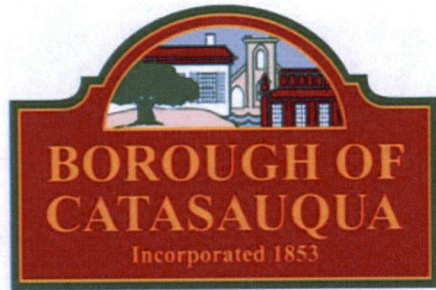


Public Education and Outreach Program



For

Catasauqua Borough

Permit Number: PA1132248

Prepared By:

Remington and Vernick Engineers



Written Public Education and Outreach Program (PEOP)

BMP #1: Develop, implement and maintain a written Public Education & Outreach Program.

The Borough of Catasauqua has prepared this Public Education and Outreach Program ("Program") to address MCM#1 of the Borough's Stormwater Management Plan. This Program will be implemented by Borough Staff and reviewed by the Borough once per calendar year and updated, if necessary.

BMP#2: Develop and maintain lists of target audience groups present within the areas served by your MS4.

The Borough of Catasauqua has identified the following target audience groups within the Borough's MS4 area:

1. Developers
 - a. Minor
 - b. Major
 - c. Residential
 - d. Commercial
2. Contractors
3. Institutions
 - a. Schools
4. Residents
 - a. Property owners
 - b. Tenants
5. Businesses
 - a. Offices
 - b. Restaurants
 - c. Industrial
 - d. Retail

BMP#3: Annually publish at least one education item on your Stormwater Management Program.

The Borough publishes general stormwater educational information, a general description of the Stormwater Management Program and information relating to stormwater management activities through the following mediums:

1. Website. The Borough provides a general notice on storm water regulations, reminders to not dump or mistreat catch basins, and links to external information sources on its website: www.catasauqua.org.
2. Borough Hall bulletin board. Information is posted on the bulletin board by the cashier station in Borough Hall for all customers and visitors to view.
3. Online Newsletter. The Borough is in the process of developing an online newsletter. It is anticipated that the newsletter will be published biannually (Spring/Summer & Fall/Winter issues) and will include articles with general stormwater educational information. Depending on the season, the newsletter may include relevant information pertaining to the following:
 - a. Household Hazardous Waste Events
 - b. Recycling
 - c. Tire Collections Events
 - d. Document Shredding Event

- e. Public Service Announcements;
- f. Tips on how to reduce stormwater runoff pollution
- g. Christmas Tree Collection Programs;

The newsletter will be available for download from the Borough's website at the following web address: www.catasauqua.org.

BMP#4: Distribute stormwater educational materials to the target audiences.

The Borough also distributes educational information to target audiences through the following mediums.

1. Public Meetings. The Borough hosts Council meetings that are held twice per month. The Director of Public Works, Borough Manager and Borough Engineer provide updates regarding repairs to storm sewer infrastructure, planned improvements to storm sewer infrastructure, MS4 compliance activities and waste collection events. This information will benefit meeting attendees and also reach those who view the livestream of the meetings on social media. There is a public comment period at each meeting where residents have the opportunity to comment on items related to stormwater management.

The Borough Engineer gives a presentation on an overview of the MS4 program annually at a public meeting. The presentation includes information on BMPs being executed throughout the Borough and how the public and Borough staff can play a role in stormwater management.

2. Web Page. The Borough maintains a web page on the Borough's website which contains information regarding the Borough's Stormwater Management Program. The web page provides information on stormwater management and what specific actions are performed as part of the Borough's MS4 program. The web page also contains information about and a link to the Borough's comprehensive stormwater management ordinance. Finally, the web page includes links to the following sources of additional information:
 - a. Pennsylvania Department of Environmental Protection (PA DEP)
 - b. Lehigh Valley Planning Commission

The Borough's website featuring stormwater management information can be accessed at the following web address: www.catasauqua.org.

