (Attended by Stormwater Bureau employees)

Regular MS4 Roundtable meetings are organized by both the Lehigh County Conservation District and the Northampton County Conservation District, respectively. The meetings create opportunities for communities to communicate, share resources, provide training, and discuss MS4 challenges. Meeting agendas, sign-ins and minutes are kept and are available upon request. Stormwater personnel attended the following meetings:

Date	Topics
06/13/2019	Lower Macungie Township Building Agenda topics included a Good Housekeeping Presentation.
12/13/2019	Northampton County Human Services Agenda topics included PennDOT MS4 initiatives.
12/19/2019	Upper Macungie Township Building Agenda topics included PCSM Inspections.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Angela F. DiBuo X 05/29/2020

Background

Inspection of stormwater conveyance, treatment or storage facilities will indicate the need to replace or improve existing facilities. Similarly, streams, stream banks, adjacent land areas or other natural areas will be identified as needing improvements due to deterioration or the potential for impaired water quality. Public safety and infrastructure improvements are priorities of the Stormwater Management Program.

BMP Program Description

Projects will be developed and submitted under the City of Allentown's Capital Projects Program as appropriate. In addition, Public Works and Parks personnel will work with various watershed groups and organizations that can solicit grants or other funding to pursue beneficial projects. Once a project is approved and the funding source secured, design and construction phases will be addressed through existing procedures. The larger projects are addressed in this document.

Governing Regulations – N/A

Pollution Prevention

Maintaining and improving natural and manmade stormwater systems are fundamental to overall stormwater management.

BMP Documentation

Projects approved and completed will be identified annually.

Pollution Removal Assessment

Projects will be identified and, if possible, removals will be quantified.

Authorization Procedure

Approved through the City of Allentown's Capital Projects Program or grant funding agency.

Legal Recourse for Violations – N/A

Responsible Parties for BMP

1. Public Works Director
2. Utility Engineer
3. Stormwater Manager
4. Park Superintendent

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Green Infrastructure

On 02/24/2020, a construction kick off meeting was held for the planning of a rain garden at the intersection of 6th Street and Sumner Avenue. Initial BMP Effectiveness Calculations estimate pollutant reductions for the Jordan Creek as follows: Phosphorus = 27 lb./yr.; Nitrogen = 224 lb./yr.; Suspended Solids = 17,000 lb./yr. This project is made possible with Growing Greener Grant funding.

Gray Infrastructure

Lining of deteriorated storm main was completed at the following locations:

1. S. Fountain St.-Cumberland to Susquehanna (MH 25-24)
2. S. Fountain St.-Wyoming to Cumberland (MH 27-26)
3. E. Washington-Kearney to N. Jerome St. (MH 43-42)
4. S. Delp St.-E. Adams to E. Juniata (MH 120-119)
5. S. Albert St.-E. Juniata to E. Potter St. (MH 80 A- 80)
6. N. Jerome St-E. Linden to E. Turner (MH 58-53)
7. N. Jerome St.-E. Hamilton to E. Linden (MH 59-58)
8. N. Jerome- E. Cedar to E. Washington (MH 45-44)
9. N. Jerome-E. Cedar to E. Washington (MH 44-42)
10. Whitehall St.-19th to 1826 Whitehall St. (MH 194-193)

Pipe replacement or new install was completed at the following locations:

1. 1307 Race St. (new inlets and pipe installation) 6/2019
2. Erie St.-S.10th to Howard St. (new inlets and pipe installation) 11/2019
3. Niles and E. Tilghman St. (new inlet and pipe installation) 11/2019
4. Susquehanna St. -Lumber to Snyder St. (pipe replacement) 2/2020

Lining is scheduled for the 2020 season are at the following locations:

1. N. 8th St.-Greenleaf to Sumner Ave.
2. S. Franklin-Walnut to Maple St.
3. Greenleaf St.-21st to Albright Ave
4. Irving St.-E. Tilghman to E. Green St.
5. St. John St- S. 12th to Jefferson St.
6. S. 12th-Nevada to St. John St.
7. 29th St.-Turner to Parkway Blvd.
8. Turner St.-Arch to 29th St.
9. Benton St.-S. 9th to Fountain St.
10. E. Washington- Lacrosse to Kiowa St.
11. Walnut St.-Hall to 8th St.
12. S. 9th St.-Cumberland to Susquehanna St.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] X 5/21/2020

City of Allentown
Best Management Practices
Watershed Protection

Background
The City of Allentown has a history of partnering with dedicated individuals and watershed organizations in efforts to address environmental concerns. Such groups present opportunities to accomplish educational outreach, procure grant funding, and conduct activities and projects to physically address environmental issues.

BMP Program Description
City personnel engage in opportunities to increase awareness of environmental issues and work cooperatively to conduct activities/projects that enhance or benefit the watershed.

The City has an Environmental Advisory Council (EAC) which meets twice per month. Its purpose is to advise city government on environmental matters affecting the City. The Council provides opportunities for residents to conserve and protect our natural resources and to influence government policies and community practices that impact the environment.

Parks and Public Works personnel regularly work with the Friends of Allentown Parks. This organization coordinates with volunteers, community service groups and local businesses to protect and promote our park system which includes 2,000 acres of open space and 35 miles of trails. They regularly organize volunteers to conduct cleanup projects and hold environmental events.

In February 2011, a Source Water Protection Plan was completed thanks to assistance from the PaDEP Source Water Protection Technical Assistance Program. Protection zones were identified and lists of potential sources of contamination were identified.

Additionally, sampling and monitoring are a means to stop pollution from entering the waterways. Stormwater personnel will sample illicit discharge and spill material in the event that it cannot be identified. The objectives of sampling are to identify and resolve the source.

Governing Regulations - N/A

Pollution Prevention
Increasing awareness and conducting projects will help to reduce the impacts of stormwater on the watershed. If pollution can be identified, the source can be stopped.

BMP Documentation
Grant applications, grant awards, stream improvement projects, etc. that apply to stormwater will be documented and reported in the annual progress report.
Sampling results are filed.

Pollution Removal Assessment
May be determined if flow is measured and concentrations of contaminants are known.

Authorization Procedure - N/A

Legal Recourse for Violations – N/A

Responsible Parties for BMP

1. Stormwater Manager
2. MS4 Coordinator
3. Park Superintendent

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

- On 4/27/2019 and 10/26/2019, the Allentown Health Bureau and Allentown Police Department sponsored "Take Back Drug Day(s)" when expired and unused medicatons are collected and kept out of unwanted hands and the sanitary sewer system.

- The City's Department of Parks and Recreation, working in partnership with various organizations as indicated below, has accomplished the following efforts:
    - On 4/27/2019, the Rotary Club planted 68 tree seedlings in the riparian buffers along Keystone Ave.
    - On 4/28/2019, the Central Catholic High School Environmental Club planted 100 tree seedlings at Dixon Street riparian buffer, and the Kiwanis Club planted 100 tree seedlings in the riparian buffers along Keystone Ave.
    - On 5/15/2019, Friends of the Allentown Parks, Parks personnel, and 75 2nd grade students from Jefferson Elementary School planted 75 seedlings in Trout Creek Parkway.
    - On 8/25/2019, Friends of the Allentown Parks and Parks personnel hosted 250 Cedar Crest College volunteers to removal invasive plants in Trexler Park. Approximately 125, 30-gal trash bags (500 cubic feet) of plants were removed.
    - In September 2019, the bridge from the creek at Cedar Creek Parkway was removed to help mitigate obstruction and flooding.
    - On 9/9/2019, Nativity Lutheran Church volunteers removed approximately 8, 30-gal trash bags (32 cubic feet) of litter from the creek at Cedar Creek Parkway.
    - On 10/6/2019, Muhlenberg College Delta Zeta Sorority students and 8 volunteers planted 44 trees in the riparian buffer at Cedar Creek Parkway.
    - On 10/24/2019, the Parks Department planted 1400 plugs of various perennials and grasses and sedges along the creek bank at Cedar Creek Parkway.
    - On 11/23/2019, Central Catholic High School Environmental Club removed approximately 38, 30-gal trash bags (152 cubic feet) of invasive plants along the creek at the Allentown Municipal Golf Course.
    - From December 2019 to February 2020, the Parks Department removed invasive plants from multiple locations inside Trexler Park.
    - On 3/1/2020, Valley Mountain Bikers volunteers removed approximately 14, 30-gal trash bags (56 cubic feet) of litter from the Lehigh Parkway Trail and Little Lehigh Creek.
    - In March 2020, a stream bank restoration project along the creek bank at Cedar Creek Parkway was completed.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Angela F. DiBuo X 05/29/2020

City of Allentown
Best Management Practices
Flood Cleanup

Background

During a major storm event, most, if not all, water courses experience a certain degree of flooding. During these flooding occurrences, both natural and manmade debris makes its way into the waterways. This debris, as it flows along a given watercourse, can become snagged at various locations where obstacles such as trees, bridges, etc. are present. When the flood waters subside, any residual debris deposits found must be cleaned up.

BMP Program Description

Cleanup and restoration of the flood plain areas along the various water courses and the restoration of the waterway opening at various obstructions, such as bridges, will help to mitigate future flooding.

Governing Regulations

1. Pennsylvania Code, Department of Environmental Protection, Chapter 105. Dam Safety and Waterway Management:
    a. Bridges & Culverts - Section 105.71
    b. Dams & Reservoirs - Section 105.131
    c. Dams, Water Obstruction or Encroachment - Section 105.51
2. Pennsylvania Code, DEP, Chapter 106 Flood Plain Management
    a. Permit Requirements - Section 106.11

Pollution Prevention

Cleanup will result in the direct removal of debris from the water courses.

BMP Documentation

During the cleanup operation, maintenance crews will note the areas from which material has been removed and indicate areas or problems which require remedial work.

Pollution Removal Assessment - N/A

Authorization Procedure –N/A

Legal Recourse for Violations-N/A

Responsible Parties for BMP

1. Director of Parks & Recreation
2. Parks Superintendent
3. Chief Maintenance Supervisor

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

The Department of Parks and Recreation routinely conducts clearing of debris from bridges and trestles on the waterways throughout Allentown. The maintenance activity performed during this reporting period focused on Fuller Bridge in which one clearing occurred, Rathburn Bridge on Keystone Ave in which four clearings occurred, Cedar Bridge in which one clearing occurred, and Schreiber's Bridge in which one clearing occurred.

Parks personnel routinely clean up debris near the waterways after major rainfall events, particularly in the Lehigh Parkway, Rose Garden, Cedar Creek Parkway, Jordan Park, Trout Creek Park, and Fountain Park. Work orders are available upon request.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Signature: _____ **Date:** 4/30/2020

(Department of Parks and Recreation)

City of Allentown
Best Management Practices
Assessment of Streets Operations

Background

Part A, 5. (c) of the City's NPDES Permit No. 0063665 requires that the City provide an assessment of the effects of operating and maintaining public streets, roads and highways and procedures for reducing or controlling potential impacts on receiving waters from the MS4, including pollutants discharged as a result of de-icing activities.

Additionally, Part A, 6. (i) Assessment of Controls of the permit requires that within the last three years of the permit renewal term, an estimate is given of the reduction in loading (removal) of pollutants for all stormwater outfalls identified in Part 2 of the application, using data collected as a result of long-term monitoring. The data provided by Streets is correlated with mapping of stormwater subdistricts to quantify removal volume by watershed. The Engineering Bureau conducts and provides the assessment annually. It is included in the Assessment of Controls section of this report.

The City of Allentown has maintained an aggressive street sweeping program for many years. Its purpose is to collect and dispose of collected material from 16 sweeping districts, through daily, weekly, bi-weekly, and monthly collection. The material collected is dumped at the City's Streets facility into large roll-offs, hauled to a transfer station by the City's Contractor and employees, then hauled to a certified land fill site.

The leaf removal program utilizes the same process. The sweeping district schedule determines the leaf collection and follow-up sweeping scheduling. Residents place leaves curbside, City Forces remove them, and mechanical sweepers clean concurrently. Leaves are taken to the City Waste Site for temporary storage, and then hauled to the County Facility, north of Allentown. For areas inaccessible to leaf removal equipment, leaves are bagged by residents (in biodegradable bags) and picked up, curbside, by City Forces.

BMP Program Description

The City's Streets Department has developed a program which has resulted in a systematic effort to remove street waste, debris, anti-skid, salt remnants, and leaves in a timely fashion. This program consists of the division of streets into specific sweeping and leaf collection districts, for five (5) types of sweeping/collection categories, as follows:

Category 1 - "Spring Clean-up" - 1st 4 weeks in March. Generally, the removal of grit and anti-skid from winter snow and ice control operations.

Category 2 - "Regular Sweeping" – Sweeping District 1 and 9 are swept year round. Beginning in 2015, District 2 was added as a year round sweeping district. Sweeping District 3 starts 1st week of April to the end of November. All other Sweeping Districts start 1st week of April to the end of October.

Category 3 - "Leaf Season Sweeping" – Beginning of November to 3rd or 4th week in December. Sweeping in conjunction with leaf vacuuming and removal of residue.

Category 4 - "Final Sweep" - 3rd & 4th week of December (depending on weather conditions). Weather permitting a "Last", routine-type, sweeping of all districts.

Category 5 - "Winter Clean-Up" - Routine clean-up by hand crews (broom sweeping) in CDB (Central Business District), and response to citizen complaints. If large amounts of anti-skid and salt are used for winter maintenance, mechanical sweepers will be utilized in all 16 sweeping districts as weather permits, except Districts 1, 2 & 9 which are swept year-round.

Manpower and equipment are delegated and assigned to implement this program on an annual basis.

Governing Regulations

1. NPDES Permit PA0063665

Pollution Prevention

The removal of material from programmed street sweeping and leaf removal/sweeping will reduce the potential of solids and sediment loading to the City's adjacent watercourses.

BMP Documentation

The Streets Bureau personnel records the volume of sweeping material and leaves removed by collection district, for each category of sweeping, and leaf removal in general.

Work orders are created in the Lucity system.

Pollution Removal Assessment

Representative samples were collected and analyzed in order to determine a characteristic pollutant profile of the first four (4) categories of street sweeping. The Category 5 material will be determined by quantity, however sampling will not be performed since the bulk of this material is trash, paper goods, glass, etc., considered to be litter-type refuse.

Based on the analytical data and the tonnage of debris removed, the reduction of pollutant loading will be calculated on a watershed basis.

Authorization Procedure-NA

Legal Recourse for Violations-N/A

Responsible Parties for BMP

1. Streets Superintendent

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Winter Road Maintenance

- Overall winter materials usage (to include rock salt, salt brine, liquid calcium, and mix) decreased from 373,478 units in 2018/2019 to 57,132.88 units in 2019/2020.

Material	2018/2019 Winter Season	2019/2020 Winter Season
Anti Skid (Tons)	25	0
Salt Brine (Gallons)	362,486	54,400
Liquid Calcium (Gallons)	1,566	12
Mix (Anti-skid & Salt) (Tons)	1,383	0
Rock Salt (Tons)	8,018	2,720.88
TOTAL (Units)	373,478	57,132.88

Street Sweeping

- During this reporting period, the Streets Department removed 22,753.71 cubic yards (7,425.94 tons) of debris and leaves. Last reporting period, 36,929 cubic yards (8,090 tons) of debris and leaves were removed.
    - The tonnage of debris was collected by Elgin mechanical broom sweepers.

- 11,765 cubic yards of leaves were removed in the Fall. This amount is a decrease as compared to last leaf season in which 24,956 cubic yards of leaves were removed.

- The (Mechanical Broom) Street Sweeping Debris and Leaf Removal spreadsheet is included for review.

- The removals per watershed measured from the new regenerative air (RA) sweepers are as follows:
    - (TMDL) Little Cedar Creek Watershed - 1,324 cu. yds.
    - Cedar Creek Watershed - 183 cu. yds.
    - Lehigh River Watershed - 135 cu. yds.
    - Trout Creek Watershed - 41.1 cu. yds.
    - Municipal Properties - 231.18 cu. yds.

- The second Tymco regenerative air sweeper was added to the City's fleet in April 2020.

I understand that the information provided will be reviewed by PaDep and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X 

05.07.2020

BMP PROGRAM - STREET SWEEPING/LEAF REMOVAL

BETWEEN 05/01/2019 TO 4/30/2020

G	CATEGORY 1 SPRING CLEAN-UP			CATEGORY 2 REGULAR SWEEPING 04/26/2019 to 04/25/2020			CATEGORY 3 LEAF SEASON	CATEGORY 4 FINAL SWEEP			CATEGORY 5 WINTER CLEAN-UP			CATEGORY HAND-CREWS INLETS		DISTRICT TOTALS	
DISTRICTS	tons of debris		cu.yds./ sweepers	tons of debris		cu.yds./ sweepers	cubic yards	tons of debris		cu.yds./ sweepers	tons of debris		cu.yds./ sweepers	tons of debris	cu.yds./ sweepers	tons of debris	cu.yds./sweepers
Arena	0.00	*n/a*	0.00	4.05	*Special Events*	6.00	0.00	0.00	*n/a*	0.00	0.00	*n/a*	0.00	0.00	0.00	**4.05**	**6.00**
1	0.00	*Year round*	0.00	1,019.59	*Year round*	1,509.00	0.00	0.00	*Year round*	0.00	0.00	*Year round*	0.00	152.80	226.14	**1,172.39**	**1,735.14**
2	0.00	*Year round*	0.00	1,319.93	*Year round*	1,953.50	0.00	0.00	*Year round*	0.00	0.00	*Year round*	0.00	98.51	145.80	**1,418.45**	**2,099.30**
3	0.00		0.00	1,000.34		1,480.50	292.50	0.00		0.00	0.00		0.00	10.95	16.20	**1,011.28**	**1,789.20**
4	0.00		0.00	114.32		169.20	497.10	0.00		0.00	0.00		0.00	18.73	27.72	**133.05**	**694.02**
5	0.00		0.00	110.07		162.90	185.10	0.00		0.00	0.00		0.00	79.52	117.69	**189.59**	**465.69**
6	0.00		0.00	95.88		141.90	396.60	0.00		0.00	0.00		0.00	31.46	46.56	**127.34**	**585.06**
7	0.00		0.00	116.22		172.00	2,348.00	164.86		244.00	0.00		0.00	66.39	98.25	**347.47**	**2,862.25**
8	0.00		0.00	102.03		151.00	486.00	27.03		40.00	0.00		0.00	30.41	45.00	**159.46**	**722.00**
9	0.00	*Year round*	0.00	991.22	*Year round*	1,467.00	0.00	0.00	*Year round*	0.00	0.00	*Year round*	0.00	109.46	162.00	**1,100.68**	**1,629.00**
10	0.00		0.00	108.11		160.00	801.60	42.57		63.00	0.00		0.00	19.76	29.25	**170.44**	**1,053.85**
11	0.00		0.00	85.14		126.00	338.10	14.19		21.00	0.00		0.00	16.42	24.30	**115.74**	**509.40**
12	0.00		0.00	97.30		144.00	178.80	14.19		21.00	0.00		0.00	73.58	108.90	**185.07**	**452.70**
13	0.00		0.00	252.36		373.50	2,475.00	16.22		24.00	0.00		0.00	26.82	39.70	**295.41**	**2,912.20**
14	0.00		0.00	263.51		390.00	2,596.00	18.24		27.00	0.00		0.00	95.44	141.25	**377.20**	**3,154.25**
15	0.00		0.00	419.26		620.50	297.00	24.32		36.00	0.00		0.00	45.57	67.45	**489.16**	**1,020.95**
16	0.00		0.00	93.24		138.00	873.00	26.35		39.00	0.00		0.00	8.58	12.70	**128.18**	**1,062.70**
TOTAL	**0.00**		**0.00**	**6,192.57**		**9,165.00**	**11,764.80**	**347.97**		**515.00**	**0.00**		**0.00**	**884.40**	**1,308.91**	**7,424.94**	**22,753.71**

Historically used 1.48 t/cu.yd.

City of Allentown
Best Management Practices
Spill Response and Enforcement Action: Stormwater Bureau

Background

Part A, 5. (g) of the City's NPDES Permit No. 0063665 requires that the City provide a description of procedures to prevent, contain, and respond to spills that may discharge into its MS4.

For a variety of reasons such as vehicular accidents, fuel oil spills and willful dumping, pollutants could enter the stormwater system. The Stormwater Department receives spill notifications through a variety of means: calls from Allentown's Communication Center, phone calls from residents, other City departments, etc.

BMP Program Description

Upon arrive on scene, Stormwater personnel install inlet protection in order to block contaminant entry into the MS4. If the flow entered the MS4, the crew will trace and contain the spill. GIS information may be used. A vactor truck is used to vacuum the spills. If pollution reaches a waterway, the PaDEP is notified. Enforcement action may be taken.

A Spill Response/Notification Matrix demostrates the communication procedure to be followed in the event of a pollution event. It includeds all relevant departments (Fire, Stormwater Department, Bureau of Health, etc.), PaDEP and downstream agencies. The water/sewer operator uses the same matrix in the event that a sanitary sewer overflow or other spill reaches the MS4.

Nights and weekends are covered by emergency standby personnel that consist of one maintenance person and a supervisor. They are on call 24/7 for any emergency. If additional personnel are needed, the supervisor on call will notify them.

Governing Regulations

1. Water Quality Act and Clean Water Act
2. Pennsylvania Clean Streams Law
3. NPDES Permit No. 0063665

Pollution Prevention

With timely spill containment at the site, the amount of pollutant entering the stream can be minimized or eliminated.

BMP Documentation

All spill calls are logged into the City's cad system by Communications Center personnel.
Spill Response forms are filled out per event and filed on the N drive.
Work orders are created in the Lucidity system.
Spill Response/Notification Matrix

Pollution Removal Assessment

To the degree possible, each incident will include an estimate of the amount of pollutants contained.

Authorization Procedure - N/A

Legal Recourse for Violations

1. NPDES Permit No. 0063665

Responsible Parties for BMP

1. Stormwater Manager
2. MS4 Coordinator
3. Environmental Technicians

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Stormwater personnel responded to **27** spill notifications which are received through Lehigh County Communication Center, dispatch calls from Allentown Fire Department, phonecalls, emails, website contact forms, etc. Spill response forms are completed per incident and are available upon request.

Pollution originated from the following sources:

Vehicular accidents	03
Vehicle leaks	16 (01 NOV issued)
Sanitary overflows	01
Water Main Break	01
Illegal dumping	04
Other	02

DEP was notified in 4 incidents due to the potential for a waterway to be affected.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] X 5/21/2020

Spill Response: Allentown Fire Department

Background

Part A, 5. (g) of the City's NPDES Permit No. 0063665 requires that the City provide a description of procedures to prevent, contain, and respond to spills that may discharge into its MS4.

For a variety of reasons such as vehicular accidents, fuel oil spills and willful dumping, pollutants could enter the stormwater system. In the event of a spill, first arriving personnel of Allentown's Fire Department obtain as much information as possible, including identification of the product through labels, placards, etc. If necessary, the information is then relayed to the Hazardous Materials Response Unit of the Allentown Fire Department. This squad provides technical assistance, equipment and trained personnel to manage and mitigate hazardous materials emergencies, including nuclear, biological, and chemical within the City.

BMP Program Description

Allentown's Fire Department uses fuel or spill guidelines to assess the situation, establish safety and accountability responsibilities and communicate with homeowners, clean up companies, etc. On the scene, AFD personnel will:

- stop the leak if possible,
- contain the spill by catching, diking or damning
- deploy absorbents, booms, pigs, pads, pillows
- protect drains, cover drains (sanitary, storm or French)
- call Sewer or Storm Department if spill reaches respective system
- initiate clean up

After an incident has been stabilized and life, environmental or property threatening situations have been mitigated, follow up actions are taken to include involvement with local and state agencies. The responsible party is requested to take immediate and appropriate remedial action. If an environmental threat is confirmed and the responsible party cannot initiate immediate remediation, the City initiates the contracting of a certified hazardous waste contractor to accomplish clean up and disposal. The Fire Department applies Speedy Dry to gasoline and oil spills at vehicular accidents. In this case, the tow company is responsible for cleanup and disposal of the contaminated material. The Fire Department will call the Communications Center to dispatch the Streets Department for cleanup of small spills.

Governing Regulations

1. NFPA (National Fire Protection Association) codes and standards
2. Water Quality Act and Clean Water Act
3. Pennsylvania Clean Streams Law

Pollution Prevention

With timely spill containment at the site or at the stormwater outlet point, the amount of pollutant entering the stream can be minimized or eliminated.

BMP Documentation

Fire Department personnel create unit and incident reports.

Pollution Removal Assessment

To the degree possible, each incident will include an estimate of the amount of pollutants contained.

Authorization Procedure - N/A

Legal Recourse for Violations

1. Clean Streams Act

Responsible Parties for BMP

1. Fire Chief
2. Emergency Management Coordinator
3. Deputy Fire Chief
4. Assistant Chief

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Allentown Fire Department personnel responded to **100** fluid spill calls within the reporting period. The incident summary report is available upon request.

I understand that the information provided will be reviewed by PaDep and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X 5/18/2020

City of Allentown
Best Management Practices
Pesticide, Herbicide and Fertilizer Use: Parks Maintenance

Background

Part A, 5. (h) of the City's NPDES Permit No. 0063665 requires that the City have a program which includes an assessment of pesticide, herbicide, and fertilizer use which may discharge into its MS4 system.

Additionally, 40 CFR 122.26 (d) (2) (iv) (A) (6) states that "Part 2 of the application shall consist of: "A description of a program to reduce … pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."

The use of pesticides, herbicides, and fertilizers at industrial, commercial, public and residential sites has the potential to cause serious water quality problems. Improper or indiscriminate use of these chemicals results in their presence in high concentrations in stormwater runoff. This runoff may discharge directly into water courses as overland flow or may enter the watercourse by the municipal storm sewer system. Depending on the amount present, immediate effects may include death of a species. Long term effects may include reduced number of offspring in a species, or birth defects. Fertilizers may cause increased aquatic vegetation and oxygen depletion of the water body.

BMP Program Description

The City will periodically review its own policies and procedures for the use of pesticides, herbicides, and fertilizers on its own properties. These include the golf courses, park system, athletic fields, entry sites to the City, and others. Application and use of the material will conform to manufacturers' guidelines.

For fertilizers, the City will pretest soils to determine proper application rates. Application logs will be maintained for all categories.

The City will maintain personnel with certified applicators licenses. Training will be provided for technician level applicators. Contracting out of services by the City for areas like the golf courses will include requirements that the contractor satisfy the state licensing and related requirements.

Commercial applicators who are applying pesticides, herbicides, and fertilizers are required to satisfy state mandated licensing requirements. These applicators similarly are required under PA Title 7 to follow label instructions for appropriate practices and application rates. Commercial applicators must also maintain logs of their work.

Additionally, the City regulates the services of contractors hired to maintain shade trees in the public right-of-way. Part Nine, Streets, Utilities and Public Services Code, 911 Shade Trees, 911.07 Licensing System A. states that "All … spraying, fertilizing and arboricultural procedures to trees and shrubs in the public right of way shall be done only by a person holding a City Tree Surgeons License. B 1. states "A City Arborist License shall only be used issued to individuals who have passed the required examination … prepared by and administered by the International Society of Arboriculture (ISA) and are thereby certified as ISA Certified Arborists."

The City's Wet Weather Monitoring Program was established as an investigative means to determine the contribution of pollutants from representative land uses to include residential, commercial and industrial areas. Pesticide analyses is included in the list of monitored contaminants.

Governing Regulations

1. 40 CFR Part 171, Certification of Pesticide Applicators
2. 40 CFR Part 156, Labeling Requirements for Pesticides and Devices
3. Pennsylvania Title 7. Agriculture, Part V. Bureau of Plant Industry, Chapter 128. Pesticides

Pollution Prevention

Proper application rates with consideration of plant uptake rates will reduce contamination of runoff with these chemicals.

BMP Documentation

All spray records are kept on file for a minimum of three years per PA Department of Agriculture requirements.
Private applicators are also required to maintain records.
Applicator and Technician Certifications are kept on file in the Parks Office.
Each Applicator and Technician maintains their daily sheets.

Pollution Removal Assessment - N/A

Authorization Procedure

Applicators will be identified by review of State listings of certified pesticide applicators, licensed pesticide dealers, etc. If necessary, records of private applicators will be inspected.

Legal Recourse for Violations

1. 40 CFR Part 171, Certification of Pesticide Applicators
2. 40 CFR Part 156, Labeling Requirements for Pesticides and Devices
3. Pennsylvania Title 7. Agriculture, Part V. Bureau of Plant Industry, Chapter 128. Pesticides

Responsible Parties for BMP

1. Director of Parks & Recreation
2. Park Superintendent
3. Golf Course Manager

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

The Parks Department maintains the City's parks, athletic fields and landscape beds with fertilizers and selective herbicide treatments; which the amounts or types of pesticides or herbicides used in the parks has not changed since last season. Personnel follow the instructions on the manufacturers' labels and maintain application logs (bed maintenance, roadside, swales/basins, turf, and fertilizer). The records are available upon request. Applicators and technicians attend training provided by Penn State Extension. Additional training was provided through attendance at the following classes:

8/6/2019 – Pesticide Recertification Class
9/25/2019 – Industrial Right-of-Way Weed Meeting
10/10/2019 – 10/11/2019 – An Ecological Approach to Waterway Stabilization and Restoration
10/15/2019 – 2019 Lehigh Valley Watershed Conference
11/6/2019 – 11/9/2019 – TCIA Expo
12/9/2019 – Professional Pest Managers School
12/17/2019 – FSC Winter Educational Seminar
1/24/2020 – Eastern PA Turfgrass Conference
2/10/2020 – Penn Del Shade Tree Symposium
2/12/2020 – KAFMO Athletic Field Day
3/4/2020 – Pruning Woody Plants
3/9/2020 – Professional Pest Managers School

I understand that PaDEP and EPA will review the information provided in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Signature: _____ **Date:** 4/27/2020

(Department of Parks and Recreation)

City of Allentown
Best Management Practices
Pesticide, Herbicide and Fertilizer Use: Municipal Golf Course

Background

Part A, 5. (h) of the City's NPDES Permit No. 0063665 requires that the City have a program which includes an assessment of pesticide, herbicide, and fertilizer use which may discharge into its MS4 system.

Additionally, 40 CFR 122.26 (d) (2) (iv) (A) (6) states that "Part 2 of the application shall consist of: "A description of a program to reduce … pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities."

The use of pesticides, herbicides, and fertilizers at industrial, commercial, public and residential sites has the potential to cause serious water quality problems. Improper or indiscriminate use of these chemicals results in their presence in high concentrations in stormwater runoff. This runoff may discharge directly into water courses as overland flow or may enter the watercourse by the municipal storm sewer system. Depending on the amount present, immediate effects may include death of a species. Long term effects may include reduced number of offspring in a species, or birth defects. Fertilizers may cause increased aquatic vegetation and oxygen depletion of the water body.

BMP Program Description

The City will periodically review its own policies and procedures for the use of pesticides, herbicides, and fertilizers on its own properties. These include the golf courses, park system, athletic fields, entry sites to the City, and others. Application and use of the material will conform to manufacturers' guidelines.

For fertilizers, the City will pretest soils to determine proper application rates. Application logs will be maintained for all categories.

The City will maintain personnel with certified applicators licenses. Training will be provided for technician level applicators. Contracting out of services by the City for areas like the golf courses will include requirements that the contractor satisfy the state licensing and related requirements.

Commercial applicators who are applying pesticides, herbicides, and fertilizers are required to satisfy state mandated licensing requirements. These applicators similarly are required under PA Title 7 to follow label instructions for appropriate practices and application rates. Commercial applicators must also maintain logs of their work.

Additionally, the City regulates the services of contractors hired to maintain shade trees in the public right-of-way. Part Nine, Streets, Utilities and Public Services Code, 911 Shade Trees, 911.07 Licensing System A. states that "All … spraying, fertilizing and arboricultural procedures to trees and shrubs in the public right of way shall be done only by a person holding a City Tree Surgeons License. B 1. states "A City Arborist License shall only be used issued to individuals who have passed the required examination … prepared by and administered by the International Society of Arboriculture (ISA) and are thereby certified as ISA Certified Arborists."

The City's Wet Weather Monitoring Program was established as an investigative means to determine the contribution of pollutants from representative land uses to include residential, commercial and industrial areas. Pesticide analyses is included in the list of monitored contaminates.

Governing Regulations

1. 40 CFR Part 171, Certification of Pesticide Applicators
2. 40 CFR Part 156, Labeling Requirements for Pesticides and Devices
3. Pennsylvania Title 7. Agriculture, Part V. Bureau of Plant Industry, Chapter 128. Pesticides

Pollution Prevention

Proper application rates with consideration of plant uptake rates will reduce contamination of runoff with these chemicals.

BMP Documentation

All spray records are kept on file for a minimum of three years per PA Department of Agriculture requirements.
Private applicators are also required to maintain records.
Applicator and Technician Certifications are kept on file in the Parks Office.
Each Applicator and Technician maintains their daily sheets.

Pollution Removal Assessment - N/A

Authorization Procedure

Applicators will be identified by review of State listings of certified pesticide applicators, licensed pesticide dealers, etc. If necessary, records of private applicators will be inspected.

Legal Recourse for Violations

1. 40 CFR Part 171, Certification of Pesticide Applicators
2. 40 CFR Part 156, Labeling Requirements for Pesticides and Devices
3. Pennsylvania Title 7. Agriculture, Part V. Bureau of Plant Industry, Chapter 128. Pesticides

Responsible Parties for BMP

1. Director of Parks & Recreation
2. Parks Superintendent
3. Golf Course Manager
4. Superintendent

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Nutrient inputs are below target levels, and the application of micronutrients are more prevalent. We are reducing the use of granular fertilizers, using more foliar sprays. This spoon feeding approach is absorbed through the leaf tissue vs a granular soil application. (This allows for more control and reduced inputs). We continue the use of Molasses and other Bio stimulants along with the use of Civitas which is an OMRI listed product as chemical alternatives. The main focus is continued efforts on our IPM plan focusing on turf health. In conjunction we have removed noxious trees from the course resulting in better turf requiring less water and nutrient inputs.

We have increased riparian buffers and native areas in coordination with efforts from Audubon International. The course currently has pollinator beds and Milk Weed sites with the focus on becoming Audubon Certified. Soil testing is still done regularly and the addition of a weather station to the course aids us in making better turf decisions when it comes to applications.

One golf course employee is currently a certified pesticide applicator, Christopher Reverie ID#706853. From 4/26/19-8/1/1 There was a second applicator. Joel Madden. Pesticide use logs are maintained. Additional training includes the Golf Industry Show, Genesis Turfgrass Winter Conference, Northeast Pennsylvania Turf Conference.

I understand that the information provided will be reviewed by PaDep and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X  5/10/19

City of Allentown
Best Management Practices
Erosion and Sediment Control

Background

Part A, 5. (i) of the City's NPDES Permit No. 0063665 requires that the City have a comprehensive program to implement and maintain structural and non-structural best management practices to reduce pollutants in stormwater runoff from construction sites to the MS4.

Additionally, Part A, 6. (iii) requires that the City maintain an acceptable Erosion and Sediment (E&S) control program for areas, which due to topography, have a potential for significant soil erosion in accordance with 25 Pa. Code Chapter 102 …".

Prior to the start of any earthmoving activity at any given location, a developer must first prepare an Erosion and Sedimentation Control Plan for the proposed work activity. For projects having a disturbance area equal to or greater than 5,000 square feet, an E&S Control Plan must be prepared, submitted for approval to the various reviewing agencies, and implemented during the construction phase of the project.

The State Bureau of Soil and Water Conservation prepared an E&S Pollution Control Program Manual to which municipalities, developers, etc. must adhere. The development of this manual is intended by the Department of Environmental Protection to modernize and strengthen its program to minimize accelerated erosion and to prevent sediment pollution to the waters of the Commonwealth as a result of the various earthmoving activities.

BMP Program Description

The developer will be required to adhere to the latest E&S Control Measures which were established by the State's E&S control program Manual. This manual describes various temporary and permanent E&S Control measures/techniques necessary to minimize accelerated erosion and to prevent sediment pollution.

The City of Allentown, through various ordinances, also adheres to these practices and regulations. All active construction sites are inspected weekly, inactive sites are inspected monthly. Inspection forms are filled out per inspection.

Governing Regulations

1. DEP Chapter 102 (as authorized under the Federal Clean Streams Law 35 P.S.§691.202 et. seq)
2. City Ordinances 12779 § 7 and 12009
3. In conjunction to Chapter 102, the following legislation may also become involved:
    a. Flood Plain Management Act, 32 P.S.§ 679.101 et seq.
    b. Storm Water Management Act, 32 P.S. § 680.1 et. seq.
    c. Dam Safety and Encroachment Act, 32 P.S. § 693.1 et. seq.

Pollution Prevention

Incorporating E&S Control measures on all earthmoving activities will help to minimize on-site erosion and downstream sediment loadings.

BMP Documentation

Any person who is coordinating an earthmoving activity shall prepare an E&S Control Plan and Narrative for the work he intends to perform. This plan must be submitted to either or both the City and Lehigh County Conservation District Office for plan review and adequacy. Once the plan is approved, the person shall implement all required E&S control measures and have on site a plan at all times.

During construction, after a storm event, and/or upon receiving a complaint, the site will be inspected by either City and/or LCCD personnel. If inadequacies are found at the site, the person in charge of the earthmoving activity will be required to take immediate corrective actions to resolve the inadequacies.

City construction site inspection forms are saved on the appropriate drive.

Pollution Removal Assessment – N/A

Authorization Procedure

1. For very small single lot developments, only city approval will be required. For most small single lot building permits, builders will only have to adhere to LCCD's E&S Control Guidelines for single lot developments, which are referenced on a building permit during routing of the permit through the Engineering Office.

2. For large developments and subdivisions, which involve earthmoving of 1 acre or more, the developer is required to obtain approval from the LCCD office. In addition, a NPDES permit must be obtained from DEP for developments with earthmoving activities of 1 acre or more.

Legal Recourse for Violations

1. City - Any person, firm or corporation who fails neglects or refuses to comply with any of the terms or provisions of the City's Sediment and Erosion control Ordinances or any regulation or requirement pursuant hereto and authorized hereby, shall, upon conviction thereof, be subject to the fines stipulated by the Ordinance(s).

2. Lehigh County Conservation District - Any earthmoving activity found in violation of the Clean Stream Law, the Act of June 22, 1937, P.L. 1987 as amended, 35 P.S. § 691.1 et seq, and the rules and regulations promulgated thereunder give the LCCD the authority to enforce these violations.

3. Penalties for violation of the rules and regulations of the Department of Environmental Protection or any condition of any permit issued by the Department are defined in Section 602 of the Clean Streams Law of Pennsylvania. The Department could institute administrative, civil, and/or criminal proceedings under the Act.

4. City of Allentown Ordinance 13812 - Storm Sewer Ordinance.

Responsible Parties for BMP

1. Plan Review
    a. All developments: Reviewing Engineers and Zoning Officer
    b. Complex and developments disturbing 1 acre or more: PaDEP and LCCD
    c. City improvements: Engineering, Stormwater Department

2. Field Inspection and Complaints
    a. Subdivisions and Land Developments: Engineering's Inspection Department and/or LCCD for large developments.
    b. Building Permits: Building Inspections
    c. Public Works Improvement projects: Engineering's Inspection Department
    d. Improvements within the Parks System: Parks Department Management

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Lehigh County Conservation District (LCCD)

Number of E&S Plans Reviewed:	14
Number of PCSM Plans Reviewed:	11
Number of Field Inspections Conducted:	29
Number of Complaints Received:	*Unknown

*This information could not be accessed due to the Stay at Home Order during the COVID-19 pandemic.

City

Number of E&S Plans Reviewed:	27
-Minor Land Development	11
-Major Land Development	14
-Building Permits	2
Number of Active Construction Sites:	13
Number of Field Inspections Conducted:	99
Number of Complaints Received:	04

I understand that the information provided will be reviewed by PaDEP and EPA to assess compliance with the requirements of the City's MS4 NPDES permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Michael E Lichty X 05-26-2020

X Kyle A Lordat X 5/26/2020

City of Allentown
Best Management Practices
Post Construction BMP Inspections

Background

Part A, 5. (j) of the City's NPDES Permit No. 0063665 requires that preventative maintenance inspections of all stormwater management facilities be conducted on a triennial basis. Inspections, corrective action, and enforcement actions must be documented and summarized in annual progress reports.

As a result of adopting State Act 167 and local regulations, sizable land developments having a hard (impervious) surface area exceeding 10,000 square feet, unless the development is within a provisional no detention area, require Storm Water Management Facilities to offset the created increase in runoff flows. Storm Water Management Facilities, or Post-Construction BMP's, are permanent stormwater management practices and site design features which store, treat, infiltrate, or reduce the volume of runoff from development sites.

BMP Program Description

To guarantee the future operation of these drainage facilities, periodic inspection and maintenance is required. Therefore, upon the completion of these facilities, the inspection office within the City's Engineering Bureau will perform an inspection per BMP once every three years.

Governing Regulations

1. Pennsylvania State Act 167
2. City's Stormwater Management Ordinance 13192

Pollution Prevention

Repairs to a detention facility will assist in eliminating erosive conditions both at the site and downstream. Maintenance such as removal of accumulated materials will ensure adequate facility design is maintained. The assurance that a storm water management facility is properly maintained and functional will help to guarantee that a downstream water course will not become inundated and be impacted by increased flows from regularly occurring storm events. Subjecting a water course to higher runoff flow rates may increase erosive effects. To some extent, the facility will also provide a means of filtration, which is dependent on the design and type of the facility provided.

BMP Documentation

Inspectors document findings on templates per BMP type. If any deficiencies or needed repairs are observed, the owner of the facility will be given written notification and given a workable deadline to resolve the condition. If it is a City-owned facility, notice will also be served.

Pollution Removal Assessment

The quantities of materials being removed will be estimated and recorded on an independent work order or the field inspection report. Also, any repair, modifications or improvements will be listed.

Authorization Procedure – N/A

Legal Recourse for Violations

1. City Ordinance 13812

Responsible Parties for BMP

1. Initial Construction & Maintenance of On-site Treatment
    a. Environmental Engineer
    b. Utility Engineer
    c. Construction Inspectors, Public Works

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

A Stormwater Detention Facilities Inventory is maintained to include over 175 sites containing approximately 203 associated facilities (detention basins, retention ponds, underground storage pipes, etc.). Per plan review, 6 sites and 6 associated detention facilities have been proposed/added to the list during this reporting period. Construction commenced on 3 sites and 1 facility was installed.

A Stormwater Quality Facilities Inventory is maintained to include approximately 62 sites and 108 associated BMPs. Per plan review, 6 sites and 24 associated BMPs have been added to the list during this reporting period. Construction began on 2 sites, and one facility was installed.

Snout devices are not considered BMPs and are not included as part of the inventory

Inspections:

During the reporting period, 26 detention facilities and 27 water quality facilities were inspected. Additional inspections, coordinated by LCCD, were performed on over 20 sites to verify installation of snout devices. Although snout devices are not a recognized water quality practice, they do provide some pollutant and trash removal where properly installed and maintained. The City of Allentown conducted joint inspections with the LCCD to close out outstanding NPDES permits. City inspections resulted in 11 enforcement letters being sent to private property owners. Repair work was started or completed at 7 of those facilities.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Michael E Lichty X 5-28-2020

Background

Part A, 6. (i) of the City's NPDES Permit No. 0063665 requires an estimate of the reduction in loading of pollutants for all stormwater outfalls identified in Part 2 of the stormwater application.

Additionally, Part A, 6. (ii) requires that the City assess the effectiveness of its Stormwater Management Program, including street sweeping, litter control, deicing procedures, and the application of herbicides for vegetation control on stormwater discharges.

BMP Program Description

Several of the City's Best Management Practices can be considered as "removal orientated" and allow for quantification of pollutant removals. In the current report, Allentown City is not including the contribution to reduction of pollutant loadings by structural BMP's calculated using theoretical removal values as described in multiple refences available.

The removals documented in the current report are intended to demonstrate compliance with pollutant removal requirements in the Stormwater Program.

The various tables and charts included with the report present the distribution and compositions of the various materials removed through the various components of the City's pollutant reduction program over a period of five years. The development of the data and the categories are explained in the Allentown's BMP manual. The amount of materials removed is developed by converting volume collected in vacuum trucks, street sweepers, and other vehicles, to weight based on a series empirical volume to weight determinations. Concentrations of pollutants in the different streams collected were determined through chemical composition testing.

Sediment is considered the primary pollutant of concern however determination of residuals amount will, for example, include some litter-type debris[1] collected during street sweeping although only a portion is y sediment.

No removal credit has been assessed for BMPs like detention ponds, litter basket cleaning, alley sweeping, undocumented streamside litter pick-ups, or safety grates. It should be noted that the Recycling Department now does street sweeping in the alleys downtown. These sweepings are combined with the litter basket residuals; therefore, we are not taking credit for the above amounts towards pollutant removal.

Table R-4, "Theoretical Sediment Generated by Allentown Based on Land Use" lists the theoretical sediment loading based on the actual land use acreage and the runoff sediment loading. Base data for the calculation was taken from Pennsylvania Department of Environmental Protection publication "Pennsylvania's Non-Point Source Management Program". This evaluation indicates that Allentown may generate 3,994 tons of sediment per year.

The various removal strategies applied, and the effectiveness of the outputs demonstrate the importance of continuing these practices.

[1]Allentown has had Anti-Litter and Garbage Collection Ordinance in place for many years; curb side collections normally occur twice per week. Many public waste collection receptacles are distributed through center city and emptied routinely; unfortunately, as in most urban cities, littering still occurs.