3. Online Newsletter. The Borough is in the process of developing an online newsletter. It is anticipated that the newsletter will be published biannually (Spring/Summer & Fall/Winter issues) and will include articles with general stormwater educational information. Depending on the season, the newsletter may include relevant information pertaining to the following:
 - h. Household Hazardous Waste Events
 - i. Recycling
 - j. Tire Collections Events
 - k. Document Shredding Event
 - l. Public Service Announcements;
 - m. Tips on how to reduce stormwater runoff pollution
 - n. Christmas Tree Collection Programs;

The newsletter will be available for download from the Borough's website at the following web address: www.catasauqua.org.

4. Borough Hall Displays. The Borough displays stormwater management information inside Borough Hall for visitors to view. A "Stormwater Pollution Solutions" poster is currently on display.

5. Annual Notice. An annual notice of the Borough's Stormwater Management Program is distributed to all customers each year with a monthly utility bill. The notice includes information on storm water management duties and responsibilities of residents.
6. Storm Inlets. Each storm sewer inlet in the Borough is stenciled or tagged to indicate that anything deposited in the inlet is ultimately deposited in rivers and can be a pollutant.

Public Participation & Involvement



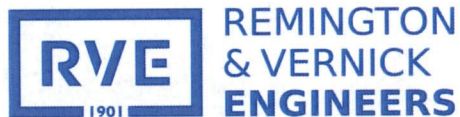
For

Catasauqua Borough

Permit Number: PAI132248

Prepared By:

Remington and Vernick Engineers



Written Public Involvement & Participation Program (PIPP)

BMP #1: Develop, implement and maintain a written Public Involvement and Participation Program (PIPP).

The Borough of Catasauqua has prepared this Public Involvement & Participation Program (PIPP) to address MCM#2 of the Borough's Stormwater Management Plan. This Program will be implemented by Borough Staff and reviewed by the Borough once per calendar year and updated, if necessary.

The Borough holds bimonthly public Council meetings. At each Council meeting, the Borough will report on recently completed stormwater management activities as well as upcoming projects. The Borough will give attendees the opportunity to make comments or ask questions relating to the Borough's stormwater management activities. In addition, the Borough provides an agenda item entitled "Hearing of Persons Present" at each Council Meeting. This agenda item provides a forum for meeting attendees to make comments pertaining to any number of topics, including any additional stormwater management concerns or aspects of the Borough's MS4 program.

The Borough will make copies of minutes from the Borough's public meetings available for download through the Borough Web Page. These minutes contain a summary of any discussion in public meetings pertaining to the Borough's stormwater management program or related topics.

BMP#2: Prior to adoption of any ordinance required by this General Permit, provide adequate public notice and opportunities for public review, input and feedback.

Prior to adopting any ordinance which is required as a condition of coverage under the Borough's Individual NPDES permit, the Borough will ensure that adequate public notice is given, along with opportunities for public review, input and feedback. The Borough will first introduce any such ordinance at a publicly advertised meeting and provide a description of the ordinance's substance. After permitting a period of questions and comments from meeting attendees, the Borough may authorize public advertisement of the proposed ordinance. Any feedback received during the public meeting will be reviewed by the Borough and the ordinance will be revised as necessary. The ordinance will then be publicly advertised in a newspaper with local circulation. Subsequent to the ordinance's advertisement for a period of not less than 7 calendar days, the Borough may act to adopt the ordinance at a subsequent publicly advertised meeting. Before adopting the ordinance, the Borough shall permit another period of questions and comments from meeting attendees.

BMP#3: Regularly solicit involvement and participation from target audience groups. This should include an effort to solicit public reporting of suspected illicit discharges. Assist the public in their efforts to help implement your SWMP. Conduct public meetings to discuss the ongoing implementation of your SWMP.

Each year, the Borough will provide a comprehensive presentation regarding the Borough's Stormwater Management Program during a publicly advertised meeting. The meeting will review the Borough's obligations under the NPDES Individual permit and report on the Borough's progress, activities and accomplishments in implementing the Stormwater Management Plan. At the conclusion of the presentation, the Borough will provide an opportunity for attendees to offer questions and comments.

The Borough holds bimonthly public Council meetings. At each Council meeting, the Borough will report on recently completed stormwater management activities as well as upcoming projects. The Borough will give attendees the opportunity to make comments or ask questions relating to the Borough's stormwater management activities. In addition, the Borough provides an agenda item entitled "Hearing

of Persons Present" at each Council Meeting. This agenda item provides a forum for meeting attendees to make comments pertaining to any number of topics, including any additional stormwater management concerns or aspects of the Borough's MS4 program.

It is anticipated that the Borough's website will be updated to include information on regarding how to report a pollution incident to the Borough.

The Borough anticipates to begin soliciting for participation in Household Hazardous Waste Collection Events, Tire Collections Events, Document Shredding Events, and other community events through their online newsletter that is in development.

The Borough will aim to create new relationships with, maintain any existing relationships with, and support local community groups that organize events that will reduce stormwater runoff pollution.

AERIAL DEVICE & COMPONENT ADVANCEMENTS

Item	New Feature Section V	Benefits	NFPA Required per 1999 edition				Durability		
			1990+	Safety	Service	Performance			
1	Establishment of a tip load standard	Uniform performance standard established a minimum recommendation; increased minimum performance	Yes	X					X
2	Improved the overload warning devices	Warns operator of potentially unsafe operating conditions	No	X					
3	Development of operational and structural safety standards	Better defined testing and inspection; improved compliance with nationally recognized welding and inspection standards	Yes	X					
4	Expanded the limiting safety interlocks	Reduces potential to put aerial in an unsafe operating condition; automatic operation.	Yes	X					
5	Expanded aerial and ground ladder testing standards	Uniform test standards; third party test recommendations; improved documentation and verification of performance.	No	X				X	X
6	Aerial tip controls	Control ladder at tip for better firefighter control	No	X					X
7	Pinable waterway	Protects waterway in rescue operations	Yes	X			X	X	X
8	Aerial multi-plex systems	Added aerial features and better serviceable	Yes	X			X	X	X
9	Increased waterway flow capacities	Improved range of stream; faster fire knock down; less appliances required	No	X					X
10	Increased system safety factors	Uniform standard; clarified performance; increased minimum standards	Yes	X				X	X
11	Introduction of short jack rotation limiter systems	Defines the range of operation; allows operation in narrow streets and alleys; reduces potential for tip overs.	Yes	X					X

New Feature		Benefits		NFPA Required per 1999 edition		1990+		Safety		Service		Durability		Performance	
Item	Section V			Chapter/Section											
12	Skid-resistant rung surfaces or coverings.	Increased firefighter safety; provides consistent footing service; less chance of slippage during inclement weather.		18 - 2.5	No			X							
13	Improved component materials for use in ladder section slide mechanism	Smoother operation; improved service; improved durability and structural safety		18 - 5.3	No			X		X			X		
14	Remote tip mounted observation cameras	Acts as a remote aerial observation device; more precise placement of remote controlled fire streams; safer observation of fire ground scenarios		N/S	Yes			X					X		
15	Improved aerial mounted breathing air systems and standards.	A uniform construction standard; low air warning system; increased duration; improved serviceability		18 - 2	Yes			X		X			X		
16	Improved ladder mounted breathing air systems and standards.	More reliable systems		18 - 2	No			X					X		
17	Remote nozzle and nozzle tip controls	Allows for the operation of a tip mounted water nozzle w/o need to have firefighter at the tip of the aerial; reduces potential for injuries		18 - 6.1											

Illicit Discharge and Detection & Elimination Program



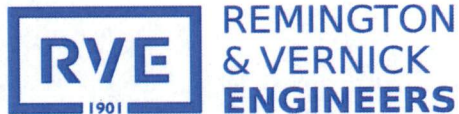
For

Catasauqua Borough

Permit Number: PAI32248

Prepared By:

Remington and Vernick Engineers



Written Illicit Discharge Detection & Elimination Program (IDD&E)

BMP #1: Develop and implement a written program for the detection, elimination, and prevention of illicit discharges into your regulated small MS4.

The Borough of Catasauqua has prepared this Illicit Discharge Detection & Elimination Program (IDD&E) to address MCM#3 of the Borough's Stormwater Management Plan. This Program will be implemented by Borough Staff and reviewed by the Borough once per calendar year and updated, if necessary.

BMP#2: Develop and maintain a map that show permittee and urbanized area boundaries, the location of all outfalls and, if applicable, observation points, and locations and names of all surface waters that receive discharges from those outfalls. Outfalls and observation points shall be numbered on the map.