Table R4: THEORETICAL SEDIMENT GENERATED BY ALLENTOWN BASED ON LAND USE

LAND USE	ACREAGE[a]	#/ACRE[b]	#	TON
Residential	3514.2	490	1,721,958	860.98
Commercial	846.8	1,300	1,100,840	550.42
Industrial	866.2	1,300	1,126,060	563.03
Wholesale/Warehousing	30.4	1,300	39,520	19.76
Transportation, Communications, & Utilities	2946.0	570	1,679,220	839.61
Public and Quasi Public	864.0	570	492,480	246.24
Parks & Recreation	1577.7	356	561,661	280.83
Agricultural & Vacant	889.8	1,424	1,267,075	633.54
TOTAL TONS				3,994.41

[a] Source Lehigh Valley Planning Commission - 2010

[b] Source "Pennsylvania's Nonpoint Source Management Program", Page 5, PaDEP, 1998

The following summary is based on a conservative estimate of the percentage of sediment in each removed category

Table R5: ESTIMATED SEDIMENT GENERATED BY ALLENTOWN BASED ON MARERIAL REMOVALS

CLEAN UP CATEGORY	%SEDIMENT	TOTAL TONS	TONS OF SEDIMENT
Spring	75%	0	-
Regular	25%	7,485	1,871
Leaves	10%	588	59
Final Fall	10%	348	35
Winter	100%	0	-
Catch Basin	100%	884	884
TOTAL			2,849

Within the boundaries of our assumptions, the amount of sediment removed demonstrates the efficiency of Allentown's Storm Water Management Program to eliminate a significant amount of pollutants from reaching the streams.

Governing Regulations

1. NPDES Permit No. 0063665

Pollution Prevention

Analyzing data obtained from City operations is a means to evaluate and improve the effectiveness of the City's MS4 program in preventing contamination from entering the waterways.

BMP Documentation

The Streets Bureau personnel records the volume of sweeping material and leaves removed by collection district, for each category of sweeping. Work orders are created in the Lucidity system. Sampling results are kept on file. Records associated with these activities are accessible and maintained in various formats.

Pollution Removal Assessment

Based on the chemical analysis data and the amount of debris removed, the reduction of pollutant loading will be calculated as a total removal and on a watershed basis.

Authorization Procedure - N/A

Legal Recourse for Violations – N/A

Responsible Parties for BMP

1. Streets Superintendent
2. Stormwater Monitoring Coordinator

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

All charts and graphs were updated with data covering the current reporting period and are included with this submittal. During this reporting period, the City removed 2,849 tons of sediment, 126 tons more than last year.

A second regenerative air sweeper was added to the City's fleet. This addition considerably increased the quantity of sediment removed.

It should be noted that a significant impact on daily operations was caused by the COVID19 virus safety measures imposed. This situation has led to attrition of these services, and consequently a reduction in the amounts of materials that would otherwise be removed.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Rodes Swope X 5/22/2020

Table R-1 Stormwater Residuals Summary Sheet - Pounds Removed from 4/26/2019 through 4/25/2020

Contaminant	Cat 1	Cat 2	Cat 3	Cat 4	Cat 5	Cat 6	Cat 7	Total lbs	Total Tons
Ammonia Nitrogen	0	1711	192	104	0	114	357	2478	1.24
CBOD (Non-Aqueous)	0	457484	95801	10408	0	19507	95580	678780	339.39
COD (Solid)	0	3409894	811489	65917	0	127010	712416	5126725	2563.36
Cyanide, total	0	0	0	1	0	1	0	1	0.00
Kjeldahl Nitrogen, total	0	14198	1105	2082	0	560	2966	20910	10.45
Organic Nitrogen, total	0	12499	902	2012	0	548	2611	18572	9.29
Oil and Grease	0	218427	33812	3816	0	14524	45635	316214	158.11
Phenolics	0	15	4	1	0	0	3	22	0.01
Phosphorus, total	0	10751	969	264	0	477	2246	14708	7.35
Aluminum, total	0	28181	167	2275	0	6843	5888	43353	21.68
Arsenic, total	0	14	0	1	0	6	3	24	0.01
Barium, total	0	674	79	63	0	73	141	1030	0.51
Beryllium, total	0	7	0	0	0	1	1	10	0.00
Cadmium, total	0	29	0	2	0	5	6	43	0.02
Cobalt, total	0	0	2	1	0	0	0	3	0.00
Chromium, total	0	233	0	16	0	40	49	338	0.17
Copper, total	0	213	231	155	0	76	44	720	0.36
Iron, total	0	28908	322	1	0	8285	6040	43555	21.78
Manganese, total	0	6190	856	175	0	542	1293	9057	4.53
Molybdenum, total	0	38	1	1	0	7	8	55	0.03
Nickel, total	0	149	7	16	0	34	31	238	0.12
Lead, total	0	142	0	200	0	46	30	418	0.21
Antimony, total	0	74	10	0	0	6	16	106	0.05
Tin, total	0	69	2	7	0	12	14	104	0.05
Thallium, total	0	0	0	9	0	3	0	12	0.01
Vanadium, total	0	42	0	8	0	32	9	91	0.05
Zinc, total	0	1021	206	377	0	301	213	2119	1.06
Total Pounds (lbs)	0	4190964	946157	87912	0	179053	875601		
Total Tons	0	2095	473	44	0	90	438		

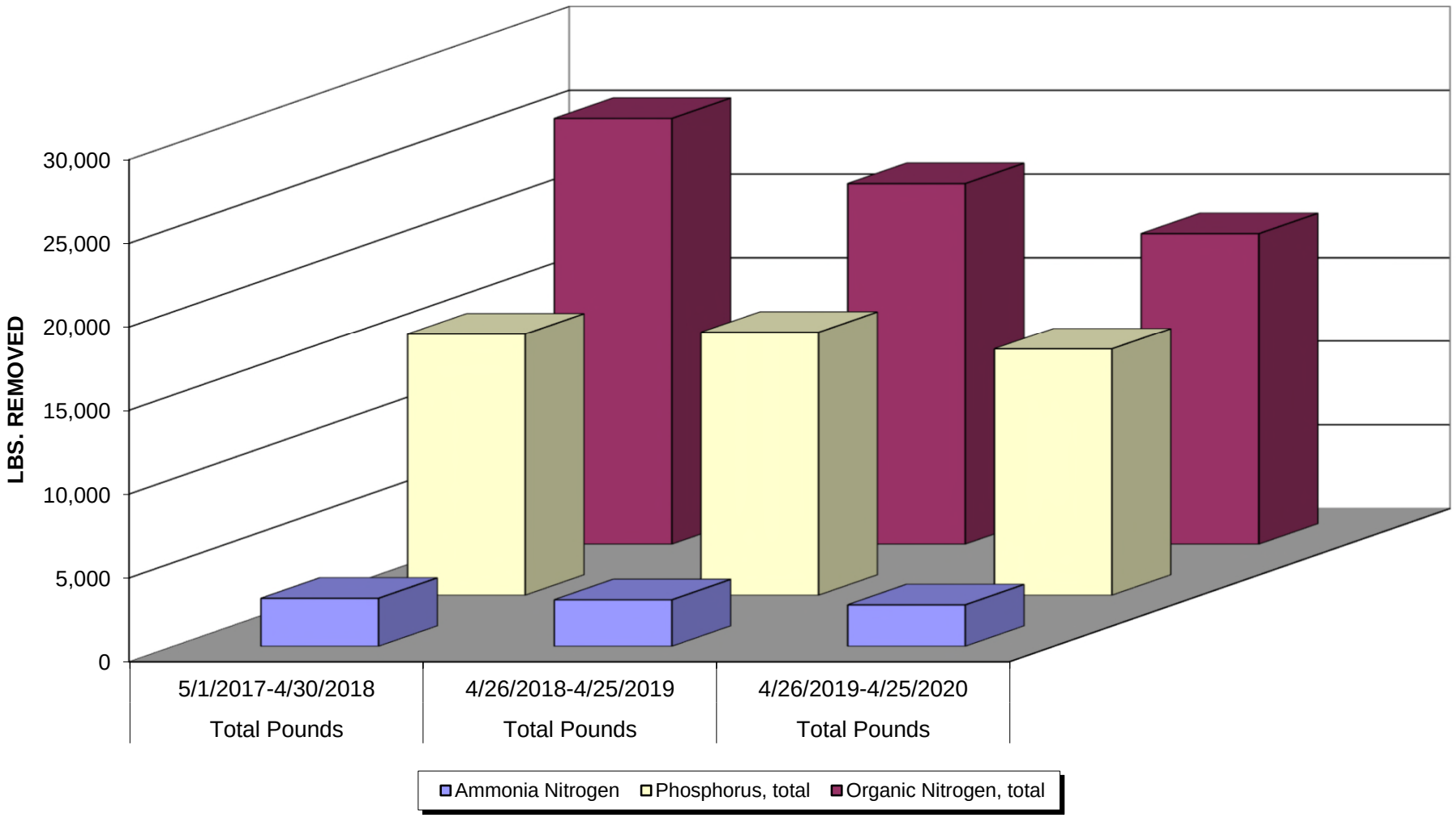
Table R-2 Stormwater Residuals Summary Sheet - Overall Pounds Removed

Contaminant	Total Pounds 5/1/2017-4/30/2018	Total Pounds 4/26/2018-4/25/2019	Total Pounds 4/26/2019-4/25/2020	AVERAGE, lb	Current Year Above Average	Current Year Above Average - Percentage	Current Year Above Last Year	Current Year Above Last Year - Percentage
Ammonia Nitrogen	2871	2780	2478	2948	-469	-15.9%	-302	-10.5%
CBOD (Non-Aqueous)	758371	824375	678780	838445	-159665	-19.0%	-145595	-19.2%
COD (Solid)	5783502	6388003	5126725	6443448	-1316722	-20.4%	-1261278	-21.8%
Cyanide, total	5	2	1	2	-1	-35.6%	-1	-10.1%
Kjeldahl Nitrogen, total	27925	24201	20910	26813	-5903	-22.0%	-3291	-11.8%
Organic Nitrogen, total	25447	21560	18572	23998	-5426	-22.6%	-2987	-11.7%
Oil and Grease	366325	360935	316214	379482	-63267	-16.7%	-44720	-12.2%
Phenolics	27	29	22	30	-8	-25.3%	-7	-26.1%
Phosphorus, total	15609	15714	14708	16907	-2199	-13.0%	-1006	-6.4%
Aluminum, total	79422	42980	43353	53995	-10642	-19.7%	373	0.5%
Arsenic, total	60	24	24	34	-9	-27.6%	0	0.4%
Barium, total	1379	1180	1030	1271	-241	-19.0%	-150	-10.9%
Beryllium, total	15	10	10	12	-2	-15.3%	0	2.2%
Cadmium, total	66	42	43	50	-7	-14.6%	1	1.3%
Cobalt, total	6	8	3	7	-4	-53.4%	-5	-79.1%
Chromium, total	703	337	338	465	-127	-27.3%	1	0.2%
Copper, total	1359	1317	720	1200	-480	-40.0%	-598	-44.0%
Iron, total	97199	40896	43555	57927	-14372	-24.8%	2659	2.7%
Manganese, total	11816	10223	9057	11137	-2080	-18.7%	-1166	-9.9%
Molybdenum, total	91	54	55	67	-11	-17.2%	2	1.7%
Nickel, total	440	254	238	309	-71	-23.0%	-16	-3.7%
Lead, total	970	648	418	699	-281	-40.2%	-231	-23.8%
Antimony, total	152	117	106	134	-28	-21.2%	-11	-7.5%
Tin, total	172	109	104	130	-26	-19.9%	-4	-2.5%
Thallium, total	31	22	12	20	-8	-41.7%	-10	-33.0%
Vanadium, total	270	94	91	132	-41	-30.9%	-3	-1.1%
Zinc, total	3747	2826	2119	2919	-800	-27.4%	-707	-18.9%

Stormwater Program - Summary of Residuals Collected

		Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7
	All Categories	Spring Cleanup	Regular Cleanup	Leaves	Final Fall Cleanup	Winter Cleanup	Catch Basin Solids	REGEN Sweeper
	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)
Entire Program								
7/1/1998 - Present	197553	7442	127323	25494	14564	7035	15366	329
		Category 1	Category 2	Category 3	Category 4	Category 5	Category 6	Category 7
	All Categories	Spring Cleanup	Regular Cleanup	Leaves	Final Fall Cleanup	Winter Cleanup	Catch Basin Solids	REGEN Sweeper
Report Year	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)	(tons removed)
7/1/1998-6/30/1999	5446	346	3566	805	574	155	Not Available	Not Available
7/1/1999-6/30/2000	8007	774	4926	744	1438	52	73	Not Available
7/1/2000-6/30/2001	8809	542	6551	801	553	237	126	Not Available
7/1/2001-6/30/2002	11081	422	7472	939	1249	737	261	Not Available
7/1/2002-6/30/2003	11863	616	8246	1537	1108	180	176	Not Available
5/1/2003-4/30/2004	12505	624	8248	1013	1780	626	214	Not Available
5/1/2004-4/30/2005	10223	310	7216	1124	1495	52	26	Not Available
5/1/2005-4/30/2006	11197	227	7322	1471	1685	461	31	Not Available
5/1/2006-4/30/2007	3637	7	2663	920	40	4	4	Not Available
5/1/2007-4/30/2008	4577	14	3140	1241	109	45	28	Not Available
5/1/2008-4/30/2009	4909	21	3616	1187	27	47	10	Not Available
5/1/2009-4/30/2010	4512	18	3042	1384	52	6	10	Not Available
5/1/2010-4/30/2011	4148	0	2725	1337	40	42	5	Not Available
5/1/2011-4/30/2012	3606	4	2741	767	65	24	5	Not Available
5/1/2012-4/30/2013	8959	231	6940	460	784	537	7	Not Available
5/1/2013-4/30/2014	19653	0	9109	2130	353	2256	5805	Not Available
5/1/2014-4/30/2015	14016	0	8985	1670	743	948	1670	Not Available
5/1/2015-4/30/2016	10513	293	7203	1421	489	0	1108	Not Available
5/1/2016-4/30/2017	16344	1498	10218	1853	359	0	2416	Not Available
5/1/2017-4/30/2018	13427	1466	6843	988	845	584	2702	Not Available
4/26/2018-4/25/2019	10122	30	6550	1703	780	43	687	329
4/26/2019-4/25/2020	9305	0	6191	588	348	0	884	1294
Average	9,402.6	338.3	6,068.8	1,185.5	677.8	319.8	773.8	811.5
Current Year Above- Below Average	-97	-338	122	-597	-330	-320	111	482
Current Year Above- Below Average Percentage	-1.0%	-100.0%	2.0%	-50.4%	-48.7%	-100.0%	14.3%	59.4%
Current Year Above- Below Previous Year	-816.9	-30.5	-358.7	-1114.5	-431.8	-42.6	197.0	964.1
rrent Year Above- Below Previous Year Percenta	-8.1%	-100.0%	-5.5%	-65.5%	-55.4%	-100.0%	28.7%	292.7%

ANNUAL NUTRIENT REMOVALS



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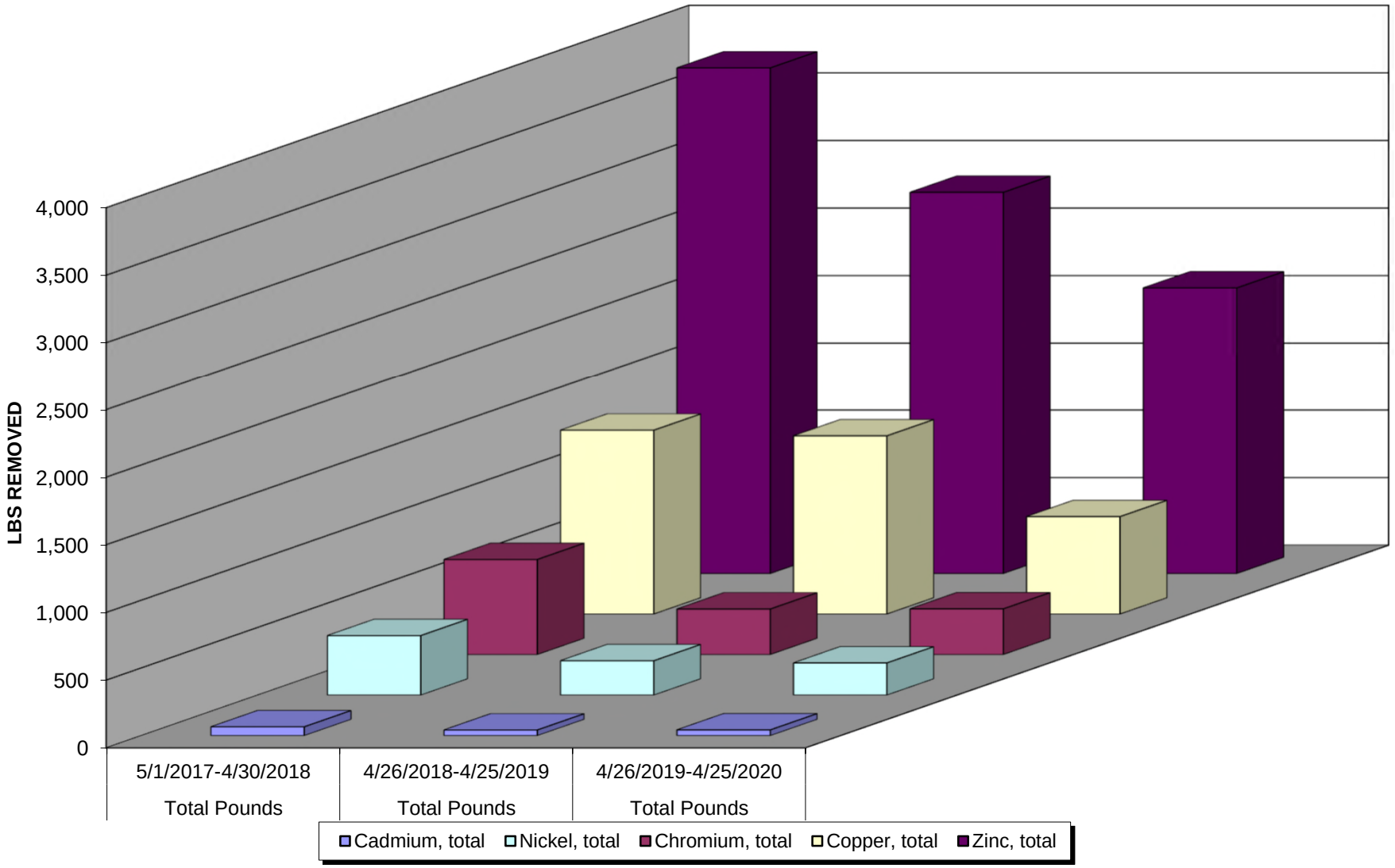
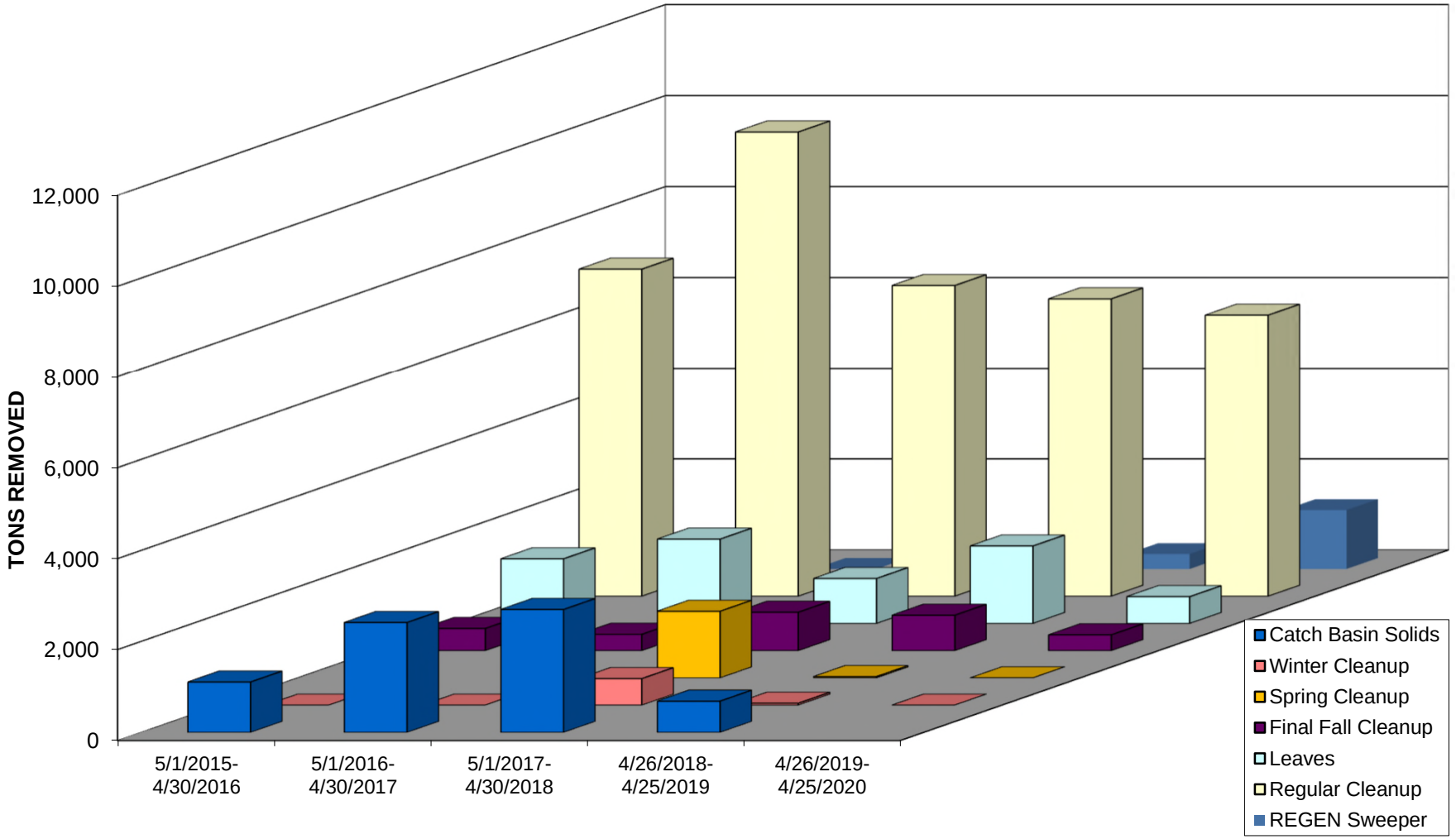
ANNUAL METALS REMOVALS



TOTAL RESIDUALS REMOVALS



City of Allentown
Best Management Practices
Litter Basket Maintenance Program

Background

Part A, 6. (ii) of the City's NPDES Permit No. 0063665 requires that the City assess the effectiveness of its Stormwater Management Program, including street sweeping, litter control, deicing procedures, and the application of herbicides for vegetation control.

Control of litter throughout Allentown that is carelessly discarded has always been a concern. Litter receptacles for both trash and recycling are available at various locations throughout the City. The emptying of the public space litter receptacles is performed by staff from the Bureau of Recycling and Solid Waste. The Bureau has several work crews that are collecting the trash and emptying the receptacles from the public space units daily.