The Borough has generated mapping of its regulated small MS4, including outfall locations and surface waters of the Commonwealth. The map includes existing BMPs, storm inlets, stormwater pipes, contours, swales, impaired streams, parcel lines, sewer shed boundaries, and imperious surface designations. The Borough will update the map to reflect any changes due to new construction or development.

The Borough is continuing to have the map verified and updated to reflect existing conditions. The Borough Engineer will continue to update the map using a combination of record plans from past developments and field verification.

BMP#3: In conjunction with the map(s) created under BMP #2 (either on the same map or on a different map), the permittee shall develop and maintain map(s) that show the entire storm sewer collection system within the permittee's jurisdiction that are owned or operated by the permittee (including roads, inlets, piping, swales, catch basins, channels, collection system where conveyances or BMPs on private property receive stormwater flows from upstream publicly owned components).

The Borough has generated mapping of its regulated small MS4, including outfall locations and surface waters of the Commonwealth. The map includes existing BMPs, storm inlets, stormwater pipes, contours, swales, impaired streams, parcel lines, sewer shed boundaries, and imperious surface designations. The Borough will update the map to reflect any changes due to new construction or development.

The Borough is continuing to have the map verified and updated to reflect actual conditions. The Borough Engineer will continue to update the map using a combination of record plans from past developments and field verification.

BMP#4: Conduct dry weather screenings of MS4 outfalls to evaluate the presence of illicit discharges. If any illicit discharges are present, the permittee shall identify the source(s) and take appropriate actions to remove or correct any illicit discharges. The permittee shall also respond to reports received from the public or other agencies of suspected or confirmed illicit discharges associated with the storm sewer system, as well as take enforcement action as necessary. The permittee shall immediately report to DEP illicit discharges that would endanger users downstream from the discharge, or would otherwise result in pollution or create a danger of pollution or would damage property.

The Borough will have the Borough Engineer conduct dry weather screenings of each MS4 outfall no less than once during each permit coverage term. The Borough will follow a phased approach to complete screenings, addressing the outfalls within different areas of the Borough each year until screenings for all outfalls across the entire Borough are complete.

Screenings will be scheduled during periods of dry weather when no significant rainfall has occurred for at least seventy-two (72) hours. For outfalls where dry weather flows are observed, the Borough Engineer shall collect samples and have the samples tested for the presence of select chemical and biological parameters to determine whether the dry weather flow is illicit.

If the Borough does detect an illicit discharge at one of its outfalls, the Borough will take steps to identify the source of the illicit discharge and to eliminate it. The Borough Engineer shall conduct a visual inspection of the storm water conveyance infrastructure upstream from the outfall. If the source of the illicit discharge cannot be readily identified by visual observation, then the Borough Engineer shall develop a plan for locating the source of the illicit discharge including, but not limited to, the following measures: conducting additional laboratory sampling, video inspection, and dye testing key locations along the storm sewer conveyance infrastructure leading to the outfall. If necessary, the Borough shall authorize entry into private structures for the purposes of conducting visual observation and testing as necessary to confirm or deny the source of illicit discharge.

Once the source of illicit discharge has been identified, the Borough shall proceed to eliminate the illicit discharge. The Borough will send a notice to the property owner by mail. The notice shall inform the property owner that the Borough has determined that their property is the source of an illicit discharge and shall provide information regarding the nature of the illicit discharge and the steps taken by the Borough to identify the illicit discharge. The notice shall require the property owner to cease the illicit discharge within a certain period of time, as determined by the Borough. The Borough may take additional enforcement actions as prescribed under Chapter 225 of the Borough Code.

The Borough will maintain a written record of all activities pertaining to the identification and elimination of illicit discharges.

BMP#5: Enact a Stormwater Management Ordinance or SOP to implement and enforce a stormwater management program that includes prohibition of non-stormwater discharges to the regulated small MS4.

The Borough has adopted Chapter 225, known as the Stormwater Management Ordinance into the Borough Code. Article 8 of this ordinance prohibits the discharge of non-stormwater discharges to waters of the Commonwealth.

BMP #6: Provide educational outreach to public employees, business owners and employees, property owners, the general public and elected officials (i.e., target audiences) about the program to detect and eliminate illicit discharges.

The Borough publishes general stormwater educational information, a general description of the Stormwater Management Program and information relating to stormwater management activities through the following mediums:

1. Public Meetings. The Borough hosts Council meetings that are held twice per month. The Director of Public Works, Borough Manager and Borough Engineer provide updates regarding repairs to storm sewer infrastructure, planned improvements to storm sewer infrastructure, MS4 compliance activities and waste collection events. This information will benefit meeting

attendees and also reach those who view the livestream of the meetings on social media. There is a public comment period at each meeting where residents have the opportunity to comment on items related to stormwater management.

The Borough Engineer gives a presentation on an overview of the MS4 program annually at a public meeting. The presentation includes information on BMPs being executed throughout the Borough and how the public and Borough staff can play a role in stormwater management.

2. Web Page. The Borough maintains a web page on the Borough's website which contains information regarding the Borough's Stormwater Management Program. The web page provides information on stormwater management and what specific actions are performed as part of the Borough's MS4 program. The web page also contains information about and a link to the Borough's comprehensive stormwater management ordinance. Finally, the web page includes links to the following sources of additional information:

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- b. Lehigh Valley Planning Commission

The Borough's website featuring stormwater management information can be accessed at the following web address: www.catasauqua.org.

3. Online Newsletter. The Borough is in the process of developing an online newsletter. It is anticipated that the newsletter will be published biannually (Spring/Summer & Fall/Winter issues) and will include articles with general stormwater educational information. Depending on the season, the newsletter may include relevant information pertaining to the following:

- a. Household Hazardous Waste Events
- b. Recycling
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- d. Document Shredding Event
- e. Public Service Announcements;
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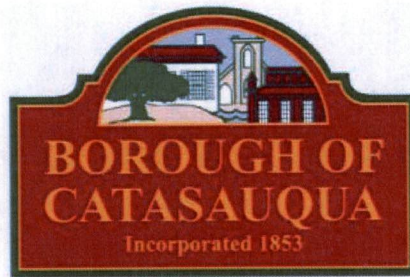
The newsletter will be available for download from the Borough's website at the following web address: www.catasauqua.org.

4. Borough Hall Displays. The Borough displays stormwater management information inside Borough Hall for visitors to view. A "Stormwater Pollution Solutions" poster is currently on display.
5. Annual Notice. An annual notice of the Borough's Stormwater Management Program is distributed to all customers each year with a monthly utility bill. The notice includes information on storm water management duties and responsibilities of residents.
6. Storm Inlets. Each storm sewer inlet in the Borough is stenciled or tagged to indicate that anything deposited in the inlet is ultimately deposited in rivers and can be a pollutant.

Construction Site Storm Water Runoff Control

The Borough of Catasauqua is relying on PA's statewide program for stormwater associated with construction activities to satisfy this MCM.

Post-Construction Storm Water Management Plan



For

Catasauqua Borough

Permit Number: PAI132248

Prepared By:

Remington and Vernick Engineers



Post-Construction Storm Water Management in New Development and Redevelopment

BMP #1: Enact, implement and enforce an ordinance or SOP to require post-construction stormwater management from new development and redevelopment projects, including sanctions for non-compliance.

The Borough of Catasauqua has adopted Chapter 225, known as the Stormwater Management Ordinance, into the Borough Code. Article 3 through Article 8 of this ordinance provides stormwater management requirements, including requirements for post construction stormwater runoff. Article 9 of this ordinance addresses enforcement and penalties for non-compliance with other ordinance requirements.

BMP #2: Develop and implement measures to encourage and expand the use of Low Impact Development (LID) in new development and redevelopment. Measures should also be included to encourage retrofitting LID into existing development. Enact ordinances consistent with LID practices and repeal sections of ordinances that conflict with LID practices.

The Borough has adopted Chapter 225, known as the Stormwater Management Ordinance, into the Borough Code. The ordinance requires the incorporation of techniques for low-impact development practices described in the Pennsylvania Stormwater Best Management Practices Manual.