The City has various sizes and styles of litter receptacles in public spaces which include the heavily utilized pedestrian sidewalks in the downtown areas of the Central Business District and the Adjacent Neighborhood District. Receptacles have also been placed around schools and parks in all parts of the city.

The Bureau of Recycling and Solid Waste has also purchased trash and recycling receptacles for the Parks Department.

BMP Program Description

Dedicated personnel and equipment have been budgeted in the Bureau of Recycling and Solid Waste to focus on availability of litter receptacles, litter basket emptying, collected litter disposal, and associated documentation. If receptacles are located strategically and emptied routinely, citizens are much more likely to comply with litter control.

Governing Regulations

1. City Ordinance #13008, as amended, addresses certain prohibitions regarding litter and establishes fines for littering violations.

Pollution Prevention

This program is specifically established to limit the amount of litter that will be needlessly discarded onto sidewalks and streets and eventually flow into storm drains.

BMP Documentation

The Bureau of Recycling and Solid Waste will track and record removal statistics.

Pollution Removal Assessment

Pollution Removal Assessment - Volume of litter removed will be documented and can be evaluated annually. Although not scientific, visual assessments will be forthcoming from citizens and businesses.

Authorization Procedure-N/A

Legal Recourse for Violations

1. Ordinance 13008, as amended.

Responsible Parties for BMP

1. Manager, Bureau of Recycling and Solid Waste

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

The tables below shows the following information:

- Total Tons of Litter Collected (Basket Weight)
- Total Tons of Single Stream Recycling Collected
- Total Number of Receptacles Emptied (# of Baskets Emptied)

The totals indicated in the tables below show an increase in the frequency of collection but a decrease in overall tonnage.

Detailed Statistics for May 2018 through April 2019

2018	Basket Weight	Single Stream Recycling Collected	# of Basket Emptied		2019	Basket Weight	Single Stream Recycling Collected	# of Basket Emptied
January					January	69,560	7,980	5,457
February					February	41,660	3,760	5,239
March					March	65,880	4,180	5,569
April					April	77,580	6,280	5,741
May	115,420	8,320	6,121		May			
June	72,380	8,560	6,177		June			
July	74,120	7,320	5,896		July			
August	83,040	3,860	5,805		August			
September	81,420	6,640	4,660		September			
October	63,860	5,440	6,276		October			
November	74,740	5,740	4,965		November			
December	53,580	3,340	4,959		December			
LBS	618,560	49,220	44,859		LBS	254,680	22,200	22,006
Tons	309.3	24.6			Tons	127.3	11.1	

5/1/2018 to 4/30/2019	Basket Weight (Tons)	Single Stream Recycling Collected (Tons)	# of Basket Emptied
	437	36	66,865

Detailed Statistics for May 2019 through April 2020

2019	Basket Weight	Single Stream Recycling Collected	# of Total Units Emptied		2020	Basket Weight	# Single Stream Recycling Collected	# of Total Units Emptied
January					January	53,700	3,680	5,480
February					February	62,740	4,660	4,960
March					March	76,700	3,640	5,647
April					April	31,580	2,160	4,466
May	97,000	4,520	6,330		May			
June	73,080	6,400	5,972		June			
July	67,640	7,380	6,506		July			
August	66,060	5,280	6,656		August			
September	66,620	6,900	5,640		September			
October	82,840	7,880	6,473		October			
November	59,800	5,000	5,366		November			
December	66,180	1,420	5,448		December			
LBS	579,220	44,780	48,391		LBS	224,720	14,140	20,553
Tons	289.6	22.4			Tons	112.4	7.1	

5/1/2019 to 4/30/2020	Basket Weight (Tons)	Single Stream Recycling Collected (Tons)	# of Basket Emptied
	402	29	68,944

I understand that the information provided will be reviewed by PaDep and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X Jane E Sammon 5/19/2020

City of Allentown
Best Management Practices
Litter Maintenance Services Contract

Background

The control of litter throughout Allentown that is carelessly discarded has always been a concern. Any litter which is not properly disposed may end up on the ground and will be carried to storm drains during precipitation events unless it is picked up by hand or by the City's street sweeping program.

In 2014, the City of Allentown, Bureau of Recycling and Solid Waste, sent out a Request for Proposal and entered into a contract with the Allentown Rescue Mission — Clean Team, LLC for maintenance services for the Central Business District, Adjacent Neighborhood District, and Special Projects. The contract term began on January 18, 2015 for one (1) year and was extended until the new Request for Proposals was issued in 2017 and the new executed contract began on March 6, 2018. The awarded vendor was again, the Allentown Rescue Mission – Clean Team, LLC.

The City is committed to the Litter Maintenance Program and under the new contract, the base term is for three years with the option to extend the contract for three additional one-year terms.

The Clean Team is comprised of formerly homeless men who have successfully graduated the Rescue Mission's in-house life skills program. The Clean Team is transitional employment and the men are employed on a part-time basis until full-time employment and housing in the community is obtained.

BMP Program Description

The intent of the work is to clean up litter, debris, trash, phone books, newspapers/advertisements, etc. on and along City sidewalks and pedestrian public right-of-ways. The Contractor supplies uniformed staff, rolling carts and equipment to pick up litter and keep separate trash and recycling. At the end of each day, the Clean Team brings the bags of trash to the designated dumpster at the Bureau Offices and the recyclables are taken next door to the Allentown Recycling Drop-off Center.

The City identified and invested in litter prevention and cleanup programs as a main priority of its Public Works Department and contracts for supplemental services.

Governing Regulations

1. Contract No. C21-000025 / RFP 2017-21

Pollution Prevention

Discarded litter could potentially flow into storm drains and this program is specifically designed to reduce the amount of litter on sidewalks and streets thereby reducing the flow of litter into storm drains.

BMP Documentation

The Bureau of Recycling and Solid Waste tracks and records removal statistics.

Pollution Removal Assessment

Weight of litter removed is documented and can be evaluated annually.

Authorization Procedure - N/A

Legal Recourse for Violations – N/A

Responsible Parties for BMP

1. Manager, Bureau of Recycling and Solid Waste

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

As stated above, the City entered into a new contract with the Clean Team that began in March of 2018 and continues for three years.

Under the new contract, the cleaning area was expanded to include:

- The Central Business District includes the area defined by both sides of 4th to 12th Streets and both sides of Linden to Walnut Streets, including all side streets and alleys off Hamilton Street, with Hamilton Street as the top priority. The project area will also include the Arts Park walkways, and including the steps and passageway bordering the Sovereign Building.
- The Adjacent Neighborhood District which includes the area defined by both sides of Linden to Tilghman Streets and both sides of 4th to 12th Streets.
- The 7th Street "corridor/entranceway" is a major street from north Allentown directly to the Center City monument. 7th Street, from Linden to Tilghman Streets will receive daily cleaning.

The Clean Team tracks the amount of litter picked up off the City streets and sidewalks in the areas described above. As the Clean Team staff is working to pick up the litter, the men are separating recyclable cans, bottles, paper and cardboard from "regular" trash such as cigarette butts, coffee cups, food bags, etc. The Clean Team places the recyclables in clear bags and the trash in black plastic bags.

The bags are left on a corner with identifying "Clean Team" stickers and the crew leader collects the bags at the end of each day. The crew leader counts the number of trash and recycling bags and the data is entered into a monthly spreadsheet that is shown below and provided to the City.

The bags of trash are placed in a dedicated dumpster and the Bureau transports the trash to a transfer station where it is weighed on a certified weight scale and emptied. The weight of each load is also recorded on the spreadsheet.

The bags of recyclables are taken to the Allentown Recycling Drop-Off Center and the weight of those bags are estimated at 20 pounds per bag.

The spreadsheet below shows the amount of litter, both recyclables and trash, that was hand-picked-up off Allentown sidewalks and streets by the Clean Team in the area defined above for this year's reporting period. Also included, is the spreadsheet from the previous reporting period for comparison.

The significant change is the requirement the City put in the 2017 Contract to require separation of recyclable materials. As evident for the last two years, the City is benefitting by recycling over 50% of the litter picked up from Allentown streets and sidewalks.

It is noteworthy to point out the statistics for April 2020. Due to COVID19, the City suspended its street sweeping and post No Parking ticket program in Center City. The litter that would have been picked up by the sweepers in April, were instead picked up by the Clean Team. This is reflected in the monthly totals.

Allentown continues its commitment to this program and for the cleanliness of Allentown.

May 2018 to April 2019	# bags of recycling City Contract	# bags of recycling Century Fund	Total # of Recycling Bags	lbs. Recycled (Estimated Weight of 20 lbs./bag)	Tons Recycled	# bags of trash City Contract	# bags of trash Century Fund	Total # of Trash Bags (Litter Removed)	lbs. of trash disposed	Tons of Trash Disposed
May	242	121	363	7,260	3.63	397	181	578	2,360	1.18
May (2)	0	0	0	0	0.00	0	0	0	3,200	1.6
June	263	89	352	7,040	3.52	388	140	528	4,540	2.27
June (2)	0	0	0	0	0.00	0	0	0	3,420	1.71
July	318	96	414	8,280	4.14	401	119	520	3,460	1.73
August	273	72	345	6,900	3.45	362	93	455	7,500	3.75
September	183	66	249	4,980	2.49	297	96	393	3,520	1.76
October	233	64	297	5,940	2.97	391	107	498	0	
November									2,780	1.39
November (2)					0.00				2,220	1.11
November (3)	219	68	287	5,740	2.87	344	109	453		
December	203	99	302	6,040	3.02	374	203	577	4,000	2
January	195	138	333	6,660	3.33	367	193	560	1,920	0.96
January (2)									3,000	1.5
February	185	69	254	5,080	2.54	268	105	373	4,120	2.06
March	210	101	311	6220	3.11	351	141	492	3,940	1.97
April	164	51	215	4300	2.15	354	164	518	2,500	1.25
April (2)									3,000	1.5
Totals	2,688	1,034	3,722	74,440	37.22	4,294	1,651	5,945	55,480	27.74

	In Pounds	In Tons	
Total Recycled	74,440	37.22	57%
Total Litter/Trash	55,480	27.74	43%
Combined Total	129,920	64.96	

May 2019 to April 2020	# bags of recycling City Contract	# bags of recycling Century Fund	Total # of Recycling Bags	lbs. Recycled (Estimated Weight of 20 lbs./bag)	Tons Recycled	# bags of trash City Contract	# bags of trash Century Fund	Total # of Trash Bags (Litter Removed)	lbs. of trash disposed	Tons of Trash Disposed
May	183	59	242	4,840	2.42	335	183	518	4,060	2.03
June	189	47	236	4,720	2.36	343	74	417	4,300	2.15
July	184	40	224	4,480	2.24	368	86	454	3,320	1.66
July (2)									2,460	1.23
August	183	46	229	4,580	2.29	382	83	465	2,680	1.34
August (2)									1,860	0.93
September	170	53	223	4,460	2.23	330	72	402	2,520	1.26
October	199	53	252	5,040	2.52	394	122	516	2,840	1.42
November	161	46	207	4,140	2.07	341	94	435	3,440	1.72
November (2)									1,960	0.98
December	197	69	266	5,320	2.66	403	111	514	4,340	2.17
January	196	69	265	5,300	2.65	448	112	560	2,480	1.24
January (2)			0	0	0.00			0	1,980	0.99
February	161	64	225	4,500	2.25	363	97	460	2,800	1.4
February (2)			0	0	0.00			0	2,660	1.33
March	130	74	204	4,080	2.04	469	115	584	2,600	1.3
March (2)			0	0	0.00			0	3,900	1.95
April	339	139	478	9,560	4.78	544	151	695	2,460	1.23
April (2)			0	0	0.00			0	4,220	2.11
Totals	2,292	759	3,051	61,020	30.51	4,720	1,300	6,020	56,880	28.44

	In Pounds	In Tons	
Total Recycled	61,020	30.51	52%
Total Litter/Trash	56,880	28.44	48%
Combined Total	117,900	58.95	

I understand that the information provided will be reviewed by PaDep and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X Ann F Summers 5/19/2020

City of Allentown
Best Management Practices
SWEEP (Solid Waste Education and Enforcement Program)

Background

Like many urban areas in Pennsylvania, the City of Allentown has experienced various neighborhood problems including litter issues in various sections of the City, and a more concentrated issue in the downtown neighborhoods surrounding the Center City business and government district. In the City's 2003 Citizen Satisfaction Survey, Center City residents identified litter (tied with crime) as the "single most important issue that should be addressed by the city government."

Research confirms a relationship between urban litter, crime and neighborhood decline. Litter can present health, fire and safety hazards. Litter is a costly problem with many intangible costs beyond the expense of cleanup. A clean city attracts residents, businesses and shoppers and spurs economic development. A dirty city depresses property values, attracts crime and creates the perception that crime and disorder is tolerated. Litter attracts more litter creating a downward spiral in a neighborhood.

BMP Program Description

The goal of the SWEEP program (Solid Waste Education and Enforcement Program) is to provide pro-active, education and field enforcement of Allentown's litter and trash ordinances to improve cleanliness. Allentown began the pilot program in May 2005 in the Weed and Seed area with two officers and expanded the program citywide in 2006. There are currently four SWEEP officers. The goal of the program is increased compliance and improved cleanliness.

A violation ticket, similar to a parking ticket, is a key component of the program. Tickets can be written for any violation of the trash and litter-related ordinances such as littering, littered properties, putting trash out early, uncontained trash, not recycling, illegal dumping and not removing graffiti. The SWEEP ticket enables officers to write tickets in less time than a citation. Officers do not have to appear in District Court unless tickets are not paid and citations are issued.

Governing Regulations

1. NPDES Permit PA0063665

Pollution Prevention

This program is established to limit the amount of litter that will be needlessly discarded onto sidewalks and streets and eventually flow into storm drains and waterways.

BMP Documentation

The Bureau of Recycling and Solid Waste tracks and records the types of SWEEP tickets issued.

Pollution Removal Assessment-N/A

Authorization Procedure-N/A

Legal Recourse for Violations

1. City Ordinances 12703, 13008, 12959, 13219 all as amended, which address certain prohibitions regarding litter, illegal dumping and establishes fines.

Responsible Parties for BMP

1. Manager, Bureau of Recycling and Solid Waste
2. SWEEP and Animal Control Manager

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

There are several notable changes since last year's report that have had significant impacts and an overall decrease in enforcement and the issuance of ordinance violation tickets.

While the SWEEP Program has four SWEEP Officer positions, the Program operated with only three officers from October 4, 2019 to February 22, 2020. This was due to a vacancy and until the fourth SWEEP Officer was hired.

However, due to COVID19, all four of the SWEEP Officers were deemed essential staff but not critical employees. This resulted in having no SWEEP Officers working their regular duties during the period of March 30 to April 20 when only one SWEEP Officer returned to duty.

Another change since last year and due to COVID19 was the elimination of overtime for the weekend enforcement of trash set out early for collection in the Sunday night collection zone. By ordinance, residents may not place their items out for collection before 5 pm on the night of collection. Over time, residents in the Sunday night collection zone began placing their bags of trash and recycling out early Sunday morning and in some cases, on Saturday. The longer trash and recycling is out on the sidewalk, the more potential there is for bags to be torn open by animals, cans to spill and create a litter problem. This litter along the sidewalk or curbline could potentially be washed into the stormwater system when it rains.

The SWEEP Officers performed weekend enforcement in the fall of 2019, but the March – April overtime was eliminated by the Administration for financial reasons due to COVID19. This affected the Sunday overtime schedule where one or two officers would work for several hours. The result was no enforcement of trash out early violations in Center City. These circumstances have contributed to a decrease in enforcement.

The City's contracted hauler suspended bulk trash collection of furniture, carpeting, etc. during COVID19 which was effective March 20 through May 12. This resulted in numerous instances of illegal dumping. Upon the return of the first SWEEP Officer on April 20, the officer had to concentrate enforcement efforts on bulk trash items left on the sidewalks and was unable to perform regular duties. Warnings were sent to residents in lieu of tickets since the City felt that many individuals were without income during this time. This also resulted in decreased enforcement actions and violation tickets issued to property owners.

These factors led to a 25% decrease in overall tickets issued during the same time period last year. The table below illustrates the number of tickets issued for each violation type and a comparison of the two time periods.

SWEEP Tickets Summary of Litter Related Violations	April 26, 2018 to April 25, 2019 Total by Violation Type	April 26, 2019 to April 25, 2020 Total by Violation Type
Accumulation of litter on property	69	56
Accumulation of trash/debris on property	1239	1069
Exceeding trash limits	78	49
Illegal Dumping	57	33
Litter Accumulation - property	1234	758
Litter Accumulation - sidewalk area	263	159
Littered dumpster/trash/recycling area	27	35
Littering	20	30
Littering from vehicle - thrown	1	4
Littering from vehicle - unsecured	0	0
Sweeping litter into street/storm water inlet	1	2
Trash / Recycling or Bulk Item out wrong day	428	445
Trash / Recycling out loose / messy	32	22
Trash / Recycling: Improper set out location	3	70
Trash cleanout: not contained	8	8
Trash cleanout: out early for collection	15	20
Trash in boxes	47	65
Trash/Recycling out prior to 5:00 pm	1438	1131
Litter Deposited in Storm Sewer / Street	1	1
TOTALS	**4,961**	**3,957**
Percentage Increase over last year	**-20%**	

I understand that the information provided will be reviewed by PaDep and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X Ann E Saurman 5/19/2020

City of Allentown
Best Management Practices
Stormwater Management Program Plan (SWMPP) Update

Background

Part A 8. c. (ii) of the City's NPDES Permit No. 0063665 requires that Annual Progress Reports include proposed changes to the City's storm water management program as required in Part A (5).

In 1993, the City submitted an application for coverage, as required under the 1990 Federal Regulations for communities greater than 100,000 population (based on the 1990 Census), outlining various best practices for implementation. This 1993 Program Plan along with the water quality monitoring protocols are in force today. The City has the responsibility and the opportunity to adjust the program plan as conditions change.

BMP Program Description

The SWMPP aligns current Best Management Practices (BMPs) with corresponding permit requirements. The plan outlines: each BMP with responsible entity, measure of effectiveness, and reporting requirement, if applicable. BMPs are continually assessed to ensure the success of the Stormwater Management Program.

Governing Regulations

1. Title 40 Code of Federal Regulations
2. NPDES Permit No. 0063665

BMP Documentation

The SWMPP is available for review on site or upon request. Changes are submitted by reference in Annual Progress Reports, as required. Supporting documentation is maintained and available for review.

Responsible Parties for BMP

The Stormwater Bureau under the Public Works Department is the primary administrator of the City's Stormwater Management Program. The SWMPP was developed through the engagement of all areas of City government which provide oversight, regulation, operation, and permit compliance activities.

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

This Stormwater Management Program Plan, dated May 2020, is an update of the existing document, initially developed in 1993, which has undergone minor edits over the years. The updated plan reflects current program activities and is based on negotiations with PaDEP in 2018-19.

The updated SWMPP is attached.

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City of Allentown, Pennsylvania

Municipal Separate Storm Sewer System (MS4)

Stormwater Management Program Plan (SWMPP)

MS4 NPDES Permit PA0063665

May 2020

Table of Contents

1.0 Introduction

1.1 MS4 Overview

The City of Allentown (the City), located in Lehigh County, is the third largest city in the Commonwealth of Pennsylvania. The City encompasses 18 square miles and has a population of 121,283 (2017). The region is experiencing growth as areas east of the City are impacted by improved transportation access from northern New Jersey, New York City, and Philadelphia metro areas. Since 2000, the population in Allentown has increased by nearly 14 percent. The Lehigh Valley Planning Commission predicts a growth of an additional 15,000 citizens by 2040. As described in the Hazard Risk Management Plan for the region, the Jordan Creek and its tributary, the Little Lehigh Creek, join within the city limits and empty into the Lehigh River which is a major tributary in the Delaware River Watershed Basin. Other waterways which flow through the City include the Cedar Creek and Little Cedar Creek, as part of the Little Lehigh Watershed which is a primary source of drinking water for the City and surrounding municipalities. Two branches of Trout Creek join the Little Lehigh Creek downstream of the water filtration plant. Other bodies of water within the city limits include Lake Muhlenberg in Cedar Creek Parkway and a pond in Trexler Park.

The City stormwater drainage system is regulated as a Municipal Separate Storm Sewer System (MS4) through the National Pollutant Discharge Elimination System (NPDES) regulations issued by the Environmental Protection Agency in 1990. In the past, the management of stormwater services was under the leadership of the City's Bureau of Water Resources. In 2013, the City executed a long-term lease of the potable water and sanitary sewer infrastructure to the Lehigh County Authority which included transferal of staff. Stormwater programs and the drainage infrastructure along with the water quality discharge permit, referred to as an MS4 Phase I permit, were retained by the City. The City established a Stormwater Bureau within the Public Works (PW) Department, identifying 19 positions retained after the separation of the Water Resource Bureau, as staff assigned to manage and implement services. In 2017, the number of positions assigned increased by one, through the transfer of a position from the Office of Compliance in PW to the Stormwater Bureau (MS4 Coordinator).

The stormwater infrastructure includes pipe (343 miles), swales, curb/gutter, best management practices (BMPs) such as rain gardens, detention basins, and other collection and conveyance components. The inventory of system components includes 284 outfalls discharging stormwater runoff to receiving waters. The City maintains an inventory of the physical infrastructure which has an estimated replacement value of $484 million. As a general rule, the public works industry accepted, for pipe and conveyance assets, an estimated useful life of 100 years assuming consistent operational maintenance and rehabilitation.

1.2 MS4 Permit History

In 1993, the City submitted an application for coverage, as required under the 1990 Federal Regulations for communities greater than 100,000 population (based on the 1990 Census), outlining various best practices for implementation. This 1993 Program Plan along with the water quality monitoring protocols are in force today. The City has the responsibility and the opportunity to adjust the program plan as conditions change and the commitment for today's best practices requires that the City update the program Plan. The Permit Program Plan is used by EPA and DEP to evaluate compliance. An out of date Plan can create risk for the City.

Pennsylvania Department of Environmental Protection (PADEP) is delegated the authority to issue and enforce the stormwater permits. The City's current permit was issued in 2004 for a period of five years. It has been extended through administrative action by PADEP and has been enforceable for the past 11 years without major rewrite or updates.

The City's permit status and City compliance activities were reviewed by EPA Region 3 in December 2014. An inspection included a review of annual reports, the Program Plan, and other documentation of the actions undertaken and ongoing as compared to permit requirements. In-field site inspections occurred as well, to determine if the City is implementing policies, procedures and enforcement strategies required by the permit.

The permit compliance inspection process provided the City the opportunity to respond to findings, statements and documentation prepared by EPA inspectors, which occurred by letter from the City dated September 25, 2015. EPA reviewed the additional supporting documentation provided in the September 2015 letter and determined if an enforcement action is required such as an Administrative Order of Consent, fines, required corrective actions, and/or legal sanctions. In May 2018, a settlement agreement was reached between the City and EPA. The City responded to EPA's findings report by undertaking corrective action to improve the Stormwater Management Program.