BMP #3: Ensure adequate O&M of all post-construction stormwater management BMPs that have been installed at development or redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale.

The Borough is developing an inventory of known post-construction stormwater management BMPs. The inventory captures important information for each post-construction stormwater management BMP, including the following parameters:

1. Property Address
2. Date Completed
3. Description

The inventory will be updated on an ongoing basis as new developments are completed.

The Borough inspects stormwater BMPs on an as-needed basis and when issues are reported by the public.

Whenever the Borough finds that a person has violated a prohibition or failed to meet a requirement, the Borough orders compliance by notifying the responsible person. The notice includes items as listed in Chapter 225 of the Borough of Catasauqua Code of Ordinances.

BMP #4: Require the implementation of a combination of structural and/or non-structural BMPs that are appropriate to the local community, that minimize water quality impacts, and that are designed to maintain pre-development runoff conditions.

The Borough is relying on PA's statewide program for stormwater associated with construction activities to satisfy this BMP.

BMP #5: Ensure that controls are installed that shall prevent or minimize water quality impacts. The permittee shall inspect all qualifying development or redevelopment projects during the

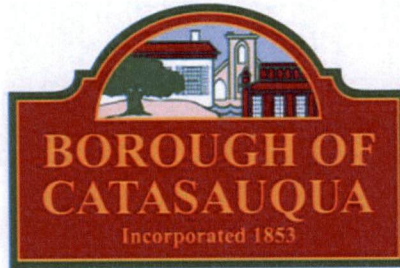
construction phase to ensure proper installation of the approved structural PCSM BMPs. A tracking system (e.g., database, spreadsheet, or written list) shall be implemented to track the inspections conducted and to track the results of the inspections (e.g., BMPs were, or were not, installed properly).

The Borough is relying on PA's statewide program for stormwater associated with construction activities to satisfy this BMP.

BMP #6: Develop a written procedure that describes how the permittee shall address all required components of this MCM.

The Borough is relying on PA's statewide program for stormwater associated with construction activities to satisfy this BMP.

Operation, Maintenance, Inspection, and Repair Program



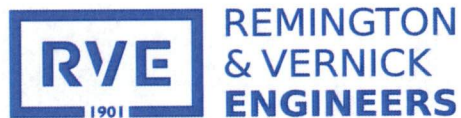
For

Catasauqua Borough

Permit Number: PAI132248

Prepared By:

Remington and Vernick Engineers



Pollution Prevention & Good Housekeeping for Municipal Operations

BMP #1: Identify and document all operations that are owned or operated by the permittee and have the potential for generating pollution in stormwater runoff to the MS4. This includes activities conducted by contractors for the permittee.

Activities

The Borough has identified the following activities which have the potential for generating stormwater runoff to the regulated MS4:

1. Road Maintenance or Repairs
2. Inlet or Outfall Maintenance
3. Storm Sewer Construction or Repairs
4. Snow Plowing
5. Yard Waste
6. Christmas Tree Collection.
7. Lawn & Grounds Care
8. Vehicle Fueling
9. Vehicle Maintenance
10. Vehicle Washing

Facilities

The Borough has identified the following facilities which are owned or operated by the Borough and have the potential for generating stormwater runoff to the regulated MS4:

1. Roadways
2. Borough Hall
3. Borough Public Works Building
4. Borough Water Works Building
5. Borough Parks
 - a. Catasauqua Park and Pool Complex
6. Channel and Drainage Swales
7. Culverts
8. Stormwater Conveyance Pipes
9. Inlets
10. Catch Basins

BMP #2: Develop, implement and maintain a written O&M program for all operations that could contribute to the discharge of pollutants from the MS4, as identified under BMP #1. This program shall address stormwater collection or conveyance systems within the regulated MS4.

The Borough has developed an O&M Manual that outlines their O&M program.

BMP #3: Develop and implement an employee training program that addresses appropriate topics to further the goal of preventing or reducing the discharge of pollutants from operations to the regulated small MS4. All relevant employees and contractors shall receive training.

The Borough has outlined a training program in the Borough O&M Manual. Additionally, the Borough Engineer gives an annual education presentation to Borough staff at a public meeting.