1.3 City Organization and Legal Authority

The delivery of stormwater services is primarily through the staff and resources within the Public Works (PW) Department. In 2013, with the lease of the water resource operations for potable water and sewer to the Lehigh County Authority, the responsibilities for stormwater management were formally established as a Bureau within Public Works. A separate budget within the General Fund was established in FY15 which identified the resources, staff and general materials/expenses authorized. In FY17, this account included 20 staff positions.

Other services and operations, organizational support from other divisions or departments as well as external agencies that affect directly or indirectly the stormwater management program include:

- Geographic Information Systems (GIS) (inventory, technical support)
- PW Engineering Bureau (engineering and design services, construction management)
- Finance Department (accounting, purchasing, financial planning)
- Streets Operations (field services, inspections support)
- Bureau of Planning and Zoning (land development regulation)
- Bureau of Building Standards and Safety (building permit process and site inspections outside of public right-of-way and within the parcel)
- Lehigh County Conservation District (erosion and sediment regulatory program for land disturbances over 1 acre and post construction plan review/regulatory compliance)
- Lehigh Valley Planning Commission (Act 167 compliance)

1.4 Stormwater Program Funding

In January 2018, the City implemented a Stormwater Utility fee to fund all elements of stormwater management including compliance with the MS4 permit. Each budget year, a review is completed of the current accomplishments and funding status of major initiatives within the compliance program, such as the establishment of appropriate best management practices for operation of the MS4 system, oversight of the industries within the City, outfall inspections, and other key permit components. The Utility generates approximately $5.6 million annually for the stormwater program and infrastructure operation.

1.5 SWMPP Updates and Modifications

This Stormwater Management Program Plan, May 2020, is an update of the existing document, initially developed in 1993, which has undergone minor edits over the years. This SWMPP was developed through the engagement of all areas of City government who provide oversight, regulation, operation, and permit compliance activities and reflects program activities based on negotiations with PaDEP in 2018-19.

2.0 Stormwater Management Program Elements

The Stormwater Management Program Plan is aligned with each section of the current, effective permit.

2.1 Source Identification

2.1.1 Permit Reference: Part A 3.

During the period beginning on the effective date and lasting through the expiration date of the permit:

(a) The City shall compile and submit any new source identification information, including the identification and mapping of storm sewer system outfalls, and significant changes affecting the City's separate storm system due to: land use activities, population estimates, runoff coefficients, major structural controls, landfills, publicly owned lands, and industries in the annual reports to the Department pursuance to Part A(8)(c) "Annual Progress Report" of this permit.

(b) The City shall provide, no later than 3 months after the issuance of this permit, an inventory of industries organized by watershed with facility name, address and description (which best reflects the principle products or services provided by each facility) which may discharge to the MS4 and submit this inventory with annual reports to the Department pursuance to Part A(8)(c) "Annual Progress Reports" of this permit.

2.1.2 Source Identification BMPs - Current Permit Cycle

The City has an ongoing process to update its mapping of the MS4 system and industries discharging to the MS4.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
1.1	The City will continue to update its GIS layers for the MS4 and outfall nodes to reflect changes identified in each annual reporting period. The City will continue to gather information from various City Departments as input for data on: land use activities, population estimates, major structural controls, landfills, publicly owned lands, and industries. The Public Works Department will provide input and maintain runoff coefficients for various land use categories.	Information Systems/GIS	Ongoing	Compliance with requirement for annual mapping update.	All system related data is updated in the GIS system and is available on site.
1.2	The City will continue to update its GIS layer of industries discharging to the MS4 to reflect changes identified in each annual reporting period. Industrial and commercial businesses operating within the City are categorized by SIC code. This information is accessible in the City's EDEN system for business information. The Fire Department has inventories of SARA Title III and HAZMAT locations. (See BMP 4.1).	Information Systems/GIS	Submitted inventory and continue to provide updates annually.	Compliance with requirement for annual update of inventory of industries discharging to the MS4.	Inventory of industrial sites submitted. Additions or deletions to the inventory submitted in subsequent Annual Reports.

2.1.3 Supporting Legal Authority

No legal citations noted.

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2.2 Monitoring and Discharge Characterization

2.2.1 Permit Reference: Part A 4.

For all stormwater discharges covered under this permit, a water quality-based effluent limitation may be required under applicable state and federal law when necessary to ensure that water quality standards and designated use(s) of the receiving waters are attained. Discharge(s) to stormwater covered under this permit shall not cause a violation of water quality criteria as prescribed in 25 Pa Code Chapters 16 and 93.

During the period beginning on the effective date and lasting through the expiration date of this permit, the City shall:

(i) Submit quantitative data on physical and chemical characteristics to the Department, annually, for 5 representative outfalls identified in the City's Part 2 stormwater application.

(ii) Collect [during the term of the permit] [~~annually~~]** samples of stormwater discharges for each representative outfall above, from three storm events occurring at least one month apart in accordance with requirements at 40 CFR 122.21(g)(7). All samples shall be collected following a storm event that is equal or greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (0.1 inch rainfall) storm event. The Department may allow exemptions to sampling three storm events when climate conditions create good cause for such exemptions. Flow rates shall be estimated at points where discrete samples are taken.*

*[Changed by Department's administrative amendment dated June 2, 2004]

**[Removed by Department's administrative amendment dated June 2, 2004]

(iii) Submit above collected samples for analysis according to methods listed under 40 CFR Part 136 for the following pollutants:

BOD-5
COD
Total Kjeldahl Nitrogen (TKN)
Nitrate
Total Ammonia plus Organic Nitrogen
Antimony Total
Arsenic, Total
Beryllium, Total
Cadmium, Total
Chromium, Total
Copper, Total
Mercury, Total
Nickel, Total
Selenium, Total
Silver, Total
Thallium, Total
Zinc, Total
Cyanide, Total (Grab)
Phenols, Total (Grab)
Total Phosphorous
Dissolved Phosphorus
Total Suspended Solids (TSS)
Total Dissolved Solids
Oil and Grease (Grab)
pH (Grab)
Fecal Coliform (Grab)
Fecal Streptococcus (Grab)

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(iv) Collect samples of stormwater discharges for each representative outfall above, from three storm events during the term of the permit, occurring at least one month apart in accordance with requirements at 40 CFR 122.21(g)(7). [~~One storm sampling event must occur during the first, third and fifth year of the permit term~~.] All samples shall be collected following a storm event that is equal or greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (0.1 inch rainfall) storm event. The Department may allow exemptions to sampling three storm events when climate conditions create good cause for such exemptions. Flow rates shall be estimated at points where discrete samples are taken.*

[(v)] Submit samples for analysis according to methods listed under 40 CFR Past 136 for the following pollutants:*

[(vi)] Provide a description for each storm event, of the date, duration of the storm event(s) sampled, and rainfall intensity which generated the sampled discharge*

[(vii)] When the city is unable to collect samples due to adverse climatic conditions, the permittee shall submit, in lieu of sampling data, a description of why samples could not be collected, including available documentation of the event. Adverse climatic conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.). This information shall be submitted in the annual reports to DEP pursuant to Part A(8)(c) of this permit.*

[(viii)] No later than 3 years after the issuance of this permit, estimate annual, seasonal pollutant loads and estimate the event mean concentrations for all stormwater outfalls identified in* [City's Part 2 storm water]* *[~~the permittee's WQM permit~~]** application, using data collected and submitted with annual reports to the Department pursuant to Part A(8)(c) "Annual Progress Reports"*

[(ix)] The Department may require quantitative data for additional parameters and/or may establish sampling conditions such as location, season of sample collection, or form of precipitation necessary to insure representativeness*

*[Changed by Department's administrative amendment dated June 2, 2004.]

**[Removed by Department's administrative amendment dated June 2, 2004.]

2.2.2 Permit Reference: Part A 5. (d)

(d) Provide a description of a monitoring program for stormwater discharges associated with industrial activities;

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2.2.3 Permit Reference: Part A 6.

Within the last 3 years of the permit term, estimate the reduction of loading of pollutants for all stormwater outfalls identified in the City's Part 2 stormwater applications [1993], using data collected as a result of long-term monitoring and submitted with annual reports to the Department pursuant to Part A(8)(c) "Annual Progress Reports" of this permit. These assessments shall also identify known impacts of stormwater.

2.2.4 Monitoring and Discharge Characterization BMPs - Current Permit Cycle

The Stormwater Bureau leads development and implementation of the City's Monitoring and Discharge Characterization Plan.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
2.1	The City will update and continue to implement a Monitoring and Discharge Characterization Plan.	Stormwater	Updated in 2019	Tracking trends in collected data is part of the plan.	Available for review on site.
2.2	The City will update and continue to implement a Dry Weather Screening Program as a component of the Monitoring and Discharge Characterization Plan and in coordination with the IDDE program (BMP 8.4). Annual dry screening of outfalls determined to be high risk for illicit discharge is based on the Monitoring and Discharge Characterization Plan.	Stormwater	Ongoing	Review progress annually.	Number of outfalls inspected. Number of illicit discharges identified.
2.3	The City will update and continue to implement a Wet Weather Screening Program as a component of the Monitoring and Discharge Characterization Plan. The City wet weather program is designed to support its Stormwater Discharge Characterization and industrial high-risk runoff programs as follows: a. The City actively monitors outfalls that have been identified as having a high potential to significantly contribute pollutants to the MS4 system. b. All sample collection is performed according to requirements of 40 CFR 122.21 (g)7 and as documented in Monitoring and Discharge Characterization Plan.	Stormwater	Ongoing	Review annually for indicators and changes in water quality data.	City will continue to provide a summary of the following for the reporting period: number of samples collected, and location of sampling sites by GIS reference. Sample results and parameters specific to sampling will be reported and maintained in accordance with BMP 2.1 and BMP 12.1.

2.2.5 Supporting Legal Authority

Article 942 of the City Code – Storm Sewer Ordinance

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2.3 Stormwater Management Program

During the period beginning on the effective date and lasting through the expiration date of this permit, the City shall continue to implement a storm water management program consistent with applicable state and Federal laws, and:

2.3.1 Permit Reference - Part A 5. (a)

(a) Maintain and implement on a system-wide basis, watershed basis, jurisdiction basis or on an individual basis the stormwater management program outlined in this document to control and/or reduce the discharge of pollutants into the system to the maximum extent practicable.

2.3.2 Permit Reference – Part A 6. (iv)

(iv) Effectively prohibit non-stormwater discharge through its municipal separate storm sewer system, except non-stormwater discharges as provided in Part C(1) of this permit. The discharge of stormwater containing pollutants which have not been reduced to the maximum extent practicable is prohibited.

The Stormwater Bureau is responsible for maintaining the current Stormwater Management Program in coordination with various operating Departments within the City.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
3.1	The City will continue to maintain a Stormwater Management Program as defined in this Stormwater Management Program Plan (SWMPP).	Stormwater	Updated in 2020	Annually review progress of implementation of BMPs established in this SWMPP.	Available for review on site. Annually determine if BMPs should be changed and request in Annual Progress Report, as required.

2.3.3 Supporting Legal Authority

The City of Allentown employs several measures, ordinances, and regulations to control discharges of pollutants through the stormwater collection system.

2.4 Industrial Stormwater Program

2.4.1 Permit Reference Part A 5. (b)

Provide a description of a comprehensive program to monitor and control to the maximum extent practicable, pollutants in runoff to the City's municipal system from operating or closed municipal landfills, hazardous waste treatment sites, industrial facilities that are subject to Section 313, Title III of the Superfund amendments and Reauthorization Act of 1986 (SARA), storage, recovery or disposal facilities for municipal wastes, and industrial sites that handle, store, or transport toxics or hazardous materials, that the City determines are contributing a substantial pollutant loading to its system;

For IHRR facilities, the City shall continue document through standard operating procedures the methodology for industrial site inspection of interconnections with the MS4, field testing procedures, frequency of inspection, triggers for contact with appropriate DEP Regional staff for follow-up and recommendations for industrial NPDES permitting.

The Stormwater Bureau maintains mapping of industrial facilities that discharge to the City's MS4 system. The City is responsible to monitor and report discharge from facilities that may present a high risk of discharging pollutants to the MS4.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
4.1	The City will continue to identify industries discharging to the MS4 as described in BMP 1.2.	See BMP 1.2			
4.2	The City will maintain and implement an Industrial High-Risk Runoff (IHRR) SOP that describes the following: • process for determination of contribution of a significant pollutant load for addition to the list of industries. • methodology for inspection and field testing. • frequency of inspection; and • process for communication with appropriate DEP regional staff on industrial NPDES permitting.	Stormwater	Ongoing	Annual review of IHRR SOP.	See BMP 1.2.

2.4.2 Supporting Legal Authority

Article 941 of the City Code – Sewage and Industrial Waste
Article 942 of the City Code – Storm Sewer Ordinance

2.5 Construction Site Runoff

2.5.1 Permit Reference Part A 6. I (iii)

(iii) Maintain an acceptable Erosion and Sediment (E&S) control program for areas, which due to topography, activities, or other factors, have a potential for significant soil erosion in accordance with 25 PA. Code Chapter 102 and the Bureau of Land and Water Conservations' "Erosion and sediment Pollution Control program manual";.

2.5.2 Construction Site BMPs - Current Permit Cycle

The City conducts plan review in compliance with Pennsylvania Chapter 102 in cooperation with the LCCD. Inspection of PCSM BMPs is detailed in Section 2.10 of this document.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
5.1	The City will maintain and update, as needed, its MOU with LCCD to document roles and responsibilities related to erosion and sediment control, stormwater management, and Post Construction Stormwater Management requirements.	Bureau of Engineering	Ongoing	Executed MOU with LCCD, with periodic review and update as needed.	Document changes in appropriate reporting year's Annual Progress Report.
5.2	The City will continue to enforce erosion & sediment control in compliance with Article 1385 of the City Code and in coordination with LCCD as documented in the MOU developed and maintained within BMP 5.1. Erosion and sediment control plans will be reviewed by LCCD as specified in the MOU to ensure that adequate controls required by ordinance are designed for the site. During construction, City inspectors will conduct routine inspections to ensure that erosion and sediment control practices are functioning as designed. In cases of noncompliance with the approved plans, the City will follow the Enforcement and Penalty sections of Article 1385 of the City Code.	Bureau of Engineering	Ongoing	Successful resolution of enforcement actions.	Number of active construction sites. Number of enforcement actions taken.
5.3	The City will identify by position title, employees engaged in review of E&S plans and inspections. City will track training and certifications.	Stormwater	Ongoing	Review attendees against the list of employees who require training.	No reporting requirement. Documentation available on site.

2.5.3 Supporting Legal Authority

Articles 1385 and 1387 of the Allentown City Code
Pennsylvania Clean Streams Law (35 P.S. §§ 691.1 et seq.)
25 Pa. Code Chapter 102

2.6 Roadways, Streets, and Parking Lots

2.6.1 Permit Reference: Part A 5. (c)

(c) Provide an assessment of the effective of operating and maintaining public streets, roads and highways and procedures for reducing or controlling potential impacts on receiving waters from the municipal storm sewer system, including pollutants discharged as a result of de-icing activities.

2.6.2 Permit Reference: Part A 6. (ii)

(ii) *Assess the effectiveness of its stormwater management program, including street sweeping, litter control, de-icing procedures, and the application of herbicides for vegetation control on stormwater discharges. The assessment shall include an analysis of alternative practices for reducing pollutants associated with road maintenance activities.*

2.6.3 Permit Reference: Part C 3.

3. *ADDITIONAL REQUIREMENTS FOR SALT STORAGE FROM INDUSTRIAL ACTIVITY WITHIN THE CITY'S MUNICIPAL SEPARATE STORM SEWER SYSTEM*
Facilities within the City's incorporated boundary with storage piles of salt used for deicing or other commercial or industrial purposed and which generate a stormwater discharge associated with industrial activity which is discharged to City's MS4 shall be enclosed or covered to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. Existing industrial facilities shall demonstrate compliance with this provision as expeditiously as practicable, but in no event later than three years after the date of issuance of the facility's permit. All new discharges must meet this requirement upon approval. Piles do not need to be enclosed or covered where stormwater from the pile is not discharged to surface waters of the commonwealth.

2.6.4 Roadways, Streets, and Parking Lots BMPs - Current Permit Cycle

The Streets Department has primary responsibility for operation and maintenance of the City's roads, streets, and parking lots, including deicing and pavement maintenance and repair. The Department of Parks and Recreation and the Bureau of Recycling and Solid Waste perform deicing operations for their facilities.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
6.1	The City will maintain and implement an SOP for Deicing and Sanding Activities.	Streets Department	Ongoing	Annual review of SOPs – incorporate any feedback received during SOP training.	No reporting required
6.2	The City will maintain and implement an SOP for Roadway, Street, and Parking Lot Maintenance.	Streets Department			

2.6.5 Supporting Legal Authority

Pennsylvania Clean Streams Law (35 P.S. §§ 691.1 et seq.)

2.7 Pesticide, Herbicide, and Fertilizer (PHF) Application

2.7.1 Permit Reference: Part A 5. (h)

(h) Provide a description of a comprehensive program for control of residential, commercial, and industrial land uses. The program shall also include assessment of pesticide, herbicide and fertilizer use that may discharge into the municipal storm sewer system;

2.7.2 PHF BMPs - Current Permit Cycle

The Department of Parks and Recreation has primary responsibility for storage and application of pesticides, herbicides, and fertilizers on City properties. Properties where PHF may be applied to manage vegetation include the golf course, playing fields, and street rights-of-way. The Department of Parks and Recreation treats City swimming pools with pesticides to manage microorganisms. The City Health Bureau applies pesticide to manage mosquito populations. City staff applying pesticides and herbicides maintain certifications as applicators or as registered technicians through the Pennsylvania Department of Agriculture.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
7.1	The City will maintain and implement a PHF SOP that addresses storage, mixing, transport, application, and clean-up of PHF. The SOP will include the process for tracking City the certifications and registrations of City staff that apply pesticides and herbicides. This SOP will document the City's procedures for controlling the discharge of pollutants related to PHF.	Department of Parks and Recreation	Ongoing	Annual review of PHF SOP – incorporate any feedback received during SOP training.	No reporting requirement.
7.2	Using the process documented in the SOP developed in BMP 7.1, the City will track the registrations of City pesticide technicians and certified pesticide applicators.	Department of Parks and Recreation	Update list of City pesticide certifications annually	Review process annually and adjust as necessary.	No reporting requirement. List will be maintained on-site and available for review.

2.7.3 Supporting Legal Authority

Pennsylvania Pesticide Control Act (35 P.S. §§ 111.21 et seq.)
7 Pa. Code Chapter 128

2.8 Illicit Discharge Detection and Elimination (IDDE)

2.8.1 Permit Reference: Part A 5. (e) and (f)

(e) Provide a description of a comprehensive program to detect and eliminate dumping or disposal of materials other than stormwater into the City's system;

(f) Provide a description of a comprehensive program including inspections, to implement and enforce an ordinance, order or by similar means to prevent new and/or to remove existing illicit discharges from connecting to the City's municipal storm sewer system;

2.8.2 IDDE BMPs - Current Permit Cycle

The Stormwater Bureau has primary responsibility for locating and eliminating illicit discharges. The Health Bureau and Bureau of Building Standards and Safety support this program through enforcement of the Food Sanitation ordinance and the International Plumbing Code, respectively.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
8.1	The City will continue to prohibit discharges to the MS4 through enforcement of the Article 942 of the City Code - Storm Sewer Ordinance (specifically, Section 942.2 "General Municipal Separate Storm Sewer System Requirements").	Stormwater	Ongoing	Review and update of ordinance as needed.	No reporting requirement
8.2	The City will continue to prohibit discharges from food service operations through enforcement of Article 1123 of the City Code - Food Service Sanitation.	Health Bureau	Ongoing	Review and update of ordinance as needed.	No reporting requirement
8.3	The City will continue to prohibit cross-connections with the sanitary system through enforcement of the International Plumbing Code.	Bureau of Building Standards and Safety	Ongoing	Review and update of enforcement process as needed.	No reporting requirement
8.4	The City will continue to respond to complaints and to conduct a dry weather screening program to locate and eliminate illicit discharges. The City will also use its CCTV inspection Lateral Assessment Certification Program (LACP) to identify illegal connections to the storm sewer. The process for locating and eliminating an illicit discharge will be documented in the Monitoring and Discharge Characterization Plan (See BMP 2.1).	Stormwater	Ongoing	See BMP 2.2.	Number of Complaints. Number of enforcement actions. Number of cases referred to PaDEP.
8.5	The City will continue to use the following options for residents and businesses to report a suspected illicit discharge: • 911 calls – 911 operators direct these calls, when appropriate for the situation, to the Public Works Department. • 311 Quick Reporter – This application is on the City's website for reporting complaints and concerns. • Direct contacts to Stormwater – Stormwater promotes two phone numbers (one for business hours and after hours, respectively) for reporting complaints and concerns.	Stormwater	Ongoing	Review the spill/ illicit discharge communications matrix annually to ensure that all numbers are current (See BMP 9.1).	No reporting requirement

2.8.3 Supporting Legal Authority

Article 942 of the City Code – Storm Sewer Ordinance
Article 1123 of the City Code – Food Service Sanitation
International Plumbing Code

2.9 Spill Prevention and Response (SPR)

2.9.1 Permit Reference: Part A 5. (g)

(g) Provide a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal storm sewer system;

2.9.2 Permit Reference: Part C 2. SPILLS

This permit does not authorize the discharge of any toxic or hazardous substance or oil resulting from an on-site spill.

2.9.3 SPR BMPs -Current Permit Cycle

The Fire Department and the Stormwater Department work cooperatively to prevent, contain, and respond to spills that may discharge to the MS4.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
9.1	The City will maintain and implement a SPR SOP that addresses both the response to spills that may impact the MS4 and spill prevention and response on City owned and operated properties. This SOP will describe the responsibilities of both the Fire Department and the Stormwater Department. The SOP will include a spills and illicit discharge communication matrix. Discharges from private entities are regulated under Article 942 of the City Code - Storm Sewer Ordinance (see BMP 8.1).	Stormwater	Ongoing	Annual review of SPR SOP – incorporate any feedback received during SOP training.	Number of spills. Number of notifications made to PaDEP.
9.2	The Fire Department will continue to enforce Article 1503 of the City Code – Recovery Ordinance that details the responsibility for control, extinguishment or cleanup of petroleum or chemical spills.	Fire Department	Ongoing	Documentation of timely response and follow-up activities to address spills.	See BMP 9.1.

2.9.4 Supporting Legal Authority

Article 942 of the City Code – Storm Sewer Ordinance Article 1503 of the City Code – Recovery Ordinance

2.10 Stormwater Infrastructure Management

2.10.1 Permit Reference: Part A 5. (j)

(j) Conduct preventive maintenance inspections of all stormwater management facilities at least on a triennial basis. Inspections, necessary corrective action and enforcement actions shall be documented and summarized in annual progress reports to the Department pursuance to Part A(8)(c) "Annual Progress Reports" of this permit.

2.10.2 Stormwater Infrastructure Management BMPs - Current Permit Cycle

The Stormwater Bureau is responsible for the operation and maintenance of City owned and operated stormwater infrastructure and the inspection and enforcement of maintenance at privately owned and operated stormwater infrastructure. The City conducts ongoing inspections of the City owned and operated conveyance system, including pipes, swales, safety grates, inlets, and catch basins. Mapping of the system and BMPs is maintained by GIS and the Engineering Bureau.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
10.1	A CCTV inspection truck will be used to investigate problems, respond to complaints, inspect storm sewers, and rate the integrity of the storm sewer system. Systematic evaluation of the MS4 will continue to be prioritized by the age of City districts, beginning with the oldest (vitrified clay and old brick storm lines are the priority). Inspections may be scheduled based upon known, historic issues or suspected problems (i.e. sinkholes) found through field investigations or complaints. Inspections will continue to be conducted in conjunction with the Street Construction and Paving Program (i.e. Streets Program). NASSCO ratings of each inspected pipe conveyance will continue to be entered into the City's GIS system.	Stormwater	Ongoing	The miles of storm sewer inspected will be tracked as a measure of effectiveness.	No reporting requirement.
10.2	The City will continue to inspect, remove debris, and note repair and maintenance issues of components of stormwater drainage infrastructure.	Stormwater	Ongoing – schedule varies based on emergencies and frequency/duration of rain events.	The cubic feet of debris removed will be tracked in Lucity as a measure of effectiveness.	No reporting requirement.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
10.3	The City will maintain a process to determine when reconstruction and replacement of stormwater infrastructure is required.	Stormwater	Ongoing	Track feet of pipe repaired or replaced, and number of manholes and inlets repaired annually as a measure of effectiveness.	No reporting requirement.
10.4	A map of the City's stormwater conveyance infrastructure, outfalls, and City-owned BMPs will continue to be maintained as described in BMP 1.1.	IT/GIS Stormwater	Ongoing	See BMP 1.1	
10.5	The City will continue to inspect City-owned BMPs on an annual basis. When maintenance of a City owned BMP is required, the maintenance staff will be notified, and a work order entered into Lucity for completion.	Stormwater	City owned BMPs inspected once a year.	Review inspection process as needed to evaluate time to address identified deficiencies, update process if necessary.	Number of inspections.
10.6	The City will continue to implement its program to ensure adequate operation and maintenance of post construction BMPs in coordination with LCCD as documented in the MOU developed and maintained as described in BMP 5.1.	Stormwater	Ongoing	See BMP 5.1.	Number of PCSM BMPs approved. Number of PCSM BMPs constructed.
10.7	The City will inspect privately maintained BMPs at least once every five years. Inspections will be documented for each facility. When maintenance of a privately maintained BMP is required, the City will send a corrective action letter, and follow up to ensure that the required maintenance is completed. Failure to maintain BMPs, will result in enforcement action. For facilities with operation and maintenance agreements, the agreement will continue to be the basis for enforcement action. For facilities constructed prior to the requirement for operation and maintenance agreements, Article 1387 of the City Code (Stormwater Management Ordinance) will continue to be used as a basis for enforcement action.	Stormwater	Privately maintained BMPs inspected at least once every five years.	Review process for completion and enforcement of requested BMP maintenance pursuant to inspections. Update approach as necessary with a goal of reducing the time to complete the requested maintenance.	With each annual report, the City will provide a summary to include number of inspections, number of corrective action letters sent, and number of enforcement actions.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
10.8	The City will continue to update its GIS layer of PCSM facilities implemented through Article 1387 of the City Code to reflect changes identified in each annual reporting period. After project approval, the Bureau of Engineering staff will add the new PCSM facility to the City's GIS layer. Stormwater will verify construction and modify the GIS layer to reflect that the BMP is completed.	Bureau of Engineering and Stormwater	Ongoing	Incorporation of new PCSM facilities into GIS layer after approval of final as built.	No reporting required.
10.9	The City will continue to train employees engaged in stormwater system operation, and track training by topic and date.	Various agencies	After completion of each training session.	Review content to determine if additional subjects are needed.	No reporting requirement. Documentation of training is maintained on site.

2.10.3 Supporting Legal Authority

Article 1387 of the City Code – Stormwater Management Ordinance

2.11 Fiscal Analysis

2.11.1 Permit Reference Part A 7. FISCAL ANALYSIS

During the period beginning on the effective date and lasting through the expiration date of this permit, the City shall:

(*i) Maintain necessary capital, operation and maintenance expenditures needed to accomplish the activities of the stormwater program and the conditions of this permit; and*

(ii) Maintain sufficient financial resource to complete stormwater activities required in this permit and comply with state and federal stormwater regulations.

2.11.2 Fiscal Analysis BMPs - 2019-2024 Permit Cycle

The City of Allentown implemented a Stormwater Utility in January 2018 to provide adequate funding for its stormwater program.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
11.1	The City will budget and authorize expenditures necessary to ensure compliance with the BMPs set forth in this Stormwater Management Program Plan, over the term of this permit.	Stormwater	Ongoing	Continuous evaluation of stormwater program costs and funding.	With each Annual Progress Report, the City will provide a statement of fiscal sufficiency to meet the terms of this permit and provide a budget for SWMP activities during the reporting period.

2.11.3 Supporting Legal Authority

Article 393.15 of the City Code – Stormwater Utility Fee

2.12 Annual Progress Report

2.12.1 Permit Reference: Part A 8. REPORTING REQUIREMENTS

8. a. Reporting of Monitoring Requirements

(i) Monitoring results shall be summarized on a Discharge Monitoring Report (DMR) From and where appropriate, in annual reports to the Department pursuance to Part A.8.c "Annual Progress Reports" of this permit. A signed copy of the DRM Form and all other reports required herein, shall be submitted to the Northeast Regional Office of the Bureau of Water Management, 2 Public Square, Wilkes-Barre, PA 18711.

8.b. Non-Compliance Reporting:

(1) Required Reporting. The City shall report non-compliance to the Department in accordance with the following:

(a) 24-hour Oral Reporting – the permittee shall give at least a 24-hour advance notice to the Department of any planned changes that may result in non-compliance with permit requirements. The City shall also report non-compliance with any term or condition of this permit and any statute, rule, or regulation, to the Department within 24 hours of becoming aware of the non-compliance.
(b) Follow- up in Written Report – where the City orally reports the information in Part A 8(b)(1)(a) within the previously mentioned 24-hour time period, a written report outlining the reported information must be completed, kept on file, and submitted to the Department on request.
(c) Non-compliance reporting pursuant to Part A 8(b)(1)(a&b) shall not excuse the City from immediate notification to the Department of incidents causing or threatening pollution pursuance to 25 PA Code Section 101.2(a).

(2) Required Information. The reports and notifications required in Part A 8(b)(1) above shall contain the following information:

(a) An explanation of the cause of non-compliance
(b) The period of non-compliance, including exact dates and times and the anticipated time when the City will return to compliance; and
(c) Steps being taken to reduce, eliminate and prevent recurrence of the non-complying event.

8.c. Annual Progress Reports
Annual progress reports required under 40 CFR 122.26(c) to facilitate the long-term assessment of the City's NPDES stormwater program shall be submitted to the Northeast Regional Office of the Bureau of Water Management, 2 Public Square, Wilkes-Barre, PA 18711-0790, [within 45 days of][~~by~~]**-the anniversary date of this permit issuance for each year of the permit term. As a minimum, reports shall include:*

(i) The status of implementing components of the city's stormwater management program that are required in Part A (5) of this permit;
(ii) Proposed changes to the City's stormwater management as required in Part A (5) of this permit;
(iii) Revisions, if necessary, to control required in Part A (6) and the fiscal analysis required in Part A (7) of this permit;
(iv) Summary of data, including monitoring data, that are accumulated through the reporting year;
(v) Projected annual expenditures and budget for the year following each annual report;
(vi) A summary describing the number and nature of enforcement actions, inspections, and public education program; and
(vii) Identification of water quality improvements or degradation within the City's incorporated boundary.

*[Changed by Department's administrative amendment dated June 2, 2004]
**[Removed by Department's administrative amendment dated June 2, 2004]

2.12.2 Annual Progress Report BMPs - Current Permit Cycle

The City of Allentown will continue to provide annual reports to DEP to document compliance with its MS4 permit.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
12.1	The Annual MS4 Progress Report will be prepared following Part A 8. of the permit.	Stormwater	90 days after end of each permit year.	Target date is met each permit year with a complete Annual Progress Report.	The City shall follow Permit Part A 8. for annual submittal of the Progress Report.

2.12.3 Supporting Legal Authority

See references to annual reporting mandates in other BMPs.

2.13 City Properties

2.13.1 Permit Reference: Part B 1.(f)

(f) Construction, Operations and Maintenance

The City shall design and build and, at all times property operate and maintain all facilities and systems of treatment and control (and related appurtenances), including Best Management Practices (BMPs) such as PPC Plans, E&S Plans and any other stormwater pollution prevention or management plans, which are installed or used by the City to achieve compliance with conditions of this permit. BMPs shall be designed, implemented and maintained to minimize or eliminate impacts from stormwater runoff. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operations and maintenance required the operation of backup or auxiliary facilities or similar systems, installed by the city only when necessary to achieve compliance with the conditions of this permit.

2.13.2 City Properties BMPs - 2019-2024 Permit Cycle

The Building Maintenance Bureau maintains the master list of all City owned and operated properties. The Stormwater Department will lead evaluation of potential pollutant risk and preparation of SWPPPs in coordination with the operations that manage high-risk properties.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
13.1	The City will continue to maintain a master list of all properties owned by the City. The City will assess all properties to evaluate risks of pollutant discharge to the MS4.	Stormwater	Maintain list of high-risk City properties	List will be reviewed when new properties are added to the master list or when a change in activities occurs on a specific property.	No reporting requirement.
13.2	The City will continue to implement and maintain stormwater pollution prevention best practices in the operation and maintenance of City owned property.	Stormwater (development) Site managers (implementation)	Ongoing	Routinely inspect City properties and ensure proper controls are in place.	No reporting requirement. Documentation of site inspections is available on site.

2.13.3 Supporting Legal Authority

Chapter 92a. of the Pennsylvania Code
Pennsylvania Clean Streams Law

2.14 Public Education and Participation

2.14.1 Permit Reference: Part A. 8. c. (vi)

(vi) A summary describing the number and nature of enforcement actions, inspections, and public education program;

2.14.2 Public Education and Participation BMPs - Current Permit Cycle

The Stormwater Department will develop and implement the public education and participation plan in cooperation with other City departments and report as referenced in current permit.

BMP ID	Best Management Practice	Responsible Agency	Schedule	Measure of Effectiveness	Reporting Requirement
14.1	The City will continue to provide public education and outreach during, the term of this permit. Key focus areas may include: • youth outreach • commercial and industrial outreach strategies, and • strategies to address specific sources of pollutants identified by the City.	Stormwater	Ongoing	Number of contacts, events, materials distributed.	Summary of outreach activities: number of events, target audience for each, number of materials distributed.
14.2	The City will continue to utilize regional activities as appropriate.	Stormwater	Ongoing	Verify regional information is targeted appropriately.	No reporting requirement.

2.14.3 Supporting Legal Authority

No legal citation applicable.

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City of Allentown
Permit Requirement
Fiscal Analysis

Background
Part A, 7. (i) of the City's NPDES Permit No. 0063665 requires that the City maintain necessary capital, operation and maintenance expenditures needed to accomplish the activities of the stormwater program and the conditions of this permit.

Additionally, Part A, 8. c. (v) of the permit requires that the annual report include projected annual expenditures and budget for the year following each annual report.

BMP Program Description
All City Departments are responsible for achieving MS4 NPDES permit requirements to include Public Works (Engineering Bureau, Streets Bureau, Stormwater Operations and the Bureau of Recycling and Solid Waste), Parks Department (including the Golf Course), and Fire Department.

Bureau managers submit budgets to their Department Directors who review with the Managing Director and the Mayor. City Council must review and approve all budgets.

In 2018, a dedicated Stormwater Fund was established through the collection of user fees based upon the amount of impervious surface (sq. ft.) on each developed parcel within the City. For reporting purposes, only the annual budget of the Stormwater Fund will be submitted.

Governing Regulations
1. NPDES Permit No. 0063665

Pollution Prevention
Financial resources must be available in order for program requirements to be met.

BMP Documentation
Budgets are published in the Final City Budget book and online at www/allentownpa.gov

Pollution Removal Assessment – N/A

Authorization Procedure - N/A

Legal Recourse for Violation – N/A

Responsible Parties for BMP
1. City Administration
2. City Council
3. City Department and Bureau Managers

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period
The FY20 Stormwater Fund budget is included for review.

In anticipation of revenue shortfalls due to the COVID-19 pandemic, six new positions budgeted for 2020 will not be filled until 2021.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature **Date:**

Recoverable Signature

X Craig W. Messinger

Signed by: craigw.messinger@allentownpa.gov

Recoverable Signature

X 05/20/2020

Signed by: craigw.messinger@allentownpa.gov

CITY OF ALLENTOWN
PROGRAM BUDGET

086 STORMWATER
03 PUBLIC WORKS
0815 STORMWATER
0001 STORMWATER

Account Number	*2019 Budget*	*2019 Adj. Budget*	*2019 A&E*	*2020 Prop. Budget*
0001-02 PERMANENT WAGES	1,516,513	1,516,513	156,513	1,891,656
0001-04 TEMPORARY WAGES	30,000	30,000	25,000	25,000
Line Item Detail				
1 SUMMER HELP				5,000.00
2 SUMMER HELP				5,000.00
3 SUMMER HELP				5,000.00
4 SUMMER HELP				5,000.00
5 SUMMER HELP				5,000.00
		Line Items Total		25,000.00
0001-06 PREMIUM PAY	111,850	111,850	111,850	121,350
Line Item Detail				
1 OVERTIME, STANDBY, CALL IN (Bargaining)				82,350.00
2 OVERTIME, STANDBY, CALL IN (Bargaining / new hires)				22,500.00
3 OVERTIME, STANDBY, CALL IN (non-bargaining / mid-year hires)				5,000.00
4 OVERTIME, STANDBY, CALL IN (supervisory)				11,500.00
		Line Items Total		121,350.00
0001-08 LONGEVITY	22,267	22,267	22,267	21,419
0001-11 SHIFT DIFFERENTIAL	11,185	11,185	11,185	12,135
Line Item Detail				
1 OT SHIFT DIFFERENTIAL (Bargaining)				8,235.00
2 OT SHIFT DIFFERENTIAL (Bargaining New Hires)				2,250.00
3 OT SHIFT DIFFERENTIAL (non-Bargaining Mid-year Hires)				500.00
4 OT SHIFT DIFFERENTIAL (Supervisory)				1,150.00
		Line Items Total		12,135.00
0001-12 FICA	129,424	129,424	129,424	156,753
Line Item Detail				
1 FICA				156,753.09
		Line Items Total		156,753.09
0001-14 PENSION	210,868	210,868	210,868	201,509
Line Item Detail				

CITY OF ALLENTOWN
PROGRAM BUDGET

086 STORMWATER
03 PUBLIC WORKS
0815 STORMWATER
0001 STORMWATER

Account Number	*2019 Budget*	*2019 Adj. Budget*	*2019 A&E*	*2020 Prop. Budget*	
Line Item Detail					
1 PENSION				201,509.19	
		Line Items Total		201,509.19	
0001-16 INSURANCE - EMPLOYEE GRP	662,561	662,561	662,561		704,317
Line Item Detail					
1 INSURANCE				704,317.00	
		Line Items Total		704,317.00	
0001-28 MILEAGE REIMBURSEMENT	50	50	50		50
Line Item Detail					
1 MILEAGE / TURNPIKE TOLLS				50.00	
		Line Items Total		50.00	
0001-30 RENTALS	352,068	352,068	352,068		60,308
Line Item Detail					
1 RENTAL OF EQUIPMENT AS NEEDED				15,000.00	
2 Radio System Upgrade (payment 3 of 5)				45,308.00	
		Line Items Total		60,308.00	
0001-32 PUBLICATIONS & MEMBERSHIP	1,975	1,975	1,675		2,595
Line Item Detail					
1 APWA MEMBERSHIP				720.00	
2 STORM PUBLICATIONS AND MEMBERSHIPS				475.00	
3 AWWA MEMBERSHIP				200.00	
4 CDL Reimbursement				800.00	
5 WATER LICENSING AND RENEWAL				400.00	
		Line Items Total		2,595.00	
0001-34 TRAINING & PROF. DEVELOP	15,330	15,330	15,330		20,115
Line Item Detail					
1 NASSCO CONGRESS & EXPO				590.00	
2 AWWA EASTERN CONFERENCE				200.00	
3 NASSCO INITIAL CERTIFICATION				4,875.00	
4 NASSCO RE-CERTIFICATIONS				7,800.00	

CITY OF ALLENTOWN
PROGRAM BUDGET

086 STORMWATER
03 PUBLIC WORKS
0815 STORMWATER
0001 STORMWATER

Account Number	*2019 Budget*	*2019 Adj. Budget*	*2019 A&E*	*2020 Prop. Budget*	
Line Item Detail					
5 STORMWATER INITIAL CERTIFICATION				4,000.00	
6 OFFICE TRAINING				500.00	
7 Water License Training				1,000.00	
8 MS4 Training				1,000.00	
9 Mileage for approved training				150.00	
		Line Items Total		20,115.00	
0001-42 REPAIRS & MAINTENANCE	11,500	24,200	11,500		11,500
Line Item Detail					
1 EQUIPMENT REPAIRS				4,000.00	
2 RISK MANAGEMENT VEHICLE CLAIMS				3,500.00	
3 LARGE STORM GRATE REPAIR				4,000.00	
		Line Items Total		11,500.00	
0001-44 LEGAL SERVICES	65,000	65,000	65,000		65,000
Line Item Detail					
1 Legal Services for Stormwater Fee Disputes				65,000.00	
		Line Items Total		65,000.00	
0001-46 OTHER CONTRACT SERVICES	388,500	505,424	505,424		417,530
Line Item Detail					
1 EQUIPMENT REPAIR/ADD ON (CONTRACTED)				6,000.00	
2 ACCU WEATHER RAIN, HIGH-WIND, SNOW SERVICE (1/2 PAID IN STREET MAINTENANCE)				3,500.00	
3 EMERGENCY SPILL CLEAN-UP				4,000.00	
4 LAB SAMPLE - ANNUAL CONTRACT				20,000.00	
5 Pollution Reduction Strategy for Impaired waterways				100,000.00	
6 Stormwater Management program support services				150,000.00	
7 NPDES Permit Consultation (EPA, DEP) & Permit renewal				50,000.00	
8 ENGINERING CONSULTATION (GRANT TECHNICAL ASSISTANCE, VALUE ENGINEERING)				5,000.00	
9 Stormwater BMP design assistance				10,000.00	
10 Real Estate / BP Tax System Update				25,000.00	

CITY OF ALLENTOWN
PROGRAM BUDGET

086 STORMWATER
03 PUBLIC WORKS
0815 STORMWATER
0001 STORMWATER

Account Number	*2019 Budget*	*2019 Adj. Budget*	*2019 A&E*	*2020 Prop. Budget*	
Line Item Detail					
11 Household Hazardous waste collection				40,000.00	
12 Zonar GPS Annual Service				4,030.00	
		Line Items Total		417,530.00	
0001-50 OTHER SERVICES & CHARGES	600	3,600	3,600		8,115
Line Item Detail					
1 Misc Advertising				100.00	
2 2018 NPDES Annual Permit Fee				500.00	
3 Stormwater Utility Lien Fees				7,515.00	
		Line Items Total		8,115.00	
0001-54 REPAIR & MAINT SUPPLIES	77,250	64,550	67,250		112,250
Line Item Detail					
1 REPAIR PARTS: BRICK, BLOCK, CEMENT, VULCLAY				10,000.00	
2 HAND TOOLS: MANHOLE HOOKS, 12' SPOONS, 12' GRABBERS, CONCRETE TOOLS, MATTING				2,000.00	
3 RUBBERIZED CRACK SEAL ROLLS				300.00	
4 STORM TRUCK SUPPLIES: LEVELS, TRANSITS, TOOLBOX SUPPLIES, CONCRETE TOOLS				1,000.00	
5 INLET PROTECTORS - FOR INLETS,SWAILS, EMERGENCY SPILLS, SOTRM MANHOLES				6,500.00	
6 SILT-SOXX:SWAILS, OUTFALLS, EMERGENCY SPILLS, CONSTRUCTION				5,000.00	
7 6" & 8" FLEX TUBE EXTENSION HOSES FOR JET VAC				250.00	
8 FLOWFILL / CONCRETE CONTRACT				45,000.00	
9 INSTALL AND REPAIR FOR NEW INLETS				7,200.00	
10 Filterized Inlets				10,000.00	
11 Industrial Filterized Inlets				20,000.00	
12 In-Stream Monitoring Supplies				5,000.00	
		Line Items Total		112,250.00	
0001-56 UNIFORMS	13,624	13,624	13,624		12,740
Line Item Detail					
1 SERVICEWEAR UNIFORMS (CURRENT)				5,440.00	
2 SERVICEWEAR UNIFORMS (NEW HIRES)				2,430.00	
3 SAFETY SHOES				4,350.00	
4 SUPERVISOR POLO SHIRTS				320.00	

CITY OF ALLENTOWN
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0815 STORMWATER
0001 STORMWATER

Account Number	*2019 Budget*	*2019 Adj. Budget*	*2019 A&E*	*2020 Prop. Budget*	
Line Item Detail					
5 SUPERVISOR FLEECE JACKETS				200.00	
		Line Items Total		12,740.00	
0001-62 FUELS, OILS & LUBRICANTS	0	0	0		30,000
Line Item Detail					
1 Fuel contribution for City Fleet				30,000.00	
		Line Items Total		30,000.00	
0001-64 PIPE & FITTINGS	88,000	88,000	78,000		88,000
Line Item Detail					
1 STORM PIPING: CONCRETE, CORRUGATED				25,000.00	
2 MANHOLE RISERS				15,000.00	
3 CASTING				5,000.00	
4 INLET RISERS				5,000.00	
5 INLET GRATES: BICYCLE CROSS OVERS				5,000.00	
6 24" SOLID LIDS				5,000.00	
7 INLET BOXES				9,880.00	
8 C-SPACERS, L-SPACERS				3,000.00	
9 25-BENDS, 22-BENDS				120.00	
10 Pollution Prevention Planning and Site Improvements				15,000.00	
		Line Items Total		88,000.00	
0001-66 CHEMICALS	4,990	4,990	4,990		4,990
Line Item Detail					
1 DEGREASER				500.00	
2 DISTILLED WATER - SAMPLING STATIONS				40.00	
3 WATER SAMPLING TABLETS				250.00	
4 LEAK & LOCATION DYE - 3 COLORS				200.00	
5 SPRAYING CHEMICALS				4,000.00	
		Line Items Total		4,990.00	
0001-68 OPERATING MATERIALS & SUPP	61,780	61,780	41,780		57,750
Line Item Detail					

CITY OF ALLENTOWN
PROGRAM BUDGET

086 STORMWATER
03 PUBLIC WORKS
0815 STORMWATER
0001 STORMWATER

Account Number	*2019 Budget*	*2019 Adj. Budget*	*2019 A&E*	*2020 Prop. Budget*	
Line Item Detail					
1 VEHICLE FIRE EXTINGUISHERS				300.00	
2 FIRST AID SUPPLIES				750.00	
3 ROADWAY SAFETY SIGNS				2,000.00	
4 TONER FOR PRINTER - TV TRUCK				600.00	
5 PLASTIC BARRICADES / CONES				2,500.00	
6 TRAINING / EDUCATIONAL MATERIALS FOR CITY AND FOR THE COMMUNITY				10,000.00	
7 MS4 Industrial Program - Materials				3,000.00	
8 Illicit Connection Detection - Materials				7,500.00	
9 CUES ANNUAL SERVICE				4,000.00	
10 PA1 Marking Paint & Flage (Green)				1,000.00	
11 PERSONAL PROTECTIVE EQUIPMENT				6,000.00	
12 hydraulic analysis program software				20,000.00	
13 Digital Camera - post construction				100.00	
		Line Items Total		57,750.00	
0001-72 EQUIPMENT	392,000	392,000	372,000		642,000
Line Item Detail					
1 Computer repair parts (STM / EOC)				500.00	
2 In-stream Monitoring Equipment & probe				20,000.00	
3 DOG HOUSE (FOR SAMPLING STATION - MS4)				2,000.00	
4 Pole Camera (underground)				16,500.00	
5 Desktop setup for new employees				4,000.00	
6 F-550 w/ plow & Spreader				87,000.00	
7 Air Compressor				25,000.00	
8 REGENITIVE AIR SWEEPER				260,000.00	
9 Lateral line cutter				55,000.00	
10 VACTOR - INITIAL PAYMENT (leased over 5 years)				100,000.00	
11 Ventrac w/ rough cut deck boom mower and cab				53,000.00	
12 Hustler 60' Super Z zero turn Mower				12,500.00	
13 Belmont Trailer 14' Deckover				6,500.00	

CITY OF ALLENTOWN
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Account Number	*2019 Budget*	*2019 Adj. Budget*	*2019 A&E*	*2020 Prop. Budget*	
		Line Items Total		642,000.00	
0001-76 CONSTRUCTION CONTRACTS	300,000	300,000	300,000		450,000
Line Item Detail					
1 Construction Contracts				400,000.00	
2 Emergency Line Repairs				50,000.00	
		Line Items Total		450,000.00	
0001-86 GENERAL CITY CHARGES	343,232	343,232	343,232		360,394
Line Item Detail					
1 General City Charges				360,393.60	
		Line Items Total		360,393.60	
0001-88 INTERFUND TRANSFERS	132,412	132,412	132,412		125,945
Line Item Detail					
1 Risk Fund - Property and Casualty				125,945.00	
		Line Items Total		125,945.00	
0001-90 REFUNDS	224,436	221,436	221,436		224,436
Line Item Detail					
1 Incentive Program for GSI				100,000.00	
2 Credit Support Program				124,436.00	
		Line Items Total		224,436.00	
Total STORMWATER	**5,167,415**	**5,284,339**	**3,859,039**		**5,827,857**

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City of Allentown
Best Management Practices
Public Education and Outreach

Background
Part A, 8. c. (vi) of the City's NPDES Permit No. 0063665 requires that the Annual Progress Reports include "a summary describing the … public education program."

BMP Program Description
The City of Allentown provides various means of educational outreach. Many City departments produce educational materials and newsletters, oftentimes in English and Spanish versions, which are dispersed via US mail, posted on the City's website, and distributed through other means to target audiences. Many of our Managers work with established, local neighborhood groups. City personnel moderate and participate in different environmentally related, educational opportunities throughout the year, ranging from formal presentations to activities with schools and scout groups. The Stormwater Department marks stormwater inlets with a bilingual curb decal that state "Don't Dump: Drains to River." Public education material and outreach efforts can be viewed by visiting the City's website at www.allentownpa.gov.

Governing Regulations
1. U.S. Clean Water Act
2. NPDES Permit No. 0063665

Pollution Prevention
Raising public awareness of stormwater issues will provide pollution identification and reduction.

BMP Documentation
Agendas and educational materials will be saved on the appropriate drive.

Pollution Removal Assessment - N/A

Authorization Procedure - N/A

Legal Recourse for Violations - N/A

Responsible Parties for BMP
1. City of Allentown Departments/Bureaus
2. MS4 Coordinator
3. Stormwater personnel

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period
The following events were hosted or attended by City personnel:

- On 4/27/2019, Friends of the Allentown Parks and Department of Parks and Recreation personnel hosted the Cherry Blossom Festival. Tree education and potting were included in the activities.

- On 5/09/2019, Stormwater personnel participated in Hydromania, an annual event which hosts approximately 1200 third and fourth graders who learn about the water cycle, watersheds, and other environmentally related topics. Stormwater personnel were exhibitors and talked to the school groups about pollution from lawns and streets, MS4 and its connection to waterways. The children were able to view the TV truck and its equipment.

- On 5/17/2020, Public Works' MS4 Coordinator participated in a stormwater panel presentation at the Chamber of Commerce Sustainability Summit. The presentation included an overview of community stormwater management program requirements, challenges, and the City's experience in implementing a stormwater utility fee. PE material was available at each table.

- On 7/8/2019, Friends of the Allentown Parks and Parks personnel presented and had hands-on activities with 84 Jefferson Elementary School students on Water Conservation/Lehigh Watershed.

- On 9/30/2019, Friends of the Allentown Parks and Parks personnel presented to 125 3rd grade students from Sheridan Elementary School on Benefits of Trees including the importance of trees in Riparian Buffers.

- On 9/30/2019, SWEEP personnel attended a Mayor's Walk on Susquehanna Street.

- On 10/15/2019, Public Works' MS4 Coordinator gave a presentation at the Lehigh Valley Watershed Conference, to include an overview of community stormwater management program requirements, challenges, and the City's experience in implementing a stormwater utility fee.

- On 10/15/2019, Public Works' MS4 Coordinator gave a presentation on the City's Stormwater Management Program to Inside Allentown, which includes residents who rotate through the City's departments to learn about administrative and operational functions.

- On 12/09/2019, Friends of the Allentown Parks and Parks personnel presented to 28 Biology research students from Muhlenberg College on Effects of Invasive Plants and Marine Species in Allentown Waterways.

- On 1/30/2020, Friends of the Allentown Parks and Parks personnel in collaboration with Lehigh County Conservation District presented to 125 3rd grade students from Sheridan Elementary School on Water Conservation/Lehigh Watershed.

- On 2/03/2020, Friends of the Allentown Parks and Parks personnel presented to 30 Urban Environment Studies students from Muhlenberg College on Riparian Buffer Plantings and Benefits.

Recycling and Solid Waste personnel attended several neighborhood meetings throughout the year to include Midway Manor, 6th Ward, Fairview Area, Raub, and Muhlenberg. Attendance at each meeting was approximately 10 to 20 people.

**Several scheduled outreach events were canceled in Spring 2020 due to the COVID-19 pandemic to include: Inside Allentown, 2020 Earth Day (4/25/2020), Envirothon, and Sheridan Career Day.*

<u>Additional Efforts included</u>:

- Trash, recycling, and litter prevention information is distributed with every SWEEP ticket. 3,957 tickets were issued during this timeframe.

- As part of its decal program, the Stormwater Bureau installed 536 "No Dumping, Drains to River" decals.

- In Summer 2019, the Stormwater Webpage site was expanded. Development included:
  - Updating contact information.
  - Adding educational material for spills and illegal dumping.
  - Adding a section entitled "Protect Our Streams with this Seasonal Stormwater Tip."
    - Fall 2019: Pool discharge information was added in time for closing/draining residential pools.
    - Winter 2019: Proper deicing best practicing were posted.
  - Adding the DEP's Factsheet "Management of Swimming Pool, Hot Tub, and Spa Water Discharges" to the Homeowner's Resource section.
  - Adding educational material about our infrastructure on the Construction and Maintenance Schedule page.
  - Adding an interactive map of the stormwater system on the Construction and Maintenance Schedule page. A resident can enter an address and trace the rain to the receiving stream.
  - Adding a Projects link/side page for Green & Grey Infrastructure Projects to include educational material.
  - Adding an interactive map to show City stream impairments next to Green Infrastructure on Projects link/page.
  - Providing lining project locations and estimated work timeframes.
  - Adding a Community Participation & Education Events link/side page.

Protect Our Streams with this Seasonal Stormwater Tip

As the Summer temperatures take a dip and you prepare to close your pool, be aware that chlorinated water can kill aquatic life and is prohibited from being drained into the street and into the stormwater system.

Follow these steps to lower the water level of your residential swimming pool:

- Stop adding chlorine to an uncovered pool and wait. Sunlight will help to naturally dissipate the chlorine within a few days.
- During this time, use a test kit to measure the chlorine.
- Allow the chlorine to reduce to undetectable levels.
- Drain the water onto a vegetated surface.
- Do not allow the water to flow into a storm drain or onto a neighbor's property, create a nuisance condition, or cause erosion.

Protect Our Streams with these Seasonal Stormwater Tips

Blanketing the ground with snow and ice, Wintertime brings challenges in protecting public safety and environmental health.

Follow these tips for managing your property for winter stormwater:

- Shovel snow early before it builds up and refreezes.
- Pile snow in locations where it will melt and soak into the ground.
- Do not bury fire hydrants.
- Make sure your nearest storm drains are clear.
- Apply de-icer early, appropriately, and give it time to work. One 50-pound bag of salt can contaminate 10,000 gallons of water.
  - Remember that salt does not work below 15°F.
  - Use a de-icer that is more environmentally friendly such as a product containing acetate, potassium chloride, or magnesium chloride (instead of sodium chloride or calcium chloride).
  - Sweep up any material remaining after the ice melts.
  - Use cracked corn for traction on your walkways instead of sand or kitty litter.

Have a safe Winter season and thank you for keeping our watersheds healthy!

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Angela F. DiBello X 05/29/2020

City of Allentown
Best Management Practices
Municipal Pollution Prevention: Good Housekeeping & Property Improvements

Background

Part B, 1. f. of the City's NPDES Permit No. 0063665 requires that the City design and build and, at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), including Best Management Practices (BMPs) such as PPC plans, E&S Plans, and any other stormwater pollution management plans, which are installed or used by the City to achieve compliance with the conditions of this permit.

Additionally, Part A, 2. (f) of the City's NPDES Permit No. 0063665 requires that the City carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition of illicit discharges to the its MS4.

Activities conducted by municipal operations can negatively impact water quality. Publicly operated facilities and activities specific to their operations or spills/incidents can contribute pollutants to the stormwater discharges. Such facilities include composting yards, fleet storage yards, golf courses, wastewater/drinking water treatment plants, public pools, parks, fire stations etc. Municipal activities, such as street sweeping and maintenance, stormwater infrastructure maintenance, correction of spills, municipal waste collection and recycling are designed to reduce stormwater water quality impacts and are performed according to procedures ensuring maximum pollutant control.

BMP Program Description

The goal of the program is to prevent stormwater pollution generated from municipal properties and operations. Methods to achieve these goals include:

- Documentation of Standard Operating Procedures (SOP)/ Work Instructions (WI) including:
    - road sweeping/maintenance/snow removal/deicing
    - vehicle maintenance and repair
    - stormwater infrastructure cleaning/repair and maintenance
    - material storage loading and processing
    - fuel/lubricants/hazardous materials storage and management
    - application of pesticides, herbicides, and fertilizers
    - maintenance of structural/nonstructural BMPs
    - spill prevention and control
    - waste and recyclables collection and management
- Documentation and implementation of Stormwater Pollution Prevention Plans (SWPPP) for municipal facilities
- Employee training for incorporation of pollution prevention methods in their daily operations.
- Develop and implement a program to periodically inspect, audit, evaluate and correct issues with the application of storm water pollution control methods.

Governing Regulations

1. U.S. Clean Water Act
2. PA Clean Streams Law
3. Ordinance 13581

Pollution Prevention

Continuous application of the correct methods to control/minimize/eliminate storm water pollutants from municipal facilities and operations, and eliminating illicit discharge to the MS4 reduce pollution of the streams.

BMP Documentation

Documentation and records such as: SOPs, WI, various plans, municipal facilities stormwater pollution prevention audits, inspection checklists, work orders, photographs in different formats are maintained and available for reference.

Pollution Removal Assessment

Pollution removal assessment is based on evaluation of continuous application of the methods and plans as described. In the case of IDDE programs and spill and incident correction, the volume of pollutants may be estimated if enough data is available.

Authorization Procedure - N/A

Legal Recourse for Violations

1. Penalty Section of Ordinance No. 13581

Responsible Parties for BMP

1. City Management
2. Stormwater Manager
3. Stormwater Monitoring Coordinator
4. MS4 Coordinator

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

The City has continued to develop and implement a BMP program related municipal facilities and activities, including:

- Development of an inventory list of municipal facilities, and various activities and operations performed by City personnel with potential impact on stormwater
- Internal and third-party stormwater management plan audits were conducted at several municipal facilities: streets yard, golf course, parks maintenance building, recycle center drop-off and compost yard, public works yard. The goal of the audits is to assess compliance with requirements of the MS4 permit and identify gaps in implementation of the BMPs, documentation and training.
- Development of a long-term plan, schedule, and responsibilities to address gaps resulted from audit observations such as:
    - Develop and document SOPs, WIs, SWPPPs inspections/audit forms
    - Develop training needs matrix and training materials
    - Develop financial requirements related to implementation of BMPs
    - Deploy plan, assess, and report progress

Streets Department, 1825 Grammes Road:

- On 11/06/2019, consultants from Wood Environment & Infrastructure and representatives from the City's Department of Public Works conducted a site inspection of the Streets Facility.
- 10 municipal properties have been placed on a quarterly sweeping schedule. 236.43 cubic yards of debris were removed within the reporting period. The inventory list, maintenance summary report, and work orders are available upon request.
- Streets and Stormwater personnel have established a bimonthly inspection and maintenance schedule for Streets site. Streets personnel inspect the streets and garage property on the first and third Friday of the month while Stormwater personnel conduct inspections on the second and fourth Friday of the month. Personnel ("handcrews") removed 10.5 cubic yards of debris from inlet grates. The mechanical sweeper cleans this property once per month and removed 11.01 cubic yards of debris.

- Stormwater personnel check and clean inlet tops, vacuum storm inlets, jet storm lines, and vacuum wash rack and oil separator. 2 oil separators are maintained and cleaned on a monthly basis. 4,003 cubic feet of debris were removed during this reporting period. Work orders are available upon request.

Bureau of Recycling and Solid Waste, Drop-Off Center, 1400 Martin Luther King, Jr. Drive:

- In January 2020, City Council approved a contract for a consultant to propose conceptual designs for reconfiguration of the center.

Bureau of Recycling and Solid Waste, Yard Waste Center Drop-Off Center:

- On 11/06/2019, consultants from Wood Environment & Infrastructure and representatives from the City's Department of Public Works conducted a site inspection of the Yard Waste Center.

Department of Parks and Recreation, Parks Maintenance Barn, 2050 Park Drive (Lehigh Parkway):

- On 12/03/2019, consultants from Wood Environment & Infrastructure and representatives from the City's Department of Parks and Recreation, and Department of Public Works conducted a site inspection of Parks Maintenance Facility.
- On 2/20/2020, a new, 8' x 10' Agri-Chemical Storage Building was installed inside the steel building onsite for the proper storage of pesticides.

Department of Parks and Recreation, Municipal Golf Course:

- On 12/03/2019, consultants from Wood Environment & Infrastructure and representatives from the City's Department of Parks and Recreation, Municipal Golf Course, and Department of Public Works conducted a site inspection of the Golf Course.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Robert Swope X 5/22/2020

City of Allentown
Best Management Practices
Inlet/Catch Basin Cleaning and Inspection

Background

Part B, 1. f. of the City's NPDES Permit No. 0063665 requires that the City design and build and, at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), including Best Management Practices (BMPs) such as PPC plans, E&S Plans, and any other stormwater pollution management plans, which are installed or used by the City to achieve compliance with the conditions of this permit.

Additionally, Part A, 8. (2) c. (vi) of the City's NPDES Permit No. 0063665 requires that the City provide a summary describing the number and nature of enforcement actions, inspections …"

Storm Water Inlets and Catch Basins serve to remove rain water from hard surfaces such as streets and highways. Over 8,800 such structures are part of the City's MS4. The City has established a program to facilitate inspection, maintenance/repair and the removal of grit and other debris for this infrastructure.

BMP Program Description

Crews are assigned routinely, by storm water districts and/or historical experiences, to inspect, remove grit and note repair and maintenance issues. A trouble spot list has been established which comprises the locations of inlets which are cleaned prior to impending storm events. Inlets are cleaned using hand crews and a combination jetting & vaccuming unit. Grit and debris removal is performed using a vactor. The amount of debris removed is noted on a log.

The removed debris is hauled to a receiving station at the City's Streets Department. The liquid is drained to the Waste Water Treatment Plant for treatment. The dewatered material is placed into containers to be hauled to a certified land fill site.

Governing Regulations

1. Water Quality Act and Clean Water Act (33 United States Code 1251 et.seq.)
2. Pennsylvania Clean Streams Law as amended 35 P.S. Sec. 691.1 et.seq.
3. NPDES Permit No. 0063665

Pollution Prevention

The grit and debris inside catch basins may contain traces of petroleum products, salt, anti-skid material and numerous other contaminants. The Inlet/Catch Basin Inspection and Cleaning Program prevents grit, debris and floatables from entering the storm water system and traveling into our waterways and provides a systematic means of identifying necessary maintenance/repair.

BMP Documentation

A log is maintained listing the inlets/catch basins cleaned and inspected.
The cleaning crew maintains a log of its findings and the cubic yards of material removed at each location.
An Inlet Inspection log is maintained.
An inlet repair log is maintained.
An oil snout inspection tracking log is maintained.
Work orders are created in the Lucidity system.

Pollution Removal Assessment

Representative samples of debris removed were analyzed to determine a characteristic pollutant profile. Based upon the results of the analysis and the removal volumes, the pollutant loading removal will be determined by watershed.

Authorization Procedure - N/A

Legal Recourse for Violations - N/A

Responsible Parties for BMP

1. Stormwater Manager
2. Maintenance Supervisor, Streets

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Approximately 759 inlets were cleaned. 23,677 cubic feet of debris were removed and 1761.05 hours were spent. The inlet cleaning and repair tracking log and work orders are available upon request.

14 water quality inserts (snouts) are inspected and maintained in the City Right of Way. 604.0 cubic feet of debris were removed from oil snout inlets. The tracking log is available upon request.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] X 5/20/2020

City of Allentown
Best Management Practices
Stormwater Safety Grate Maintenance and Repair

Background

Part B, 1. f. of the City's NPDES Permit No. 0063665 requires that the City design and build and, at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), including Best Management Practices (BMPs) such as PPC plans, E&S Plans, and any other stormwater pollution management plans, which are installed or used by the City to achieve compliance with the conditions of this permit.

Additionally, Part A, 8. (2) c. (vi) of the City's NPDES Permit No. 0063665 requires that the City provide a summary describing the number and nature of enforcement actions, inspections …"

The City of Allentown has a Safety Grate Maintenance and Repair Program. The grates are placed where an open channel flow is diverted into a closed piping system. The purpose of the grates is to prevent injury or accidental drowning of persons swept into the conveyance system by the strong current. In addition, the grates prevent large debris from getting into the system and possibly causing a blockage. Although the grates are very effective in preventing accidental drowning, they do require a significant amount of maintenance. 21 safety grates are located throughout the City.

BMP Program Description

Crews inspect safety grates for accumulated debris, vandalism and the need for general maintenance. Upon notification of an anticipated significant storm event, grates are checked for debris. During a storm event, personnel are assigned to monitor the grates and remove debris as required to maintain efficient operation of the grate and to prevent flooding. A final check is performed the first work day following the storm event to inspect the grates for debris and damage. Remedial actions are scheduled as required.

Governing Regulations

1. NPDES Permit PA0063665

Pollution Prevention

These maintenance/repair and cleaning programs prevent vegetation debris and floatables from getting into our storm drainage system and ending up in the streams and rivers.

BMP Documentation

Documentation is maintained for all inspection, maintenance and repair work performed. Inspections are logged and the time recorded. Work orders for maintenance and repair activity by City crews is tracked through our Lucidity system. A spreadsheet is updated with inspection dates and amount of debris removed (cubic yards).

Pollution Removal Assessment

The material removed from the grates is normally related to the environment upstream from the grate or debris place there by vandalism. Example of such are trees, shrubs, rocks and in some cases yard furniture. The trees and shrubs are normally hauled to the City's Yard Waste Site. The other materials are place in a landfill.

Authorization Procedure-NA

Legal Recourse for Violations-N/A

Responsible Parties for BMP

1. Stormwater Manager
2. Maintenance Supervisor, Streets

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Safety grates were replaced at the following locations:

1. Emmaus Ave. and Lancaster Ave.
2. Mack Blvd. (between Dixon and Vine St.)

City crews spent **690.35** hours inspecting and cleaning 21 safety grates located throughout the city. **221.50** cubic yards of debris were removed. Last reporting period, **486.25** cubic yards of debris were removed. The safety grates are inspected before and after every significant rain storm. Work orders are available upon request.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] X 5/20/2020

City of Allentown
Best Management Practices
Replacement of Existing Open Throated City Inlets

Background
As a current City practice to update the City's infrastructure, the City has been replacing older style inlets (such as the old "E" Series inlets which have open throats ranging in size from 9¾" x 32" ± throat to the larger 5" x 9' ± throat), having large open throats, with newer PennDOT type "C" and "M" inlets. Type "C" inlets have a very small open throat, whereas type "M" inlets have no curb opening at all. Reducing the size of the open throats will help to reduce the amount of solid materials from entering the collection system.

BMP Program Description
The conversion, from the old style inlet with a large throat and small grate to the new style inlets which have either a small or no curb opening and a large grate, will assist in restricting various roadway debris/liter from entering the storm water collection system.

Governing Regulations – N/A

Pollution Prevention
Installation of these newer style inlets will result in smaller amounts of debris from entering and passing through the collection system. It should be noted, that once the debris has entered the collection system, the debris will be conveyed directly to the waters of the Commonwealth.

BMP Documentation
During the year, the City will document the number of old inlets with large open throats being replaced. Work orders will be created in the Lucidity work order system.

Pollution Removal Assessment
The conversion of large curb openings with small grated inlets to small curb openings with large grated inlets will further reduce the amount of debris entering the storm water collection system and the waters of the Commonwealth.

Authorization Procedure – N/A

Legal Recourse for Violation – N/A

Responsible Parties for BMP
1. Utility Engineer
2. Superintendent of Streets
2. Stormwater Manager

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period
Number of Conversions: 3 Completed
See summary table on next page.
Work orders are available upon request.

The 2020 Spring construction schedule has been delayed due to the COVID-19 pandemic. Stormwater construction personnel were remanded to home starting on March 30, 2020, and continuing past the end of the reporting period.

Open Throat Inlets Replaced				
Location	Old Type Inlet	New Type Inlets Installed	# Inlets Replaced	Date Completed
S. Filmore and Saucon St.	30"E	4' M-Alternate	1	12/19/2019
S. Filmore and Donald St.	30"E	4' C-Alternate	2	1/7/2020

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X 5/15/2020

City of Allentown
Best Management Practices
Additional MS4 Maintenance Activities

Background

Part B, 1. f. of the City's NPDES Permit No. 0063665 requires that the City design and build and, at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), including Best Management Practices (BMPs) such as PPC plans, E&S Plans, and any other stormwater pollution management plans, which are installed or used by the City to achieve compliance with the conditions of this permit.

Part A, 8. (2) c. (vi) of the City's NPDES Permit No. 0063665 requires that the City provide a summary describing the number and nature of enforcement actions, inspections …"

Additionally, Part A, 5. (j) of the City's NPDES Permit No. 0063665 requires that preventative maintenance inspections of all stormwater management facilities be conducted on a triennial basis. Inspections, corrective action, and enforcement actions must be documented and summarized in annual progress reports.

BMP Program Description

Stormwater controls must be routinely inspected and maintained to ensure continual functioning as designed. If proper maintenance is not provided, adverse environmental impacts such as discharge of pollutants into ground and surface waters may occur.

Stormwater personnel routinely inspect and repair swales, City maintained detention basins and other MS4 features. The City maintains ten detention facilities, one rain garden and forty three swales. throughout the city.

Governing Regulations

1. Pennsylvania State Act 167
2. City's Stormwater Management Ordinance 13192

Pollution Prevention

Routine inspection and maintenance of the MS4 system prevents pollutant conveyance into the waters of the Commonwealth.

BMP Documentation

Work orders are created in the Lucidity system.

Pollution Removal Assessment

The quantities of materials being removed will be estimated and recorded on an independent work order or the field inspection report. Also, any repair, modifications or improvements will be documented.

Authorization Procedure – N/A

Legal Recourse for Violation

1. City Ordinance 13812

Responsible Parties for BMP

1. Utility Engineer
2. Stormwater Manager

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period
All work orders are available upon request.

In June of 2019, 5 of 10 detention basins were maintained by Stormwater. Work orders are available upon request.

06/03/2019 – Tioga Street
06/03/2019 – Twins at Devonshire
06/06/2019 – Golf Course
06/03/2019 – Martin Street
06/06/2019 – Springhouse Road

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.
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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X  X 5/20/2020

City of Allentown
Best Management Practices
Snow Site Cleanup

Background
Part B, 1. f. of the City's NPDES Permit No. 0063665 requires that the City design and build and, at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), including Best Management Practices (BMPs) such as PPC plans, E&S Plans, and any other stormwater pollution management plans, which are installed or used by the City to achieve compliance with the conditions of this permit.

During a declared snow emergency, the City places into operation its Snow Emergency Removal Plan. Part of the emergency plan requires the removal and disposal of snow from the right-of-way. Snow is disposed of at various designated storage areas within the City.

During the course of snow removal and disposal, refuse and other waste products can be picked up in the snow removal process, thus creating the need to clean-up the various snow storage area at a time when the snow has finally melted.

BMP Program Description
Upon the complete disappearance of the snow stockpiles, the City's Streets Bureau will proceed with cleaning up the refuse and restoring any disturbed surface areas, which may have occurred during the stock piling operation.

For areas where snow was blown onto adjacent City properties, either City Streets or Parks personnel shall inspect these sites for any deposited refuse material and clean it up as warranted.

Governing Regulations-N/A

Pollution Prevention
Removal of refuse from the storage areas on a timely basis will lessen the chances of refuse from entering the water courses, etc. The timely removal of refuse at the dump sites will reduce the potential of contaminants from entering the storm water collection system and downstream waterways.

Direct deposit of snow into water courses during the snow removal process would result in salts and road debris being added directly to the water courses.

BMP Documentation
The Streets Department will periodically inspect the storage areas and remove the refuse as soon as conditions permit.

Pollution Removal Assessment-N/A

Authorization Procedure-NA

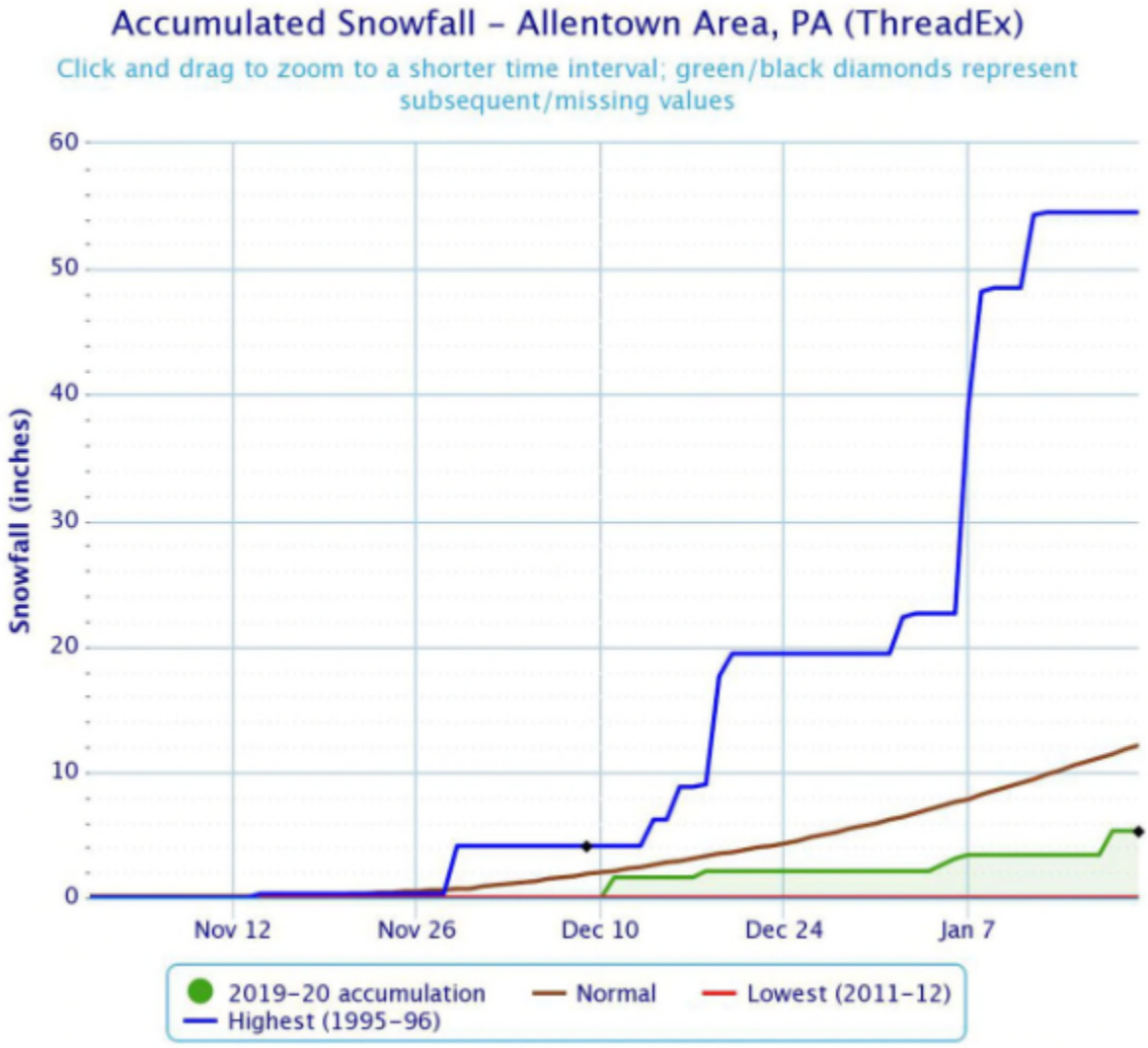
Legal Recourse for Violations-N/A

Responsible Parties for BMP
1. Streets Superintendent
2. Parks Superintendent

<u>Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period</u>
The City removed 0 cubic yards of snow (versus 75 cubic yards in the 2019 winter season).

Due to below average snowfall this season (of approximately 5 inches as reported at the Lehigh Valley National Airport), it was not necessary to stockpile snow at designated locations.

As part of standard operating procedure at stockpiling sites, inlet protection is installed to prevent debris from entering the MS4. Garbage is collected and properly disposed of following snow melt. This language will be added to our Snow Operations SOP.



I understand that the information provided will be reviewed by PaDep and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.

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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature & Date:

X 05-08-2020

City of Allentown
Best Management Practices
Salt Storage from Industrial Activity

Background

Part C, 3. of the City's NPDES Permit No. 0063665 requires that: facilities within the City's incorporated boundary with storage piles of salt … and which generate a stormwater discharge … which is discharged to the City's MS4 shall be enclosed or covered to prevent exposure. Piles do not need to be enclosed or covered where stormwater from the pile is not discharged to surface waters of the Commonwealth.

Industrial facilities shall demonstrate compliance as soon as possible but no later than three years after issuance of the facility's permit.

BMP Program Description

Stormwater personnel conduct visual inspections of industrial facilities during winter months. The date of visual and observations are recorded. The locations of inlets are checked by GIS.

Governing Regulations

1. Water Quality Act and Clean Water Act
2. Pennsylvania Clean Streams Law
3. NPDES Permit No. 0063665

Pollution Prevention

Proper containment of salt from storage piles will prevent its entry into the MS4.

BMP Documentation

Visual log sheets and maps

Pollution Removal Assessment – N/A

Authorization Procedure - N/A

Legal Recourse for Violations

1. NPDES Permit No. 0063665

Responsible Parties for BMP

1. Stormwater Manager
2. Stormwater personnel
3. MS4 Coordinator

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

Stormwater personnel conducted visual inspections of 21 commercial properties from November through March. The findings log is available upon request. Educational outreach material has been created for distribution to the property owners prior to the 2020-2021 Winter season.

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit. 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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X [signature] X 5/21/2020

Little Cedar Creek TMDL

Background

The Little Cedar Creek watershed encompasses approximately four square miles and is designated as High Quality – Cold Water Fishes, Migratory Fishes under Chapter 93 in Title 25 of the PA Code.

The creek is identified on the 1996 303(d) List of Impaired Waters as Segment ID 583 with 1.1 miles of impaired stream due to excess siltation from urban runoff and storm sewers. In August, 2004 the U.S. Environmental Protection Agency (EPA) approved Total Maximum Daily Loads (TMDLs) for sediment in the Little Cedar Creek. The TMDLs were submitted to EPA for review and approval by the Pennsylvania Department of Environmental Protection (DEP) on July 12, 2004. TMDL's were established and submitted in accordance with Sections 303(d)(1)(c) and 303 (d)(2) of the Clean Water Act.

At the time of TMDL establishment, the mean annual sediment loading was 857 tons/year. In order to attain water quality standards, the mean annual sediment loading must be limited to 355 tons/year, requiring a 59% reduction to meet the TMDL.

Approximately 75% of the watershed was designated as an MS4 area at that time; therefore, the TMDL includes a Waste Load Allocation (WLA) of sediment for the municipalities in the watershed. The WLA is listed at 220 tons/year. Three municipalities discharge to the creek: Upper Macungie Township, South Whitehall Township and the City of Allentown.

The creek is a losing stream and runs through municipally-owned land to include Martha Nola Memorial Park, Allentown Municipal Golf Course and Trexler Park. Major highways are located within the watershed which include the Northeast Extension of the Turnpike, Interstate I-78 and State Routes 309 and 22. The Little Cedar Creek flows into the Cedar Creek and then into the Little Lehigh Creek, a primary source of drinking water for Allentown and surrounding communities. The impervious surfaces surrounding the creek do not allow infiltration of rain water, causing increased rate and volume of stormwater flow.

City of Allentown's Efforts

In 2000, the City's in-house staff contracted Imperial Excavating to widen (provide an adequate cross section) and non-erosive liner (conc. segmental block liner) along a narrow 650 lf +/- creek section by the golf course retention basins. This section has primarily held up over the years.

In following years, 2001 - 2004, the Parks Department had hired Barry Isett & Associates to design and contract out multi-phase projects to apply soft engineering techniques along the remaining sections of the creek within the limits of the City's golf course. The design basically placed various surface matting materials and devices along the stream banks, utilizing the existing contours of the creek bed. Since the construction, regular flood flows have decimated and scoured a majority of the aforementioned soft linings.

On April 4, 2012 the City of Allentown met with Mr. Paul Grella (PaDEP) to discuss the City's Phase 1 MS4 (Municipal Separate Storm Sewer System) Permit. During this meeting the City was instructed to review the Little Cedar Creek TMDL report and offer potential Best Management Practices (BMPs) that may help reduce the amount of sediment being discharged from overland runoff, stormwater outfalls, etc.

A DEP Fact Sheet and Strategy Request was provided to Allentown. The fact sheet states that: "Reaching the reduction goal established by this TMDL will only occur through changes in current land use practices, including the incorporation of more stormwater "best management practices" (BMPs)."

The Strategy states; "Create a map of the area within the Allentown MS4 regulated boundary potentially

affecting Little Cedar Creek. Identify all possible sources of sediment. Create a suite of BMP's that could be selected from, which will provide the necessary reductions based on their performance information. Note that some sources, including the Pennsylvania Stormwater Management BMP manual, will provide sediment removal percentages." Allentown's response to this information is to be included with the City's Annual Progress Report submissions.

It is worth noting that during the time of DEP's designation, much construction was occurring in the upper portions of the Little Cedar Creek. As of 2012, many of the larger residential homes and developments have been completed and are now equipped with typical stormwater controls.

The City of Allentown continues to apply many Best Management Practices to assure that our local streams and drinking source waters are protected. Details of these efforts are highlighted throughout this annual report.

The City has identified 16 stormwater outfalls on the Little Cedar Creek that are located within City of Allentown boundaries. Some of these outfalls have inlets in South Whitehall Township. Each of these outfalls is described in the following pages. Using these descriptions and visual assessments, the City attempted to identify potential sources of sediment loadings and to prioritize Best Management Practices accordingly. The outfalls are described in the chart below and are depicted on the following maps:

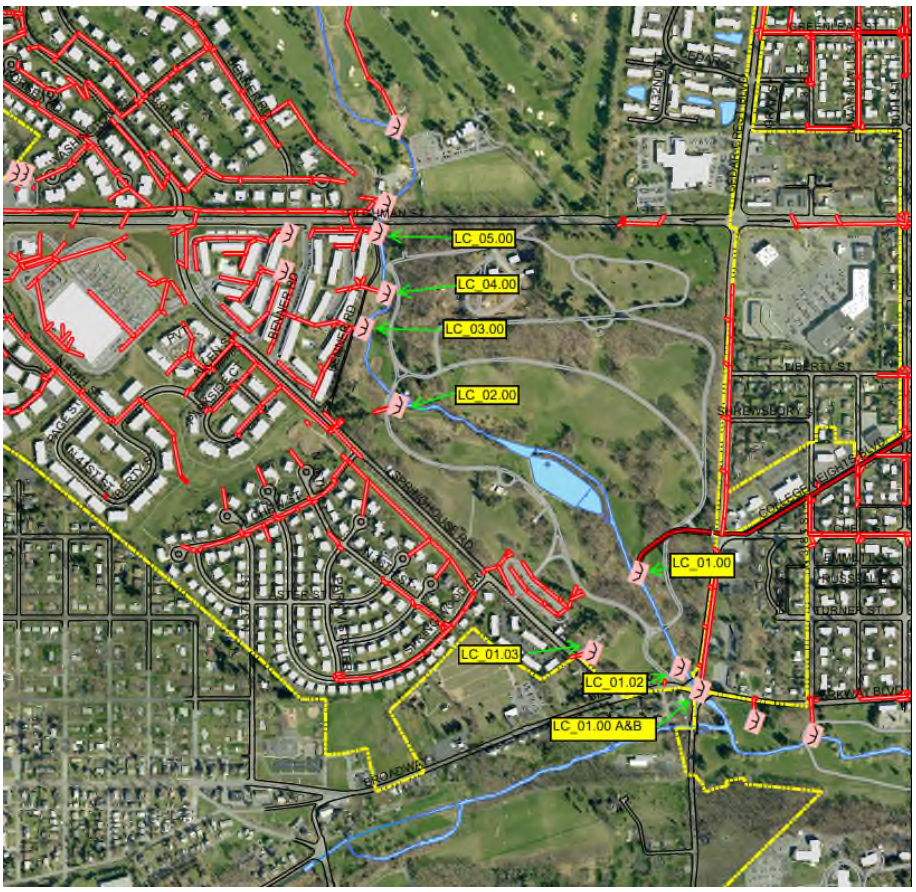
Little Cedar Creek Stormwater Outfalls							
	COA						
	Object ID	NPDES ID	Outfall Source(s)	Type	Concern	Inlet(s) Boundary	Pipe Size
1	45	LC_01.00 A	Outfall under intersection of Broadway and Cedar Crest Blvd.	Road	Low	Allentown + SWT	est. 18"
2	46	LC_01.00 B	Outfall under intersection of Broadway and Cedar Crest Blvd.	Road	Low	Allentown + SWT	est. 18"
3	64	LC_01.01	Runoff from Cedar Crest Boulevard and College Heights roads	Road/ Residential	High	Allentown + SWT	(2)3'x11'
4	4170	LC_01.02	(2) inlets near Broaway St. and park entrance	Road	Low	Allentown	18"
5	52	LC_01.03	Outfall from residential development, and Springhouse Rd.	Road/ Residential	High	Allentown + SWT	15"
6	53	LC_02.00	Major outfall from retention pond outfall, residential development, and Springhouse Rd.	Road/ Residential	High	Allentown + SWT	(2)43"
7	54	LC_03.00	(7) inlets near apartment complex	Residential	Low	Allentown	18"
8	55	LC_04.00	(4) inlets near apartment complex	Residential	Low	Allentown	12"
9	56	LC_05.00	(6) inlets near apartment complex	Residential	Low	Allentown	18"
Tilghman Street Border							
10	57	LC_05.01	Runoff from Tilghman Street inlets	Road	High	Allentown + SWT	18"
11	58	LC_05.02	Retention Pond outfall from Benner and S. 38th Streets	Residential	Low	Allentown + SWT	18"
12	59	LC_05.03	Golf Course Inlets	Open	Low	Allentown	18"
13	60	LC_05.04	Golf Course and Trexler Boulevard inlets	Road / Open	Low	Allentown	36"
14	61	LC_06.00	Runoff from north of Trexler Blvd (South Whitehall Township)	Residential	High	SWT	24" x 38"
15	62	LC_06.01	Runoff from N. 38th St. (large home construction nearing completion)	Residential	Low	Allentown	18"
16	63	LC_07.00	Runoff from N. Parkway and Springhouse Roads	Road/ Residential	High	Allentown + SWT	36"

The yellow-highlighted outfalls above are characterized as having a higher concern for sediment loading because of the types of drainage area and the amount of inlets associated with them. The non-highlighted outfalls appear to have appropriate sediment reduction scenarios provided to them.

For example, outfall LC_05.02 is overflow drainage from an already existing retention basin. The majority of the sediment coming from inlets associated with this outfall is captured in this basin.

Outfalls LC_05.03 and LC_05.04 are located within the Allentown Municipal Golf course and constitute runoff from the heavily sodded golf course with a minor amount of flow coming from nearby street inlets.

Little Cedar Creek Outfalls located within the City of Allentown



As shown in the picture below, golf course personnel maintain adequate buffer zones to help prevent sediment that might occur from overland runoff or bank scouring into the Little Cedar Creek. Outfall LC_06.01 has eight inlets connected to it from North 38th Street. During the time of DEP's designation, much construction was occurring in this vicinity.

Riparian buffers at the Allentown Municipal Golf Course

According to PaDEP's Little Cedar Creek TMDL Fact Sheet, the impaired segment of the Little Cedar Creek begins above the Allentown Municipal Golf Course and terminates near Tilghman Street. Therefore, efforts will be focused on the following outfalls; LC_05.01, LC_06.00, and LC_07.00. These outfalls are located in the designated impaired section and are also highlighted as having a higher concern for potential sediment loading.

LC_05.01:
This outfall is located just north of the Tilghman Street overpass. Stormwater discharge is drained from road and residential inlets along or near Tilghman Street. The City of Allentown will research possible BMP's such as increasing street sweeping efforts, placing No Dumping decals in the inlets, and educating local residents to the importance of protecting the Little Cedar Creek. Some of these inlets might also be located in South Whitehall Township.

LC_06.00:
Although this outfall is located within the City of Allentown, all but one inlet resides in South Whitehall Township. Allentown's GIS system does not include the South Whitehall's stormwater infrastructure. The City will monitor this outfall to see if wet-weather events produce heavy sediment discharge.

LC_07.00:
This outfall is located upstream from Allentown's Municipal Golf Course and comprises discharge from road and residential development inlets near North Parkway and Springhouse Roads. Many of these inlets are also located in South Whitehall Township. The City of Allentown will research possible BMP's such as increasing street sweeping efforts, placing No Dumping decals in the inlets, and educating local residents to the importance of protecting the Little Cedar Creek.

In the 2012-2013 reporting period, the City of Allentown considered the above BMP's as well as continued to investigate ways that would reduce sediment in the Little Cedar Creek.
As of 2012, many of the larger residential homes have been completed and are now equipped with stormwater controls.

In 2013-14, as a result of the final build-out and restoration of all disturbed surface areas within a couple of large developments, both within the City and South Whitehall Township, which occurred immediately upstream within the Little Cedar Creek Watershed, the City will continue to monitor the newly installed BMP devices to assure proper functioning.

Stormwater personnel routinely clean the inlets/catch basins.

Updates, Changes and Accomplishments during the 4/26/2019 - 4/25/2020 Reporting Period

As part of a current services contract, work includes the quality control of mapping undertaken by GIS staff to provide clarification on permit mandates impacting the jurisdiction, including boundaries for TMDL planning.

In permit negotiations from 2018 through 2020, the City proposed to develop and implement a Watershed Restoration Strategy (WRS) to address impairments in local streams as identified in the PaDEP's 2016 Integrated Water Quality Monitoring and Assessment Report. A TMDL Plan for the Little Cedar Creek is included in the WRS.

A second regenerative air (RA) sweeper was deployed this year. 1,324 cu. yds. of sediment were removed from the Little Cedar Creek watershed (in comparison to 361.5 cu. yds. reported in 2019).

The Community Engagement policy is being further developed to incentivize participation of private property owners and residents in green infrastructure and educational outreach projects. It is a grant program where projects are funded and ranked based upon the City's goals (to include pollution reduction criteria, treatment of impaired stream segments, public/educational outreach, community benefit, etc.).

I understand that the information provided will be reviewed by PaDEP and EPA in order to assess compliance with the requirements of the City's NPDES MS4 permit.
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 is, to the best of my knowledge and belief, true, accurate, and complete.

Electronic Signature: **Date:**

X Angela F. DiBuo X 05/29/2020